

Zerto

Zerto Virtual Replication RESTful APIs

Version 7.0

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The Zerto RESTful API enables you to manage Zerto programmatically. The REST APIs provide a way to automate many of the tasks required to manage DR, without having to use the Zerto User Interface. For related documentation, refer to [myZerto > Technical Documentation](#).

The following topics are described in this :

- [“Using the APIs”, below](#)
- [“Managing VPGs”, on page 10](#)

APIs are available both to return status information and to perform actions, such as a failover. The REST APIs are used for the following:

- Start and end a session. See below, [“Using the APIs”, on page 7](#) and [“Session API”, on page 102](#).
- Return a list of available Zerto v1 REST APIs. See [“Listing the Available APIs”, on page 8](#) and [“/v1/ API”, on page 29](#).
- Return information about Zerto alerts. See [“Alerts API”, on page 30](#).
- Dismiss or undismis an alert. See [“Alerts API”, on page 30](#).
- Return information about Zerto events. See [“Events API”, on page 54](#).
- Return information about the local site where the API is run. See [“Local Site API”, on page 78](#).
- Return information about the peer sites for the site where the API is run. See [“Peer Sites API”, on page 81](#).
- Perform pairing the current site to a peer site. See [“Peer Sites API”, on page 81](#)
- Perform unpairing the current site to a peer site. See [“Peer Sites API”, on page 81](#)
- Return information about service profiles. See [“Service Profiles API”, on page 100](#).
- Return information about tasks run at a site. See [“Tasks API”, on page 105](#).
- Return information about the hypervisor site where the API is run and the paired hypervisor sites and as well as information about the resources at a specified site. See [“Virtualization Sites API”, on page 115](#).
- Return information about protected virtual machines. See [“Protected VMs API”, on page 123](#).
- Return information about VPGs. See [“VPGs API”, on page 136](#).
- Perform actions on a VPG, such as creating, failing over, cloning, testing, or deleting a VPG. See [“VPGs API”, on page 136](#).
- Manage VPGs. See [“VPG Management API”, on page 160](#).
- Return information about VRAs. See [“VRAs API”, on page 225](#).
- Perform actions on a VRA, such as installing, editing, or deleting a VRA. See [“VRAs API”, on page 225](#).
- Return information about ZORGs. Described in [“ZORGs API”, on page 246](#).
- Generate a resource report about the virtual machines being protected to a recovery site. See [“Managing vCD APIs”, on page 251](#).

The information returned by these APIs refers to what is managed by the Zerto Virtual Manager where the API is run.

Using the APIs

All APIs are exposed over HTTPS.

Most of the Zerto RESTful APIs require a session running with basic authorization. The username and password authorization used must be a valid username and password either for the Windows machine where the Zerto Virtual Manager is installed or for the hypervisor manager, VMware vCenter Server or Microsoft SCVMM, accessed by the Zerto Virtual Manager. In both cases the Zerto Virtual Manager is the Zerto Virtual Manager where the APIs will run.

The following APIs can be called without any authentication:

- Listing the RESTful APIs, described in [“Listing the Available APIs”, on page 8](#) and [“/v1/ API”, on page 29](#).
- Getting help for an API, described in [“Getting Help for an API”, on page 9](#).
- Generating a resource report about the virtual machines being protected to a recovery site, using the ResourcesReport API, described in [“Managing vCD APIs”, on page 251](#).

When passing a URL in a browser, you require a security certificate. In Microsoft Internet Explorer you have to be in *Compatibility* mode.

To test the APIs, Zerto recommends using a REST client, such as the following:

- For Google Chrome: Postman, from <http://www.getpostman.com/>.
- For Microsoft Internet Explorer and Mozilla FireFox: RESTClient, from <http://www.restclient.org>.

The following topics are discussed:

["Starting a Session", on page 8](#)

["Listing the Available APIs", on page 8](#)

["Filtering Information Retrieved By an API", on page 9](#)

["Getting Help for an API", on page 9](#)

["Ending a Session", on page 10](#)

Starting a Session

Using the username and password either for the Windows machine where the Zerto Virtual Manager is installed or for the hypervisor manager, VMware vCenter Server or Microsoft SCVMM, accessed by the Zerto Virtual Manager, you can establish a session by posting the following URL:

```
https://zvm_ip:port/v1/session/add
```

A session identifier, x-zerto-session, is returned as part of the response header and the session is established. The session identifier is used in the client code with every API call for the duration of the session.

The APIs can be consumed by applications implemented in different technologies in a stateless manner.

Data returned is formatted either as JSON or as XML as set by the consumer. By default, data that is returned for the v1 APIs is formatted as JSON.

Listing the Available APIs

Running the following API returns a list of available APIs under /v1:

```
https://zvm_ip:port/v1/
```

The following output is generated:

```
[{"href":"https://10.100.0.51:9669/v1/events","rel":"down","type":"IEventsService"}, {"href":"https://10.100.0.51:9669/v1/vpgs","rel":"down","type":"IVpgService"}, {"href":"https://10.100.0.51:9669/v1/vms","rel":"down","type":"IVmService"}, {"href":"https://10.100.0.51:9669/v1/vras","rel":"down","type":"IVraService"}, {"href":"https://10.100.0.51:9669/v1/peersites","rel":"down","type":"IPeerSitesService"}, {"href":"https://10.100.0.51:9669/v1/session","rel":"down","type":"ISessionService"}, {"href":"https://10.100.0.51:9669/v1/tasks","rel":"down","type":"ITasksService"}, {"href":"https://10.100.0.51:9669/v1/serviceprofiles","rel":"down","type":"IServiceProfilesService"}, {"href":"https://10.100.0.51:9669/v1/virtualizationsites","rel":"down","type":"IVirtualizationSitesService"}, {"href":"https://10.100.0.51:9669/v1/zorgs","rel":"down","type":"IZorgsService"}, {"href":"https://10.100.0.51:9669/v1/localsite","rel":"down","type":"ILocalSiteService"}, {"href":"https://10.100.0.51:9669/v1/alerts","rel":"down","type":"IAlertsService"}]
```

Where:

- zvm_ip** The IP address of the Zerto Virtual Manager where the API is run.
- port** The port to access the Zerto Virtual Manager. The default port is 9669.
- href** The URL used.
- rel** The next path level for the API relative to the current path.
- type** The API interface service.

Filtering Information Retrieved By an API

Information retrieved by many of the APIs can be filtered. The filter parameters are optional and any combination of these parameters is valid. When more than one filter is applied, the AND operand is used. The Help page lists the filters for a specific API. For details, refer to “Getting Help for an API”, below.

Getting Help for an API

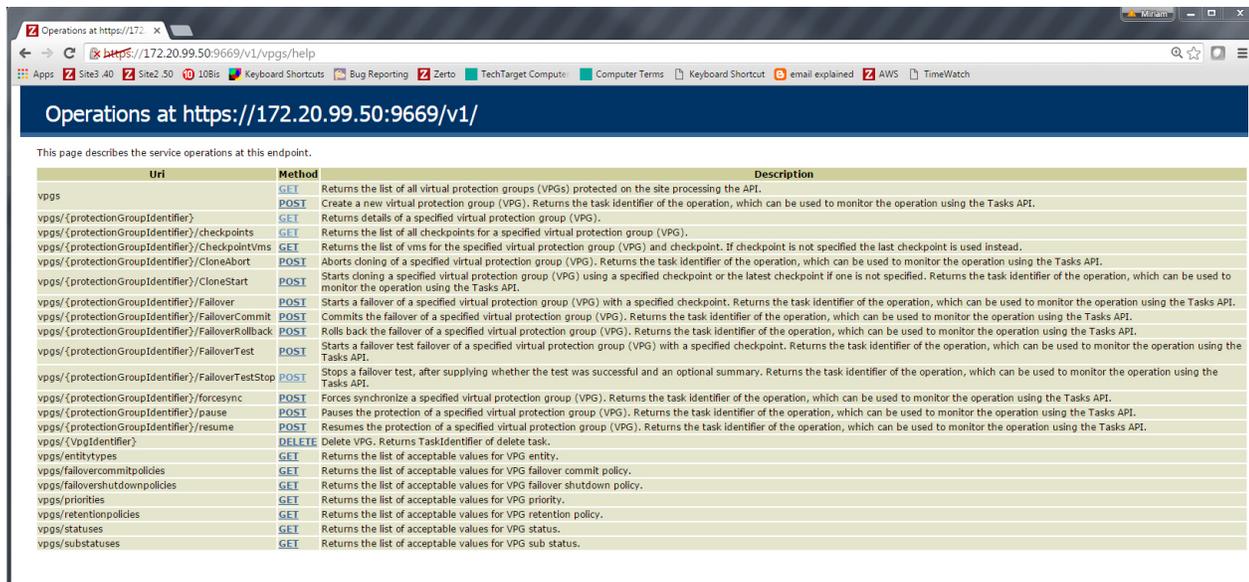
Help about each v1 API is available, using the following URL:

```
https://zvm_ip:port/v1/API/help
```

Where:

- zvm_ip** The IP address of the Zerto Virtual Manager where the report is run.
- port** The port to access the Zerto Virtual Manager. The default port is 9669.
- API** The name of the API for which help is required, for example `events` or `vras`.

The available methods are returned. For example, the `vpgs` API has the following response:



Drilling-down on a method returns an example response in both XML and JSON formats and the complete XML schema. For example, the `/v1/` GET method returns the following response:

Returns the list of ZVM API services

Url: `https://106.18.206.12:9669/v1/`

HTTP Method: GET

Message direction	Format	Body
Request	N/A	The Request body is empty.
Response	Xml	Example,Schema
Response	Json	Example

The following is an example response Xml body:

```
<ArrayOfLink_String xmlns="http://schemas.zerto.com/zvm/api">
  <Link_String>
    <href>String content</href>
    <rel>String content</rel>
    <type>String content</type>
  </Link_String>
  <Link_String>
    <href>String content</href>
    <rel>String content</rel>
    <type>String content</type>
  </Link_String>
</ArrayOfLink_String>
```

The following is an example response Json body:

```
[{
  "href":"String content",
  "rel":"String content",
  "type":"String content"
}]
```

The following is the response Xml Schema:

```
<xs:schema xmlns:tns="http://schemas.zerto.com/zvm/api" elementFormDefault="qualified"
targetNamespace="http://schemas.zerto.com/zvm/api" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="Link_String">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:Link">
        <xs:sequence />
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="Link_String" nillable="true" type="tns:Link_String" />
  <xs:complexType name="Link">
    <xs:annotation>
      <xs:appinfo>
        <GenericType Name="Link" Namespace="http://schemas.zerto.com/zvm/api"
xmlns="http://schemas.microsoft.com/2003/10/Serialization/">
          <GenericParameter Name="a:string" Namespace="http://www.w3.org/2001/XMLSchema" />

```

Ending a Session

End a session with the following URL and the HTTP DELETE request:

```
https://zvm_ip:port/v1/session
```

Note: If a session is dormant for thirty minutes, the session is automatically terminated.

Managing VPGs

The Zerto RESTful APIs includes an API that enables you to manage the creation and editing of VPGs programmatically.

The following topics are described in this section:

- [“An Introduction to the vpgSettings API”, below](#)
- [“How Does the vpgSettings API Work”, on page 11](#)
- [“Using the APIs”, on page 7](#)

- [“Short Outlines of How to Manage a VPG”, on page 12](#)
- [“A First Time Tutorial Using the vpgSettings API”, on page 15](#)
- [“Getting Help for an API”, on page 9](#)

An Introduction to the vpgSettings API

You can manage VPGs using both the `/v1/vpgs` API or the `/v1/vpgSettings` API. Use the `/v1/vpgs` API to perform actions on a VPG, such as failing over a VPG, cloning a VPG or testing a VPG. Use the `/v1/vpgSettings` API to manage the definition of a VPG, including editing the VPG definition and adding or removing virtual machines from a VPG.

Use the `vpgSettings` API to do the following:

- Create a new VPG.
- Display values in an existing VPG.
- Edit existing values in a VPG.

What is Supported

The **vpgSettings** API works in the following environments:

- vCenter Server
- Hyper-V
- vCenter Server to Hyper-V and Hyper-V to vCenter Server
- vCloud Director to vCloud Director
- Running on the protected site
- Running on the recovery site
- Preseeding
- Virtual machines with RDM disks

What is Not Supported

The **vpgSettings** API does not support the following:

- Setting backup
- AWS
- Azure

How Does the vpgSettings API Work

The definition of a VPG can be described by the set of values. The `vpgSettings` API enables managing this set of values. All the VPG settings are managed in a VPG settings object, which is saved in memory. This object is managed during a session and used to either create a VPG or update an existing VPG.

Managing a VPG using the `vpgSettings` API involves the following steps:

1. Create a VPG settings object.
2. Manipulate the VPG settings object to include the values you want.
3. Commit the VPG settings object to update the VPG definition in the Zerto Virtual Manager using the values from the VPG settings object in the memory.

The VPG settings object uses an identifier, the `vpgSettingsIdentifier`. This identifier is not the same as the VPG identifier used to identify an existing VPG.

To ensure uniqueness, you supply identifiers to the `vpgSettings` API and not names. To retrieve identifiers to use in the `vpgSettings` API, use other Zerto RESTful APIs. For example, to retrieve the recovery network identifiers for failover and failover test networks, use the `virtualizationsites/{SITEIDENTIFIER}/networks` API to return both the network names and identifiers. In the `vpgSettings` API, you use the network identifier and not the name. In the same way, use the `virtualizationsites/{SITEIDENTIFIER}/vms` API to return the identifiers of all unprotected virtual machines in a site, and use these identifiers in the `vpgSettings` API to specify the virtual machines to add to a VPG or to protect in a new VPG.

Using the vpgSettings API

The vpgSettings API is exposed over HTTPS and requires a session running with basic authorization. The username and password authorization used must be a valid username and password either for the Windows machine where the Zerto Virtual Manager is installed or for the hypervisor manager, VMware vCenter Server or Microsoft SCVMM, accessed by the Zerto Virtual Manager. In both cases the Zerto Virtual Manager is the Zerto Virtual Manager where the APIs will run.

Using the username and password either for the Windows machine where the Zerto Virtual Manager is installed or for the hypervisor manager, VMware vCenter Server or Microsoft SCVMM, accessed by the Zerto Virtual Manager, you can establish a session by posting the following URL:

```
https://zvm_ip:port/v1/session/add
```

A session identifier, x-zerto-session, is returned as part of the response header and the session is established. The session identifier is used in the client code with every API call for the duration of the session.

The APIs can be consumed by applications implemented in different technologies in a stateless manner.

Data returned is formatted either as JSON or as XML as set by the consumer. By default, data that is returned for the v1 APIs is formatted as JSON.

An API session times out after 30 minutes of inactivity. A VPG settings object is automatically deleted from memory in the following situations:

- When a session times out.
- When the VPG settings object is not used in a session for 30 minutes, even if the session is still active.
- When the VPG settings object is committed.

Short Outlines of How to Manage a VPG

You manage a VPG using the vpgSettings API by using multiple methods. This section outlines the basic use of the vpgSettings API to perform different VPG functions:

- [Creating a VPG](#)
- [Updating a VPG](#)
- [Adding a Virtual Machine to a VPG](#)
- [Resetting Values in a VPG Settings Object](#)
- [Deleting a Virtual Machine from a VPG](#)
- [Deleting the VPG Settings Object](#)

Creating a VPG

When creating a VPG the set of values are specified and saved as a VPG settings object in the API session. To update the Zerto Virtual Manager with the settings, you commit the object.

You create the VPG settings object by executing the vpgSettings API with the POST method and the necessary request body.

```
https://zvm_ip:port/v1/vpgsettings
```

The request body specifies all the details required for the VPG, details of which are in [“VPGs: POST”, on page 152](#).

You can create a skeleton VPG settings object by using the following request body:

```
{ }
```

You can then edit the response body with the required values and pass the completed JSON as a new request body.

Executing this API creates the object settings and returns the vpgSettingsIdentifier in the response body. To create the VPG in the Zerto Virtual Manager, you have to commit the changes using the following API, with the POST method:

```
https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/commit
```

For more details, refer to [“To create a VPG:”, on page 15](#).

Updating a VPG

When editing a VPG, you first get the VPG settings as an object using the `vpgIdentifier` to create a new `vpgSettingsIdentifier`. The settings for the VPG are then modified as required and then the VPG settings object with the changes is committed to update the Zerto Virtual Manager with the changed settings. For example, the following URL with a GET method retrieves the VPG identifier that can then be used to generate a `vpgSettingsIdentifier` for the settings object for the VPG:

```
https://zvm_ip:port/v1/vpgs
```

Details of the VPG are returned including the VPG identifier, which is then used in the request body of the `vpgSettings` URL, using a POST method:

```
https://zvm_ip:port/v1/vpgsettings
```

The request body is similar to the following, in JSON format:

```
{
  "VpgIdentifier": "49b189ff-dcd7-4544-a25d-356bea6c6676"
}
```

The `vpgSettingsIdentifier` is returned in the response body. You can use this identifier to retrieve the settings object for the VPG, using a GET method:

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33
```

You update the VPG settings object by executing the relevant API. For example to update any of the basic settings, you use the `vpgsettings/vpgSettingsIdentifier/basic` API with the PUT method and the necessary request body.

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33/basic
```

In the following example, the request body specifies that the priority is changed to high and the journal history is changed to 10 hours:

```
{
  "JournalHistoryInHours": 10,
  "Priority": "High"
}
```

Executing this API changes the object settings. To update the Zerto Virtual Manager with the changed settings, you have to commit the changes using the following API, with the POST method:

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33/commit
```

The task identifier for the update is returned in the response body and the settings object is deleted.

Note: Changes to all the VPG settings, such as the expected RPO, the are performed in the same way as described here.

For more details, refer to ["To update an existing VPG:", on page 18.](#)

Adding a Virtual Machine to a VPG

The procedure to add a virtual machine to an existing VPG is the same as updating a VPG, described above, but a POST method is used instead of a PUT method to update the settings object. After the settings object is updated with the new information, the object must be committed, also using the POST method. For more details, refer to ["To add a virtual machine to the VPG:", on page 19.](#)

Resetting Values in a VPG Settings Object

To reset a value in a VPG settings object, do the following:

1. Get the object and save the response.
2. Delete the section of the VPG settings object, using the **DELETE** method.
3. Add the new value in the VPG settings object using the **PUT** method.
4. Commit the change using the **POST** method.

Note: Mandatory parameters that do not have a default value must be set using the PUT command.

Example 1: Resetting the Priority to the Default Value

1. Retrieve the basic settings in the VPG settings object using the following URL with the **GET** method:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/basic`
2. Save the response body and then delete the settings in the current VPG settings object, using the same URL but with the **DELETE** object:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/basic`
3. Update the basic settings with the reset priority by changing the value of priority setting in the new request body, as follows:

```
{
  "JournalHistoryInHours": 4,
  "Name": "test-using-API1",
  "Priority": null,
  "ProtectedSiteIdentifier": "6c36720e-b32d-44de-9600-042ce5268d0d",
  "RecoverySiteIdentifier": "02159615-16d8-40e0-87f8-2fe669bf414f",
  "RpoInSeconds": 300,
  "ServiceProfileIdentifier": null,
  "TestIntervalInMinutes": 262080,
  "UseWanCompression": true,
  "ZorgIdentifier": null
}
```

4. Update the VPG settings object using the following URL with the **PUT** method:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/basic`
5. Commit the settings to update the VPG using the following URL with the **POST** method:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/commit`

Example 2: Change Journal Settings

1. Retrieve the journal settings object using the following URL with the **GET** method:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/journal`
2. Save the response body and then delete the settings, using the same URL but with the **DELETE** object:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/journal`
3. You can now update the journal settings by changing the relevant values in the new request body.
Use the following URL with the **PUT** method to update the settings:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/journal`
For example, the storage to use and the hard limit and warning threshold are unlimited, as follows:

```
{
  "DatastoreIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.datastore-201",
  "Limitation": {
    "HardLimitInMB": 0,
    "HardLimitInPercent": 0,
    "WarningThresholdInMB": 0,
    "WarningThresholdInPercent": 0
  }
}
```

4. Use the following URL with the **POST** method to commit the settings:
`https://zvm_ip:port/v1/vpgsettings/vpgSettingsIdentifier/commit`

Deleting a Virtual Machine from a VPG

The procedure to delete a virtual machine from an existing VPG requires that you first get the VPG settings as an object using the `vpgIdentifier` to create a new `vpgSettingsIdentifier`. The virtual machine identifier to remove from the VPG is then sent with the DELETE method to delete the virtual machine from the VPG settings:

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33/vms/13d550a4-24af-4914-9ca4-09f8619eb703.vm-153
```

Executing this API changes the object settings. To update the Zerto Virtual Manager with the changed settings, you have to commit the changes using the following API, with the POST method:

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33/commit
```

The task identifier for the update is returned in the response body and the settings object is deleted.

Note: The virtual machine is deleted from the VPG but the target disks in the recovery site are kept.

Deleting the VPG Settings Object

A VPG settings object is destroyed in the following cases:

- When a session times out.
- When the object is not used in a session for 30 minutes, even if the session is still active.
- When the object is committed.
- By executing the `vpgSettings` API for the object, with a DELETE method:

```
https://zvm_ip:port/v1/vpgsettings/ac942f3f-8e40-4d5f-a782-8cfebe80ed33
```

A First Time Tutorial Using the vpgSettings API

This walk-through uses the URLs that are passed to create a session and then edit an existing VPG. The examples were tested using a REST client, such as Postman, used in Google Chrome, and available from <http://www.getpostman.com/>.

In all the example code, the `zvm_ip` is the IP of the Zerto Virtual Manager where the API will run and both the content type and accept type is `application/json`.

To start a session:

- Use the following URL with a POST method and basic authentication to access the hypervisor management tool, vCenter Server or the Microsoft SCVMM.

```
https://zvm_ip:9669/v1/session/add
```

The Response Header that is returned is similar to the following:

```
Content-Length: 0  
Date: Mon, 29 Jun 2015 08:50:58 GMT  
Server: Microsoft-HTTPAPI/2.0  
x-zerto-session: 9UDQD6RG7YF33QJLWQXGJV8C453N277NA22P7FSNWVZCJTWCBRHQ
```

The fourth line contains the value of `x-zerto-session`, which is used in all subsequent calls.

To create a VPG:

1. Create a skeleton VPG settings object, using the following URL with a POST method:

```
https://zvm_ip:9669/v1/vpgsettings
```

and the following request body:

```
{ }
```

The API must be run on the protected site.

The `vpgSettingsIdentifier` is returned.

2. Get the skeleton structure for the VPG settings object using the following URL with a GET method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677
```

Where 3864850e-1580-4518-95d1-f88a4d97c677 is the vpgSettingsIdentifier returned in step 1.

3. Set in the basic parameters as required, at least the following fields:

- JournalHistoryInHours
- Name
- Priority
- ProtectedSiteIdentifier
- RecoverySiteIdentifier
- RpoInSeconds
- TestIntervallInMinutes.

Get the RecoverySiteIdentifier by running the virtualizationsites API, using the following URL with the GET method:

```
https://zvm_ip:9669/v1/virtualizationsites
```

Note: If required, the ServiceProfileIdentifier can be retrieved using the /v1/serviceprofiles API with the GET method and the ZorgIdentifier can be retrieved using the /v1/zorgs API with the GET method.

4. Get the structures for the Journal, Networks and Recovery sections in the skeleton by copying the Json request bodies from the examples in the help, accessed by running the following URL:

```
https://zvm_ip:9669/v1/vpgsettings/help
```

For more details, refer to ["Getting Help for an API", on page 9](#).

5. Use the virtualizationsites API to get the following values from the recovery site to add to the skeleton settings:

- DatastoreIdentifier for both the journal and recovery storage
- DefaultNetworkIdentifier, for both the failover and move network and for the test failover network
- DefaultFolderIdentifier
- DefaultHostClusterIdentifier or DefaultHostIdentifier or ResourcePoolIdentifier

6. Set the journal limitations as required. A zero, 0, value means unlimited.

7. Get the identifiers for the virtual machines that are not protected, with the virtualizationsites/vms API and add the list of virtual machines you want protected in the VPG, as in the following example

```
[{"VmIdentifier": "13d550a4-24af-4914-9ca4-09f8619eb703.vm-147"}]
```

8. Remove the vpgIdentifier and vpgSettingsIdentifier lines from the skeleton.

9. Create a new VPG settings object by using the following URL with the POST method:

```
https://zvm_ip:9669/v1/vpgsettings
```

and the updated skeleton for the request body.

10. Create the VPG by committing the updated skeleton, using the following URL with a POST method:

```
https://zvm_ip:9669/v1/vpgsettings/a965180f-1375-6545-9d21-556a4a41c871/commit
```

The task identifier is returned which can then be used with the /v1/tasks/{taskIdentifier} API to monitor the task progress. The settings object for this VPG is also destroyed.

Note: For details about using virtualizationsites APIs, refer to ["Virtualization Sites API", on page 115](#).

The following is an example VPG settings object skeleton after it has been edited:

```
{
  "Backup": null,
  "Basic": {
    "JournalHistoryInHours": 4,
    "Name": "MyFirstVpg",
    "Priority": "Medium",
    "ProtectedSiteIdentifier": "6c36720e-b32d-44de-9600-042ce5268d0d",
    "RecoverySiteIdentifier": "02159615-16d8-40e0-87f8-2fe669bf414f",
    "RpoInSeconds": 300,
    "ServiceProfileIdentifier": null,
    "TestIntervalInMinutes": 262080,
    "UseWanCompression": true,
    "ZorgIdentifier": null
  },
  "BootGroups": {
    "BootGroups": [
      {
        "BootDelayInSeconds": 0,
        "BootGroupIdentifier": "00000000-0000-0000-0000-000000000000",
        "Name": "Default"
      }
    ]
  },
  "Journal": {
    "DatastoreIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.datastore-201",
    "Limitation": {
      "HardLimitInMB": 0,
      "HardLimitInPercent": 0,
      "WarningThresholdInMB": 0,
      "WarningThresholdInPercent": 0
    }
  },
  "Networks": {
    "Failover": {
      "Hypervisor": {
        "DefaultNetworkIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.network-34"
      }
    },
    "FailoverTest": {
      "Hypervisor": {
        "DefaultNetworkIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.network-34"
      }
    }
  },
  "Recovery": {
    "DefaultDatastoreIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.datastore-201",
    "DefaultFolderIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.group-v22",
    "DefaultHostClusterIdentifier": null,
    "DefaultHostIdentifier": "841c3a57-e4bb-4e53-b045-47e95da4ece9.host-30",
    "ResourcePoolIdentifier": null
  },
}
```

```
"Scripting": {
  "PostBackup": null,
  "PostRecovery": {
    "Command": null,
    "Parameters": null,
    "TimeoutInSeconds": 0
  },
  "PreRecovery": {
    "Command": null,
    "Parameters": null,
    "TimeoutInSeconds": 0
  }
},
"Vms": [{"VmIdentifier": "13d550a4-24af-4914-9ca4-09f8619eb703.vm-147"}]
}
```

To update an existing VPG:

1. Use the following URL with a **GET** method and the x-zerto-session added to the header to retrieve the VPG identifiers for existing VPGs. A VPG identifier is then used to create the VPG settings object:

```
https://zvm_ip:9669/v1/vpgs
```

The response to this command is a list of VPGs with information about each VPG.

2. Copy the relevant VpgIdentifier from the response to use in the request body of another API, and create a VPG settings object for this VPG. The request body contains code similar to the following:

```
{
  "VpgIdentifier": "b030cbc3-3cd1-4a3b-9378-afd2a6e0ee88"
}
```

Note: The content type for this example is application/json.

Use the following URL with a **POST** method to create the VPG settings object for the VPG:

```
https://zvm_ip:9669/v1/vpgsettings
```

The response to this command is the vpgSettingsIdentifier and the VPG settings object is created.

3. Get the VPG settings object for review, using the following URL with a **GET** method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677
```

Where 3864850e-1580-4518-95d1-f88a4d97c677 is the vpgSettingsIdentifier returned in step 2.

4. Updating the VPG is done using the following steps:

- a) Get the current settings for the part of the VPG you want to update. For example, to update the basic values, use the following URL with a GET method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/basic
```

Where 3864850e-1580-4518-95d1-f88a4d97c677 is the vpgSettingsIdentifier returned in step 2.

The following example response body is returned:

```
{
  "JournalHistoryInHours": 4,
  "Name": "Test-Using-API",
  "Priority": "Medium",
  "ProtectedSiteIdentifier": "6c36720e-b32d-44de-9600-042ce5268d0d",
  "RecoverySiteIdentifier": "02159615-16d8-40e0-87f8-2fe669bf414f",
  "RpoInSeconds": 540,
  "ServiceProfileIdentifier": null,
  "TestIntervalInMinutes": 131040,
  "UseWanCompression": true,
  "ZorgIdentifier": null
}
```

- b) Use the response body from step 4 to create the request body for the update with the required changes and then use this request body with the following URL with a PUT method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/basic
```

The following example request body changes the priority, journal history and compression settings for the VPG:

```
{
  "JournalHistoryInHours": 10,
  "Priority": "High",
  "UseWanCompression": false,
}
```

- c) You can verify that the VPG settings object has been updated by rerunning the following URL with a GET method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/basic
```

- d) Update the VPG with these new settings by committing the change, using the following URL with a POST method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/commit
```

The task identifier is returned which can then be used with the `/v1/tasks/{taskId}` API to monitor the task progress. The settings object for this VPG is also destroyed.

To add a virtual machine to the VPG:

1. Get the identifier for the protected site, for the virtual machines that are not protected, with the `/v1/virtualizationsites` or `/v1/localsite` API. For example, using the following URL with a GET method:

```
https://zvm_ip:9669/v1/localsite
```

The API must be run on the protected site.

2. Get the identifiers for the virtual machines that are not protected, with the `/v1/virtualizationsites/vms` API, using the following URL with a GET method:

```
https://zvm_ip:9669/v1/virtualizationsites/6c36720e-b32d-44de-9600-042ce5268d0d/vms
```

Where `6c36720e-b32d-44de-9600-042ce5268d0d` is the local site identifier, returned in step 1. The following example response body is returned:

```
[
  {
    "VmIdentifier": "13d550a4-24af-4914-9ca4-09f8619eb703.vm-147",
    "VmName": "Operations"
  },
  {
    "VmIdentifier": "13d550a4-24af-4914-9ca4-09f8619eb703.vm-148",
    "VmName": "HR"
  }
]
```

3. Updating the VPG to include the virtual machine you want to add, by first creating the VPG settings object as described in steps 1 to 3 in ["To update an existing VPG:"](#), above and then using the following URL with a POST method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/vms
```

Where `3864850e-1580-4518-95d1-f88a4d97c677` is the `vpgSettingsIdentifier`. The Request Body contains the following:

```
{
  "VmIdentifier": "13d550a4-24af-4914-9ca4-09f8619eb703.vm-147"
}
```

Where `13d550a4-24af-4914-9ca4-09f8619eb703.vm-147` is the virtual machine identifier to add to the VPG.

4. Update the VPG with the virtual machine by committing the change, using the following URL with a POST method:

```
https://zvm_ip:9669/v1/vpgsettings/3864850e-1580-4518-95d1-f88a4d97c677/commit
```

The task identifier is returned which can then be used with the `/v1/tasks/{taskId}` API to monitor the task progress. The settings object for this VPG is also destroyed.

The APIs can be consumed by applications implemented in different technologies in a stateless manner.

Data returned is formatted either as JSON or as XML as set by the consumer. By default, data that is returned for the v1 APIs is formatted as JSON.

Code must include the necessary authentication to run, including the username and password fields that are used by the Zerto Virtual Manager to access the vCenter Server and establishing a session.

PowerShell Scripts

Note: To invoke Zerto APIs from PowerShell, you must install PowerShell version 4.0 or higher.

The following code sample gets a list of VPGs from a specific Zerto Virtual Manager, and gets a VPG identifier based on a VPG name.

```

$strZVMIP = "{ZVM IP}"
$strZVMPort = "{ZVM HTTPS port}"
$strZVMUser = "{ZVM user}"
$strZVMPwd = "{ZVM user password}"
## Perform authentication so that Zerto APIs can run. Return a session identifier that needs to
be inserted in the header for subsequent requests.
function getxZertoSession ($userName, $password){
    $baseUrl = "https://" + $strZVMIP + ":"+$strZVMPort
    $xZertoSessionURL = $baseUrl + "/v1/session/add"
    $authInfo = ("{}:{}".format $userName, $password)
    $authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
    $authInfo = [System.Convert]::ToBase64String($authInfo)
    $headers = @{"Authorization"="Basic {}".format $authInfo}
    $contentType = "application/json"
    $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers -Method
    POST -Body $body -ContentType $contentType

    # $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers -Body
    $body -Method POST
    return $xZertoSessionResponse.headers.get_item("x-zerto-session")
}

#Extract x-zerto-session from the response, and add it to the actual API:
$xZertoSession = getxZertoSession $strZVMUser $strZVMPwd
$zertoSessionHeader = @{"x-zerto-session"=$xZertoSession}
$zertoSessionHeader_xml = @{"Accept"="application/xml"
"x-zerto-session"=$xZertoSession}

#Invoke the Zerto API:
$vpgListApiUrl = "https://" + $strZVMIP + ":"+$strZVMPort+"/v1/vpgs"
$VPGNAME = "MyApp"
#Iterate with XML:
$vpgListXML = Invoke-RestMethod -Uri $vpgListApiUrl -Headers $zertoSessionHeader_xml
foreach ($vpg in $vpgListXML.ArrayOfVpgApi.VpgApi){
    if ($vpg.VpgName -eq $VPGNAME){
        $tmpVpgIdentifier = $vpg.VpgIdentifier
        break
    }
}
#Iterate with JSON:
$vpgListJSON = Invoke-RestMethod -Uri $vpgListApiUrl -Headers $zertoSessionHeader
foreach ($vpg in $vpgListJSON){
    if ($vpg.VpgName -eq $VPGNAME){
        $tmpVpgIdentifier = $vpg.VpgIdentifier
        break
    }
}
write-host $tmpVpgIdentifier
##End of script

```

Zerto provides an extensive set of RESTful APIs to enable clients to manage Zerto Virtual Replication without using the Zerto User Interface.

This section describes how to invoke Zerto APIs using Windows PowerShell. It shows how to authenticate with the service and shows the different ways to send data to, and receive data from, the Zerto APIs.

Zerto RESTful APIs are divided into the following types:

- **Authentication**
- **HTTP requests**

If you intend to invoke Zerto APIs from PowerShell, you must install PowerShell version 4.0 or higher.

All references to Zerto RESTful APIs assume the following base URL:

```
https://zvm-ip:zvm-port/v1
```

Where:

- zvm-ip** The IP address of the Zerto Virtual Manager where the API is run.
- zvm-port** The port to access the Zerto Virtual Manager. The default port is 9669.

See the following sections:

- ["Authentication", on page 22](#)
- ["Using the x-zerto-session Variable", on page 23](#)
- ["Basic Invocation", on page 23](#)
- ["Input Format", on page 23](#)
- ["Output Format", on page 23](#)
- ["Examples", on page 23](#)

Authentication

To authenticate, invoke the following API:

```
https://zvm-ip:zvm-port/v1/session/add
```

The response to this request contains a variable called `x-zerto-session` that contains a unique session ID that is used in subsequent requests to APIs.

Authentication Sample

IMPORTANT: The scripts are provided by example only and are not supported under any Zerto support program or service.

The following code snippet shows an example of authentication.

```
$baseURL = "https://" + $strZVMIP + ":"+$strZVMPort
5 $xZertoSessionURL = $baseURL + "/v1/session/add"
1 $authInfo = ("{}:{}".format($userName,$password))
2 $authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
3 $authInfo = [System.Convert]::ToBase64String($authInfo)
4 $headers = @{"Authorization"="Basic {}".format($authInfo)}
$contentType = "application/json"
7 $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers
                                -Method POST -Body $body -ContentType $contentType
8 return $xZertoSessionResponse.headers.get_item("x-zerto-session")
```

The following list explains the authentication sample.

1. Create an authentication object array from the username and password.

```
$authInfo = ("{}:{}".format $userName,$password)
```

2. Convert the authentication object to UTF8.

```
$authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
```

3. Convert the information to base64 format.

```
$authInfo = [System.Convert]::ToBase64String($authInfo)
```

4. Build the basic authentication format into a header variable.

```
$headers = @{"Authorization"="Basic {}".format $authInfo}
```

5. Build the session request URL.

```
$xZertoSessionURL = $baseUrl + "/v1/session/add"
```

6. Authenticate the user's credentials. The field `contentType` authenticates a user's credentials.

```
$contentType = "application/json"
```

7. Invoke the HTTP request to the specified URL, given the authentication header. The response will contain a header with the `x-zerto-session` variable.

```
$xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers  
-Method POST -Body $body -ContentType $contentType
```

8. Extract the `x-zerto-session` value from the response headers.

```
$xZertoSessionResponse.headers.get_item("x-zerto-session")
```

Using the `x-zerto-session` Variable

Once you have obtained the `x-zerto-session` unique session identifier, build a header for subsequent HTTP requests containing the session identifier:

```
$zertSessionHeader = @{"x-zerto-session"=$xZertoSession}
```

where `$xZertoSession` holds the unique session identifier.

Basic Invocation

Running Zerto APIs from PowerShell is based on the `Invoke-RestMethod` command.

A basic invocation is similar to the following:

```
$vpgListApiUrl = "https://" + $strZVMIP + ":" + $strZVMPort + "/v1/vpgs"  
Invoke-RestMethod -Uri $vpgListApiUrl -Headers $zertSessionHeader
```

Input Format

If the request requires parameters that do not reside in the URL, such as POST requests, specify the input format type using the `-ContentType` argument and switch between XML and JSON.

Output Format

The output formats of the API requests can be parsed as XML or JSON. PowerShell offers additional formats to which the data can be converted. You also have the ability to save the response to a file.

Specify the output format type using the `-accept` header.

For example, running the `baseUrl/v1/VPGs` request returns a list of VPGs configured for a specific site.

Examples

Following are script examples.

IMPORTANT: The scripts are provided by example only and are not supported under any Zerto support program or service.

Example 1: Get Information

The following code sample gets a list of VPGs from a specific Zerto Virtual Manager, and gets a VPG identifier based on a VPG name.

```
$strZVMIP = "{ZVM IP}"
$strZVMPort = "{ZVM HTTPS port}"
$strZVMUser = "{ZVM user}"
$strZVMPwd = "{ZVM user password}"
## Perform authentication so that Zerto APIs can run. Return a session identifier that needs to
be inserted in the header for subsequent requests.
## For more details, see Zerto Virtual Replication RESTful API Reference Guide.
function getxZertoSession ($userName, $password){
    $baseUrl = "https://" + $strZVMIP + ":"+$strZVMPort
    $xZertoSessionURI = $baseUrl + "/v1/session/add"
    $authInfo = ("{0}:{1}" -f $userName, $password)
    $authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
    $authInfo = [System.Convert]::ToBase64String($authInfo)
    $headers = @{Authorization=("Basic {0}" -f $authInfo)}
    $contentType = "application/json"
    $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURI
        -Headers $headers -Method POST -Body $body -ContentType $contentType

    # $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURI
        -Headers $headers -Body $body -Method POST
    return $xZertoSessionResponse.headers.get_item("x-zerto-session")
}

#Extract x-zerto-session from the response, and add it to the actual API:
$xZertoSession = getxZertoSession $strZVMUser $strZVMPwd
$zertoSessionHeader = @{"x-zerto-session"=$xZertoSession}

#Invoke the Zerto API:
$vpGListApiUrl = "https://" + $strZVMIP + ":"+$strZVMPort+"/v1/vpGs"
$VPGNAME = "MyApp"
#Iterate with XML:
$vpGListXML = Invoke-RestMethod -Uri $vpGListApiUrl -Headers $zertoSessionHeader
    -ContentType "application/xml"

foreach ($vpG in $vpGListXML.ArrayOfVpgApi.VpgApi){
    if ($vpG.VpgName -eq $VPGNAME){
        $tmpVpgIdentifier = $vpG.VpgIdentifier
        break
    }
}

#Iterate with JSON:
$vpGListJSON = Invoke-RestMethod -Uri $vpGListApiUrl -Headers $zertoSessionHeader
    -ContentType "application/json"

foreach ($vpG in $vpGListJSON){
    if ($vpG.VpgName -eq $VPGNAME){
        $tmpVpgIdentifier = $vpG.VpgIdentifier
        break
    }
}

write-host $tmpVpgIdentifier
##End of script
```

Example 2: Perform an Action

The following code sample creates a VPG with a list of VMs specified in a file.

Both pre-recovery and post-recovery scripts are run by the ZVM service on the ZVM machine. The account running the ZVM service is the account that will run the scripts when they are executed

```
#Parameters Section
$strZVMIP = "{Zerto Virtual Manager IP}"
$strZVMPort = "{Zerto Virtual Manager HTTPS port}"
$strZVMUser = "{Zerto Virtual Manager user}"
$strZVMPw = "{Zerto Virtual Manager user password}"
$sourceSiteName = "{protected site name}"
$targetSiteName = "{recovery site name}"
$targetDataStoreName = "{recovery storage name in the recovery site for the VPG}"
$vpName = "{name of the VPG you want to create}"
$unProtectedVMsCSVFile = "name of the file that has the names of the VMs to add to the VPG. The
file must not have headers, and the VM names must be separated with commas, without spaces
between the names. For example, the first row in the file would look like this: vm1,vm2,vm3}"
$BASEURL = "https://" + $strZVMIP + ":"+$strZVMPort+"/v1/" #base URL for all APIs

$zertoSessionHeader_xml = @"Accept="application/xml"
"x-zerto-session"=$xZertoSession}
##Function Definitions
#Get a site identifier by invoking Zerto APIs, given a Zerto API session and a site name:
function getSiteIdentifierByName ($sessionHeader, $siteName){
    $url = $BASEURL + "virtualizationsites"
    $response = Invoke-RestMethod -Uri $url -Headers $zertoSessionHeader_xml
    ForEach ($site in $response.ArrayOfVirtualizationSiteApi.VirtualizationSiteApi) {
        if ($site.VirtualizationSiteName -eq $siteName){
            return $site.SiteIdentifier
        }
    }
}

#Get a storage identifier by invoking Zerto APIs, given a Zerto API session and a storage name:
function getDatastoreIdentifierByName ($sessionHeader, $siteIdentifier, $datastoreName){
    $url = $BASEURL + "virtualizationsites/"+$siteIdentifier + "/datastores"
    $response = Invoke-RestMethod -Uri $url -Headers $zertoSessionHeader_xml
    ForEach ($datastore in $response.ArrayOfDatastoreNativeApi.DatastoreNativeApi) {
        if ($datastore.DatastoreName -eq $datastoreName){
            return $datastore.DatastoreIdentifier
        }
    }
}

#Get unprotected VM identifiers by invoking Zerto APIs, given a Zerto API session, a site
identifier, and a list of VMs to add to the VPG:
function getUnprotectedVMsIdentifiers($sessionHeader, $siteIdentifier, $VMNames){
    $url = $BASEURL + "virtualizationsites/"+$siteIdentifier + "/vms"
    $unprotectedVMsIdentifiers = @()
    $response = Invoke-RestMethod -Uri $url -Headers $zertoSessionHeader_xml
    ForEach ($vm in $response.ArrayOfVmNativeApi.VmNativeApi) {
        if ($VMNames.IndexOf($vm.VmName) -gt -1){
            $unprotectedVMsIdentifiers+=($vm.VmIdentifier)
        }
    }
    return $unprotectedVMsIdentifiers
}
```

```
#Authenticate with Zerto APIs: create a Zerto API session and return it, to be used in other APIs
function getZertoXSession () {
    #Authenticate with Zerto APIs:
    $xZertoSessionURL = "https://" + $strZVMIP + ":"+$strZVMPort+"/v1/session/add"
    $authInfo = ("{}:{}".format $strZVMUser,$strZVMPw)
    $authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
    $authInfo = [System.Convert]::ToBase64String($authInfo)
    $headers = @{"Authorization"="Basic {}".format $authInfo}
    $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers -Method
    POST
    #Extract x-zerto-session from the response and add it to the actual API:
    $xZertoSession = $xZertoSessionResponse.headers.get_item("x-zerto-session")
    return $xZertoSession
}
```

```
#Build VM elements to be added to the VPGs API, based on a list of VM identifiers
function buildVMsElement ($VMs) {
    $response = "<VmsIdentifiers>"

    ForEach ($vm in $VMs) {
        $response+="<string
xmlns="+'"http://schemas.microsoft.com/2003/10/Serialization/Arrays"'+">"+$vm+"</string>"
    }
    $response += "</VmsIdentifiers>"
    return $response
}
```

```
#Script starts here:
$xZertoSession = getZertoXSession

$zertoSessionHeader = @{"x-zerto-session"=$xZertoSession}

$sourceSiteIdentifier = getSiteIdentifierByName $zertoSessionHeader $sourceSiteName

$targetSiteIdentifier = getSiteIdentifierByName $zertoSessionHeader $targetSiteName

$dataStoreIdentifier = getDataStoreIdentifierByName $zertoSessionHeader $targetSiteIdentifier
$targetDataStoreName

$unprotectedVMNames = Get-Content $unProtectedVMsCSVFile | %{$_.Split(",")}

$vmsIdentifiers = getUnprotectedVMsIdentifiers $zertoSessionHeader $sourceSiteIdentifier
$unprotectedVMNames

$vmsIdentifiersElement = buildVMsElement $vmsIdentifiers
#Create the URL and body of the VPGs request:
$createVPGUrl = $BASEURL+"vpgs"
$vpgsRequestBody = "<VpgCreateDataApi xmlns="+'"http://schemas.zerto.com/zvm/api"'+">"
    + "<DataStoreIdentifier>"+$dataStoreIdentifier + "</DataStoreIdentifier>"
    + "<SourceSiteIdentifier>"+$sourceSiteIdentifier + "</SourceSiteIdentifier>"
    + "<TargetSiteIdentifier>"+$targetSiteIdentifier + "</TargetSiteIdentifier>"
    + $vmsIdentifiersElement + "<VpgName>"+$vpgName + "</VpgName> </VpgCreateDataApi>"
#Invoke the Zerto API:
Invoke-RestMethod -Uri $createVPGUrl -Headers $zertoSessionHeader
    -Body $vpgsRequestBody -ContentType "application/xml" -method POST
##End of script
```

This section provides reference material about the Zerto RESTful APIs.

All APIs

The following APIs are available:

API	SUBJECT OF API	METH- OD	DESCRIPTION
/v1/	List available APIs	GET	Retrieves the list of available Zerto v1 REST APIs. See "/v1/ API", on page 29 .
/v1/alerts	Alert information	GET	Retrieves information about Zerto alerts. See "Alerts API" and "Alerts: GET", on page 31 .
/v1/alerts	Alert actions	POST	Dismisses or undismisses an alert. See "Alerts API" and "Alerts: POST", on page 47 .
/v1/datastores	Datastores information	GET	Retrieves information about datastores. See "Datastores API", on page 47 .
/v1/events	Events	GET	Retrieves information about Zerto events. See "Events API", on page 54 .
/v1/flrs	File level recovery Information	GET, POST, DELETE	Retrieve information and manage file level recovery. See "File Level Recovery", on page 66 .
/v1/license	License	GET, POST, DELETE	Retrieve information about licenses and manage licensing. See "License API", on page 74 .
/v1/localsite	Local site information	GET	Retrieves information about the local site where the API is run. See "Local Site API", on page 78 .
/v1/peersites	Peer site information	GET	Retrieves information about the peer sites for the site where the API is run. See "Peer Sites API" and "Peersites - GET", on page 82 .
/v1/peersites	Peer site action	POST	Adds a peer site. See "Peer Sites API" and "Peersites - POST", on page 84 .
/v1/peersites	Peer site action	DELETE	Unpair a peer site. See "Peer Sites API" and "Peersites - POST", on page 84 .
/v1/Reports/recovery	Recovery report	GET	Retrieve information about recovery actions. See "Recovery Report API", on page 87 .

API	SUBJECT OF API	METHOD	DESCRIPTION
/v1/reports/resources	Run the resource report	GET	Generates resource information for the virtual machines being recovered to the site where the report is run. See “Resources Report API”, on page 92.
/v1/serviceprofiles	Service profiles	GET	Retrieves service profile information. See “Service Profiles API”, on page 100.
/v1/session	Session management	POST	Starts a session. See “Session API” and “Session: POST”, on page 103.
/v1/session	Session management	DELETE	Ends a session. See “Session API” and “Session: DELETE”, on page 103.
/v1/tasks	Task information	GET	Retrieves information about tasks run at a site. See “Tasks API”, on page 105.
/v1/virtualizationsites	Site information	GET	Retrieves information about the hypervisor site where the API is run and the paired hypervisor sites as well as information about the resources at a specified site. See “Virtualization Sites API”, on page 115.
/v1/vms	Protected virtual machine information	GET	Retrieves information about protected virtual machines. See “Protected VMs API”, on page 123.
/v1/volumes	Volumes information	GET	Retrieves information about volumes. See “Volumes API”, on page 132.
/v1/vpgs	VPG information	GET	Retrieves information about VPGs. See “VPGs API” and “VPGs: GET”, on page 138.
/v1/vpgs	VPG actions	POST	Performs actions on a VPG. See “VPGs API” and “VPGs: POST”, on page 152.
/v1/vpgs	VPG actions	DELETE	Deletes a VPG. See “VPGs API” and “VPGs: DELETE”, on page 159.
/v1/vpgSettings	Manage a VPG	GET	Manages a vpgSettings object. See “VPG Management API” and “VPG Settings: GET”, on page 163.
/v1/vpgSettings	Manage a VPG	POST	Performs actions on a vpgSettings object. See VPG Management API and “VPG Settings: POST”, on page 188.
/v1/vpgSettings	Manage a VPG	PUT	Enables editing a vpgSettings object. See VPG Management API and “VPG Settings: PUT”, on page 202.
/v1/vpgSettings	Manage a VPG	DELETE	Deletes a vpgSettings object. See VPG Management API and “VPG Settings: DELETE”, on page 223.
/v1/vras	VRA information	GET	Retrieves VRA information. See “VRAs API” and “VRAs: GET”, on page 226.
/v1/vras	VRA actions	POST	Performs actions on a VRA. See “VRAs API” and “VRAs: POST”, on page 230

API	SUBJECT OF API	METHOD	DESCRIPTION
/v1/vras	VRA actions	PUT	Enables editing a VRA. See “VRAs API” and “VRAs: PUT” , on page 234.
/v1/vras	VRA actions	DELETE	Deletes a VRA. See “VRAs API” and “VRAs: DELETE” , on page 236.
/v1/vras/changeRecoveryVra	Change recovery host of VMs	GET, POST, PUT	Changes the recovery host for all or some VMs. See “VRAs: Change Recovery VRA APIs” , on page 237
/v1/zorgs	ZORG information	GET	Retrieves ZORG information. See in “ZORGs API” , on page 246.
/v1/zsspSessions	ZSSP Sessions	GET, POST, DELETE	Retrieve information and Manage ZSSP Sessions. See “ZSSP Sessions API” , on page 248
vCD APIs	Manage vCD VPGs		View, create, update or delete vCD VPGs. See “Managing vCD APIs” , on page 251.
vSphere to vCD APIs	Manage vSphere to vCD VPGs	GET, POST, PUT	See “vSphere to vCD VPG Management APIs” on page 295
vSphere to Azure APIs	Manage vSphere to Azure VPGs	GET, POST, PUT	See “vSphere to Azure VPG Management APIs” on page 321

/v1/ API

[/v1/](#) returns the list of all Zerto RESTful v1 APIs.

URL

/v1/ APIs `https://zvm_ip:port/v1/`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

HTTP Method

GET

Security

The API is exposed over HTTPS. This API does not require logging in with authentication to run the API.

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/`.

```
[
  {
    "href": "String content",
    "rel": "String content",
    "type": "String content"
  }
  {
    "href": "String content",
    "rel": "String content",
    "type": "String content"
  }
]
```

XML Response Format

For the XML response format, see [“V1/ API XML Response Format”, on page 352](#).

Response Values

Response values for `https://zvm_ip:port/v1/`.

PARAMETER	DESCRIPTION
href	The URL used.
rel	The next path level for the API relative to the current path.
type	The API interface service.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Alerts API

`/v1/alerts` returns information about alerts and dismisses or undismisses a specific alert. The following API are available:

- [“Alerts: GET”, below](#)
- [“Alerts: POST”, on page 47](#)

PURPOSE	METHOD	URL
Information for all alerts	GET	<code>https://zvm_ip:port/v1/alerts</code>
Information for one alert	GET	<code>https://zvm_ip:port/v1/alerts/{alertId}</code>

PURPOSE	METHOD	URL
Valid values for alert entities	GET	<code>https://zvm_ip:port/v1/alerts/entities</code>
Valid values for alert help identifiers	GET	<code>https://zvm_ip:port/v1/alerts/helpidentifiers</code>
Valid values for alert levels	GET	<code>https://zvm_ip:port/v1/alerts/levels</code>
Dismisses an alert	POST	<code>https://zvm_ip:port/v1/alerts/{alertId}/dismiss</code>
Undismisses an alert	POST	<code>https://zvm_ip:port/v1/alerts/{alertId}/undismiss</code>

HTTP Methods

GET, POST

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Alerts: GET

Returns information about alerts.

URL

All alerts	<code>https://zvm_ip:port/v1/alerts</code>
Filtered alerts	<code>https://zvm_ip:port/v1/alerts?startDate={STARTDATE}&endDate={ENDDATE}&vpgIdentifier={VPGIDENTIFIER}&zorgIdentifier={ZORGIDENTIFIER}&siteIdentifier={SITEIDENTIFIER}&level={LEVEL}&entity={ENTITY}&helpIdentifier={HELPIDENTIFIER}&isDismissed={ISDISMISSED}</code>
Single alert	<code>https://zvm_ip:port/v1/alerts/{alertId}</code>
Valid alert entities	<code>https://zvm_ip:port/v1/alerts/entities</code>
Valid alert help identifiers	<code>https://zvm_ip:port/v1/alerts/helpidentifiers</code>
Valid alert levels	<code>https://zvm_ip:port/v1/alerts/levels</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

alertId	The identifier of the alert for which information is returned or which is dismissed or undismissed
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all alerts are returned. Filters are not case-sensitive.
Filter	Description
startDate	The starting date for the list of events, supplied as a date with the format of the Zerto Virtual Manager where the API runs, for example, <code>yyyy-mm-dd</code> . You can also specify a local time with the following format: <code>yyyy-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
endDate	The end date for the list, supplied as a date with the format of the Zerto Virtual Manager where the API runs, for example, <code>yyyy-mm-dd</code> . You can also specify a local time with the following format: <code>yyyy-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
vpgIdentifier	The identifier of the VPG for which you want to return alerts.
zorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager
siteIdentifier	The internal site identifier.
level	The alert level: warning error
entity	The type of entity to return. Possible values are: Zvm : Alerts that are triggered when there is a problem with a Zerto Virtual Manager. Vra : Alerts that are triggered when there is a problem with a VRA. Vpg : Alerts that are triggered when there is a problem with a VPG. CloudConnector : Alerts that are triggered when there is a problem with a Zerto Cloud Connector. Storage : Alerts that are triggered when there is a problem with a datastore specified in a VPG. License : Alerts that are triggered when there is a problem with a Zerto Virtual Manager license. Zcm : Alerts that are triggered when there is a problem with a Zerto Cloud Manager. FileRecoveryComponent : Alerts that are triggered when there is a problem with file level recover.
helpIdentifier	The help identifier associated with the alert. The following alert identifiers are available: AWS0001 : AWS S3 bucket removed BCK0001 : Long term retention fails BCK0002 : Long term retention fails BCK0005 : Long term retention repository disconnected BCK0006 : Long term retention repository disconnected BCK0007 : Long term retention repository not defined.

LIC0001: License exceeded LIC0002: License exceeded LIC0003: License about to expire LIC0004: License expired and exceeded LIC0005: Deprecated LIC0006: License expired LIC0007: License exceeded LIC0008: Deprecated LIC0009: Public cloud replication violation LIC0010: VCD violation LIC0011: Cross replication violation
STR0001: Datastore not accessible STR0002: Datastore full STR0004: Datastore low in space
VCD0001: vCenter Server for the Org vDC is not found VCD0002: Org vDC is defined in multiple vCenter Servers VCD0003: Org vDC storage profile not found in vCenter Server VCD0004: Provider vDC storage profile not found in vCenter Server VCD0005: Org vDC network not retrieved VCD0006: Provider vDC metadata not found VCD0007: Org vDC resource pool not retrieved VCD0010: OrgNetwork not retrieved VCD0014: vCD disconnection VCD0015: AMQP-server disconnection VCD0016: Provider vDC datastore not found VCD0017: Metadata not accessible VCD0018: Duplicated MAC addresses VCD0020: VM inconsistency in vApp VCD0021: VM inconsistency in vApp

VPG0003: VPG has low journal history
VPG0004: VPG has low journal history
VPG0005: VPG in error state
VPG0006: VPG missing configuration details
VPG0007: VPG replication paused
VPG0008: VPG rollback failed
VPG0009: VPG target RPO exceeded
VPG0010: VPG target RPO exceeded
VPG0011: Deprecated
VPG0012: Deprecated
VPG0014: VPG waiting for commit or rollback
VPG0015: Resources not enough to support VPG
VPG0016: Resources pool not found
VPG0017: VPG protection paused
VPG0018: VMs in VPG not configured with a storage profile
VPG0019: VPG recovery storage profile disabled
VPG0020: VPG recovery storage profile not found
VPG0021: VPG recovery storage profile not found
VPG0022: VPG recovery storage profile disabled
VPG0023: VPG recovery storage profile not found
VPG0024: VPG recovery storage profile does not include active datastores
VPG0025: vApp network mapping not defined
VPG0026: VPG recovery storage profile changed
VPG0027: VPG includes VMs that are no longer protected
VPG0028: Corrupted Org vDC network mapping
VPG0035: VPG protected resources not in ZORG
VPG0036: VPG recovery resources not in ZORG
VPG0037: Journal history is compromised
VPG0038: Journal history is compromised
VPG0039: RDM has an odd number of blocks
VPG0040: Virtual machine hardware mismatch with recovery site
VPG0041: Virtual machine running Windows 2003
VPG0042: Recovery network not found
VPG0043: SAN policy might cause some volumes to become offline upon recovery
VPG0044: One or more of the virtual machines in the VPG has a disk with size 0
VPG0045: Deprecated
VPG0046: Deprecated
VPG0047: Deprecated
VPG0048: Deprecated
VPG0049: Protection group missing VM
VPG0050: Protection Group Tested Alert
VPG0051: Stopping Failover Test Operation Failed
VPG0052: Rolling back Failover Live Operation Failed
VPG0053: Rolling back Move Operation Failed

VRA0001: Host without VRA
VRA0002: VRA without IP
VRA0003: Host IP changes
VRA0004: VRA lost IP
VRA0005: VRAs not connected
VRA0006: Datastore for journal disk is full
VRA0007: I/O error to journal
VRA0008: Recovery disk and VMs missing
VRA0009: Recovery disk missing
VRA0010: Recovery disks turned off
VRA0011: Recovery disk inaccessible
VRA0012: Cannot write to recovery disk
VRA0013: I/O error to recovery disk
VRA0014: Cloned disks turned off
VRA0015: Cloned disk inaccessible
VRA0016: Datastore for clone disk is full
VRA0017: I/O error to clone
VRA0018: Protected disk and VM missing
VRA0019: Protected disk missing
VRA0020: VM powered off
VRA0021: VM disk inaccessible
VRA0022: VM disk incompatible
VRA0023: VRA cannot be registered.
VRA0024: VRA removed
VRA0025: I/O synchronization
VRA0026: Recovery disk removed
VRA0027: Journal disk removed
VRA0028: VRA powered off
VRA0029: VRA memory low
VRA0030: Journal size mismatch
VRA0032: VRA out-of-date
VRA0033: Peer VRA out-of-date
VRA0035: Deprecated
VRA0036: Deprecated
VRA0037: Local MAC Address Conflict
VRA0038: MAC Address Conflict
VRA0039: Journal reached configured limit
VRA0040: Journal space low
VRA0049: Host rollback failed
VRA0050: Wrong host password
VRA0051: Deprecated
VRA0052: Disk visible but not recognized
VRA0053: System disk removed
VRA0054: VRA journal alert in public cloud
VRA0055: VRA target volume alert in public cloud
VRA0056: VRA is shutting down
ZCA001: Storage removed
ZCA002: Quota of instances number exceeded
ZCA003: Zerto AWS Snapshot Manager not reachable

	<p>ZCC0001: Zerto Cloud Connector removed ZCC0002: Zerto Cloud Connector powered off ZCC0003: Orphaned Zerto Cloud Connector ZCM0001: No connection to Zerto Virtual Manager ZCM0002: Zerto Cloud Manager not support</p>
	<p>ZVM0001: No connection to hypervisor manager, such as VMware vCenter Server and Microsoft SCVMM, or to public cloud. ZVM0002: No connection to VRA ZVM0003: No connection to site ZVM0004: Peer site out-of-date ZVM0005: Zerto Virtual Manager space low ZVM0006: Upgrade available ZVM0007: Cannot upgrade ZVM0008: Version mismatch ZVM0009: Internal error ZVM0010: Synchronization between Zerto Virtual Managers ZVM0011: Metadata Collection ZVM0012: Metadata Collection ZVM0013: Metadata Collection ZVM0014: VRA/Diskbox SCSI GUID mismatch ZVM0015: Hyper-V host state ZVM0017: Protected VM with unknown OS ZVM0019: (Hyper-V only) Agent disconnected / Failed to open channel ZVM0020: Agent installation failed ZVM0021: VRA-H powered off FLR0001: Files cannot be restored Unknown</p>
isDismissed	<p>True: Returns the list of alerts that have been dismissed. False: Returns the list of alerts that have not been dismissed.</p>

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/alerts` and for `https://zvm_ip:port/v1/alerts/{alertId}`.

```
[{
  "AffectedVpgs": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "AffectedZorgs": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "Description": "String content",
  "Entity": "String content",
  "HelpIdentifier": "String content",
  "IsDismissed": Boolean,
  "Level": "String content",
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "Site": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "TurnedOn": "\/Date(928142400000+0300)\/"
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/alerts/entities`, `https://zvm_ip:port/v1/alerts/helpidentifiers`, and `https://zvm_ip:port/v1/alerts/levels`.

```
["String content"]
```

XML Response Format

For the XML response format, see [“Alerts API XML Response Format”, on page 352](#).

Response Values

Response values for `https://zvm_ip:port/v1/alerts` and for `https://zvm_ip:port/v1/alerts/{alertId}`.

PARAMETER	DESCRIPTION
AffectedVpgs	The VPGs affected by the alert.
href	The URL used to retrieve VPG information for each VPG affected by the event.
identifier	The unique internal identifier of the VPG.
rel	The next path level for the API relative to the current path.

PARAMETER	DESCRIPTION
type	The API interface service.
AffectedZorgs	The ZORGs affected by the alert.
href	The URL used to retrieve ZORG information for each ZORG affected by the event.
identifier	The unique internal identifier of the ZORG.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Description	The alert description.
Entity	<p>The entity for which the alert applies. The following alert entities are available:</p> <p>Zvm: Alerts that are triggered when there is a problem with a Zerto Virtual Manager.</p> <p>Vra: Alerts that are triggered when there is a problem with a VRA.</p> <p>Vpg: Alerts that are triggered when there is a problem with a VPG.</p> <p>CloudConnector: Alerts that are triggered when there is a problem with a Zerto Cloud Connector.</p> <p>Storage: Alerts that are triggered when there is a problem with a datastore specified in a VPG.</p> <p>License: Alerts that are triggered when there is a problem with a Zerto Virtual Manager license.</p> <p>Zcm: Alerts that are triggered when there is a problem with a Zerto Cloud Manager.</p> <p>FileRecoveryComponent: Alerts that are triggered when there is a problem with file level recovery</p>
HelpIdentifier	<p>The help identifier associated with the alert. The following alert identifiers are available:</p> <p>AWS0001: AWS S3 bucket removed</p> <p>BCK0001: Long term retention fails</p> <p>BCK0002: Long term retention fails</p> <p>BCK0005: Long term retention repository disconnected</p> <p>BCK0006: Long term retention repository disconnected</p> <p>BCK0007: Long term retention repository not defined.</p>
	<p>LIC0001: License exceeded</p> <p>LIC0002: License exceeded</p> <p>LIC0003: License about to expire</p> <p>LIC0004: License expired and exceeded</p> <p>LIC0005: Deprecated</p> <p>LIC0006: License expired</p> <p>LIC0007: License exceeded</p> <p>LIC0008: Deprecated</p> <p>LIC0009: Public cloud replication not supported</p> <p>LIC0010: VCD not supported</p> <p>LIC0011: Multi hypervisor replication not supported</p>
	<p>STR0001: Datastore not accessible</p> <p>STR0002: Datastore full</p> <p>STR0004: Datastore low in space</p>

PARAMETER	DESCRIPTION
	VCD0001: vCenter Server for the Org vDC is not found VCD0002: Org vDC is defined in multiple vCenter Servers VCD0003: Org vDC storage profile not found in vCenter Server VCD0004: Provider vDC storage profile not found in vCenter Server VCD0005: Org vDC network not retrieved VCD0006: Provider vDC metadata not found VCD0007: Org vDC resource pool not retrieved VCD0010: OrgNetwork not retrieved VCD0014: vCD disconnection VCD0015: AMQP-server disconnection VCD0016: Provider vDC datastore not found VCD0017: Metadata not accessible VCD0018: Duplicated MAC addresses VCD0020: VM inconsistency in vApp VCD0021: VM inconsistency in vApp

PARAMETER	DESCRIPTION
	<p>VPG0003: VPG has low journal history</p> <p>VPG0004: VPG has low journal history</p> <p>VPG0005: VPG in error state</p> <p>VPG0006: VPG missing configuration details</p> <p>VPG0007: VPG replication paused</p> <p>VPG0008: VPG rollback failed</p> <p>VPG0009: VPG target RPO exceeded</p> <p>VPG0010: VPG target RPO exceeded</p> <p>VPG0011: VPG test overdue</p> <p>VPG0012: Deprecated</p> <p>VPG0014: Deprecated</p> <p>VPG0015: Resources not enough to support VPG</p> <p>VPG0016: Resources pool not found</p> <p>VPG0017: VPG protection paused</p> <p>VPG0018: VMs in VPG not configured with a storage profile</p> <p>VPG0019: VPG recovery storage profile disabled</p> <p>VPG0020: VPG recovery storage profile not found</p> <p>VPG0021: VPG recovery storage profile not found</p> <p>VPG0022: VPG recovery storage profile disabled</p> <p>VPG0023: VPG recovery storage profile not found</p> <p>VPG0024: VPG recovery storage profile does not include active datastores</p> <p>VPG0025: vApp network mapping not defined</p> <p>VPG0026: VPG recovery storage profile changed</p> <p>VPG0027: VPG includes VMs that are no longer protected</p> <p>VPG0028: Corrupted Org vDC network mapping</p> <p>VPG0035: VPG protected resources not in ZORG</p> <p>VPG0036: VPG recovery resources not in ZORG</p> <p>VPG0037: Journal history is compromised</p> <p>VPG0038: Journal history is compromised</p> <p>VPG0039: RDM has an odd number of blocks</p> <p>VPG0040: Virtual machine hardware mismatch with recovery site</p> <p>VPG0041: Virtual machine running Windows 2003</p> <p>VPG0042: Recovery network not found</p> <p>VPG0043: SAN policy might cause some volumes to become offline upon recovery</p> <p>VPG0044: One or more of the virtual machines in the VPG has a disk with size 0</p> <p>VPG0045: Deprecated</p> <p>VPG0046: Deprecated</p> <p>VPG0047: Deprecated</p> <p>VPG0048: Deprecated</p>

PARAMETER	DESCRIPTION
	<p>VRA0001: Host without VRA VRA0002: VRA without IP VRA0003: Host IP changes VRA0004: VRA lost IP VRA0005: VRAs not connected VRA0006: Datastore for journal disk is full VRA0007: I/O error to journal VRA0008: Recovery disk and VMs missing VRA0009: Recovery disk missing VRA0010: Recovery disks turned off VRA0011: Recovery disk inaccessible VRA0012: Cannot write to recovery disk VRA0013: I/O error to recovery disk VRA0014: Cloned disks turned off VRA0015: Cloned disk inaccessible VRA0016: Datastore for clone disk is full VRA0017: I/O error to clone VRA0018: Protected disk and VM missing VRA0019: Protected disk missing VRA0020: VM powered off VRA0021: VM disk inaccessible VRA0022: VM disk incompatible VRA0023: VRA cannot be registered. VRA0024: VRA removed VRA0025: I/O synchronization VRA0026: Recovery disk removed VRA0027: Journal disk removed VRA0028: VRA powered off VRA0029: VRA memory low VRA0030: Journal size mismatch VRA0032: VRA out-of-date VRA0035: Deprecated VRA0036: For internal use only VRA0037: Local MAC Address Conflict VRA0038: MAC Address Conflict VRA0039: Journal reached configured limit VRA0040: Journal space low VRA0049: Host rollback failed VRA0050: Wrong host password VRA0051: For internal use only VRA0052: Disk visible but not recognized VRA0053: System disk removed VRA0054: VRA journal alert in public cloud VRA0055: VRA target volume alert in public cloud VRA0056: VRA is shutting down</p>
	<p>ZCA001: Storage removed ZCA002: Quota of instances number exceeded ZCA003: Zerto AWS Snapshot Manager not reachable</p>

PARAMETER	DESCRIPTION
	<p>ZCC0001: Zerto Cloud Connector removed ZCC0002: Zerto Cloud Connector powered off ZCC0003: Orphaned Zerto Cloud Connector ZCM0001: No connection to Zerto Virtual Manager ZCM0002: Zerto Cloud Manager not support</p>
	<p>ZVM0001: No connection to hypervisor manager, such as VMware vCenter Server and Microsoft SCVMM, or to public cloud. ZVM0002: No connection to VRA ZVM0003: No connection to site ZVM0004: Peer site out-of-date ZVM0005: Zerto Virtual Manager space low ZVM0006: Upgrade available ZVM0007: Cannot upgrade ZVM0008: Version mismatch ZVM0009: Internal error ZVM0010: Synchronization between Zerto Virtual Managers ZVM0011: Metadata Collection ZVM0012: Metadata Collection ZVM0013: Metadata Collection ZVM0014: VRA/Diskbox SCSI GUID mismatch ZVM0015: Hyper-V host state ZVM0017: Protected VM with unknown OS ZVM0019: (Hyper-V only) Agent disconnected / Failed to open channel ZVM0020: Agent installation failed ZVM0021: VRA-H powered off FLR0001: Files cannot be restored Unknown</p>
IsDismissed	<p>True: Returns the list of alerts that have been dismissed. False: Returns the list of alerts that have not been dismissed.</p>
Level	<p>The alert level: Warning: The alert is a warning. Error: The indicates an error.</p>
Link	The link details.
href	The URL used.
identifier	The unique internal identifier of the alert.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Site	The link details.
href	The URL used.
identifier	The unique internal identifier of the local site.

PARAMETER	DESCRIPTION
rel	The next path level for the API relative to the current path.
type	The API interface service.
TurnedOn	The date the alerts was issued. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .

Response values for `https://zvm_ip:port/v1/alerts/entities`.

RESPONSE: DESCRIPTION

entity types: the entity that the alert refers to:

- Zvm:** Alerts that are triggered when there is a problem with a Zerto Virtual Manager.
- Vra:** Alerts that are triggered when there is a problem with a VRA.
- Vpg:** Alerts that are triggered when there is a problem with a VPG.
- CloudConnector:** Alerts that are triggered when there is a problem with a Zerto Cloud Connector.
- Storage:** Alerts that are triggered when there is a problem with a datastore specified in a VPG.
- License:** Alerts that are triggered when there is a problem with a Zerto Virtual Manager license.
- Zcm:** Alerts that are triggered when there is a problem with a Zerto Cloud Manager.
- FileRecoveryComponent:** Alerts that are triggered when there is a problem with file level recovery.

Response values for `https://zvm_ip:port/v1/alerts/helpidentifiers`.

RESPONSE: DESCRIPTION

helpidentifier types: the identifier for each alert:

- AWS0001:** AWS S3 bucket removed
- BCK0001:** Long term retention fails
- BCK0002:** Long term retention fails
- BCK0005:** Long term retention repository disconnected
- BCK0006:** Long term retention repository disconnected
- BCK0007:** Long term retention repository not defined.

- LIC0001:** License exceeded
- LIC0002:** License exceeded
- LIC0003:** License about to expire
- LIC0004:** License expired and exceeded
- LIC0005:** Deprecated
- LIC0006:** License expired
- LIC0007:** License exceeded
- LIC0008:** Deprecated
- LIC0009:** Public cloud replication not supported
- LIC0010:** VCD not supported
- LIC0011:** Multi hypervisor replication not supported

- STR0001:** Datastore not accessible
- STR0002:** Datastore full
- STR0004:** Datastore low in space

RESPONSE: DESCRIPTION

- VCD0001:** vCenter Server for the Org vDC is not found
 - VCD0002:** Org vDC is defined in multiple vCenter Servers
 - VCD0003:** Org vDC storage profile not found in vCenter Server
 - VCD0004:** Provider vDC storage profile not found in vCenter Server
 - VCD0005:** Org vDC network not retrieved
 - VCD0006:** Provider vDC metadata not found
 - VCD0007:** Org vDC resource pool not retrieved
 - VCD0010:** OrgNetwork not retrieved
 - VCD0014:** vCD disconnection
 - VCD0015:** AMQP-server disconnection
 - VCD0016:** Provider vDC datastore not found
 - VCD0017:** Metadata not accessible
 - VCD0018:** Duplicated MAC addresses
 - VCD0020:** VM inconsistency in vApp
 - VCD0021:** VM inconsistency in vApp
-
- VPG0003:** VPG has low journal history
 - VPG0004:** VPG has low journal history
 - VPG0005:** VPG in error state
 - VPG0006:** VPG missing configuration details
 - VPG0007:** VPG replication paused
 - VPG0008:** VPG rollback failed
 - VPG0009:** VPG target RPO exceeded
 - VPG0010:** VPG target RPO exceeded
 - VPG0011:** VPG test overdue
 - VPG0012:** Deprecated
 - VPG0014:** Deprecated
 - VPG0015:** Resources not enough to support VPG
 - VPG0016:** Resources pool not found
 - VPG0017:** VPG protection paused
 - VPG0018:** VMs in VPG not configured with a storage profile
 - VPG0019:** VPG recovery storage profile disabled
-
- VPG0020:** VPG recovery storage profile not found
 - VPG0021:** VPG recovery storage profile not found
 - VPG0022:** VPG recovery storage profile disabled
 - VPG0023:** VPG recovery storage profile not found
 - VPG0024:** VPG recovery storage profile does not include active datastores
 - VPG0025:** vApp network mapping not defined
 - VPG0026:** VPG recovery storage profile changed
 - VPG0027:** VPG includes VMs that are no longer protected
 - VPG0028:** Corrupted Org vDC network mapping

RESPONSE: DESCRIPTION

VPG0035: VPG protected resources not in ZORG
VPG0036: VPG recovery resources not in ZORG
VPG0037: Journal history is compromised
VPG0038: Journal history is compromised
VPG0039: RDM has an odd number of blocks
VPG0040: Virtual machine hardware mismatch with recovery site
VPG0041: Virtual machine running Windows 2003
VPG0042: Recovery network not found
VPG0043: SAN policy might cause some volumes to become offline upon recovery
VPG0044: One or more of the virtual machines in the VPG has a disk with size 0
VPG0045: Deprecated
VPG0046: Deprecated
VPG0047: Deprecated
VPG0048: Deprecated
VPG0049: Protection group missing VM
VPG0050: Protection Group Tested Alert
VPG0051: Stopping Failover Test Operation Failed
VPG0052: Rolling back Failover Live Operation Failed
VPG0053: Rolling back Move Operation Failed

VRA0001: Host without VRA
VRA0002: VRA without IP
VRA0003: Host IP changes
VRA0004: VRA lost IP
VRA0005: VRAs not connected
VRA0006: Datastore for journal disk is full
VRA0007: I/O error to journal
VRA0008: Recovery disk and VMs missing
VRA0009: Recovery disk missing

VRA0010: Recovery disks turned off
VRA0011: Recovery disk inaccessible
VRA0012: Cannot write to recovery disk
VRA0013: I/O error to recovery disk
VRA0014: Cloned disks turned off
VRA0015: Cloned disk inaccessible
VRA0016: Datastore for clone disk is full
VRA0017: I/O error to clone
VRA0018: Protected disk and VM missing
VRA0019: Protected disk missing

VRA0020: VM powered off
VRA0021: VM disk inaccessible
VRA0022: VM disk incompatible
VRA0023: VRA cannot be registered.
VRA0024: VRA removed
VRA0025: I/O synchronization
VRA0026: Recovery disk removed
VRA0027: Journal disk removed
VRA0028: VRA powered off
VRA0029: VRA memory low

RESPONSE: DESCRIPTION

VRA0030: Journal size mismatch
VRA0032: VRA out-of-date
VRA0033: Peer VRA out-of-date
VRA0035: Deprecated
VRA0036: Deprecated
VRA0037: Local MAC Address Conflict
VRA0038: MAC Address Conflict
VRA0039: Journal reached configured limit
VRA0040: Journal space low
VRA0049: Host rollback failed
VRA0050: Wrong host password
VRA0051: Deprecated
VRA0052: Disk visible but not recognized
VRA0053: System disk removed
VRA0054: VRA journal alert in public cloud
VRA0055: VRA target volume alert in public cloud
VRA0056: VRA is shutting down
ZCA001: Storage removed
ZCA002: Quota of instances number exceeded
ZCA003: Zerto AWS Snapshot Manager not reachable
ZCC0001: Zerto Cloud Connector removed
ZCC0002: Zerto Cloud Connector powered off
ZCC0003: Orphaned Zerto Cloud Connector
ZCM0001: No connection to Zerto Virtual Manager
ZCM0002: Zerto Cloud Manager not support
ZVM0001: No connection to hypervisor manager, such as VMware vCenter Server and Microsoft SCVMM, or to public cloud.
ZVM0002: No connection to VRA
ZVM0003: No connection to site
ZVM0004: Peer site out-of-date
ZVM0005: Zerto Virtual Manager space low
ZVM0006: Upgrade available
ZVM0007: Cannot upgrade
ZVM0008: Version mismatch
ZVM0009: Internal error
ZVM0010: Synchronization between Zerto Virtual Managers
ZVM0011: Metadata Collection
ZVM0012: Metadata Collection
ZVM0013: Metadata Collection
ZVM0014: VRA/Diskbox SCSI GUID mismatch
ZVM0015: Hyper-V host state
ZVM0017: Protected VM with unknown OS
ZVM0019: (Hyper-V only) Agent disconnected / Failed to open channel
ZVM0020: Agent installation failed
ZVM0021: VRA-H powered off
FLR0001: Files cannot be restored
Unknown

Response values for `https://zvm_ip:port/v1/alerts/levels`.

RESPONSE: DESCRIPTION

level types:

Warning: The alert is a warning.

Error: The indicates an error.

Alerts: POST

Dismisses or undismisses a specified alert.

URL

Dismiss alert `https://zvm_ip:port/v1/alerts/{alertId}/dismiss`

Undismiss alert `https://zvm_ip:port/v1/alerts/{alertId}/undismiss`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
alertId	The identifier of the alert for which information is returned or which is dismissed or undismissed

Request Body Using Json Format

The request body is empty.

Response In Json Format

The response body is empty.

XML Response Format

For the XML response format, see [“Alerts API XML Response Format”, on page 352](#).

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Datstores API

`/v1/datstores` retrieves information about all or specific datstores in the site processing the API.

URL

Information about all datastores `https://zvm_ip:port/v1/datastores`

Information about specific datastore `https://zvm_ip:port/v1/datastores/{datastoreIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/datastores`.

```
[
  {
    "Config": {
      "Devices": [
        "string content"
      ]
    },
    "OwningDatastoreCluster": null,
    "Type": null
  },
  "DatastoreIdentifier": "string content",
  "DatastoreName": "string content",
  "Health": {
    "Alerts": [],
    "Status": "Normal"
  },
  "Stats": {
    "AvailabilityStatus": "Normal",
    "NumIncomingVMs": 7,
    "NumOutgoingVMs": 0,
    "NumVRAs": 0,
    "Usage": {
      },
    },
    "Datastore": {
      "CapacityInBytes": 536870912000,
      "FreeInBytes": 323713236992,
      "ProvisionedInBytes": 386572688763,
      "UsedInBytes": 213157675008
    },
    "Zerto": {
      "Appliances": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      },
      "Journal": {
        "ProvisionedInBytes": 234995712,
        "UsedInBytes": 325058560
      },
      "Protected": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      },
      "Recovery": {
        "ProvisionedInBytes": 29360128,
        "UsedInBytes": 10124001280
      }
    },
    "Scratch": {
      "ProvisionedInBytes": 0,
      "UsedInBytes": 0
    },
    "Unknown": {
      "ProvisionedInBytes": 0,
      "UsedInBytes": 0
    }
  }
],
{
```

```
[
  {
    "Config": {
      "Devices": [
        "string content"
      ]
      "OwningDatastoreCluster":{
        "DatastoreClusterIdentifier": "string content"
        "DatastoreClusterName": "string content"
        "Type": null
      }
      "DatastoreIdentifier": "string content",
      "DatastoreName": "string content",
      "Health": {
        "Alerts": [],
        "Status": "Normal"
      }
      "Stats": {
        "AvailabilityStatus": "Normal",
        "NumIncomingVMs": 7,
        "NumOutgoingVMs": 0,
        "NumVRAs": 0,
        "Usage": {
          "Datastore": {
            "CapacityInBytes": 536870912000,
            "FreeInBytes": 419582443520,
            "ProvisionedInBytes": 169459472274,
            "UsedInBytes": 117288468480
          }
        }
      }
    }
  }
]
```

```
"Zerto": {
  "Appliances": {
    "ProvisionedInBytes": 13422821376,,
    "UsedInBytes": 13422821376
  },
  "Journal": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Protected": {
    "ProvisionedInBytes": 15032385536,
    "UsedInBytes": 13422821376
  },

```

```
  "Recovery": {
    "ProvisionedInBytes": 0,
    "UsedInBytes":0
  },
  "Scratch": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Unknown": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  }
},
{
```

```
[
  {
    "Config": {
      "Devices": [
        "string content"
      ]
      "OwningDatastoreCluster": null,
      "Type": null
    }
    "DatastoreIdentifier": "string content",
    "DatastoreName": "string content",
    "Health": {
      "Alerts": [],
      "Status": "Normal"
    }
    "Stats": {
      "AvailabilityStatus": "Normal",
      "NumIncomingVMs": 7,
      "NumOutgoingVMs": 0,
      "NumVRAs": 0,
      "Usage": {
        "Datastore": {
          "CapacityInBytes": 536870912,
          "FreeInBytes": 519045120,
          "ProvisionedInBytes": 17825792,
          "UsedInBytes": 17825792
        }
      }
    }
  }
]
```

```
"Zerto": {
  "Appliances": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Journal": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Protected": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Recovery": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Scratch": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  },
  "Unknown": {
    "ProvisionedInBytes": 0,
    "UsedInBytes": 0
  }
},
{
```

The following is an example response Json body for `https://zvm_ip:port/v1/datastores/{datastoreIdentifier}`.

```
[
  {
    "Config": {
      "Devices": [
        "string content"
      ]
      "OwningCluster": null,
      "Type": null
    }
    "DatastoreIdentifier": "string content",
    "DatastoreName": "string content",
    "Health": {
      "Alerts": [],
      "Status": "Normal"
    }
    "Stats": {
      "AvailabilityStatus": "Normal",
      "NumIncomingVMs": 7,
      "NumOutgoingVMs": 0,
      "NumVRAs": 0,
      "Usage": {
        "Datastore": {
          "CapacityInBytes": 536870912000,
          "FreeInBytes": 323713236992,
          "ProvisionedInBytes": 386572688763,
          "UsedInBytes": 213157675008
        }
      }
    }
    "Zerto": {
      "Appliances": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      },
      "Journal": {
        "ProvisionedInBytes": 234995712,
        "UsedInBytes": 325058560
      },
      "Protected": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      },
      "Recovery": {
        "ProvisionedInBytes": 29360128,
        "UsedInBytes": 10124001280
      },
      "Scratch": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      },
      "Unknown": {
        "ProvisionedInBytes": 0,
        "UsedInBytes": 0
      }
    }
  }
],
{
```

XML Response Format

For the XML response format, see [“Datastores API XML Response Format”](#), on page 356.

Response Values

Response values for `https://zvm_ip:port/v1/datastores` and `https://zvm_ip:port/v1/datastores/{datastoreIdentifier}`.

PARAMETER	DESCRIPTION
Config	The datastore configuration.
Devices	List of the datastore devices.
OwningDatastoreCluster	
DatastoreClusterIdentifier	The identifier of the cluster that the datastore is associated with.
DatastoreClusterName	The name of the cluster that the datastore is associated with.
Type	The type of datastore.
DatastoreIdentifier	The identifier of the datastore.
DatastoreName	The datastore name.
Health	
Alerts	The alert status of the datastore.
Status	The status of the datastore. Possible values are: NotApplicable Error Normal Warning
Stats	
AvailabilityStatus	The datastore availability status. Possible values are: EnteringMaintenance InMaintenance Normal Unavailable
NumIncomingVMs	The number of virtual machines to be recovered using the datastore.
NumOutgoingVMs	The number of virtual machines to be protected using the datastore.
NumVRAs	The number of VRAs using the datastore.
Usage	The amount of space used in relation to the total amount available.
Datastore	
CapacityInBytes	The capacity of the datastore, in bytes.

PARAMETER	DESCRIPTION
FreeInBytes	The amount of free space of the datastore, in bytes.
ProvisionedInBytes	The amount of provisioned space of the datastore, in bytes.
UsedInBytes	The amount of used space of the datastore, in bytes.
Zerto	
Appliances	
ProvisionedInBytes	The amount of provisioned space of the appliances' volumes, in bytes.
UsedInBytes	The amount of used space of the appliances' volumes, in bytes.
Journal	
ProvisionedInBytes	The amount of provisioned space of the journal's volumes, in bytes.
UsedInBytes	The amount of used space of the journal's volumes used size in bytes.
Protected	
ProvisionedInBytes	The amount of provisioned space of the protected volumes, in bytes.
UsedInBytes	The amount of used space of the protected volumes, in bytes.
Recovery	
ProvisionedInBytes	The amount of provisioned space of the recovery volumes, in bytes.
UsedInBytes	The amount of used space of the recovery volumes, in bytes.
Scratch	
ProvisionedInBytes	The amount of provisioned space of the scratch volumes, in bytes.
UsedInBytes	The amount of used space of the scratch volumes, in bytes.
Unknown	
ProvisionedInBytes	The amount of provisioned space of the unknown volumes, in bytes.
UsedInBytes	The amount of used space of the unknown volumes, in bytes.

Events API

/v1/events returns the last 1000 Zerto events, with summary details about each event. You can use this API to see the results of operations such as cloning a VPG or testing a VPG.

For example, you can use this API to identify when a failover test was started and stopped, by looking for the `FailOverTest` and `StopFailOverTest` events and then using the timestamps for these events to see how long the VPG was tested.

URL

All events	<code>https://zvm_ip:port/v1/events</code>
Filtered events	<code>https://zvm_ip:port/v1/events?startDate={STARTDATE}&endDate={ENDDATE}&vpg={VPG}&vpgIdentifier={VPGIDENTIFIER}&eventType={EVENTTYPE}&siteName={SITENAME}&siteIdentifier={SITEIDENTIFIER}&zorgIdentifier={ZORGIDENTIFIER}&entityType={ENTITYTYPE}&userName={USERNAME}&category={CATEGORY}&eventCategory={CATEGORY}&alertIdentifier={ALERTIDENTIFIER}</code>
Single event	<code>https://zvm_ip:port/v1/events/{eventId}</code>
Valid event categories	<code>https://zvm_ip:port/v1/events/categories</code>
Valid event entities	<code>https://zvm_ip:port/v1/events/entities</code>
Valid event types	<code>https://zvm_ip:port/v1/events/types</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
eventId	The identifier of the event for which information is returned.
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all events are returned. Filters are not case-sensitive.

Filter	Description
startDate	The starting date for the list of events, supplied as a date with the format of the Zerto Virtual Manager where the API runs, for example, <code>yyyy-mm-dd</code> . You can also specify a local time with the following format: <code>yyyy-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
endDate	The end date for the list, supplied as a date with the format of the Zerto Virtual Manager where the API runs, for example, <code>yyyy-mm-dd</code> . You can also specify a local time with the following format: <code>yyyy-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
vpg, vpgIdentifier	The identifier of the VPG for which you want to return events.
eventType	The type of event. For the description of events, refer to the Zerto documentation about alerts and events. Possible values are: 0 or Unknown 1 or CreateProtectionGroup 2 or RemoveProtectionGroup 3 or FailOver 4 or FailOverTest 5 or StopFailOverTest 6 or Move 7 or ProtectVM 8 or UnprotectVM 9 or InstallVra

	<p>10 or UninstallVra 11 or UpdateProtectionGroup 12 or InsertTaggedCP 13 or HandleMirrorPromotion 14 or ActivateAllMirrors 15 or LogCollection 16 or ForceReconfigurationOfNewVM 17 or ClearSite 18 or ForceRemoveProtectionGroup 19 or ForceUpdateProtectionGroup</p>
	<p>20 or ForceKillProtectionGroup 21 or PrePostScript: Deprecated 22 or InitFullSync 23 or Pair 24 or Unpair 25 or InstallCloudConnector 26 or UninstallCloudConnector 27 or RedeployCloudConnector 28 or ScriptExecutionFailure 29 or SetAdvancedSiteSettings</p>
	<p>30 or Clone 31 or KeepDisk 32 or FailoverBeforeCommit 33 or FailoverCommit 34 or FailoverRollback 35 or MoveBeforeCommit 36 or MoveRollback 37 or MoveCommit 38 or MaintainHost 39 or UpgradeVra</p>
	<p>40 or MoveProtectionGroupToManualOperationNeeded: Deprecated 42 or PauseProtectionGroup 43 or ResumeProtectionGroup 44 or UpgradeZVM: Deprecated 45 or BulkUpgradeVras 46 or BulkUninstallVras 47 or AlertTurnedOn 48 or AlertTurnedOff</p>

	<p>50 or ChangeRecoveryHost 51 or BackupProtectionGroup 52 or CleanupProtectionGroupVipDiskbox 53 or RestoreProtectionGroup 54 or PreScript 55 or PostScript 56 or RemoveVmFromVc 57 or ChangeVraPasswordIpSettings 58 or FlrJournalMount 59 or FlrJournalUnmount 60 or Login 61 or StartVMsWithOrder 62 or HostEnteringMaintenanceMode 63 or HostExitingMaintenanceMode 64 or VmRestoredToSnapshot 65 or ProtectedVmRemovedFromHypervisor 66 or ProtectedVmAddedToHypervisor, 67 or PauseProtectionGroupForMissingVm: Deprecated. 68 or ResumeProtectionGroupAfterUserRemovedMissingVm 69 or ResumeProtectionGroupAfterVmReadded: Deprecated. 70 or Cloud 71 or StartingInstallerDownload 72 or DownloadingZertoInstaller 73 or StartingZvmUpgradeRemotely 74 or UpgradingZvmRemotely 75 or SplitCommit</p>
siteName	The name of the site.
siteIdentifier	The internal site identifier.
zorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
entityType	<p>The type of entity to return. Possible values are:</p> <ul style="list-style-type: none"> ■ 0 or VPG: The entity is a VPG. ■ 1 or VRA: The entity is a VRA. ■ 2 or Unknown: The entity is unknown. ■ 3 or Site: The entity is the site.
userName	The name of the user for which the event occurred. If the event occurred as a result of a task started by the Zerto Virtual Manager, for example, when moving a VPG before the commit stage, the user is <code>System</code> .
category	<p>The type of event to return. This filter behaves in the same way as the <code>eventCategory</code> filter. Possible values are:</p> <ul style="list-style-type: none"> ■ 0 or All: All event types. ■ 1 or Events: The event is not an alert event (not EV0056 nor EV0057). ■ 2 or Alerts: The event is an alert event (EV0056 and EV0057).

eventCategory	Backwards compatibility. This filter behaves in the same way as the <i>category</i> filter. If both category and eventCategory filters are specified, only the category filter value is used and the eventCategory filter value is ignored. The type of event to return. Possible values are: <ul style="list-style-type: none">■ 0 or All: All event types.■ 1 or Events: The event is not an alert event (not EV0056 nor EV0057).■ 2 or Alerts: The event is an alert event (EV0056 and EV0057).
alertIdentifier	The internal alert identifier.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/events` and for `https://zvm_ip:port/v1/events/{eventId}`.

```
[{
  "Description": "String content",
  "EntityType": 0,
  "EventCategory": "String content",
  "EventCompletedSuccessfully": Boolean,
  "EventIdentifier": "String content",
  "EventType": 0,
  "HelpLink": "String content",
```

```
"Link": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
},
"Link_x007B_0_x007D_": {
  "href": "String content",
  "rel": "String content",
  "type": "String content"
},
"OccurredOn": "\\Date(928142400000+0300) \\/",
"RelatedEntities": {
  "Alerts": [{
    "href": "String content",
    "ma": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "FlrSessions": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }]
  "Hosts": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "Sites": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "Vpgs": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }],
  "Zorgs": [{
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  }]
},
```

```

"SiteIdentifier": "String content",
"SiteName": "String content",
"UserName": "String content",
"Vpgs": [{
  "Link_x007B_0_x007D_": {
    "href": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "VpgIdentifier": "String content",
  "VpgName": "String content"
}],
"ZorgIdentifier": "String content",
"ZorgName": "String content"
}]

```

The following is an example response Json body for https://zvm_ip:port/v1/events/categories, https://zvm_ip:port/v1/events/entities, and https://zvm_ip:port/v1/events/types.

```
["String content"]
```

XML Response Format

For the XML response format, see [“Events API XML Response Format”, on page 353](#).

Response Values

Response values for https://zvm_ip:port/v1/events and for https://zvm_ip:port/v1/events/{eventId}.

PARAMETER	DESCRIPTION
Description	A description of the event.
EntityType	The type of entity. Possible values are (Json/XML): 0/VPG: The entity is a VPG. 1/VRA: The entity is a VRA. 2/Unknown: The entity is unknown. 3/Site: The entity is the site.
EventCategory	The type of event. Possible values are: 0/All: All event types. 1/Events: The event is not an alert event (not EV0056 nor EV0057). 2/Alerts: The event is an alert event (EV0056 and EV0057).
EventCompletedSuccessfully	Whether the event completed successfully or not.
EventIdentifier	The unique internal identifier of the event.

PARAMETER	DESCRIPTION
EventType	The type of event. Possible values are (Json/XML): 1/Unknown 2/CreateProtectionGroup 3/RemoveProtectionGroup 4/FailOver 5/FailOverTest 6/StopFailOverTest 7/Move 8/ProtectVM 9/UnprotectVM 10/InstallVra
	11/UninstallVra 12/UpdateProtectionGroup 13/InsertTaggedCP 14/HandleMirrorPromotion 15/ActivateAllMirrors 16/LogCollection 17/ForceReconfigurationOfNewVM 18/ClearSite 19/ForceRemoveProtectionGroup 20/ForceUpdateProtectionGroup
	21/ForceKillProtectionGroup 22/PrePostScript: Deprecated 23/InitFullSync 24/Pair 25/Unpair 26/InstallCloudConnector 27/UninstallCloudConnector 28/RedeployCloudConnector 29/ScriptExecutionFailure 30/SetAdvancedSiteSettings
	31/Clone 32/KeepDisk 33/FailoverBeforeCommit 34/FailoverCommit 35/FailoverRollback 36/MoveBeforeCommit 37/MoveRollback 38/MoveCommit 39/MaintainHost 40/UpgradeVra

PARAMETER	DESCRIPTION
	<p>41/MoveProtectionGroupToManualOperationNeeded: Deprecated 42/ChangeVraIpSettings: Deprecated 43/PauseProtectionGroup 44/ResumeProtectionGroup 45/UpgradeZVM: Deprecated 46/BulkUpgradeVras 47/BulkUninstallVras 48/AlertTurnedOn 49/AlertTurnedOff</p>
	<p>51/ChangeRecoveryHost 52/BackupProtectionGroup 53/CleanupProtectionGroupVipDiskbox 54/RestoreProtectionGroup 55/PreScript 56/PostScript 57/RemoveVmFromVc 58/ChangeVraPasswordIpSettings 59/FlrJournalMount 60/FlrJournalUnmount 61/Login 62/HostEnteringMaintenanceMode 63/HostExitingMaintenanceMode 64/VmRestoredToSnapshot 65/ProtectedVmRemovedFromHypervisor 66/ProtectedVmAddedToHypervisor, 67/PauseProtectionGroupForMissingVm: Deprecated 68/ResumeProtectionGroupAfterUserRemovedMissingVm 69/ResumeProtectionGroupAfterVmReadded: Deprecated 70/Cloud 71/StartingInstallerDownload 72/DownloadingZertoInstaller 73/StartingZvmUpgradeRemotely 74/UpgradingZvmRemotely 75/SplitCommit</p>
HelpLink	The link to additional information about the event.
Link	The link details.
href	The URL used.
identifier	The unique internal identifier of the event.
rel	The next path level for the API relative to the current path.
type	The API interface service.

PARAMETER	DESCRIPTION
OccurredOn	The date the event occurred. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .
RelatedEntities	Entities possibly affected by the event.
Alerts	The alerts affected by the event.
href	The URL used to retrieve alert information.
identifier	The unique internal identifier of the alert.
rel	The next path level for the API relative to the current path.
type	The API interface service.
FlrSessions	The file level restore sessions affected by the event.
href	The URL used to retrieve file level restore session information.
identifier	The unique internal identifier of the file level restore session.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Hosts	The hosts affected by the event.
href	The URL used to retrieve host information.
identifier	The unique internal identifier of the host.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Sites	The sites affected by the event.
href	The URL used to retrieve site information.
identifier	The unique internal identifier of the site where the API runs.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Vpgs	The VPGs affected by the event.
href	The URL used to retrieve VPG information for each VPG affected by the event.

PARAMETER	DESCRIPTION
identifier	The unique internal identifier of the VPG.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Zorgs	The ZORGS affected by the event.
href	The URL used to retrieve ZORG information.
identifier	The unique internal identifier of the ZORG.
rel	The next path level for the API relative to the current path.
type	The API interface service.
SiteIdentifier	The internal site identifier.
SiteName	The name of the site where the event occurred.
UserName	The username responsible for the event, system or an administrator user.
Vpgs	The VPGs affected by the event.
Link	The link to the specific VPG.
href	The URL used to retrieve VPG information for each VPG affected by the event.
rel	The next path level for the API relative to the current path.
type	The API interface service.
VpgIdentifier	The internal VPG identifier.
VpgName	The name of the VPG.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
ZorgName	The name of the Zerto organization, defined by a Zerto Cloud Manager, where the event occurred.

Response values for `https://zvm_ip:port/v1/events/categories`.

RESPONSE: DESCRIPTION

Event categories:
All: All event types.
Events: The event is not an alert event (not EV0056 nor EV0057).
Alerts: The event is an alert event (EV0056 and EV0057).

Response values for `https://zvm_ip:port/v1/events/entities`.

RESPONSE: DESCRIPTION

Entity types:

VPG: The entity is a VPG.

VRA: The entity is a VRA.

Unknown: The entity is unknown.

Site: The entity is the site.

Response values for `https://zvm_ip:port/v1/events/types`.

RESPONSE: DESCRIPTION

Event types:

Unknown

CreateProtectionGroup

RemoveProtectionGroup

FailOver

FailOverTest

StopFailOverTest

Move

ProtectVM

UnprotectVM

InstallVra

UninstallVra

UpdateProtectionGroup

InsertTaggedCP

HandleMirrorPromotion

ActivateAllMirrors

LogCollection

ForceReconfigurationOfNewVM

ClearSite

ForceRemoveProtectionGroup

ForceUpdateProtectionGroup

ForceKillProtectionGroup

PrePostScript: Deprecated

InitFullSync

Pair

Unpair

InstallCloudConnector

UninstallCloudConnector

RedeployCloudConnector

ScriptExecutionFailure

SetAdvancedSiteSettings

RESPONSE: DESCRIPTION

Clone
KeepDisk
FailoverBeforeCommit
FailoverCommit
FailoverRollback
MoveBeforeCommit
MoveRollback
MoveCommit
MaintainHost
UpgradeVra

MoveProtectionGroupToManualOperationNeeded: Deprecated
ChangeVraIpSettings: Deprecated
PauseProtectionGroup
ResumeProtectionGroup
UpgradeZVM: Deprecated
BulkUpgradeVras
BulkUninstallVras
AlertTurnedOn
AlertTurnedOff

ChangeRecoveryHost
BackupProtectionGroup
CleanupProtectionGroupVipDiskbox
RestoreProtectionGroup
PreScript
PostScript
RemoveVmFromVc
ChangeVraPasswordIpSettings
FlrJournalMount
FlrJournalUnmount
Login
HostEnteringMaintenanceMode
HostExitingMaintenanceMode
VmRestoredToSnapshot
ProtectedVmRemovedFromHypervisor
ProtectedVmAddedToHypervisor,
PauseProtectionGroupForMissingVm: Deprecated
ResumeProtectionGroupAfterUserRemovedMissingVm
ResumeProtectionGroupAfterVmReadded: Deprecated

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23.](#)

File Level Recovery

The File Level Recovery APIs enables you to view and recover specific files and folders from the recovery site from a specific point-in-time. Thus, you can recover files and folders for a virtual machine for as far back as the journal history is configured.

The user must be an administrator with viewing and managing VPG privileges.

The following APIs are available:

[Create a New Mount](#)

[View Existing Sessions](#)

[Browse The Disk](#)

[Select and Download Items](#)

[Unmount a Disk](#)

Create a New Mount

Mount a disk.

Note: Only one disk can be mounted in a session.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/flrs</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The following is an example of a Json request body for `https://zvm_ip:port/v1/flrs`.

```
{
  "jflr" {
    "CheckpointIdentifier": "6",
    "VmIdentifier": "0a1d772d-0f69-4a0e-8063-f809aa9dc237.vm-70",
    "VmVolumeIdentifier": "scsi:0:0",
    "VpgIdentifier": "b797d92a-a65a-4e00-9410-1a3aff93480b"
  }
}
```

PARAMETER	DESCRIPTION	TYPE	MANDATORY
jflr	Details about the File Level Recovery session.	-	-
CheckpointIdentifier	The identifier of the checkpoint of the VPG.	string	Yes
VmIdentifier	The identifier of the virtual machine.	string	Yes
VmVolumeIdentifier	The identifier of the disk used by the VM. The disk identifier can use either the SCSI or IDE standards to describe controllers and units, for example: SCSI:0:0.	string	Yes
VpgIdentifier	The internal VPG identifier	string	Yes

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/flrs`.

```
{  
  "2c1320bd-9210-4fbb-9b9a-b2c08e24699e.6b5b30d6-c090-4233-8466-5fe"  
}
```

PARAMETER	DESCRIPTION
FlrSessionIdentifier	The File Level Recovery session identifier.

Back to [File Level Recovery](#)

Back to [All APIs](#)

View Existing Sessions

Retrieve a list of mounted disks. There are several options to retrieve mounted disks:

- [Retrieve All Mounted Disks.](#)
- [Retrieve All Mounted Disks of a VM](#)
- [Retrieve a Single Mounted Disk.](#)

Retrieve All Mounted Disks

METHOD	URL
GET	<code>https://zvm_ip:port/v1/flrs</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Retrieve All Mounted Disks of a VM

METHOD	URL
GET	<code>https://zvm_ip:port/v1/flrs?vmIdentifier={vmIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vmIdentifier	The identifier of the VM. If the VM identifier is excluded, all open File Level Recovery sessions are displayed.

Retrieve a Single Mounted Disk

METHOD	URL
GET	<code>https://zvm_ip:port/v1/flrs/{flrSessionIdetifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
flrSessionIdentifier	The identifier of the File Level Recovery session.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example of a Json response for:

- All mounted disks: `https://zvm_ip:port/v1/flrs`
- All disks of a VM: `https://zvm_ip:port/v1/flrs?vmIdentifier={vmIdentifier}`
- A single disk (without the array statement): `https://zvm_ip:port/v1/flrs/{flrSessionIdentifier}`

```
[
  {
    "CheckpointIdentifier": "6",
    "FlrSessionIdentifier": "2c120bd-9210-4fbb-9b9a-b2c08e24699e.6b30d6-c090-4233-84e18bf39a4c",
    "FlrSessionStatus": "MountCompletedSuccessfully",
    "FlrSessionType": "jflr",
    "MountTime": "2018-03-04T12:24:41.551Z",
    "VmIdentifier": "0ald772d-0f69-4a0e-8063-f809aa9dc237.vm-70",
    "VmVolumeIdentifier": "Scsi:0:0",
    "VpgIdentifier": "b797d92a-a65a-4e00-9410-1a3aff93480b"
  }
]
```

PARAMETER	DESCRIPTION
CheckpointIdentifier	The identifier of the checkpoint of the VPG.
FlrSessionIdentifier	The File Level Recovery session identifier.
FlrSessionStatus	The status of the request to mount. Possible values are: <ul style="list-style-type: none"> ■ MountCompletedSuccessfully: Mounting the disk completed successfully. ■ MountFailed: Mounting the disk failed. ■ MountInProgress: Mounting a new disk is in progress. ■ UnmountCompletedSuccessfully: Unmounting the disk completed successfully. ■ UnmountFailed: Unmount the disk failed. ■ UnmountInProgress: Unmounting the disk is in progress.
FlrSessionType	The File Level Recovery session type: jflr.
MountTime	The date and time when the mount was created, in the format <code>yyyy-mm-ddThh:mm:ss.fffZ</code> , set to UTC.
VmIdentifier	The internal identifier of the VM.

PARAMETER	DESCRIPTION
VmVolumeIdentifier	The identifier of the disk used by the VM. The disk identifier can use either the SCSI or IDE standards to describe controllers and units, for example: SCSI:0:0.
VpIdentifier	The internal identifier of the VPG.

Back to [File Level Recovery](#)

Back to [All APIs](#)

Browse The Disk

Retrieve a list of files or folders existing in a disk.

The information can be retrieved for one path at a time.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}/browse</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
flrsessionIdentifier	The File Level Recovery session identifier.

Request Body Using Json Format

The following is an example of a Json request body for

`https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}/browse`.

```
{
  "path": "partition#1 Ext3"
}
```

PARAMETER	DESCRIPTION	TYPE	MANDATORY
Path	The path to a partition, folder or file. An empty Path value returns all existing partitions in the disk. Use a single forward slash (/) to separate the components of a path. For example: ZertoVMs/dummy_vra_znest175hv02.zertolab.local/RecoveryVolumes/41b4fac2/vm44/VM-1.vhdx. Backslash (\) is not supported .	string	Yes

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}/browse`

```
{
  "MainPathItem": {
    "CreationTime": "2018-03-05T12:13:22.365Z",
    "DownloadInformation": {
      "AdditionalInformation": null,
      "IsDownloadable": true
    }
  },
  "IsBrowsable": true,
  "LastAccessTime": "2018-03-05T12:13:22.365Z",
  "LastWriteTime": "2018-03-05T12:13:22.365Z",
  "Path": "",
  "SizeInBytes": null,
  "Type": "Partition"
},
"PathItems": [
  {
    "CreationTime": "2018-03-05T12:13:22.365Z",
    "DownloadInformation": {
      "AdditionalInformation": "Cannot restore. Links are not supported.",
      "IsDownloadable": false
    },
    "IsBrowsable": false,
    "LastAccessTime": "2018-03-05T12:13:22.365Z",
    "LastWriteTime": "2018-03-05T12:13:22.365Z",
    "Path": "partition#0 Ext3\\cdrom",
    "SizeInBytes": 0,
    "Type": "File"
  }
]
}
```

PARAMETER	DESCRIPTION
MainPathItem	Details regarding the path mentioned in the request body.
CreationTime	The time in which the API was run, in the format yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
DownloadInformation	Details regarding downloading the partition, folder or file.
AdditionalInformation	Additional information regarding the ability to download the partition, folder or file.
IsDownloadable	True: The partition can be downloaded. False: The partition cannot be downloaded.
IsBrowsable	True: The partition can be browsed. False: The partition cannot be browsed.
LastAccessTime	The date and time the item was last accessed in the disk, in the format yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
LastWriteTime	The date and time the item was last edited, in the format yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
Path	The path to the partition. When the path value in the request body is empty, the MainPathItem path is empty.
SizeInBytes	The size of the item, in bytes.

PARAMETER	DESCRIPTION
Type	The type of item. Possible values are: <ul style="list-style-type: none"> ■ Partition ■ Folder ■ File
PathItems	Details regarding the sub items of the main path item. If the value of the path in the request body is a file, the PathItems list is empty. If the path value in the request body is empty, PathItems displays details regarding the highest partition.
CreationTime	The time in which the API was run in the format, yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
DownloadInformation	Details regarding the download.
AdditionInformation	Additional information regarding the partition, folder or file.
IsDownloadable	True: The partition, folder or file can be downloaded. False: The partition, folder or file cannot be downloaded.
IsBrowsable	True: The item is a folder or a partition and is browsable. False: The item is a file, and is not browsable.
LastAccessTime	The date and time the item was last accessed in the disk, in the format yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
LastWriteTime	The date and time the item was last edited, in the format yyyy-mm-ddThh:mm:ss.fffZ, set to UTC.
Path	The path to the item.
SizeInBytes	The size of the item, in bytes.
Type	The type of item. Possible values are: <ul style="list-style-type: none"> ■ Partition ■ Folder ■ File

Back to [File Level Recovery](#)

Back to [All APIs](#)

Select and Download Items

Note the following:

- Up to **20** items can be downloaded.
- The items are automatically compressed if the user selects one of the following:
 - More than one file
 - A folder
 - Multiple folders
 - A partition

METHOD	URL
POST	<code>https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}/download</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
flrsessionIdentifier	The File Level Recovery session identifier.

Request Body Using Json Format

The following is an example of a Json request body for

`https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}/download`.

```
{
  "Compress": false,
  "PathList":
  [
    "partition#0 Ext3\\initrd.img"
  ]
}
```

PARAMETER	DESCRIPTION	TYPE	MANDATORY	DEFAULT
Compress	Whether to compress the file. True: Compress the file. False: Don't compress the file.	boolean	No	True
PathList	The path to the file or folder that's being downloaded. If the PathList is empty, the entire VM is downloaded.	string	Yes	-

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/flr/{flrsessionIdentifier}/download`

```
{
  "v1/downloads/6b5b30d6-c090-4233-8466-5fe18bf39a4c.9eb56867-2537-47d2-9396-3b0b8a5cd11c"
}
```

PARAMETER	DESCRIPTION
DownloadLink	The File Level Recovery session identifier. The link is valid for 10 seconds.

Back to [File Level Recovery](#)

Back to [All APIs](#)

Unmount a Disk

Unmount a previously mounted disk

METHOD	URL
DELETE	<code>https://zvm_ip:port/v1/flrs/{flrsessionIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
flrsessionIdentifier	The File Level Recovery session identifier.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/flr/{flrsessionIdentifier}`.

```
"0c66b743-01d3-42c5-844b-bf5d4283ddb1.6b5b30d6-c090-4233-8466-5fe18bf39a4c"
```

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the unmount action.

Back to [File Level Recovery](#)

Back to [All APIs](#)

License API

Use the license API to retrieve information about the license and perform actions related to the license.

Using the license API, you can:

- Integrate the license information into portals.
- Activate environments automatically.
- Automatically monitor quantity and usage.

Required Privileges: Manage site permission.

The following APIs are available:

[View License Details](#)

[Apply a New License or Update an Existing License](#)

[Delete a License](#)

View License Details

Retrieve information about a Zerto Virtual Replication license.

METHOD	URL
GET	<code>https://zvm_ip:port/v1/license</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/license`.

```
{
  "Details": {
    "ExpiryTime": "2021-01-01T00:00:00.000Z",
    "LicenseKey": "L8D5VK6EUVXWT33STH9YHR3GQ4K6JYW3FPCWJECLR2",
    "LicenseType": "",
    "MaxVms": 1000
  },
  "Usage": {
    "SitesUsage": [
      {
        "ProtectedVmsCount": 6,
        "SiteIdentifier": "939558e2-e2b7-4a7c-980b-92db337c14b1",
        "SiteName": "QA_VC_Noa_118.234"
      },
      {
        "ProtectedVmsCount": 3,
        "SiteIdentifier": "1289edfe-4cc7-4d68-8293-ca960e82d224",
        "SiteName": "String content"
      }
    ],
    "TotalVmsCount": 9
  }
}
```

PARAMETER	DESCRIPTION
Details	General information about the license.
ExpiryTime	The date and time on which the license expires, according to the Zerto Virtual Manager clock where the API is run. The time is in the format <code>yyyy-mm-ddThh:mm:ss.fffZ</code> , set to UTC.
LicenseKey	The license key.
LicenseType	The type of the license.
MaxVms	The maximum number of virtual machines that can be protected that can be used with this license, based on the license type.
Usage	Information about the sites using the license.
SitesUsage	Details about the sites and the protected VMs in each site.
ProtectedVMsCount	The number of protected VMs in the site.
SiteIdentifier	The identifier of the site.
SiteName	The name of the site.
TotalVmsCount	The total number of VMs used in all the sites that are linked to a single license.

Back to [License API](#)

Back to [All APIs](#)

Apply a New License or Update an Existing License

Add a new license or update an existing one.

METHOD	URL
PUT	<code>https://zvm_ip:port/v1/license</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The following is an example of a Json request body for `https://zvm_ip:port/v1/license`.

```
{  
  "LicenseKey": "L8D5VK6EUWXWT33STH9YHR3GQ4K6JYW3FPCWJECLR2"  
}
```

PARAMETER	DESCRIPTION	TYPE	MANDATORY
LicenseKey	The license key.	string	Yes

Response In Json Format

The response body is empty.

Back to [License API](#)

Back to [All APIs](#)

Delete a License

Delete a ZVM license.

METHOD	URL
DELETE	<code>https://zvm_ip:port/v1/license</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The response body is empty.

Back to [License API](#)

Back to [All APIs](#)

Local Site API

/v1/localsite returns information about the local site processing the API.

The following API are available:

- [“Peersites - GET”, below](#)
- [“Peersites - POST”, on page 84](#)

PURPOSE	METHOD	URL
Local site information	GET	<code>https://zvm_ip:port/v1/localsite</code>
Valid pairing statuses	GET	<code>https://zvm_ip:port/v1/localsite/pairingstatuses</code>
Send Billing Data to the billing server	POST	<code>https://zvm_ip:port/v1/localsite/billing/sendUsage</code>

HTTP Method

GET, POST

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)
Return the details of the peer sites: [Peer Sites API](#)
Return the list of all hypervisor sites: [Virtualization Sites API](#)

Localsite - GET

Returns information about local site.

URL

Local site information `https://zvm_ip:port/v1/localsite`
Valid pairing statuses `https://zvm_ip:port/v1/localsite/pairingstatuses`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/localsite`.

```
{
  "BandwidthThrottlingInMBs": 0.625,
  "ContactEmail": "String content",
  "ContactName": "String content",
  "ContactPhone": "String content",
  "IsReplicationToSelfEnabled": Boolean,
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "Location": "String content",
  "SiteIdentifier": "String content",
  "SiteName": "String content",
  "SiteType": "String content",
  "UtcOffsetInMinutes": 2147483647,
  "Version": "String content"
}
```

The following is an example response Json body for `https://zvm_ip:port/v1/localsite/pairingstatuses`.

```
["String content"]
```

XML Response Format

For the XML response format, see [“Local Site API XML Response Format”, on page 362](#).

Response Values

Response values for `https://zvm_ip:port/v1/localsite`.

PARAMETER	DESCRIPTION
BandwidthThrottlingInMBs	<p>The maximum allocated replication bandwidth for each VRA bandwidth group.</p> <p>The response reflects the bandwidth throttling as defined for that point in time.</p> <p>The bandwidth throttling is defined in the Site Settings window in the Performance and Throttling tab. The number represents megabits per second.</p> <p>The bandwidth throttling values of the API are in megabytes per second. Therefore, the values are the results of the calculation $X/8$ MB, where X is the number of megabits stated in the Site Settings window, in the Performance and Throttling tab.</p> <p>For example: Bandwidth throttling was defined as follows:</p> <ul style="list-style-type: none">■ From 14:00 to 16:00: unlimited■ For the rest of the day: 10 Mb/s. <p>The API is run at 18:00, and therefore the response will show 10/8 MB/s, or 1.25 MB/s.</p> <p>A value of -1 means that the bandwidth throttling is unlimited.</p>
ContactEmail	<p>The email address defined in the <i>Zerto User Interface Site Information</i> dialog.</p>

PARAMETER	DESCRIPTION
ContactName	The name of the contact person defined in the <i>Zerto User Interface Site Information</i> dialog.
ContactPhone	The phone number of the contact defined in the <i>Zerto User Interface Site Information</i> dialog.
IsReplicationToSelfEnabled	True: Protected virtual machines can be recovered to this protected site. False: Protected virtual machines can only be recovered to a different recovery site.
Link	The link details.
href	The URL used.
identifier	The internal site identifier.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Location	The location of the site defined during installation or in the <i>Site Information</i> dialog.
SiteIdentifier	The internal site identifier.
SiteName	The name of the site defined during installation or in the <i>Site Information</i> dialog.
SiteType	The type of the site defined during installation or in the <i>Site Information</i> dialog.
UtcOffsetInMinutes	The offset of the site time from UTC in minutes.
Version	The Zerto Virtual Manager version.

Response values for `https://zvm_ip:port/v1/localsite/pairingstatuses`.

RESPONSE: DESCRIPTION
Pairing statuses: Paired: The site is paired. Pairing: The site is in the process of being paired. Unpaired: The site is not paired.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Localsite - POST

URL

Send Billing Data to the billing server `https://zvm_ip:port/v1/localsite/billing/sendUsage`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9081.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/localsite/billing/sendUsage`.

```
["String content"]
```

Response Values

Response values for `https://zvm_ip:port/v1/localsite/billing/sendUsage`.

RESPONSE: DESCRIPTION

Passed: Succeeded to send usage information.

Failed: Failed to send usage information.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Peer Sites API

`/v1/peersites` returns a list of all peer sites of the site processing the API and pairs the site processing the API with another site. The following API are available:

- [“Peersites - GET”, below](#)
- [“Peersites - POST”, on page 84](#)

PURPOSE	METHOD	URL
List of peer sites	GET	<code>https://zvm_ip:port/v1/peersites</code>
A single peer site	GET	<code>https://zvm_ip:port/v1/peersites/{siteIdentifier}</code>
The status of peer sites	GET	<code>https://zvm_ip:port/v1/peersites/pairingstatuses</code>
Pair to another sites	POST	<code>https://zvm_ip:port/v1/peersites/pair</code>
Unpair a site	DELETE	<code>https://zvm_ip:port/v1/peersites/{SiteIdentifier}</code>

HTTP Method

GET, POST, DELETE

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Return the details of the local site: [Local Site API](#)

Return the list of all hypervisor sites: [Virtualization Sites API](#)

Format

Json, XML

Peersites - GET

Returns information about peer sites.

URL

All peer sites `https://zvm_ip:port/v1/peersites`

Filtered peer sites `https://zvm_ip:port/v1/peersites?peerName={PEERNAME}&pairingStatus={PAIRINGSTATUS}&location={LOCATION}&hostName={HOSTNAME}&port={PORT}`

Single peer site `https://zvm_ip:port/v1/peersites/{siteIdentifier}`

Valid pairing statuses `https://zvm_ip:port/v1/peersites/pairingstatuses`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.	
port	The port to access the Zerto Virtual Manager. The default port is 9669.	
siteIdentifier	The identifier of the peer site for which information is to be returned.	
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all peer sites are returned. Filters are not case-sensitive.	
	Filter	Description
	peerName	The name of a peer site for which information is to be returned. The name is case-sensitive.
	pairingStatus	The pairing status for which information is to be returned.
	location	The site location, as specified in the site information, for which information is to be returned.

hostName	The IP address of a Zerto Virtual Manager, paired with this site, for which information is to be returned.
port	The port used to access peer sites for which information is to be returned. The default port is 9081.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/peersites` and for `https://zvm_ip:port/v1/peersites/{siteIdentifier}`.

```
[{
  "HostName": "String content",
  "IncomingThroughputInMb":1.26743233E+15,
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "Link_x007B_0_x007D_": {
    "href": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "Location": "String content",
  "OutgoingBandWidth":1.26743233E+15,
  "PairingStatus":0,
  "PeerSiteName": "String content",
  "Port":9081,
  "ProvisionedStorage":2147483647,
  "SiteIdentifier": "String content",
  "UsedStorage":2147483647,
  "Version": "String content"
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/peersites/pairingstatuses`.

```
["String content"]
```

XML Response Format

For the XML response format, see [“Peer Sites API GET Method Request and Response Formats”](#), on page 363.

Response Values

Response values for `https://zvm_ip:port/v1/peersites` and for `https://zvm_ip:port/v1/peersites/{siteIdentifier}`

PARAMETER	DESCRIPTION
HostName	The address of a machine where a peer site Zerto Virtual Manager runs.
IncomingThroughputInMb	The Mb/s for all the applications running on the virtual machines being recovered on the peer site.
Link	The link details.
href	The URL used.

PARAMETER	DESCRIPTION
identifier	The internal site identifier.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Link__x007B_0_x007D_	The link details.
href	The URL used.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Location	The site location of the peer site defined during the installation or in the <code>Site Information</code> dialog.
OutgoingBandWidth	The bandwidth throttling defined for the site.
PairingStatus	The connection status of the local site. Possible values are (Json/XML): Paired: The site is paired. Pairing: The site is in the process of being paired. Unpaired: The site is not paired.
PeerSiteName	The name of the peer site defined during installation or in the <code>Site Information</code> dialog.
Port	The port used for communication by the Zerto Virtual Managers. The default port is 9081.
ProvisionedStorage	The storage provisioned for all of the virtual machines in all the VPGs recovered to this site.
SiteIdentifier	The internal site identifier.
UsedStorage	The storage used by all of the virtual machines in all the VPGs recovered to this site.
Version	The Zerto Virtual Manager version.

Response values for `https://zvm_ip:port/v1/peersites/pairingstatuses`.

RESPONSE: DESCRIPTION
<p>Pairing statuses:</p> <p>Paired: The site is paired. Pairing: The site is in the process of being paired. Unpaired: The site is not paired.</p>

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Peersites - POST

Pairs the current site with another, peersite.

URL

Pair with another site `https://zvm_ip:port/v1/peersites`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9081.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/peersites` POST request.

```
{
  "HostName": "String content"
  "Port": 9081
}
```

Request Values

Request values for `https://zvm_ip:port/v1/peersites` POST request.

PARAMETER	DESCRIPTION	MANDATORY
HostName	The address or DNS name of the Zerto Virtual Manager machine that will pair to the current site.	Yes
Port	The default port used for communication between paired Zerto Virtual Managers. The default port is 9081.	Yes

XML Request Format

For the XML request format, see [“Peer Sites API POST Method Request and Response Formats”](#), on page 363.

Response In Json Format

The following is an example response request Json body for `https://zvm_ip:port/v1/peersites` POST request.

```
{
  "TaskIdentifier": "String content"
}
```

Response Values

Response values for `https://zvm_ip:port/v1/peersites` POST request.

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the pairing task. The task identifier can be used with the Tasks API to monitor the delete action.

XML Response Format

For the XML response format, see [“Peer Sites API POST Method Request and Response Formats”](#), on page 363.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”](#), on page 23.

Peersites - DELETE

Unpair the current site from another site paired to it.

URL

Unpair with another site `https://zvm_ip:port/v1/peersites/{SiteIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager machine where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
SiteIdentifier	The identifier of the site to unpair.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}` DELETE request.

```
{
  "IsKeepTargetDisks": Boolean
}
```

Request Values

Request values for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}` DELETE request.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
IsKeepTargetDisks	True: Keep the target replica disks for any VPGs replicating between the sites as the VPGs will be deleted by unpairing the sites. This will enable faster synchronization in the event of recreating these VPGs at a later stage. False: The target replica disks for the virtual machines are deleted.	No	False

Response In Json Format

The following is an example response request Json body for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}` DELETE request.

```
{
  "TaskIdentifier": "String content"
}
```

Response Values

Response values for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}` DELETE request.

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the pairing task. The task identifier can be used with the Tasks API to monitor the pairing action.

XML Response Format

For the XML response format, see "[Peer Sites API DELETE Method Request and Response Formats](#)", on page 364.

PowerShell Scripts

For complete PowerShell Scripts, see “Examples”, on page 23.

Recovery Report API

Use this API to retrieve information about recovery operations such as failover, failover tests and move. The information for each machine includes the steps taken during the operation, such as creating a machine and scratch volumes for testing, when each process began and ended, and whether the operation succeeded or not.

Recovery Reports are always kept, and **never deleted**.

Note: When failover test is still in progress, the end time in the Recovery Report appears as NA.

Generate A Recovery Report

Generate a recovery report and view information about recovery operations, such as failover, failover tests and moves.

The report displays information by VPG, and then by virtual machine within the VPG.

METHOD	URL
GET	<code>https://zvm_ip:port/v1/reports/recovery</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Filtering

```
https://zvm_ip:port/v1/reports/recovery?startTime={startTime}&endTime={endTime}&pageNumber={pageNumber}&pageSize={pageSize}&vpgName={vpgName}&recoveryType={recoveryType}&state={state}
```

Filters

Any combination of filters is valid. Filters are not case-sensitive.

Filtering

FILTER	DESCRIPTION	MANDATORY	DEFAULT
startTime	Operations performed between the specified start Time and end Time (inclusive) are displayed. The time is set to UTC with the following possible formats:	No	If none specified, generate the earliest time available.
endTime	yyyy-MM-ddTHH:mm:ss.fffZ" yyyy-MM-ddTHH:mm:ssZ yyyy-MM-ddTHH:mmZ yyyy-MM-ddTHHZ yyyy-MM-dd yyyy-MM yyyy	No	If none specified, generate the latest time available.
pageNumber	The page number the user wants to retrieve. Minimum value is 1.	No	1
pageSize	The number of reports to display in a single page. The maximum number of reports per page is 1000.	No	1000
vpgName	The name of the VPG. You can specify more than one VPG, separated by commas.	No	
recoveryType	The type of recovery operations. Possible values are: Failover Failover Test Move	No	All recovery operations.
state	Whether the recovery operation has completed.	No	

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/reports/recovery`.

```
{
  "General": {
    "EndTime": "2018-11-06T14:17:59.637Z",
    "InitiatedBy": "string content",
    "Notes": "",
    "PointInTime": "2018-11-06T14:18:01.000Z",
    "ProtectedSiteName": "string content",
    "RTOInSeconds": "78.5313997",
    "RecoverySiteName": "string content",
    "RecoveryType": "Move",
    "StartTime": "2018-11-06T14:17:48.000Z",
    "Status": "Success",
    "VpgIdentifier": "string content",
    "VpgName": "string content"
  }
  "RecoveryOperationIdentifier": "string content",
  "RecoverySetting": {
    "Steps": [
      {
        "Description": "Shutdown protected VMs",
        "EndTime": "2018-11-06T14:17:59.637Z",
        "ExecutionTime": "00:00:01.6250079",
        "Result": "Success",
        "StartTime": "2018-11-06T14:17:58.012Z"
      },
      {
        "Description": "Recover VM 'deb(1)",
        "EndTime": "2018-11-06T14:18:13.716Z",
        "ExecutionTime": "00:00:04.3437576",
        "Result": "Success",
        "StartTime": "2018-11-06T14:18:09.372Z"
      },
      {
        "Description": "disable DRS",
        "EndTime": "2018-11-06T14:18:14.044Z",
        "ExecutionTime": "00:00:00.2813752",
        "Result": "Success",
        "StartTime": "2018-11-06T14:18:13.762Z"
      },
      {
        "Description": "Recover VMs' 'deb(1)' volumes",
        "EndTime": "2018-11-06T14:19:01.466Z",
        "ExecutionTime": "00:00:47.3595136",
        "Result": "Success",
        "StartTime": "2018-11-06T14:18:14.106Z"
      },
      {
        "Description": "Start VMs",
        "EndTime": "2018-11-06T14:19:06.919Z",
        "ExecutionTime": "00:00:05.0156373",
        "Result": "Success",
        "StartTime": "2018-11-06T14:19:01.903Z"
      }
    ]
  }
}
```

```

],
"Vms": [
  {
    "DatastoreName": "string content",
    "FolderName": "/",
    "HostName": "string content",
    "VmName": "string content",
    "Volumes": [
      {
        "DatastoreName": "string content",
        "VolumeName": "stringcontent"
      }
    ]
  }
],
"Vpg": {
  "DefaultDatastoreName": "string content",
  "DefaultHostName": "string content",
  "DefaultNetworkName": "string content"
}
]

```

Response Values

Response values for `https://zvm_ip:port/v1/reports/recovery`.

PARAMETER	DESCRIPTION
General	
EndTime	The time the recovery operation ended. The time is in the format <code>yyyy-mm-ddThh:mm:ss.fffZ</code> , set to UTC.
InitiatedBy	The name of the user who initiated the operation.
Notes	Comments the user added regarding the operation.
PointInTime	The Point in time value takes the checkpoint UTC time, which was created in the protected site, and converts it to the recovery site time zone.
ProtectedSiteName	The name of the protected site where the virtual machines are protected.
RTOInSeconds	The recovery time objective in seconds.
RecoverySiteName	The name of the recovery site where the virtual machines are recovered.
RecoveryType	The type of recovery operation. Possible values are: <ul style="list-style-type: none"> ■ Failover ■ Failover Test ■ Move
StartTime	The time the recovery operation started. The time is in the format <code>yyyy-mm-ddThh:mm:ss.fffZ</code> , set to UTC.

PARAMETER	DESCRIPTION
Status	Operation status. Possible values are: Unknown Succeed Failed PassedByUser FailedByUser
VpgIdentifier	The identifier of the VPG.
VpgName	The name of the VPG.
RecoveryOperationIdentifier	The identifier of the recovery operation.
RecoverySettings	
Steps	The tasks that a specific recovery operation runs.
Descriptions	The description of the task.
EndTime	The time the recovery operation task ends.
ExecutionTime	The duration of the task.
Result	The result of the task. Possible values are: Success Failure
StartTime	The time the recovery operation task starts.
Vms	
DatastoreName	The name of the datastore that is used for the recovered virtual machines.
FolderName	The name of the folder that is used for the recovered virtual machines.
HostName	The name of the cluster, resource pool or host in the recovery site that handles the replicated data.
NetworkName	The name of the network used for failover or move by the virtual machines.
VmName	The name of the virtual machine.
Volumes	
DatastoreName	The name of the datastore where the disk is stored.
VolumeName	The name of the volume.
Vpg	
DefaultDatastoreName	The name of the default datastore that is used for the recovered virtual machines.

PARAMETER	DESCRIPTION
DefaultHostName	The name of the default cluster, resource pool or host in the recovery site that handles the replicated data.
DefaultNetworkName	The name of the default network used for failover or move by the virtual machines.

Resources Report API

The resources report API generates information about the resources that are used by the virtual machines that are recovered to the site where the report is run. If no virtual machines are recovered to the site where the report is run, the report is empty.

This information is collected at fixed times as defined in the Resources Report section of the Site Settings window. Information for the report is saved for 90 days when the sampling period is hourly, and for one year when the sampling period is daily.

METHOD	URL
GET	<code>https://zvm_ip:port/v1/reports/resources</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Basic filtering

`https://zvm_ip:port/v1/reports/resources?startTime={startTime}&endTime={endTime}&pageNumber={pageNumber}&pageSize={pageSize}`

Advanced filtering

`https://zvm_ip:port/v1/reports/resources?startTime={startTime}&endTime={endTime}&pageNumber={pageNumber}&pageSize={pageSize}&zorgName={zorgName}&vpgName={vpgName}&vmName={vmName}&protectedSiteName={protectedSiteName}&protectedClusterName={protectedClusterName}&protectedHostName={protectedHostName}&protectedOrgVdc={protectedOrgVdc}&protectedVcdOrg={protectedVcdOrg}&recoverySiteName={recoverySiteName}&recoveryClusterName={recoveryClusterName}&recoveryHostName={recoveryHostName}&recoveryOrgVdc={recoveryOrgVdc}&recoveryVcdOrg={recoveryVcdOrg}`

Filters

Any combination of filters is valid. Filters are not case-sensitive.

Basic Filtering

FILTER	DESCRIPTION	MANDATORY	DEFAULT
startTime	Information about the resources is collected according to the dates specified in the startTime and endTime (inclusive). The time is set to UTC with the following possible formats: yyyy-MM-ddTHH:mm:ss.fffZ"	No	If none specified, generate the earliest time available.
endTime	yyyy-MM-ddTHH:mm:ssZ yyyy-MM-ddTHH:mmZ yyyy-MM-ddTHHZ yyyy-MM-dd yyyy-MM yyyy	No	If none specified, generate the latest time available.
pageNumber	The page number to retrieve.	No	1
pageSize	The number of reports to display in a single page. The maximum number of reports per page is 1000.	No	1000

Advanced Filters

FILTER	DESCRIPTION
protectedClusterName	The name of the cluster containing the host where the virtual machine in the protected site resides.
protectedHostName	The address or DNS name of the host where the virtual machine in the protected site resides.
protectedOrgVdc	The name of the vDC organization in the protected site.
protectedSiteName	The name of the protected site.
protectedVcdOrg	The name of the vCD organization in the protected site.
recoveryClusterName	The name of the cluster containing the host where the virtual machine in the recovery site resides.
recoveryHostName	The address or DNS name of the host where the virtual machine in the recovery site resides.
recoveryOrgVdc	The name of the vDC organization in the recovery site.
recoverySiteName	The name of the recovery site.
recoveryVcdOrg	The name of the recovery vCD organization.
VmName	The name of the virtual machine.
vpgName	The name of the VPG.
zorgName	The name of the organization set up in the Zerto Cloud Manager.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/reports/resources`:

```
[{
  "Performance": {
    "BandwidthInBps": -1,
    "ThroughputInBps": -1
  },
  "ProtectedSite": {
    "SiteName": "string content",
    "VcdOrgName": "",
    "Compute": {
      "ClusterName": "string content",
      "HostName": "string content",
      "OrgVdcName": "",
      "ResourcePoolName": "",
      "VraName": "string content"
    }
  },
  "Storage": {
    "VolumesProvisionedStorageInGB": 0.516,
    "VolumesUsedStorageInGB": 0.498,
    "NumberOfVolumes": 3
  },
  "VmInfo": {
    "Cpu": {
      "CpuLimitationInMhz": 0,
      "CpuReservedInMhz": 0,
      "CpuUsedInMhz": 0,
      "NumberOfvCpus": 1
    }
  },
  "HardwareVersion": "string content",
  "Memory": {
    "ActiveGuestMemoryInMB": 15,
    "ConsumedHostMemoryInMB": 90,
    "MemoryInMB": 256,
    "MemoryLimitationInMB": 0,
    "MemoryReservedInMB": 0
  },
  "VmIdentifier": "string content",
  "VmName": "string content"
},
]
```

```

"RecoverySite": {
  "SiteName": "string content",
  "VcdOrgName": "",
  "Compute": {
    "ClusterName": "string content",
    "HostName": "string content",
    "OrgVdcName": "",
    "ResourcePoolName": "",
    "VraName": "string content",
    "FailoverOrMoveInstanceFamily": "",
    "FailoverOrMoveInstanceType": "",
    "FailoverTestInstanceFamily": "",
    "FailoverTestInstanceType": ""
  },
},
"Storage": {
  "VolumesProvisionedStorageInGB": 0.516,
  "VolumesUsedStorageInGB": 0,
  "DatastoreName": "string content",
  "JournalProvisionedStorageInGB": 16,
  "JournalUsedStorageInGB": 0.306,
  "StoragePolicyName": ""
}
},
"SampleTime": "2018-04-12T21:59:59.000Z",
"Vpg": {
  "CrmIdentifier": "",
  "ProtectedAndRecoveryType": "VC2VC",
  "ServiceProfileName": "",
  "VpgName": "string content",
  "ZorgName": ""
}
}]

```

PARAMETER	DESCRIPTION
Performance	
BandwidthInBps	The average bandwidth used between two consecutive samples, in bytes per second. A value of -1 means that data is not transferred.
ThroughputInBps	The average throughput used between two consecutive samples, in bytes per second. A value of -1 means that data is not transferred.
ProtectedSite	
SiteName	The name of the protected site.
VcdOrgName	The name of the vCD organization in the protected site.
Compute	

PARAMETER	DESCRIPTION
ClusterName	The name of the cluster containing the host where the virtual machine in the protected site resides.
HostName	The address or DNS name of the host where the virtual machine in the protected site resides.
OrgVdcName	The name of the vDC organization in the protected site.
ResourcePoolName	The name of the resource pool hosting the virtual machine.
VraName	The name of the VRA.
Storage	
VolumesProvisionedStorageInGB	The amount of provisioned storage for the virtual machine in the protected site. This value is the sum of the provisioned size of all the volumes.
VolumesUsedStorageInGB	The amount of storage used by the virtual machine in the protected site. This value is the sum of the used storage of all the volumes.
NumberOfVolumes	The number of volumes attached to the virtual machine.
VmInfo	
Cpu	
CpuLimitationInMhz	The maximum MHz available for the CPUs in the virtual machine.
CpuReservedInMhz	The MHz reserved for use by the CPUs in the virtual machine.
CpuUsedInMhz	The MHz used by the CPUs in the virtual machine.
NumberOfvCpus	The number of vCPUs for the virtual machine.
HardwareVersion	The VMware hardware version.
Memory	
ActiveGuestMemoryInMB	The amount of memory used by the guest OS of the virtual machine.
ConsumedHostMemoryInMB	The amount of memory the host consumes.
MemoryInMB	The total amount of memory defined for the virtual machine.
MemoryLimitationInMB	The upper limit for the virtual machine's memory allocation.
MemoryReservedInMB	The reserved memory allocation for this virtual machine.
VmIdentifier	The identifier of the VM.
VmName	The name of the VM.
RecoverySite	

PARAMETER	DESCRIPTION
SiteName	The name of the recovery site.
VcdOrgName	The name of the vCD organization in the recovery site.
Compute	
ClusterName	The name of the cluster containing the host where the virtual machine in the recovery site resides.
HostName	The address or DNS name of the host where the virtual machine in the recovery site resides.
OrgVdcName	The name of the vDC organization in the recovery site.
ResourcePoolName	The name of the resource pool hosting the virtual machine.
VraName	The name of the VRA.
FailoverOrMoveInstanceFamily	The instance family from which to select the instance type.
FailoverOrMoveInstanceType	The type of instance used when performing a failover or a move.
FailoverTestInstanceFamily	The instance family from which to select the instance types.
FailoverTestInstanceType	The type of instance used when testing a failover.
Storage	
VolumesProvisionedStorageInGB	The provisioned storage for the virtual machine in the recovery site. This value is the sum of the provisioned size of all the volumes.
VolumesUsedStorageInGB	The used storage for the virtual machine in the recovery site. This value is the sum of the used storage of all the volumes.
DatastoreName	The name of the datastore.
JournalProvisionedStorageInGB	The provisioned journal storage for the virtual machine.
JournalUsedStorageInGB	The used journal storage for the virtual machine.
StoragePolicyName	The name of the storage policy in which the VM configuration files will reside.
SampleTime	The date and time the resource information was collected.
Vpg	
CrmlIdentifier	The cloud resource manager (CRM) identifier defined in the Zerto Cloud Manager for a ZORG.

PARAMETER	DESCRIPTION
ProtectedAndRecoveryType	The VPG type. Possible values are: VC2VC: vCenter to vCenter replication. VC2VCD: vCenter to vCloud Director replication. VCD2VCD: vCloud Director to vCloud Director replication. VCD2VC: vCloud Director to vCenter replication.
ServiceProfileName	The name of the service profile defined in the Zerto Cloud Manager.
VpgName	The name of the VPG.
ZorgName	The name of the ZORG as defined in the Zerto Cloud Manager.

XML Response Format

For the XML response format, see [“Resources Report API XML Response Formats”](#), on page 364.

API Response Fields: Old and New

CURRENT FIELD NAME	PREVIOUS FIELD NAME
BandwidthInBps	BandwidthInBytes
ThroughputInBps	ThroughputInBytes
ProtectedSite	SourceSite
SiteName	SourceSite
VcdOrgName	SourceVCDOrg
ClusterName	SourceCluster
HostName	SourceHost
OrgVdcName	SourceOrgVDC
ResourcePoolName	SourceResourcePool
VraName	SourceVraName
VolumesProvisionedStorageInGB	SourceVolumesProvisionedStorageInGB
VolumesUsedStorageInGB	SourceVolumesUsedStorageInGB
NumberOfVolumes	NumberOfVolumes
CpuLimitationInMhz	CpuLimitInMhz
CpuReservedInMhz	CpuReservedInMhz
CpuUsedInMhz	CpuUsedInMhz

CURRENT FIELD NAME	PREVIOUS FIELD NAME
NumberOfvCpus	NumberOfvCpus
HardwareVersion	VmHardwareVersion
ActiveGuestMemoryInMB	ActiveGuestMemoryInMB
ConsumedHostMemoryInMB	ConsumedHostMemoryInMB
MemoryInMB	MemoryInMB
MemoryLimitationInMB	MemoryLimitInMb
MemoryReservedInMB	MemoryReservedInMB
VmIdentifier	VmIdentifier
VmName	VmName
RecoverySite	TargetSite
SiteName	TargetSite
VcdOrgName	TargetVCDOrg
ClusterName	TargetCluster
HostName	TargetHost
OrgVdcName	TargetOrgVDC
ResourcePoolName	TargetResourcePool
VraName	TargetVraName
FailoverOrMoveInstanceFamily	Failover\Move Instance Family\VM Series
FailoverOrMoveInstanceType	Failover\Move Instance Type\VM Size
FailoverTestInstanceFamily	Failover Test Instance Family\VM Series
FailoverTestInstanceType	Failover Test Instance Type\VM Size
VolumesProvisionedStorageInGB	RecoveryVolumesProvisionedStorageInGB
VolumesUsedStorageInGB	RecoveryVolumesUsedStorageInGB
DatastoreName	TargetDatastores
JournalProvisionedStorageInGB	RecoveryJournalProvisionedStorageInGB
JournalUsedStorageInGB	RecoveryJournalUsedStorageInGB
StoragePolicyName	StorageProfile

CURRENT FIELD NAME	PREVIOUS FIELD NAME
SampleTime	TimeStamps
CrmlIdentifier	CrmlId
ProtectedAndRecoveryType	vpgType
ServiceProfileName	ServiceProfile
VpgName	VpgName
ZorgName	ZORG

See Also

[Managing vCD APIs](#)

Service Profiles API

/v1/serviceprofiles returns information about service profiles that are defined in the Zerto Cloud Manager that is connected to the site where the API runs.

URL

- All service profiles** `https://zvm_ip:port/v1/serviceprofiles`
- Filtered service profiles** `https://zvm_ip:port/v1/serviceprofiles?site={siteIdentifier}`
- Single service profile** `https://zvm_ip:port/v1/serviceprofiles/{serviceProfileId}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.	
port	The port to access the Zerto Virtual Manager. The default port is 9669.	
serviceProfileId	The service profile ID for which information should be returned.	
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all service profiles are returned. Filters are not case-sensitive.	
	Filter	Description
	siteIdentifier	The identifier of the site for which service profiles should be returned.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/serviceprofiles` and for `https://zvm_ip:port/v1/serviceprofiles/{SiteIdentifier}`.

```
[{
  "Description": "String content",
  "History": "P428DT10H30M12.3S",
  "JournalWarningThresholdInPercent": 4294967295,
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "MaxJournalSizeInPercent": 4294967295,
  "Rpo": "P428DT10H30M12.3S",
  "ServiceProfileIdentifier": "String content",
  "ServiceProfileName": "String content",
  "TestInterval": "P428DT10H30M12.3S"},
]
```

XML Response Format

For the XML response format, see [“Service Profiles API XML Response Formats”, on page 367.](#)

Response Values

Response values for `https://zvm_ip:port/v1/serviceprofiles` and for `https://zvm_ip:port/v1/serviceprofiles/{SiteIdentifier}`.

PARAMETER	DESCRIPTION
Description	A description of the service profile.
History	The length of time all write commands are saved in the journal.
JournalWarningThresholdInPercent	The journal size that triggers a warning that the journal has neared its hard limit, as a percentage of the virtual machine volume size.
Link	The link details.

PARAMETER	DESCRIPTION
href	The URL used.
identifier	The unique identifier of the service profile.
rel	The next path level for the API relative to the current path.
type	The API interface service.
MaxJournalSizeInPercent	The maximum size that the journal can grow, as a percentage of the virtual machine volume size.
Rpo	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The unique identifier of the service profile.
ServiceProfileName	The name of the service profile.
TestInterval	The period of time specified in the VPG that should pass between testing the failover process.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Session API

/v1/session starts and ends a session. The following API are available:

- [“Session: POST”, below](#)
- [“Session: DELETE”, on page 103](#)

PURPOSE	METHOD	URL
Start a session	POST	<code>https://zvm_ip:port/v1/session/Add</code>
End a session	DELETE	<code>https://zvm_ip:port/v1/session</code>

HTTP Methods

POST, DELETE

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header when ending a session.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Session: POST

Sets up an authenticated session for the Zerto RESTful API.

URL

Start session `https://zvm_ip:port/v1/session/Add`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Response In Json Format

The response body is empty.

Session: DELETE

Ends a session for the Zerto RESTful API.

Note: If a session is dormant for thirty minutes the session is automatically terminated.

URL

End session `https://zvm_ip:port/v1/session`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The response body is empty.

PowerShell Samples

For complete PowerShell samples, see [“Examples”, on page 23](#)

PowerShell Samples

Starting a Session with VMware vCenter Server or Microsoft SCVMM Credentials The following code sample shows how to start a session with VMware vCenter Server or Microsoft SCVMM authentication.

```
$strZVMIP = "{ZVM IP}"
$strZVMPort = "{ZVM HTTPS port}"
$strZVMUser = "{ZVM user}"
$strZVMPwd = "{ZVM user password}"
## Perform authentication so that Zerto APIs can run. Return a session identifier that needs to
be inserted in the header for subsequent requests.
function getxZertoSession ($userName, $password){
    $baseUrl = "https://" + $strZVMIP + ":"+$strZVMPort
    $xZertoSessionURL = $baseUrl + "/v1/session/add"
    $authInfo = ("{}: {}" -f $userName, $password)
    $authInfo = [System.Text.Encoding]::UTF8.GetBytes($authInfo)
    $authInfo = [System.Convert]::ToBase64String($authInfo)
    $headers = @{Authorization=("Basic {}" -f $authInfo)}
    $contentType = "application/json"
    $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers -Method
    POST -Body $body -ContentType $contentType

    # $xZertoSessionResponse = Invoke-WebRequest -Uri $xZertoSessionURL -Headers $headers -Body
    $body -Method POST
    return $xZertoSessionResponse.headers.get_item("x-zerto-session")
}

#Extract x-zerto-session from the response, and add it to the actual API:
$xZertoSession = getxZertoSession $strZVMUser $strZVMPwd
$zertoSessionHeader = @{"x-zerto-session"=$xZertoSession}
```

Starting a Session with Windows Credentials To start a session with Windows authentication, replace the line in the above code:

```
String loginType = args.Length > 4 ? args[4] : "1";
```

with:

```
String loginType = args.Length > 4 ? args[4] : "0";
```

Ending a Session The following code sample shows how to end a session:

```
private void LogOut() {
    String addSessionUri = m_baseAddress + "/session";
    HttpWebRequest request = WebRequest.Create(addSessionUri) as HttpWebRequest;

    //logging-out is about DELETING a session, with the DELETE http command
    request.Method = "DELETE";
    request.Timeout = 10000;

    //you need to set the id of the session to be deleted --> logged-out
    request.Headers.Add(c_authorizationHeader, m_sessionId);

    HttpWebResponse httpResponse = request.GetResponse() as HttpWebResponse;

    if (httpResponse.StatusCode == HttpStatusCode.OK) {
        m_sessionId = String.Empty;
        Console.WriteLine("\nLogged out - by deleting the session");
    }
    else {
        Console.WriteLine("Request {0} failed with code: {1}, {2}", request,
httpResponse.StatusCode, httpResponse.StatusDescription);
    }
}
```

Tasks API

/v1/tasks returns information about tasks run on the site.

URL

- All tasks** `https://zvm_ip:port/v1/tasks`
- Filtered tasks** `https://zvm_ip:port/v1/tasks?startedBeforeDate={STARTEDBEFOREDATE}&startedAfterDate={STARTEDAFTERDATE}&completedBeforeDate={COMPLETEDBEFOREDATE}&completedAfterDate={COMPLETEDAFTERDATE}&type={TYPE}&status={STATUS}`
- Single task** `https://zvm_ip:port/v1/tasks/{taskIdentifier}`
- Valid task types** `https://zvm_ip:port/v1/tasks/types`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
taskIdentifier	The identifier of the task for which information should be returned. The task identifier is the concatenation of the task and site identifiers, separated by a period. For example, 5e81d46e-c49e-4b2c-b65a-d742a4939192.d2da8a37-68f0-4464-a70c-abb19683fd01
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all tasks are returned. Filters are not case-sensitive.
Filter	Description

startedBeforeDate	The date before which the tasks must have begun, supplied in the format <code>YYYY-mm-dd</code> . You can also specify a local time in the format: <code>YYYY-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
startedAfterDate	The date after which the tasks must have begun, supplied in the format <code>YYYY-mm-dd</code> . You can also specify a local time in the format: <code>YYYY-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
completedBeforeDate	The date before which the tasks must have ended, supplied in the format <code>YYYY-mm-dd</code> . You can also specify a local time in the format: <code>YYYY-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
completedAfterDate	The date after which the tasks must have ended, supplied in the format <code>YYYY-mm-dd</code> . You can also specify a local time in the format: <code>YYYY-mm-ddThh:mm:ss.fffZ</code> . Adding Z to the end of the time sets the time to UTC.
type	<p>The type of task. For the description of the tasks, refer to the Zerto documentation about monitoring tasks. Possible values are:</p> <ul style="list-style-type: none"> 0 or FirstUnusedValue 1 or CreateProtectionGroup 2 or RemoveProtectionGroup 3 or FailOver 4 or FailOverTest 5 or StopFailOverTest 6 or Move 7 or GetCheckpointList 8 or ProtectVM 9 or UnprotectVM 10 or AddVMToProtectionGroup 11 or RemoveVMFromProtectionGroup
	<ul style="list-style-type: none"> 12 or InstallVra 13 or UninstallVra 14 or GetVMSettings 15 or UpdateProtectionGroup 16 or InsertTaggedCP 17 or WaitForCP 18 or HandleMirrorPromotion 19 or ActivateAllMirrors 20 or LogCollection 21 or ClearCheckpoints 22 or ForceReconfigurationOfNewVM 23 or ClearSite 24 or ForceRemoveProtectionGroup 25 or ForceUpdateProtectionGroup 26 or ForceKillProtectionGroup

	27 or PrePostScript 28 or InitFullSync 29 or Pair 30 or Unpair 31 or AddPeerVraInfo 32 or RemovePeerVraInfo 33 or InstallCloudConnector 34 or UninstallCloudConnector 35 or HandleFirstSyncDone
	36 or Clone 37 or MoveBeforeCommit 38 or MoveRollback 39 or MoveCommit 40 or UpgradeVRA 41 or MaintainHost 42 or NotSupportedInThisVersion 43 or MoveProtectionGroupToManualOperationNeeded
	44 or FailoverBeforeCommit 45 or FailoverCommit 46 or FailoverRollback 47 or ChangeVraIpSettings 48 or PauseProtectionGroup 49 or ResumeProtectionGroup 50 or BulkUpgradeVras 51 or BulkUninstallVras 52 or ChangeVraPassword 53 or ChangeRecoveryHost 54 or ChangeRecoveryHostForProtectionGroup
	55 or VpgBackup 56 or RedeployCloudConnector 57 or RestoreVpg 58 or VpgDeleteBackup 59 or SubmitSupportTicket 60 or PreScript 61 or PostScript 62 or ChangeVraPasswordIpSettings 63 or FlrJournalMount 64 or FlrJournalUnmount 65 or StartVMsWithOrder 66 or HandleProtectedVmRemovedFromPlatform 67 or HandleProtectedVmAddedToPlatform 68 or SplitCommit
status	The status of the task. Possible values are: 1 or InProgress 3 or Paused 4 or Failed 6 or Completed 7 or Cancelling

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Return the details of the peer sites: [Peer Sites API](#)

Return the details of the local site: [Local Site API](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/tasks` and for `https://zvm_ip:port/v1/tasks/{taskidentifier}`

```
{
  "CompleteReason": "",
  "Completed": "/Date(1520423877045)/",
  "InitiatedBy": "Administrator",
  "IsCancellable": false,
  "Link": {
    "href": "https://172.20.99.9:9669/v1/tasks/0743-01d3-4c5-844b-b428b1.60d6-c090-4233-8b9a4c",
    "identifier": "0c66b743-01d3-42c5-844b-bf5d4283ddb1.6b5b30d6-c090-4233-8466-5fe18bf39a4c",
    "rel": null,
    "type": "TaskApi"
  },
  "RelatedEntities": {
    "Hosts": [],
    "Sites": [
      {
        "href": "https://172.20.99.9:9669/v1/localsite",
        "identifier": "736cfa4b-658b-41d5-91ea-33c2213db6ed",
        "rel": null,
        "type": "LocalSiteApi"
      },
      {
        "href": "https://172.20.99.9:9669/v1/peersites/6b5b30d6-c090-4233-8466-5fe18bf39a4c",
        "identifier": "6b5b30d6-c090-4233-8466-5fe18bf39a4c",
        "rel": null,
        "type": "PeerSiteApi"
      }
    ],
    "Vpgs": [
      {
        "href": "https://172.20.99.9:9669/v1/vpgs/b797d92a-a65a-4e00-9410-1a3aff93480b",
        "identifier": "b797d92a-a65a-4e00-9410-1a3aff93480b",
        "rel": null,
        "type": "VpgApi"
      }
    ],
    "FlrSessions": [
      {
        "href": "https://172.20.99.9:9669/v1/flrs/e35fc247-5fe0-4e1c-ab9f-edc76d3aeda8",
        "identifier": "e35fc247-5fe0-4e1c-ab9f-edc76d3aeda8",
        "rel": null,
        "type": "FlrSessionInformationApi"
      }
    ]
  },
  "Started": "/Date(1520423876840)/",
  "Status": {
    "Progress": 100,
    "State": 6
  },
  "TaskIdentifier": "0c66b743-01d3-42c5-844b-bf5d4283ddb1.6b5b30d6-c090-4233-8466-5fe18bf39a4c",
  "Type": "FlrJournalUnmount"
}
```

XML Response Format

For the XML response format, see [“Tasks API XML Response Format”, on page 367.](#)

Response Values

Response values for `https://zvm_ip:port/v1/tasks` and for `https://zvm_ip:port/v1/task/{taskidentifier}`.

PARAMETER	DESCRIPTION
CompleteReason	The reason the task completed.
Completed	The date the task completed. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .
InitiatedBy	The name of the user who initiated the task.
IsCancellable	True: The task can be canceled via user intervention. False: The task cannot be canceled via user intervention.
Link	The link details.
href	The URL used.
identifier	The unique identifier of the task.
rel	The next path level for the API relative to the current path.
type	The API interface service.
RelatedEntities	Entities possibly affected by the event.
Hosts	The hosts affected by the task.
href	The URL used to retrieve host information for each host affected by the event.
identifier	The unique internal identifier of the host where the API runs.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Sites	The sites affected by the task.
href	The URL used to retrieve site information: peersites and localsite APIs.
identifier	The unique internal identifier of the site where the API runs.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Vpgs	The VPGs affected by the task.
href	The URL used to retrieve VPG information for each VPG affected by the event.
identifier	The unique internal identifier of the VPG.

PARAMETER	DESCRIPTION
rel	The next path level for the API relative to the current path.
type	The API interface service.
FlrSessions	The file level restore sessions affected by the task.
href	The URL used to retrieve file level restore session information for each session affected by the event.
identifier	The unique internal identifier of the file level restore session.
rel	The next path level for the API relative to the current path.
type	The API interface service.
Started	The date the task started. The value can be converted to an understandable date using code similar to the following: var date = new Date(jsonDate); or code similar to the Perl code example, jsonDateToString(\$), in "Managing vCD APIs", on page 251 .
Status	The status of the task.
Progress	The progress of the task.
State	The state of the task. Possible values are (Json/XML): 0/FirstUnusedValue 1/InProgress 2/WaitingForUserInput 3/Paused 4/Failed 5/Stopped 6/Completed 7/Canceling
TaskIdentifier	The unique identifier of the task.
Type	The type of task. For the description of the tasks, refer to the Zerto documentation about monitoring tasks. Possible values are: 0 or FirstUnusedValue 1 or CreateProtectionGroup 2 or RemoveProtectionGroup 3 or FailOver 4 or FailOverTest 5 or StopFailOverTest 6 or Move 7 or GetCheckpointList 8 or ProtectVM 9 or UnprotectVM 10 or AddVMTtoProtectionGroup 11 or RemoveVMFromProtectionGroup

PARAMETER	DESCRIPTION
	12 or InstallVra 13 or UninstallVra 14 or GetVMSettings 15 or UpdateProtectionGroup 16 or InsertTaggedCP 17 or WaitForCP 18 or HandleMirrorPromotion 19 or ActivateAllMirrors 20 or LogCollection 21 or ClearCheckpoints 22 or ForceReconfigurationOfNewVM 23 or ClearSite 24 or ForceRemoveProtectionGroup 25 or ForceUpdateProtectionGroup 26 or ForceKillProtectionGroup
	27 or PrePostScript 28 or InitFullSync 29 or Pair 30 or Unpair 31 or AddPeerVraInfo 32 or RemovePeerVraInfo 33 or InstallCloudConnector 34 or UninstallCloudConnector 35 or HandleFirstSyncDone
	36 or Clone 37 or MoveBeforeCommit 38 or MoveRollback 39 or MoveCommit 40 or UpgradeVRA 41 or MaintainHost 42 or NotSupportedInThisVersion 43 or MoveProtectionGroupToManualOperationNeeded

PARAMETER	DESCRIPTION
	44 or FailoverBeforeCommit 45 or FailoverCommit 46 or FailoverRollback 47 or ChangeVraIpSettings 48 or PauseProtectionGroup 49 or ResumeProtectionGroup 50 or BulkUpgradeVras 51 or BulkUninstallVras 52 or ChangeVraPassword 53 or ChangeRecoveryHost 54 or ChangeRecoveryHostForProtectionGroup
	55 or VpgBackup 56 or RedeployCloudConnector 57 or RestoreVpg 58 or VpgDeleteBackup 59 or SubmitSupportTicket 60 or PreScript 61 or PostScript 62 or ChangeVraPasswordIpSettings 63 or FlrJournalMount 64 or FlrJournalUnmount 65 or StartVMsWithOrder 66 or HandleProtectedVmRemovedFromPlatform 67 or HandleProtectedVmAddedToPlatform 68 or SplitCommit

Response values for `https://zvm_ip:port/v1/tasks/types`.

RESPONSE: DESCRIPTION

Task types:

CreateProtectionGroup
RemoveProtectionGroup
FailOver
FailOverTest
StopFailOverTest
Move
GetCheckpointList
ProtectVM
UnprotectVM
AddVMTtoProtectionGroup
RemoveVMFromProtectionGroup

InstallVra
UninstallVra
GetVMSettings
UpdateProtectionGroup
InsertTaggedCP
WaitForCP
HandleMirrorPromotion
ActivateAllMirrors
LogCollection
ClearCheckpoints
ForceReconfigurationOfNewVM
ClearSite
ForceRemoveProtectionGroup
ForceUpdateProtectionGroup
ForceKillProtectionGroup

PrePostScript
InitFullSync
Pair
Unpair
AddPeerVraInfo
RemovePeerVraInfo
InstallCloudConnector
UninstallCloudConnector
HandleFirstSyncDone

Clone
MoveBeforeCommit
MoveRollback
MoveCommit
UpgradeVra
MaintainHost
NotSupportedInThisVersion
MoveProtectionGroupToManualOperationNeeded

RESPONSE: DESCRIPTION

FailoverBeforeCommit
FailoverCommit
FailoverRollback
ChangeVraIpSettings
PauseProtectionGroup
ResumeProtectionGroup
BulkUpgradeVras
BulkUninstallVras
ChangeVraPassword
ChangeRecoveryHost
ChangeRecoveryHostForProtectionGroup

VpgBackup
RedeployCloudConnector
RestoreVpg
VpgDeleteBackup
SubmitSupportTicket
PreScript
PostScript
ChangeVraPasswordIpSettings
FlrJournalMount
FlrJournalUnmount
StartVMsWithOrder
HandleProtectedVmRemovedFromPlatform
HandleProtectedVmAddedToPlatform
SplitCommit

Virtualization Sites API

/v1/virtualizationsites returns information about the hypervisor site where the API is run and all the sites paired with this site. The information returned can be tailored to specific information about the resources managed at a specified site.

For **VCD Virtualization Sites APIs** see “[VCD Virtualization Sites APIs](#)”, on page 251.

URL

All sites	<code>https://zvm_ip:port/v1/virtualizationsites</code>
Single site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}</code>
Storage clusters at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastoreclusters</code>
Storage at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastores</code>
Devices at all hosts	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices</code>
Devices at a single host	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices?hostIdentifier={hostIdentifier}</code>
Folders at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/folders</code>
Host clusters at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hostclusters</code>

Hosts at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts</code>
Single host at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts/{hostIdentifier}</code>
Networks at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/networks</code>
Resource pools at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/resourcepools</code>
Unprotected VMs at site	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vms</code>
VM Instance Types	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/vmInstanceTypes</code>
See VM Instance Type	
Available vNets	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/virtualNetworks</code>
See Available vNets	
Available Subnets	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/subnets</code>
See Available Subnets	
Security Groups	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/securityGroups</code>
See Security Groups	

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
siteIdentifier	The identifier of the site for which information is returned.
hostIdentifier	The identifier of the host for which information is returned.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

vCD APIs: [Managing vCD APIs](#)

Return the details of the peer sites: [Peer Sites API](#)

Return a list of protected virtual machines: [Protected VMs API](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

Virtualization sites The following is an example response Json body for `https://zvm_ip:port/v1/virtualizationsites` and for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}`.

```
[{
  "SiteIdentifier": "String content",
  "VirtualizationSiteName": "String content"
}
{
  "SiteIdentifier": "String content",
  "VirtualizationSiteName": "String content"
}]
```

Datastore clusters The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastoreclusters.

```
[{
  "DatastoreClusterName": "String content"
}
{
  "DatastoreClusterName": "String content"
}]
```

Datastores The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastores.

```
[{
  "DatastoreIdentifier": "String content",
  "DatastoreName": "String content"
}
{
  "DatastoreIdentifier": "String content",
  "DatastoreName": "String content"
}]
```

Devices for all hosts The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices

```
[{
  "DeviceIdentifier": "String content",
  "DatastoreIdentifier": "String content",
  "VmIdentifier": "String content",
  "HostIdentifiers {
    "HostIdentifier": "String content"
  }
  "SizeInKb":
}]
```

Devices for a specific host The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices&hostIdentifier={hostIdentifier}

```
{
  "DeviceIdentifier": "String content",
  "DatastoreIdentifier": "String content",
  "VmIdentifier": "String content",
  "HostIdentifier": "String content",
  "SizeInKb":
}
```

Folders The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/folders.

```
[{
  "FolderIdentifier": "String content",
  "FolderName": "String content"
}
{
  "FolderIdentifier": "String content",
  "FolderName": "String content"
}]
```

Host clusters The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hostclusters.

```
[{
  "ClusterIdentifier": "String content",
  "VirtualizationClusterName": "String content"
}
{
  "ClusterIdentifier": "String content",
  "VirtualizationClusterName": "String content"
}]
```

Hosts The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts and for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts/{hostIdentifier}.

```
[{
  "HostIdentifier": "String content",
  "VirtualizationHostName": "String content"
}
{
  "HostIdentifier": "String content",
  "VirtualizationHostName": "String content"
}]
```

Networks The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/networks.

```
[{
  "NetworkIdentifier": "String content",
  "VirtualizationNetworkName": "String content"
}
{
  "NetworkIdentifier": "String content",
  "VirtualizationNetworkName": "String content"
}]
```

VMware only: Resource Pools The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/resourcepools.

```
[{
  "ResourcePoolIdentifier": "String content",
  "ResourcepoolName": "String content"
}
{
  "ResourcePoolIdentifier": "String content",
  "ResourcepoolName": "String content"
}]
```

Unprotected VMs The following is an example response Json body for

https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vms

```
[{
  "VmIdentifier": "String content",
  "VmName": "String content"
}
{
  "VmIdentifier": "String content",
  "VmName": "String content"
}]
```

VM Instance Type The following is an example response Json body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/vmInstanceTypes`

```
[{
  "VMInstanceType": "Standard_DS1_v2",
  "Description": "string" ,
  "VMSeries": "DSv-2",
  "IsPremiumSupported": boolean
}
{
```

Available vNets The following is an example response Json body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/virtualNetworks`

```
[{
  "VirtualNetworkIdentifier": string,
  "VirtualNetworkName": string
}
{
```

Available Subnets The following is an example response Json body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/subnets`

```
[{
  "VirtualNetworkIdentifier":string,
  "SubnetIdentifier": string,
  "SubnetName": string,
  "IPRange": string - e.g. 10.0.0.0/24
}
{
```

Security Groups The following is an example response Json body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/securityGroups`

```
[{
  "SecurityGroupIdentifier": string,
  "SecurityGroupName": string
}
{
```

XML Response Format

For the XML response format, see [“Virtualization Sites API XML Response Format”](#), on page 369.

Response Values

Response values for `https://zvm_ip:port/v1/virtualizationsites` and for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}`.

PARAMETER	DESCRIPTION
SitIdentifier	The identifier of the Zerto Virtual Manager site.
VirtualizationSiteName	The hypervisor manager name. For example the VMware vCenter Server name or Microsoft SCVMM name.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastoreclusters`.

PARAMETER	DESCRIPTION
DatastoreClusterName	The storage cluster name.

Note: Storage in Microsoft SCVMM is also returned using this API.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastores`.

PARAMETER	DESCRIPTION
DatastoreIdentifier	The internal identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DatastoreName	The storage name.

Note: Storage in Microsoft SCVMM is also returned using this API and the response labels are `DatastoreIdentifier` and `DatastoreName`.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices`

PARAMETER	DESCRIPTION
DevicIdentifier	The unique identifier of the device.
DatastoreIdentifier	The identifier of the datastore that uses the device. If no value is set (null), then it means no datastore is using this device. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
VmIdentifier	This the identifier of the VM that uses this device. If no VM is using this device, then value is null. When a device is used directly by a VM, this state is called RDM (Raw Device Management).
HostIdentifiers	A list of all hosts that can reach this device. That is, this device can be allocated for any entity in the domain of the particular host (datastore or VM).
HostIdentifier	The unique identifier of the host.
SizeInKb	The amount of storage allocated for the device

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/devices&hostIdentifier={hostIdentifier}`

PARAMETER	DESCRIPTION
DevicIdentifier	The unique identifier of the device.
DatastoreIdentifier	The identifier of the datastore where the disk is stored. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i>
VmIdentifier	The unique identifier of the VM

PARAMETER	DESCRIPTION
HostIdentifier	The unique identifier of the host.
SizeInKb	The size of the device in KB.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/folders`.

PARAMETER	DESCRIPTION
FolderIdentifier	The internal identifier of the folder. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
FolderName	The folder name.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hostclusters`.

PARAMETER	DESCRIPTION
ClusterIdentifier	The unique identifier of the host cluster. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
VirtualizationClusterName	The name of the host cluster.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts` and for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts/{hostIdentifier}`.

PARAMETER	DESCRIPTION
HostIdentifier	The unique identifier of the host.
VirtualizationHostName	The name of the host.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/networks`.

PARAMETER	DESCRIPTION
NetworkIdentifier	The internal identifier of the network.
VirtualizationNetworkName	The network name. If identical network names are returned, the switch name will be added to the network name. For example, VM network (DSwitch).

VMware only: Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/resourcepools`.

PARAMETER	DESCRIPTION
ResourcePoolIdentifier	The internal identifier of the resource pool.
ResourcepoolName	The resource pool name.

Response values for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vms`.

PARAMETER	DESCRIPTION
VmIdentifier	The internal identifier of the virtual machine that is not protected by Zerto.
VmName	The virtual machine name that is not protected by Zerto.

Note: The response includes:

- a) Virtual machines that are not protected in any VPG.
- b) Virtual machines that are protected in VPGs but can be protected in additional VPGs. A virtual machine can be protected in a maximum number of three VPGs as long as:
 - The VPGs do not recover to the same site.
 - The protected and recovery sites, as well as the VRAs on each site, are of version 5.0 and higher.

Response values for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/publicCloud/vmInstanceTypes`

PARAMETER	DESCRIPTION
VmIdentifier	The internal identifier of the virtual machine that is not protected by Zerto.
VmName	The virtual machine name that is not protected by Zerto.

Need to add for the other 3 as well.

Protected VMs API

`/v1/vms` returns information about all virtual machines protected on the site processing the API.

URL

All VMs `https://zvm_ip:port/v1/vms`

Filtered VMs `https://zvm_ip:port/v1/vms?vpgName={VPGNAME}&vmName={VMNAME}&status={STATUS}&substatus={SUBSTATUS}&organizationName={ORGNAME}&priority={PRIORITY}&protectedSiteType={PROTECTEDSITETYPE}&recoverySiteType={RECOVERYSITETYPE}&protectedSiteIdentifier={PROTECTEDSITEIDENTIFIER}&recoverySiteIdentifier={RECOVERYSITEIDENTIFIER}vmIdentifier={vmIdentifier}`

Single VM `https://zvm_ip:port/v1/vms/{vmIdentifier}`

Note: Running an API for a single virtual machine returns details of the single virtual machine only if it is protected in a single VPG. For information about virtual machines that are protected in several VPGs, use the filter `vmIdentifier`.

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

vmIdentifier	The identifier of the virtual machine for which information is returned. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .	
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all virtual machines are returned. Filters are not case-sensitive.	
	Filter	Description
	vpgName	The name of the VPG which protects the virtual machine.
	vmName	The name of the virtual machine.
	status	<p>The status of the VPG. Possible values are:</p> <p>0 or Initializing- The VPG is being initialized. This includes when a VPG is created, and during the initial sync between sites.</p> <p>1 or MeetingSLA: The VPG is meeting the SLA specification.</p> <p>2 or NotMeetingSLA: The VPG is not meeting the SLA specification for both the journal history and RPO SLA settings.</p> <p>3 or RpoNotMeetingSLA: The VPG is not meeting the SLA specification for the RPO SLA setting.</p> <p>4 or HistoryNotMeetingSLA: The VPG is not meeting the SLA specification for the journal history.</p> <p>5 or FailingOver: The VPG is in a Failover operation.</p> <p>6 or Moving: The VPG is in a Move operation.</p> <p>7 or Deleting: The VPG is being deleted.</p> <p>8 or Recovered: The VPG has been recovered.</p>
	substatus	<p>The substatus of the VPG, for example the VPG is in a bitmap sync. For the description of substatuses, refer to the <i>Zerto Virtual Manager Administration Guide</i>. Possible values are:</p> <p>0 or None</p> <p>1 or InitialSync</p> <p>2 or Creating</p> <p>3 or VolumeInitialSync</p> <p>4 or Sync</p> <p>5 or RecoveryPossible</p> <p>6 or DeltaSync</p> <p>7 or NeedsConfiguration</p> <p>8 or Error</p> <p>9 or EmptyProtectionGroup</p>
		<p>10 or DisconnectedFromPeerNoRecoveryPoints</p> <p>11 or FullSync</p> <p>12 or VolumeDeltaSync</p> <p>13 or VolumeFullSync</p> <p>14 or FailingOverCommitting</p> <p>15 or FailingOverBeforeCommit</p> <p>16 or FailingOverRollingBack</p> <p>17 or Promoting</p> <p>18 or MovingCommitting</p> <p>19 or MovingBeforeCommit</p>

	<p>20 or MovingRollingBack 21 or Deleting 22 or PendingRemove 23 or BitmapSync 24 or DisconnectedFromPeer 25 or ReplicationPausedUserInitiated 26 or ReplicationPausedSystemInitiated 27 or RecoveryStorageProfileError 29 or RollingBack</p>
	<p>30 or RecoveryStorageError 31 or JournalStorageError 32 or VmNotProtectedError 33 or JournalOrRecoveryMissingError 34 or AddedVmsInInitialSync 35 or ReplicationPausedForMissingVolume</p>
sourceType	Deprecated. See protectedSiteType .
targetType	Deprecated. See recoverySiteType .
sourceSite	Deprecated. See protectedSiteIdentifier .
targetSite	Deprecated. See recoverySiteIdentifier .
protectedSiteType	<p>The protected site environment. Possible values are:</p> <p>0 or VCVpg: The VPG is protecting virtual machines in a VMware vCenter Server. 1 or VCvApp: Deprecated. See VCDvApp. 2 or VCDvApp: The VPG is protecting a VMware vCloud Director vApp. 3 or PublicCloud: Not applicable. 4 or HyperV: The VPG is protecting virtual machines in Microsoft Hyper-V.</p>
recoverySiteType	<p>The recovery site environment. Possible values are:</p> <p>0 or VCVpg: The VPG is recovering virtual machines in a VMware vCenter Server. 1 or VCvApp: Deprecated. See VCDvApp. 2 or VCDvApp: The VPG is recovering a VMware vCloud Director vApp. 3 or PublicCloud: The VPG is recovering virtual machines to a public cloud. 4 or HyperV: The VPG is recovering virtual machines in Microsoft Hyper-V.</p>
protectedSiteIdentifier	The identifier of the protected site where the VPG virtual machines are protected.
recoverySiteIdentifier	The identifier of the recovery site where the VPG virtual machines are recovered.
organizationName	The ZORG for this VPG.
priority	<p>The priority specified for the VPG. Possible values are:</p> <p>0 or Low: The VPG has a low priority for transferring data. 1 or Medium: The VPG has a medium priority for transferring data. 2 or High: The VPG has a high priority for transferring data.</p>

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

- Starting a session: [Session: POST](#)
- Return a list of unprotected virtual machines: [Virtualization Sites API](#):
`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vms`
- Return a list of unprotected vCD vApps: [List Unprotected vCD vApps in a Site](#):
`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vcdvapps`

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vms` and for `https://zvm_ip:port/v1/vms/{vmIdentifier}`.

```
[
{
  "ActualRPO": 4,
  "EnabledActions": {
    "IsFlrEnabled": true
  },
  "Entities": {
    "Protected": 0,
    "Recovery": 0,
    "Source": 0,
    "Target": 0
  },
  "HardwareVersion": "String content",
  "IOPs": 1,
  "IsVmExists": true,
  "JournalHardLimit": {
    "LimitType": 1,
    "LimitValue": 153600
  },
  "JournalUsedStorageMb": 0,
  "JournalWarningThreshold": {
    "LimitType": 1,
    "LimitValue": 115200
  },
  "LastTest": null,
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": null,
    "type": "VmApi"
  },
  "Link_{0}": {
    "href": "String content",
    "rel": "self",
    "type": "VmApi"
  },
  "OrganizationName": "String content",
  "OutgoingBandWidthInMbps": 4.48681640625,
  "Priority": 1,
  "ProtectedSite": {
    "href": "String content",
    "identifier": "String content",
    "rel": null,
    "type": "PeerSiteApi"
  },
},
```

```

"ProvisionedStorageInMB": 11938,
"RecoveryHostIdentifier": "String content",
"RecoverySite": {
  "href": "String content",
  "identifier": "String content",
  "rel": null,
  "type": "LocalSiteApi"
},
"SourceSite": "String content",
"Status": 1,
"SubStatus": 0,
"TargetSite": "String content",
"ThroughputInMB": 9,
"UsedStorageInMB": 0,
"VmIdentifier": "String content",
"VmName": "String content",
"Volumes": [
  {
    "VmVolumeIdentifier": "String content"
  }
],
"VpgIdentifier": "String content",
"VpgName": "String content"
}
]

```

XML Response Format

For the XML response format, see [“VMs API XML Response Format”, on page 370.](#)

Response Values

Response values for `https://zvm_ip:port/v1/vms` and for `https://zvm_ip:port/v1/vms/{vmIdentifier}`

PARAMETER	DESCRIPTION
ActualRPO	The time since the last checkpoint was written to the journal in seconds. This should be less than the <code>Target RPO Alert</code> value specified for the VPG. A value of -1 means that the RPO has not been calculated.
Entities	The source type and target types, vCenter Server or vCloud Director, where the virtual machine is protected and recovered.
Protected	The type of virtual machines being protected. Possible values are (Json/XML): 0/VCVpg: The VPG is protecting virtual machines in a VMware vCenter Server. 1/VCvApp: Deprecated. See VCDvApp. 2/VCDvApp: The VPG is protecting a VMware vCloud Director vApp. 3/AWS: Not applicable. 4/HyperV: The VPG is protecting virtual machines in Microsoft Hyper-V.

PARAMETER	DESCRIPTION
Recovery	The type of virtual machines being recovered. Possible values are (Json/XML): 0/VCVpg : The VPG is recovering virtual machines in a VMware vCenter Server. 1/VCvApp : Deprecated. See VCDvApp. 2/VCDvApp : The VPG is recovering a VMware vCloud Director vApp. 3/AWS : The VPG is recovering virtual machines in Amazon Web Services (AWS). 4/HyperV : The VPG is recovering virtual machines in Microsoft Hyper-V.
Source	Deprecated. See Protected .
Target	Deprecated. See Recovery .
JournalHardLimit	The maximum size the Journal can grow to.
LimitType	The type of Journal size limit. Possible values are: <ul style="list-style-type: none"> ■ 0 or Unlimited ■ 1 or Megabytes ■ 2 or Percentage
LimitValue	The limit value according to the limit type.
JournalUsedStorageMb	The amount of used journal storage for the virtual machine, in Mb.
JournalWarningThreshold	The journal size that generates a warning that the journal is nearing its hard limit.
LimitType	The type of Journal size limit. Possible values are: <ul style="list-style-type: none"> ■ 0 or Unlimited ■ 1 or Megabytes ■ 2 or Percentage
LimitValue	The limit value according to the limit type.
HardwareVersion	The VMware hardware version.
IOPS	The IO per second between all the applications running on the virtual machine in the VPG and the VRA that sends a copy to the remote site for replication.
IsVmExists	True : The VM exists. False : The VM does not exist.
LastTest	The date the last failover test occurred. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(<i>jsonDate</i>) ;</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .
Link	The link details.
href	The URL used.
identifier	The unique identifier of the virtual machine.

PARAMETER	DESCRIPTION
rel	The next path level for the API relative to the current path.
type	The API interface service.
Link	The link details.
href	The URL used.
rel	The next path level for the API relative to the current path.
type	The API interface service.
OrganizationName	The name of the organization set up in the Zerto Cloud Manager, the ZORG, that uses a cloud service provider for recovery.
OutgoingBandwidthInMbps	The bandwidth throttling defined for the virtual machines.
Priority	The priority specified for the VPG. Possible values are (Json/XML): 0/Low: The VPG has a low priority for transferring data. 1/Medium: The VPG has a medium priority for transferring data. 2/High: The VPG has a high priority for transferring data.
ProtectedSite	The identifier of the protected site where the VPG virtual machines are protected.
href	The URL used.
identifier	The unique identifier of the virtual machine.
rel	The next path level for the API relative to the current path.
type	The API interface service.
ProvisionedStorageInMB	The storage provisioned for the virtual machine in the recovery site.
RecoveryHostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, serverid.moref.
RecoverySite	The identifier of the recovery site where the VPG virtual machines are recovered.
href	The URL used.
identifier	The unique identifier of the virtual machine.
rel	The next path level for the API relative to the current path.
type	The API interface service.
SourceSite	Deprecated. See ProtectedSite > identifier .

PARAMETER	DESCRIPTION
Status	<p>The status of the VPG that contains the virtual machine. Possible values are (Json/XML):</p> <p>0/Initializing- The VPG is being initialized. This includes when a VPG is created, and during the initial sync between sites.</p> <p>1/MeetingSLA: The VPG is meeting the SLA specification.</p> <p>2/NotMeetingSLA: The VPG is not meeting the SLA specification for both the journal history and RPO SLA settings, for example during a delta sync or when there is an error.</p> <p>3/RpoNotMeetingSLA: The VPG is not meeting the SLA specification for the RPO SLA setting.</p> <p>4/HistoryNotMeetingSLA: The VPG is not meeting the SLA specification for the journal history.</p> <p>5/FailingOver: The VPG is in a Failover operation.</p> <p>6/Moving: The VPG is in a Move operation.</p> <p>7/Deleting: The VPG is being deleted.</p> <p>8/Recovered: The VPG is recovered.</p>
SubStatus	<p>The substatus of the VPG that contains the virtual machine, for example the VPG is in a bitmap sync. For the description of substatuses, refer to the <i>Zerto Virtual Manager Administration Guide</i>. Possible values are (Json/XML):</p> <p>0/None</p> <p>1/InitialSync</p> <p>2/Creating</p> <p>3/VolumeInitialSync</p> <p>4/Sync</p> <p>5/RecoveryPossible</p> <p>6/DeltaSync</p> <p>7/NeedsConfiguration</p> <p>8/Error</p> <p>9/EmptyProtectionGroup</p>
	<p>10/DisconnectedFromPeerNoRecoveryPoints</p> <p>11/FullSync</p> <p>12/VolumeDeltaSync</p> <p>13/VolumeFullSync</p> <p>14/FailingOverCommitting</p> <p>15/FailingOverBeforeCommit</p> <p>16/FailingOverRollingBack</p> <p>17/Promoting</p> <p>18/MovingCommitting</p> <p>19/MovingBeforeCommit</p>
	<p>20/MovingRollingBack</p> <p>21/Deleting</p> <p>22/PendingRemove</p> <p>23/BitmapSync</p> <p>24/DisconnectedFromPeer</p> <p>25/ReplicationPausedUserInitiated</p> <p>26/ReplicationPausedSystemInitiated</p> <p>27/RecoveryStorageProfileError</p> <p>29/RollingBack</p>

PARAMETER	DESCRIPTION
	30/RecoveryStorageError 31/JournalStorageError 32/VmNotProtectedError 33/JournalOrRecoveryMissingError 34/AddedVmsInInitialSync 35/ReplicationPausedForMissingVolume
TargetSite	Deprecated. See RecoverySite > identifier .
ThroughputInMb	The MBs for all the applications running on the virtual machine being protected.
UsedStorageInMB	The storage used by the virtual machine at the recovery site.
VmIdentifier	The identifier of the virtual machine for which information is returned. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
VmName	The virtual machine name.
Volumes	Information about the volumes of the virtual machine.
vmVolumeIdentifier	The identifier of the volume used by the virtual machine. The volume identifier uses the SCSI standard to describe controllers and units, for example: SCSI:0:0.
VpgName	The name of the VPG in which the virtual machine is protected.
EnabledActions	Actions that can be performed on the virtual machine.
IsFlrEnabled	Whether file level restore is enabled.
VpgIdentifier	The identifier of the VPG.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

Volumes API

`/v1/volumes` retrieves information about all volumes in the site processing the API.

URL

Information about all volumes `https://zvm_ip:port/v1/volumes`

To get list of volumes info of current site `https://zvm_ip:port/v1/volumes?volumeType={volumeType}&vpgIdentifier={vpgIdentifier}&datastoreIdentifier={datastoreIdentifier}&protectedVmIdentifier={protectedVmIdentifier}&owningVmIdentifier={owningVmIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.	
port	The port to access the Zerto Virtual Manager. The default port is 9669.	
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all volumes are returned. Filters are not case-sensitive.	
	Filter	Description
	volumeType	The type of volume. Possible values are: 0 or Protected 1 or Recovery 2 or Journal 3 or Scratch 6 or Appliances 10 or Unknown
	vpgIdentifier	The identifier of the VPG.
	datastoreIdentifier	The identifier of the datastore.
	protectedVmIdentifier	The identifier of the protected virtual machine.
	owningVmIdentifier	The identifier of the owning virtual machine.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for https://zvm_ip:port/v1/volumes.

```
[
  {
    "Datastore"
      "Identifier": "string content",
      "Name": "string content",
    }
    "IsThisProvisioned": Boolean,
    "OwningVm":{
      Identifier": "string content",
      "Name": "string content",
    }
    "Path": {
      "FileName": "Normal",
      "Full": 7,
      "Relative": 0,
    }
    "ProtectedVm": {
      Identifier": "string content",
      "Name": "string content",
    }
    "Size": {
      "ProvisionedInBytes": 33570816,
      "UsedInBytes: 415236096
    }
    "VolumeType": "Journal",
    "Vpg": {
      Identifier": "string content",
      "Name": "string content",
    }
  }
]
```

Response values for https://zvm_ip:port/v1/volumes.

PARAMETER	DESCRIPTION
Datastore	
Identifier	The identifier of the datastore.
Name	The name of the datastore.
IsThinProvisioned	True: The recovery volumes are thin-provisioned. False: The recovery volumes are thick-provisioned.
OwningVm	
Identifier	The identifier of the owning virtual machine.

PARAMETER	DESCRIPTION
Name	The name of the owning virtual machine.
Path	
FileName	The file name of the .VMDK.
Full	The full path of the .VMDK.
Relative	The relative path of the .VMDK.
ProtectedVm	
Identifier	The identifier of the protected virtual machine.
Name	The name of the protected virtual machine.
Size	
ProvisionedInBytes	The provisioned size of the volume, in bytes.
UsedInBytes	The used size of the volume, in bytes.
VolumeType	The type of volume. Possible values are: 0 or Protected 1 or Recovery 2 or Journal 3 or Scratch 6 or Appliances 10 or Unknown
Vpg	
Identifier	The identifier of the owning VPG.
Name	The name of the owning VPG.

VPGs API

/v1/vpgs returns information about VPGs or creates or performs actions on a specific VPG. The following APIs are available:

- "VPGs: GET", below
- "VPGs: POST", on page 152
- "VPGs: DELETE", on page 159

PURPOSE	METHOD	URL
Information for all VPGs	GET	<code>https://zvm_ip:port/v1/vpgs</code>
Information for one VPG	GET	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}</code>
Checkpoints for a VPG	GET	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints</code>
Checkpoints Summary for a VPG	GET	Deprecated
Checkpoints Statistics for a VPG	GET	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints/stats</code>
Valid values for VPG entities	GET	<code>https://zvm_ip:port/v1/vpgs/entitytypes</code>
Valid values for failover commit policies	GET	<code>https://zvm_ip:port/v1/vpgs/failovercommitpolicies</code>
Valid values for failover shutdown policies	GET	<code>https://zvm_ip:port/v1/vpgs/failovershutdownpolicies</code>
Valid values for VPG priorities	GET	<code>https://zvm_ip:port/v1/vpgs/priorities</code>
Valid values for failover retention policies	GET	<code>https://zvm_ip:port/v1/vpgs/retentionpolicies</code>
Valid values for VPG statuses	GET	<code>https://zvm_ip:port/v1/vpgs/statuses</code>
Valid values for VPG substatuses	GET	<code>https://zvm_ip:port/v1/vpgs/substatuses</code>
Create a VPG	POST	<code>https://zvm_ip:port/v1/vpgs</code> Deprecated. See VPG Settings: POST
Insert a tagged checkpoint	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Checkpoints</code>
Clone a VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneStart</code>
Abort a VPG clone	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneAbort</code>
Failover a VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover</code>

PURPOSE	METHOD	URL
Commit a VPG failover	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit</code>
Rollback a VPG failover	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback</code>
Test a VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTest</code>
Stop a VPG test	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTestStop</code>
Force synchronize a VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/forcesync</code>
Move Operation	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/move</code>
Rollback Move VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveRollback</code>
Commit Move VPG	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveCommit</code>
Pause VPG protection	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/pause</code>
Resume VPG protection	POST	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/resume</code>
Delete a VPG	DELETE	<code>https://zvm_ip:port/v1/vpgs/{VpgIdentifier}</code>

HTTP Methods

GET, POST, DELETE

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)
View the results of the create VPG operation: [Events API](#)
Return the datastore identifier: [Datastores](#)
Return the resource pool identifier: [VMware only: Resource Pools](#)
Return the source and target site identifiers: [Virtualization sites](#)
Return the vCenter vApp identifier to protect: [Unprotected VMs](#)
vCD APIs: [Managing vCD APIs](#)
Return the list of unprotected virtual machine identifiers: [Unprotected VMs](#)
Retrieve details of the task being performed: [Tasks API](#)
Manage a VPG: [VPG Management API](#):

Format

Json, XML

VPGs: GET

Returns information about VPGs.

URL

All VPGs	<code>https://zvm_ip:port/v1/vpgs</code>
Filtered VPGs	Deprecated
Single VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}</code>
VPG Checkpoints	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints?startDate={STARTDATE}&endDate={ENDDATE}</code>
VPG Checkpoints summary	Deprecated
VPG Checkpoints stats	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints/stats</code>
Valid VPG entities	<code>https://zvm_ip:port/v1/vpgs/entitytypes</code>
Valid failover commit policies	<code>https://zvm_ip:port/v1/vpgs/failovercommitpolicies</code>
Valid failover shutdown policies	<code>https://zvm_ip:port/v1/vpgs/failovershutdownpolicies</code>
Valid VPG priorities	<code>https://zvm_ip:port/v1/vpgs/priorities</code>
Valid failover retention policies	<code>https://zvm_ip:port/v1/vpgs/retentionpolicies</code>
Valid VPG statuses	<code>https://zvm_ip:port/v1/vpgs/statuses</code>
Valid VPG substatures	<code>https://zvm_ip:port/v1/vpgs/substatures</code>

Where:

Filters for: All VPGs					
zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.				
port	The port to access the Zerto Virtual Manager. The default port is 9669.				
protectionGroupIdentifier	The identifier of the VPG for which information is retrieved.				
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all VPGs are returned. Filters are not case-sensitive.				
	<table> <thead> <tr> <th>Filter</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>name</td> <td>The name of the VPG.</td> </tr> </tbody> </table>	Filter	Description	name	The name of the VPG.
Filter	Description				
name	The name of the VPG.				

status	<p>The status of the VPG. Possible values are:</p> <p>0 or Initializing- The VPG is being initialized. This includes when a VPG is created, and during the initial sync between sites.</p> <p>1 or MeetingSLA: The VPG is meeting the SLA specification.</p> <p>2 or NotMeetingSLA: The VPG is not meeting the SLA specification for both the journal history and RPO SLA settings.</p> <p>3 or RpoNotMeetingSLA: The VPG is not meeting the SLA specification for the RPO SLA setting.</p> <p>4 or HistoryNotMeetingSLA: The VPG is not meeting the SLA specification for the journal history.</p> <p>5 or FailingOver: The VPG is in a Failover operation.</p> <p>6 or Moving: The VPG is in a Move operation.</p> <p>7 or Deleting: The VPG is being deleted.</p> <p>8 or Recovered: The VPG has been recovered.</p>
SubStatus	<p>The substatus of the VPG, for example the VPG is in a bitmap sync. For the description of substatuses, refer to the <i>Zerto Virtual Manager Administration Guide</i>. Possible values are</p> <p>0 or None</p> <p>1 or InitialSync</p> <p>2 or Creating</p> <p>3 or VolumeInitialSync</p> <p>4 or Sync</p> <p>5 or RecoveryPossible</p> <p>6 or DeltaSync</p> <p>7 or NeedsConfiguration</p> <p>8 or Error</p> <p>9 or EmptyProtectionGroup</p>
	<p>10 or DisconnectedFromPeerNoRecoveryPoints</p> <p>11 or FullSync</p> <p>12 or VolumeDeltaSync</p> <p>13 or VolumeFullSync</p> <p>14 or FailingOverCommitting</p> <p>15 or FailingOverBeforeCommit</p> <p>16 or FailingOverRollingBack</p> <p>17 or Promoting</p> <p>18 or MovingCommitting</p> <p>19 or MovingBeforeCommit</p>
	<p>20 or MovingRollingBack</p> <p>21 or Deleting</p> <p>22 or PendingRemove</p> <p>23 or BitmapSync</p> <p>24 or DisconnectedFromPeer</p> <p>25 or ReplicationPausedUserInitiated</p> <p>26 or ReplicationPausedSystemInitiated</p> <p>27 or RecoveryStorageProfileError</p> <p>29 or RollingBack</p>

	<p>30 or RecoveryStorageError 31 or JournalStorageError 32 or VmNotProtectedError 33 or JournalOrRecoveryMissingError 34 or AddedVmsInInitialSync 35 or ReplicationPausedForMissingVolume</p>
protectedSiteType	<p>The protected site environment. This filter behaves in the same way as the <i>sourceType</i> filter. Possible values are:</p> <p>0 or VCVpg: The VPG is protecting virtual machines in a VMware vCenter Server. 1 or VCvApp: Deprecated. See VCDvApp. 2 or VCDvApp: The VPG is protecting a VMware vCloud Director vApp. 3 or PublicCloud: Not applicable. 4 or HyperV: The VPG is protecting virtual machines in Microsoft Hyper-V.</p>
recoverySiteType	<p>The recovery site environment. This filter behaves in the same way as the <i>targetType</i> filter. Possible values are:</p> <p>0 or VCVpg: The VPG is recovering virtual machines to a VMware vCenter Server. 1 or VCvApp: Deprecated. See VCDvApp. 2 or VCDvApp: The VPG is recovering virtual machines to a VMware vCloud Director vApp. 3 or PublicCloud: The VPG is recovering virtual machines to a Public Cloud. 4 or HyperV: The VPG is recovering virtual machines to Microsoft Hyper-V.</p>
protectedSiteIdentifier	<p>The identifier of the protected site where the VPG virtual machines are protected.</p>
recoverySiteIdentifier	<p>The identifier of the recovery site where the VPG virtual machines are recovered.</p>
sourceSite	<p>Deprecated. See protectedSiteIdentifier.</p>
targetSite	<p>Deprecated. See recoverySiteIdentifier.</p>
sourceType	<p>Deprecated. See protectedSiteType.</p>
targetType	<p>Deprecated. See recoverySiteType.</p>
organizationName	<p>The ZORG for this VPG.</p>
zorgIdentifier	<p>The internal identifier for the ZORG.</p>
priority	<p>The VPG priority. Possible values are:</p> <p>0 or Low: The VPG has a low priority for transferring data. 1 or Medium: The VPG has a medium priority for transferring data. 2 or High: The VPG has a high priority for transferring data.</p>

serviceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
backupEnabled (deprecated)	True: The VPG is defined for both disaster recovery and for long term recovery via offsite backup. False: The VPG is defined for disaster recovery only.

Filters for: Checkpoints							
zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.						
port	The port to access the Zerto Virtual Manager. The default port is 9669.						
protectionGroupIdentifier	The identifier of the VPG for which information is retrieved.						
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all VPGs are returned. Filters are not case-sensitive.						
	<table border="1"> <thead> <tr> <th>Filter</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>startDate</td> <td>The start date of the checkpoint.</td> </tr> <tr> <td>endDate</td> <td>The end date of the checkpoint.</td> </tr> </tbody> </table>	Filter	Description	startDate	The start date of the checkpoint.	endDate	The end date of the checkpoint.
Filter	Description						
startDate	The start date of the checkpoint.						
endDate	The end date of the checkpoint.						

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vpgs` and, without the array statement, for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}`.

```
[{
  "ActiveProcessesApi": {
    "RunningFailOverTestApi": {
      "Stage": "String content"
    }
  },
  "ActualRPO": 2147483647,
  "BackupEnabled": Boolean,
```

```
"Entities": {
  "Protected":0,
  "Recovery":0,
  "Source": 0,
  "Target": 0
},
"FailSafeHistory": {
  "ActualFailSafeHistory":240,
  "ConfiguredFailSafeHistory": 240,
  "FailSafeDescription": ""
},
"HistoryStatusApi": {
  "ActualHistoryInMinutes": 1440,
  "ConfiguredHistoryInMinutes": 1440,
  "EarliestCheckpoint": {
    "CheckpointIdentifier": "203456",
    "Tag":null,
    "TimeStamp":"/Date(1474877983000)/",
  "IOPS": 2147483647,
  "LastTest": "/Date(928142400000+0300)/",
```

```
"Link": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
},
"Link_x007B_0_x007D_": {
  "href": "String content",
  "rel": "String content",
  "type": "String content"
},
```

```
"OrganizationName": "String content",
"Priority": 0,
"ProgressPercentage": 1.26743233E+15,
"ProtectedSite": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
},
"ProvisionedStorageInMB": 2147483647,
```

```
"RecoverySite": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
},
```

```
"ServiceProfile": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
},
"ServiceProfileIdentifier": "String content",
"ServiceProfileName": "String content",
"SourceSite": "String content",
"Status": 0,
"SubStatus": 0,
```

```
"TargetSite": "String content",
"ThroughputInMB": 1.26743233E+15,
"UsedStorageInMB": 2147483647,
"VmsCount": 2147483647
"VpgIdentifier": "String content"
"VpgName": "String content",

"Zorg": {
  "href": "String content",
  "identifier": "String content",
  "rel": "String content",
  "type": "String content"
}
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints?startDate={STARTDATE}&endDate={ENDDATE}`.

```
[{
  "CheckpointIdentifier": "String content",
  "Tag": "String content",
  "TimeStamp": "\/Date(928142400000+0300)\/"
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints/stats`

```
[{
  "Earliest": {
    "CheckpointIdentifier": "String content",
    "Tag": "String content",
    "TimeStamp": "\/Date(1479047837000)\/"
  },
  "Latest": {
    "CheckpointId": "String content",
    "Tag": "String content",
    "TimeStamp": "\/Date(1479047837000)\/"
  }
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/vpgs/entitytypes`, `https://zvm_ip:port/v1/vpgs/failovercommitpolicies`, `https://zvm_ip:port/v1/vpgs/failovershutdownpolicies`, `https://zvm_ip:port/v1/vpgs/priorities`, `https://zvm_ip:port/v1/vpgs/retentionpolicies`, `https://zvm_ip:port/v1/vpgs/statuses`, and for `https://zvm_ip:port/v1/vpgs/substatuses`.

```
["String content"]
```

XML Response Format

For the XML response format, see [“VPGs API GET Method Response Formats”](#), on page 372.

Response Values

VPGs Response values for `https://zvm_ip:port/v1/vpgs` and for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}`.

PARAMETER	DESCRIPTION
ActiveProcessApi	The current stage of an operation being performed on the VPG.
RunningFailoverTestApi	The operation being performed.

PARAMETER	DESCRIPTION
Stage	The stage of the running operation: InTest: The VPG is in a failover test operation. Starting: The VPG virtual machines in the recovery site are being initialized for a failover test. Stopping: The recovery site is being cleaned up after a failover test of the VPG.
ActualRPO	The time since the last checkpoint was written to the journal in seconds. This should be less than the <code>Target RPO Alert</code> value specified for the VPG. A value of -1 means that the RPO has not been calculated.
BackupEnabled (deprecated)	True: The VPG is defined for both disaster recovery and for long term recovery via offsite backup. False: The VPG is defined for disaster recovery only.
ConfiguredRpoSeconds	
Entities	The source type and target types where the VPG is protected and recovered.
Protected	The protected site environment. This parameter behaves in the same way as the <i>Source</i> parameter. Possible values are (Json/XML): 0/VCVpg: The VPG is protecting virtual machines in a VMware vCenter Server. 1/VCvApp: Deprecated. See VCDvApp. 2/VCDvApp: The VPG is protecting a VMware vCloud Director vApp. 3/PublicCloud: Not applicable. 4/HyperV: The VPG is protecting virtual machines in Microsoft Hyper-V.
Recovery	The recovery site environment. This parameter behaves in the same way as the <i>Target</i> parameter. Possible values are (Json/XML): 0/VCVpg: The VPG is recovering virtual machines in a VMware vCenter Server. 1/VCvApp: Deprecated. See VCDvApp. 2/VCDvApp: The VPG is recovering a VMware vCloud Director vApp. 3/PublicCloud: The VPG is recovering virtual machines to a Public Cloud. 4/HyperV: The VPG is recovering virtual machines in Microsoft Hyper-V.
Source	Deprecated. See Protected .
Target	Deprecated. See Recovery .
FailSafeHistory	Details of the journal's healthy hours history.
ActualFailSafeHistory	The actual number of hours in a journal that were marked as healthy, in minutes.
ConfiguredFailSafeHistory	The configured number of hours that have been marked as healthy, in minutes. The default is 4 hours.
FailSafeDescription	
HistoryStatusApi	Details of the journal's history.
ActualHistoryInMinutes	The actual journal history, in minutes.

PARAMETER	DESCRIPTION
ConfiguredHistoryInMinutes	The configured journal history, in minutes. The default value is 4 hours.
EarliestCheckpoint	The earliest checkpoint in a journal.
CheckpointIdentifier	The identifier of the checkpoint of the VPG.
Tag	The tag when the checkpoint was added manually.
TimeStamp	The date and time the checkpoint was written to the journal. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .
IOPS	The IO per second between all the applications running on the virtual machines in the VPG and the VRAs that sends a copy to the remote site for replication.
LastTest	The date the last failover test occurred. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251
Link	The link details.
href	The URL used.
identifier	The VPG identifier.
rel	The next path level of the API relative to the current path.
type	The API interface service.
Link	The link details.
href	The URL used.
rel	The next path level of the API relative to the current path.
type	The API interface service.
OrganizationName	The name of the organization set up in the Zerto Cloud Manager that uses a cloud service provider for recovery.
Priority	The priority specified for the VPG. Possible values are (Json/XML): 0/Low: The VPG has a low priority for transferring data. 1/Medium: The VPG has a medium priority for transferring data. 2/High: The VPG has a high priority for transferring data.

PARAMETER	DESCRIPTION
ProgressPercentage	The percentage of an operation completed on the VPG, such as a bitmap sync or updating the VPG.
ProtectedSite	The protected site details.
href	The URL used.
identifier	The site identifier.
rel	The next path level of the API relative to the current path.
type	The API interface service.
ProvisionedStorageInMB	The storage provisioned for the virtual machine in the recovery site.
RecoverySite	The recovery site details.
href	The URL used.
identifier	The site identifier.
rel	The next path level of the API relative to the current path.
type	The type of site. Possible options are: LocalSiteApi PeerSiteApi
ServiceProfile	The service profile details.
href	The URL used.
identifier	The service profile identifier.
rel	The next path level of the API relative to the current path.
type	The API interface service.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
ServiceProfileName	The service profile name.
SourceSite	Deprecated. See ProtectedSite > identifier .

PARAMETER	DESCRIPTION
Status	<p>The status of the VPG that contains the virtual machine. Possible values are (Json/XML):</p> <p>0/Initializing- The VPG is being initialized. This includes when a VPG is created, and during the initial sync between sites.</p> <p>1/MeetingSLA: The VPG is meeting the SLA specification.</p> <p>2/NotMeetingSLA: The VPG is not meeting the SLA specification for both the journal history and RPO SLA settings, for example during a delta sync or when there is an error.</p> <p>3/RpoNotMeetingSLA: The VPG is not meeting the SLA specification for the RPO SLA setting.</p> <p>4/HistoryNotMeetingSLA: The VPG is not meeting the SLA specification for the journal history.</p> <p>5/FailingOver: The VPG is in a Failover operation.</p> <p>6/Moving: The VPG is in a Move operation.</p> <p>7/Deleting: The VPG is being deleted.</p> <p>8/Recovered: The VPG is recovered.</p>
SubStatus	<p>The substatus of the VPG that contains the virtual machine, for example the VPG is in a bitmap sync. For the description of substatuses, refer to the <i>Zerto Virtual Manager Administration Guide</i>. Possible values are (Json/XML):</p> <p>0/None 1/InitialSync 2/Creating 3/VolumeInitialSync 4/Sync 5/RecoveryPossible 6/DeltaSync 7/NeedsConfiguration 8/Error 9/EmptyProtectionGroup</p>
	<p>10/DisconnectedFromPeerNoRecoveryPoints 11/FullSync 12/VolumeDeltaSync 13/VolumeFullSync 14/FailingOverCommitting 15/FailingOverBeforeCommit 16/FailingOverRollingBack 17/Promoting 18/MovingCommitting 19/MovingBeforeCommit</p>
	<p>20/MovingRollingBack 21/Deleting 22/PendingRemove 23/BitmapSync 24/DisconnectedFromPeer 25/ReplicationPausedUserInitiated 26/ReplicationPausedSystemInitiated 27/RecoveryStorageProfileError 29/RollingBack</p>

PARAMETER	DESCRIPTION
	30/RecoveryStorageError 31/JournalStorageError 32/VmNotProtectedError 33/JournalOrRecoveryMissingError 34/AddedVmsInInitialSync 35/ReplicationPausedForMissingVolume
TargetSite	Deprecated. See RecoverySite > identifier .
ThroughputInMb	The MBs for all the applications running on the virtual machines being protected in the VPG.
UsedStorageInMB	The storage used by the virtual machines in the VPG at the recovery site.
VmsCount	The number of virtual machines protected in the VPG.
VpgIdentifier	The internal VPG identifier.
VpgName	The VPG name.
Zorg	The ZORG details.
href	The URL used.
identifier	The ZORG identifier.
rel	The next path level of the API relative to the current path.
type	The API interface service.

Checkpoints Response values for
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints?startDate={STARTDATE}&endDate={ENDDATE}.

PARAMETER	DESCRIPTION
checkpointId	The identifier of the checkpoint.
Tag	The tag when the checkpoint was added manually.
Timestamp	The date and time the checkpoint was written to the journal. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs", on page 251 .

Checkpoints stats Response values for
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints/stats.

PARAMETER	DESCRIPTION
Earliest	Information related to the first checkpoint of a specific VPG in the recovery site.
CheckpointIdentifier	The identifier of the first checkpoint.

PARAMETER	DESCRIPTION
Tag	The tag when the checkpoint was added.
TimeStamp	The date and time the checkpoint was written to the journal. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs" , on page 251 .
LastCheckpoint	Information related to the last checkpoint of a specific VPG in the recovery site
CheckpointIdentifier	The identifier of the last checkpoint.
Tag	The tag when the checkpoint was added.
TimeStamp	The date and time the checkpoint was written to the journal. The value can be converted to an understandable date using code similar to the following: <pre>var date = new Date(jsonDate);</pre> or code similar to the Perl code example, <code>jsonDateToString(\$)</code> , in "Managing vCD APIs" , on page 251 .

Entity types Response values for `https://zvm_ip:port/v1/vpgs/entitytypes`.

RESPONSE: DESCRIPTION

Possible entity types: the type of site for the VPG:

VCVpg: The VPG is recovering virtual machines in a VMware vCenter Server.

VCvApp: Deprecated. See VCDvApp

VCDvApp: The VPG is recovering a VMware vCloud Director vApp.

PublicCloud: The VPG is recovering virtual machines in Amazon Web Services (AWS).

HyperV: The VPG is recovering virtual machines in Microsoft Hyper-V.

Failover commit policies Response values for `https://zvm_ip:port/v1/vpgs/failovercommitpolicies`.

RESPONSE: DESCRIPTION

Possible policies used for a failover:

Rollback: After the seconds specified in the `TimeToWaitBeforeShutdownInSec` setting have elapsed, the failover is rolled back.

Commit: After the seconds specified in the `TimeToWaitBeforeShutdownInSec` setting have elapsed, the failover continues, committing the virtual machines in the recovery site.

None: The virtual machines in the VPG being failed over remain in the `Before Commit` state until either they are committed with [Commit a failover](#) or rolled back with [Roll back a failover](#).

Failover shutdown policies Response values for `https://zvm_ip:port/v1/vpgs/failovershutdownpolicies`.

RESPONSE: DESCRIPTION

Possible shutdown policies when failing over a VPG:

None: The protected virtual machines are not shut down before the failover begins.

Shutdown: If VMware Tools or Microsoft Integration Services are available, the virtual machines are shut down gracefully. Otherwise, the failover operation fails.

ForceShutdown: The virtual machines are forcibly shut down even if they cannot be gracefully shut down.

Priorities Response values for `https://zvm_ip:port/v1/vpgs/priorities`.

RESPONSE: DESCRIPTION

Possible VPG priorities:

Low: The VPG has a low priority for transferring data.

Medium: The VPG has a medium priority for transferring data.

High: The VPG has a high priority for transferring data.

Retention policies Response values for `https://zvm_ip:port/v1/vpgs/retentionpolicies`.

RESPONSE: DESCRIPTION

Possible VPG retention policies:

StandardDR: The VPG is defined for disaster recovery and not for additional long term recovery via offsite backup.

ExtendedDR: The VPG is defined for both disaster recovery and for additional long term recovery via offsite backup.

Statuses Response values for `https://zvm_ip:port/v1/vpgs/statuses`.

RESPONSE: DESCRIPTION

Possible statuses of a VPG:

Initializing- The VPG is being initialized. This includes when a VPG is created, and during the initial sync between sites.

MeetingSLA: The VPG is meeting the SLA specification.

NotMeetingSLA: The VPG is not meeting the SLA specification for both the journal history and RPO SLA settings, for example during a delta sync or when there is an error.

RpoNotMeetingSLA: The VPG is not meeting the SLA specification for the RPO SLA setting.

HistoryNotMeetingSLA: The VPG is not meeting the SLA specification for the journal history.

FailingOver: The VPG is in a Failover operation.

Moving: The VPG is in a Move operation.

Deleting: The VPG is being deleted.

Recovered: The VPG is recovered.

Substatuses Response values for `https://zvm_ip:port/v1/vpgs/substatuses`.

RESPONSE: DESCRIPTION

Possible substatus of a VPG:

None
InitialSync
Creating
VolumeInitialSync
Sync
RecoveryPossible
DeltaSync
NeedsConfiguration
Error
EmptyProtectionGroup

DisconnectedFromPeerNoRecoveryPoints
FullSync
VolumeDeltaSync
VolumeFullSync
FailingOverCommitting
FailingOverBeforeCommit
FailingOverRollingBack
Promoting
MovingCommitting
MovingBeforeCommit

MovingRollingBack
Deleting
PendingRemove
BitmapSync
DisconnectedFromPeer
ReplicationPausedUserInitiated
ReplicationPausedSystemInitiated
RecoveryStorageProfileError
RollingBack

RecoveryStorageError
JournalStorageError
VmNotProtectedError
JournalOrRecoveryMissingError
AddedVmsInInitialSync
ReplicationPausedForMissingVolume

VPGs: POST

Creates a VPG or performs actions on a specific VPG.

URL

Create VPG	Deprecated
Insert a tagged checkpoint	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Checkpoints</code>
Clone VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneStart</code>
Abort VPG clone	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneAbort</code>
Failover VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover</code>
Commit VPG failover	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit</code>
Rollback VPG failover	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback</code>
Test VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/failoverTest</code>
Stop VPG test	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/failoverTestStop</code>
Force synchronize a VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/forcesync</code>
Move VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/move</code>
Rollback Move VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveRollback</code>
Commit Move VPG	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveCommit</code>
Pause VPG protection	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/pause</code>
Resume VPG protection	<code>https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/resume</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
protectionGroupIdentifier	The identifier of the VPG for which an action is executed, such as a clone, failover or failover test.

Request Body Using Json Format

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Checkpoints`

```
{
  "checkpointName": "String content"
}
```

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneStart`.

```
{
  "CheckpointId": "String content"
  "DatastoreIdentifier": "String content"
  "VmIdentifiers":
  [
    "VmIdentifier": "string content"
  ]
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover.`

```
{
  "CheckpointIdentifier": "String content",
  "CommitPolicy": 1,
  "ShutdownPolicy": 0,
  "TimeToWaitBeforeShutdownInSec": 2147483647
  "IsReverseProtection": Boolean
  "VmIdentifiers":
  [
    "VmIdentifier": "string content"
  ]
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit`

```
{
  "IsReverseProtection": Boolean
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTest.`

```
{
  "CheckpointIdentifier": "String content"
  "VmIdentifiers":
  [
    "VmIdentifier": "string content"
  ]
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTestStop.`

```
{
  "FailoverTestSuccess": Boolean,
  "FailoverTestSummary": "String content"
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/move:`

```
{
  "CommitPolicy": "String content",
  "CommitPolicyTimeout": 2,
  "ForceShutdown": Boolean,
  "ReverseProtection": Boolean,
  "KeepSourceVms": Boolean,
  "ContinueOnPreScriptFailure": Boolean
}
```

The following is an example of a request body in Json format for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveCommit:`

```
{
  "ReverseProtection": Boolean,
  "KeepSourceVms": Boolean
}
```

The request body for the following VPG POST APIs is empty:

```
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/failoverTest
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/failoverTestStop
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/forcesync
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveRollback
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/pause
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/resume
```

XML Request Format

For the XML request format, see [“VPGs API POST Method Request and Response Formats”](#), on page 374.

Request Values

Insert Checkpoint Request values for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints`

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
CheckpointName	The name of the tagged checkpoint.	Yes	-

Note: It is not possible to insert a tagged checkpoint if the protected site is either Azure or AWS.

Clone a VPG Request values for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/CloneStart`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
CheckpointId	The identifier of the checkpoint to use for cloning.	No	The latest checkpoint.
DatastoreIdentifier	The identifier of the datastore on which the cloned virtual machines are created. Specifying a datastore when the recovery site is vCD or Public cloud is not allowed.	No	The datastore (vSphere) or storage (Hyper-V) with the most free space.
VmIdentifiers	The name of the virtual machine/s selected for cloning.	No	

Aborting a Clone Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/CloneAbort` is empty.

Failover a VPG Request values for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/failover`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
CheckpointIdentifier	The identifier of the checkpoint to use for failover.	No	The latest checkpoint
CommitPolicy	<p>The policy to use after the failover enters a <i>Before Commit</i> state. Possible values are (Json/XML):</p> <ul style="list-style-type: none"> ■ Rollback or 0: After the seconds specified in the <i>TimeToWaitBeforeShutdownInSec</i> setting have elapsed, the failover is rolled back. ■ Commit or 1: After the seconds specified in the <i>TimeToWaitBeforeShutdownInSec</i> setting have elapsed, the failover continues, committing the virtual machines in the recovery site. ■ None or 2: The virtual machines in the VPG being failed over remain in the Before Commit state until either they are committed with Commit a failover, or rolled back with Roll back a failover. 	No	Rollback
ShutdownPolicy	<p>The shutdown policy to apply to the virtual machines on the protected site that are being failed over.</p> <p>Possible values are (Json/XML):</p> <ul style="list-style-type: none"> ■ 0: The protected virtual machines are not touched before starting the failover. This assumes that you do not have access to the protected virtual machines. ■ 1: If the protected virtual machines have VMware Tools or Microsoft Integration Services available, the virtual machines are gracefully shut down, otherwise the failover operation fails. This is similar to performing a Move operation to a specified checkpoint. ■ 2: The protected virtual machines are forcibly shut down before starting the failover. If the protected virtual machines have VMware Tools or Microsoft Integration Services available, the procedure waits five minutes for the virtual machines to be gracefully shut down before forcibly powering them off. This is similar to performing a Move operation to a specified checkpoint. 	No	
TimeToWaitBeforeShutdownInSec	The amount of time in seconds the failover waits in a Before Commit state to enable checking that the failover is as required before performing the commit policy setting. The commit policy setting can either be commit or rollback.	No	

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
IsReverseProtection	<ul style="list-style-type: none"> ■ 1 or True: Enable reverse protection. The virtual machines are recovered on the recovery site and then protected using the default reverse protection settings. ■ 0 or False: Do not enable reverse protection. The VPG definition is kept with the status <i>Needs Configuration</i> and the reverse settings in the VPG definition are not set. 	No	False
VmIdentifiers	The name of the virtual machine/s selected for failover.	No	

Commit a failover Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/FailoverCommit`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
IsReverseProtection	<ul style="list-style-type: none"> ■ 1 or True: Enable reverse protection. The virtual machines are recovered on the recovery site and then protected using the default reverse protection settings. ■ 0 or False: Do not enable reverse protection. The VPG definition is kept with the status <i>Needs Configuration</i> and the reverse settings in the VPG definition are not set. 	No	False

Note: Attempting to commit a failover during the initial stage, before it is ready to commit or roll back, throws an exception.

Roll back a failover Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/FailoverRollback` is empty.

Note: Attempting to rollback a failover during the initial stage, before it is ready to commit or roll back, throws an exception.

Test a failover Request values for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/FailoverTest`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
checkpointId	Deprecated. See CheckpointIdentifier.	Irrelevant	
CheckpointIdentifier	The identifier of the checkpoint to use for testing.	No	Latest checkpoint
VmIdentifiers	The name of the virtual machine/s selected for testing.	No	

Stopping a failover test Request values for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/FailoverTestStop`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
FailoverTestSuccess	<ul style="list-style-type: none"> ■ True: The test was successful. ■ False: The test was not successful. 	No	True
FailoverTestSummary	Free text describing the test.	No	N/A

Move VPG Operation https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/move:

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
CommitPolicy	<p>The policy to use after the move enters a <i>Before Commit</i> state. Possible values are (Json/XML):</p> <ul style="list-style-type: none"> ■ Rollback or 0: The Move is rolled back after the seconds specified in the setting, <i>commitPolicyTimeout</i>, elapse. ■ Commit or 1: The Move resumes committing the virtual machines in the recovery site after the seconds specified in the setting, <i>commitPolicyTimeout</i>, elapse. ■ None or 2: The virtual machines in the VPG being moved remain in the Before Commit state until either they are committed with Commit a Move or rolled back with the Rollback a Move. 	No	Site settings default commit policy
CommitPolicyTimeout	The amount of time, in seconds, the Move is in a "Before Commit" state, before performing the commitPolicy setting.	No	Site settings default commit policy.
ForceShutdown	<ul style="list-style-type: none"> ■ 0 or False: If a utility (VMware Tools) is installed on the protected virtual machines, the procedure waits five minutes for the virtual machines to be gracefully shut down before forcibly powering them off. ■ 1 or True: To force a shutdown of the virtual machines. 	No for Hyper-V and vSphere Yes for Cloud Service Providers	False
ReverseProtection	<ul style="list-style-type: none"> ■ 0 or False: Do not enable reverse protection. The VPG definition is kept with the status <i>Needs Configuration</i> and the reverse settings in the VPG definition are not set. ■ 1 or True: Enable reverse protection. The virtual machines are recovered on the recovery site and then protected using the default reverse protection settings. <p>Note: If ReverseProtection is set to True, the KeepSourceVMs should be ignored because the virtual disks of the VMs are used for replication and cannot have VMs attached.</p>	No	True
KeepSourceVms	<ul style="list-style-type: none"> ■ 0 or False: Remove the protected virtual machines from the protected site. ■ 1 or True: Prevent the protected virtual machines from being deleted in the protected site. 	No	False
ContinueOnPreScriptFailure	<ul style="list-style-type: none"> ■ 0 or False: Do not continue the Move operation in case of failure of script executing prior the operation. ■ 1 or True: Continue the Move operation in case of failure of script executing prior the operation. 	No	False

Move Commit Operation `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveCommit:`

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
ReverseProtection	<ul style="list-style-type: none"> ■ 0 or False: Do not enable reverse protection. The VPG definition is kept with the status <i>Needs Configuration</i> and the reverse settings in the VPG definition are not set. ■ 1 or True: Enable reverse protection. The virtual machines are recovered on the recovery site and then protected using the default reverse protection settings. 	No	As set at "move" request
KeepSourceVms	<ul style="list-style-type: none"> ■ 0 or False: Remove virtual machines from the inventory. ■ 1 or True: Prevent the protected virtual machines from being deleted in the protected site. 	No	False

Force synchronize a VPG Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/forcesync` is empty.

Pause VPG protection Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/pause` is empty.

Resume VPG protection Request body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}/resume` is empty.

Response In Json Format

The following is an example response Json body for:

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTest,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTestStop,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/forcesync,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/move,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveCommit,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/moveRollback,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/pause,` and for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/resume.`

```
{
  "TaskIdentifier": "String content"
}
```

Response Values

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the action.

XML Response Format

For the XML response format, see “VPGs API POST Method Request and Response Formats”, on page 374.

Response Values

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the action.

VPGs: DELETE

Delete a specified VPG, keeping the target disks to use for preseeding if the virtual machines are reprotected.

URL

Delete VPG `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgIdentifier	The identifier of the VPG to be deleted.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`.

```
{
  "Force": Boolean,
  "KeepRecoveryVolumes": Boolean
}
```

XML Request Format

For the XML response format, see [“VPGs API DELETE Method Request and Response Formats”](#), on page 376.

Request Values

Request values for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Force	True: Force deletion of the VPG. False: Do not force deletion of the VPG.	No	False
KeepRecoveryVolumes	True: Keep the recovery volumes. If the virtual machines in the deleted VPG are reprotected, these volumes can be used as preseeded volumes to speed up the initial synchronization of the new VPG. False: Do not keep the recovery volumes.	No	

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`.

```
"String content"
```

Response Values

The response value is the task identifier which can be used with the [Tasks API](#) to monitor the delete action.

XML Response Format

For the XML response format, see [“VPGs API DELETE Method Request and Response Formats”](#), on page 376.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”](#), on page 23.

VPG Management API

/v1/vpgSettings returns information about VPG settings, creates new VPGs, copies existing VPGs, edits VPG settings, or deletes all or selected VPG settings for a VPG.

For more information about how to use VpgSetting APIs, please refer to [“Managing VPGs”](#), on page 10.

The following API are available:

- [“VPG Settings: GET”](#), on page 163
- [“VPG Settings: POST”](#), on page 188
- [“VPG Settings: PUT”](#), on page 202
- [“VPG Settings: DELETE”](#), on page 223
-

For **vCD** VPG management APIs, go to [“Managing vCD APIs”](#), on page 251.

PURPOSE	METHOD	URL
Get settings for VPGs	GET	<code>https://zvm_ip:port/v1/vpgSettings</code>
Get settings for a VPG	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Get VPG backup settings	GET	Deprecated
Get the day a backup is scheduled	GET	Deprecated
Get a VPG backup retention period	GET	Deprecated
Get a VPG backup schedule	GET	Deprecated
Get VPG basic settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Get VPG boot settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup</code>
Get VPG journal settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Get VPG network settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>

PURPOSE	METHOD	URL
Get the VPG priority	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/priority</code>
Get VPG recovery settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Get VPG script settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Get all VM settings for a VPG	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms</code>
Get VM settings for a VM in a VPG	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Get all VM NIC settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics</code>
Get settings for a VM NIC	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>
Get VM volume settings	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes</code>
Get settings for a VM volume	GET	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>
Create new VPG settings object	POST	<code>https://zvm_ip:port/v1/vpgSettings</code>
Create VPG settings object for an existing VPG	POST	<code>https://zvm_ip:port/v1/vpgSettings</code>
Commit a settings object	POST	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/commit</code>
Add VMs to a settings object	POST	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms</code>
Edit VPG settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Edit backup settings object	PUT	Deprecated
Edit basic settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Edit boot settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup</code>
Edit journal settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Edit network settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>

PURPOSE	METHOD	URL
Edit recovery settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Edit script settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Edit VM settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Edit NIC settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>
Edit volume settings object	PUT	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>
Delete a settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Delete backup settings object	DELETE	Deprecated
Delete basic settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Delete boot settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup</code>
Delete journal settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Delete network settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Delete recovery settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Delete script settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Delete VM settings from a VPG	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Delete NIC settings object	DELETE	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>

HTTP Methods

GET, POST, PUT, DELETE

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)
View the results of the create VPG operation: [Events API](#)
Return the datastore identifier: [Datastores](#)
Return the resource pool identifier: [VMware only: Resource Pools](#)
Return the source and target site identifiers: [Virtualization sites](#)
Return the vCenter vApp identifier to protect: [Unprotected VMs](#)
Return the list of unprotected virtual machine identifiers: [Unprotected VMs](#)
Retrieve details of the task being performed: [Tasks API](#)
Perform actions, such as testing, a VPG: [“VPGs API”, on page 136](#)

Format

Json, XML

VPG Settings: GET

The GET methods are used to retrieve values in a VPG settings object.

See also:

- [“VPG Settings: POST”, on page 188](#)
- [“VPG Settings: PUT”, on page 202](#)
- [“VPG Settings: DELETE”, on page 223](#)

Get settings for VPGs	<code>https://zvm_ip:port/v1/vpgSettings</code>
Get settings for a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Get VPG backup settings	Deprecated
Get the day a backup is scheduled	Deprecated
Get a VPG backup retention period	Deprecated
Get a VPG backup schedule	Deprecated
Get VPG basic settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Get VPG boot settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup</code>
Get VPG journal settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Get VPG network settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Get the VPG priority	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/priority</code>
Get VPG recovery settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Get VPG script settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Get all VM settings for a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms</code>
Get VM settings for a VM in a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>

Get all VM NIC settings	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics</code>
Get settings for a VM NIC	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>
Get VM volume settings	<code>https://zvm_ip:port/v1/vpgSettings/vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes</code>
Get settings for a VM volume	<code>https://zvm_ip:port/v1/vpgSettings/vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object for which information is retrieved.
vmIdentifier	The identifier of the virtual machine for which settings are retrieved. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
nicIdentifier	The identifier of the NIC for which settings are retrieved.
volumeId	The identifier of the volume for which settings are retrieved.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vpgSettings` and, without the array statement, for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
[{
  "Backup": {
    "RepositoryIdentifier": "String content",
    "RetentionPeriod": "String content",
    "Retry": {
      "IntervalInMinutes":2147483647,
      "Number":2147483647,
      "Retry": Boolean
    },
    "Scheduler": {
      "DayOfWeek": "String content",
      "SchedulerPeriod": "String content",
      "TimeOfDay": "String content"
    }
  },
},
```

```
"Basic": {
  "JournalHistoryInHours":2147483647,
  "Name": "String content",
  "Priority": "String content",
  "ProtectedSiteIdentifier": "String content",
  "RecoverySiteIdentifier": "String content",
  "RpoInSeconds":300,
  "ServiceProfileIdentifier": "String content",
  "TestIntervalInMinutes":43200,
  "UseWanCompression": Boolean,
  "ZorgIdentifier": "String content"
},
"BootGroups": {
  "BootGroups":[
    {
      "BootDelayInSeconds":0,
      "BootGroupIdentifier": "String content",
      "Name": "String content"
    }
  ]
},
"Journal": {
  "DatastoreIdentifier": "String content",
  "Limitation": {
    "HardLimitInMB":2147483647,
    "HardLimitInPercent":2147483647,
    "WarningThresholdInMB":2147483647,
    "WarningThresholdInPercent":2147483647
  }
},
"Networks": {
  "Failover": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String content"
    }
  },
  "VCD": null
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String content"
    }
  }
  "VCD": null
}
"Protected": {
  "VCD": null
}
"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
  "VCD": null
},
```

```
"Scripting": {  
  "PostBackup": {  
    "Command": "String content",  
    "Parameters": "String content",  
    "TimeoutInSeconds":2147483647  
  },  
  "PostRecovery": {  
    "Command": "String content",  
    "Parameters": "String content",  
    "TimeoutInSeconds":2147483647  
  },  
  "PreRecovery": {  
    "Command": "String content",  
    "Parameters": "String content",  
    "TimeoutInSeconds":2147483647  
  }  
},
```

```
"Vms":[{"  
  "BootGroupIdentifier": "String content",  
  "Journal": {  
    "DatastoreIdentifier": "String content",  
    "Limitation": {  
      "HardLimitInMB":4294967295,  
      "HardLimitInPercent":4294967295,  
      "WarningThresholdInMB":4294967295,  
      "WarningThresholdInPercent":4294967295  
    }  
  }  
},
```

```
"Nics":[{"Failover": {"Hypervisor": {"DnsSuffix": "String content", "IpConfig": {"Gateway": "String content", "IsDhcp": Boolean, "PrimaryDns": "String content", "SecondaryDns": "String content", "StaticIp": "String content", "SubnetMask": "String content"}, "NetworkIdentifier": "String content", "ShouldReplaceMacAddress": Boolean}, "FailoverTest": {"Hypervisor": {"DnsSuffix": "String content", "IpConfig": {"Gateway": "String content", "IsDhcp": Boolean, "PrimaryDns": "String content", "SecondaryDns": "String content", "StaticIp": "String content", "SubnetMask": "String content"}, "NetworkIdentifier": "String content", "ShouldReplaceMacAddress": Boolean}, "NicIdentifier": "String content"}}], "Recovery": {"DatastoreClusterIdentifier": "String content", "DatastoreIdentifier": "String content", "FolderIdentifier": "String content", "HostClusterIdentifier": "String content", "HostIdentifier": "String content", "ResourcePoolIdentifier": "String content"}, "VmIdentifier": "String content", "Volumes":[{"Datastore": {"DatastoreClusterIdentifier": "String content", "DatastoreIdentifier": "String content", "IsThin": Boolean}, "IsSwap": Boolean, "Preseed": null, "RDM": null, "VCD": null, "VolumeIdentifier": "String content"}]}
```

```
"VpgIdentifier": "String content",  
"VpgSettingsIdentifier": "String content"  
}]
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.`

```
{  
  "JournalHistoryInHours":2147483647,  
  "Name": "String content",  
  "Priority": "String content",  
  "ProtectedSiteIdentifier": "String content",  
  "RecoverySiteIdentifier": "String content",  
  "RpoInSeconds":4294967295,  
  "ServiceProfileIdentifier": "String content",  
  "TestIntervalInMinutes":2147483647,  
  "UseWanCompression": Boolean,  
  "ZorgIdentifier": "String content"  
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup.`

```
{  
  "BootGroups": [{  
    "BootDelayInSeconds":4294967295,  
    "BootGroupIdentifier": "String content",  
    "Name": "String content"  
  }]  
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal.`

```
{  
  "DatastoreIdentifier": "String content",  
  "Limitation": {  
    "HardLimitInMB":2147483647,  
    "HardLimitInPercent":2147483647,  
    "WarningThresholdInMB":2147483647,  
    "WarningThresholdInPercent":2147483647  
  }  
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks`

```
{  
  "Failover": {  
    "Hypervisor": {  
      "DefaultNetworkIdentifier": "String content"  
    }  
  },  
  "FailoverTest": {  
    "Hypervisor": {  
      "DefaultNetworkIdentifier": "String content"  
    }  
  }  
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/priority.`

```
"String content"
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery.`

```
{
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting.`

```
{
  "PostBackup": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  },
  "PostRecovery": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  },
  "PreRecovery": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  }
}
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms.`

```
[{
  "BootGroupIdentifier": "String content",
  "Journal": {
    "DatastoreIdentifier": "String content",
    "Limitation": {
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  }
},
```

```
"Nics":[{"Failover": {"Hypervisor": {"DnsSuffix": "String content", "IpConfig": {"Gateway": "String content", "IsDhcp": Boolean, "PrimaryDns": "String content", "SecondaryDns": "String content", "StaticIp": "String content", "SubnetMask": "String content"}, "NetworkIdentifier": "String content", "ShouldReplaceMacAddress": Boolean}}, "FailoverTest": {"Hypervisor": {"DnsSuffix": "String content", "IpConfig": {"Gateway": "String content", "IsDhcp": Boolean, "PrimaryDns": "String content", "SecondaryDns": "String content", "StaticIp": "String content", "SubnetMask": "String content"}, "NetworkIdentifier": "String content", "ShouldReplaceMacAddress": Boolean}}, "NicIdentifier": "String content"}], "Recovery": {"DatastoreClusterIdentifier": "String content", "DatastoreIdentifier": "String content", "FolderIdentifier": "String content", "HostClusterIdentifier": "String content", "HostIdentifier": "String content", "ResourcePoolIdentifier": "String content"}, "VmIdentifier": "String content", "Volumes":[{"Datastore": {"DatastoreClusterIdentifier": "String content", "DatastoreIdentifier": "String content", "IsThin": Boolean}}, {"IsSwap": Boolean, "Preseed": null, "RDM": null, "VCD": null, "VolumeIdentifier": "String content"}]}
```

The following is an example response Json body for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}`.

```
{
  "BootGroupIdentifier": "String content",
  "Journal": {
    "DatastoreIdentifier": "String content",
    "Limitation": {
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  },
  "Nics":[{
    "Failover": {
      "Hypervisor": {
        "DnsSuffix": "String content",
        "IpConfig": {
          "Gateway": "String content",
          "IsDhcp": Boolean,
          "PrimaryDns": "String content",
          "SecondaryDns": "String content",
          "StaticIp": "String content",
          "SubnetMask": "String content"
        }
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      }
    },
    "NetworkIdentifier": "String content",
    "ShouldReplaceMacAddress": Boolean
  }
  },
  "NicIdentifier": "String content"
}],
  "Recovery": {
    "DatastoreClusterIdentifier": "String content",
    "DatastoreIdentifier": "String content",
    "FolderIdentifier": "String content",
    "HostClusterIdentifier": "String content",
    "HostIdentifier": "String content",
    "ResourcePoolIdentifier": "String content"
  },
}
```

```
"VmIdentifier": "String content",
  "Volumes": [{
    "Datastore": {
      "DatastoreClusterIdentifier": "String content",
      "DatastoreIdentifier": "String content",
      "IsThin": Boolean
    },
    "IsSwap": Boolean,
    "Preseed": null,
    "RDM": null,
    "VCD": null,
    "VolumeIdentifier": "String content"
  ]
}
```

The following is an example response Json body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics.

```
[{
  "Failover": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
  "NicIdentifier": "String content"
}]
```

The following is an example response Json body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}.

```
{
  "Failover": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
  "NicIdentifier": "String content"
}
```

The following is an example response Json body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes.

```
[{
  "Datastore": {
    "DatastoreClusterIdentifier": "String content",
    "DatastoreIdentifier": "String content",
    "IsThin": Boolean
  },
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}]
```

The following is an example response Json body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}.

```
{
  "Datastore": {
    "DatastoreClusterIdentifier": "String content",
    "DatastoreIdentifier": "String content",
    "IsThin": Boolean
  },
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"}
```

Response Values

VPg settings Response values for `https://zvm_ip:port/v1/vpgSettings` and for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

PARAMETER	DESCRIPTION															
Backup (Deprecated)	Information related to offsite backup.															
RepositoryIdentifier	The identifier of the repository where offsite backups are written.															
RetentionPeriod	<p>The length of time to keep offsite backups, up to a maximum of 12 months. Over time, Zerto reduces the number of stored offsite backups to save space.</p> <table border="1"> <thead> <tr> <th>VALID VALUES FOR RetentionPeriod</th> <th># OF BACKUPS SAVED WHEN RUN DAILY</th> <th># OF BACKUPS SAVED WHEN RUN WEEKLY</th> </tr> </thead> <tbody> <tr> <td>OneWeek</td> <td>7</td> <td>1</td> </tr> <tr> <td>OneMonth</td> <td>11</td> <td>5</td> </tr> <tr> <td>ThreeMonths</td> <td>13</td> <td>7</td> </tr> <tr> <td>SixMonths</td> <td>16</td> <td>10</td> </tr> </tbody> </table> <p>The SchedulerPeriod parameter defines whether backups are created daily or weekly.</p> <p>For an explanation of how Zerto reduces the number of offsite backups, see the <i>Zerto Administration Guide</i>.</p>	VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY	OneWeek	7	1	OneMonth	11	5	ThreeMonths	13	7	SixMonths	16	10
VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY														
OneWeek	7	1														
OneMonth	11	5														
ThreeMonths	13	7														
SixMonths	16	10														
Retry	Information about backup retries.															
IntervallInMinutes	How much time to wait, in minutes, after a backup job fails before running the backup job again.															
Number	The number of retries that will be attempted.															
Retry	<p>True: The offsite backup job is rerun automatically if it fails.</p> <p>False: The offsite backup job is not rerun automatically if it fails.</p>															
Scheduler	Offsite backup schedule settings.															

PARAMETER	DESCRIPTION
DayOfWeek	The day of the week that the offsite backups are run. If the value of SchedulerPeriod is daily, the value in this parameter can be ignored.
SchedulerPeriod	Daily: The offsite backups are run every day. Weekly: The offsite backups are run once a week.
TimeOfDay	The time of day when offsite backup jobs are run. The time is based on a 24-hour clock.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines are protected.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines are recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0: No testing is expected. 43200 or null: Testing is expected monthly. 131040: Testing is expected every three months. 262080: Testing is expected every six months. 394560: Testing is expected every nine months. 525600: Testing is expected every twelve months.
UseWanCompression	True: Data is compressed before sending it to the recovery site. False: Data is not compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	Information about boot groups.
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.

PARAMETER	DESCRIPTION
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
Recovery	Information about the recovery site.
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines.
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.

PARAMETER	DESCRIPTION
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.

PARAMETER	DESCRIPTION
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.

PARAMETER	DESCRIPTION
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumIdentifier	The identifier of the volume.
VpgIdentifier	The identifier of the VPG.
VpgSettingsIdentifier	The identifier of the VPG settings object.

Basic Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic`.

PARAMETER	DESCRIPTION
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines are protected.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines are recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.

PARAMETER	DESCRIPTION
TestIntervallnMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0 : No testing is expected. 43200 or null : Testing is expected monthly. 131040 : Testing is expected every three months. 262080 : Testing is expected every six months. 394560 : Testing is expected every nine months. 525600 : Testing is expected every twelve months.
UseWanCompression	True : Data is compressed before sending it to the recovery site. False : Data is not compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.

Boot group Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup`.

PARAMETER	DESCRIPTION
BootGroups	Information about boot groups.
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.

Journal Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal`.

PARAMETER	DESCRIPTION
DatastoreIdentifier	The identifier of the storage used by the journal. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited.

Network Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks`.

PARAMETER	DESCRIPTION
Failover	Information about the networks used for failover.
Hypervisor	
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.

Priority Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/priority`.

RESPONSE: DESCRIPTION
Possible VPG priorities: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.

Recovery Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery`.

PARAMETER	DESCRIPTION
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .

Scripting Response values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting`.

PARAMETER	INFORMATION ABOUT THE SCRIPTS TO RUN, EITHER BEFORE OR AFTER RECOVERY OPERATION, OR AFTER AN OFFSITE BACKUP IS RUN.
PostBackup	Information about scripts that are run after an offsite backup is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.

Virtual machines Response values for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms and https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}.

PARAMETER	DESCRIPTION
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.

PARAMETER	DESCRIPTION
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.
FailoverTest	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.

PARAMETER	DESCRIPTION
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.

PARAMETER	DESCRIPTION
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumIdentifier	The identifier of the volume.

Virtual machine NICs Response values for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nic
and https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nic/{nicIdentifier}.

PARAMETER	DESCRIPTION
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site is copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site is not copied to the recovery site.

PARAMETER	DESCRIPTION
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP is used for the virtual machine on the recovery site. False: A static IP address is used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: Copy the Media Access Control (MAC) address used on the protected site to the recovery site. False: Do <i>not</i> copy the MAC address from the protected site to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.

Virtual machine volumes Response values for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes and
https://zvm_ip:port/v1/vpgSettings/vpgSettingsIdentifier/vms/{vmIdentifier}/volumes/{volumeId}.

PARAMETER	DESCRIPTION
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.

PARAMETER	DESCRIPTION
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumelIdentifier	The identifier of the volume.

VPG Settings: POST

The POST method is used for the following purposes:

- To create a VPG settings identifier, or a session identifier.
- To commit the settings object to deploy the VPG in the Zerto Virtual Manager
- To add virtual machines to a VPG
- To add NIC settings to a virtual machine.

You can use the same URL, `https://zvm_ip:port/v1/vpgSettings`, to either create a new VPG or edit an existing one.

- To create a new VPG, put the parameters you wish to include in the VPG - in the request body.
- To update an existing VPG, put the VPG Identifier in the request body.

Note: A maximum of 100 VPGSettings objects can coexist in temporary state. Make sure you commit or delete VPG settings objects that are no longer in use.

See also:

- [“VPG Settings: GET”, on page 163](#)
- [“VPG Settings: PUT”, on page 202](#)
- [“VPG Settings: DELETE”, on page 223](#)

URL

Create a new VPG settings Identifier `https://zvm_ip:port/v1/vpgSettings`

Create VPG settings Identifier for an existing VPG `https://zvm_ip:port/v1/vpgSettings`

Commit a settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/commit`

Add VMs to a settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.
vmlIdentifier	The identifier of the virtual machine that is to be added to a VPG or for a NIC that is added to a virtual machine in the VPG. The identifier comprises the server identifier and the virtual machine moref, with the format, <code>serverid.moref</code> .

When creating a VPG settings object, The following is an example of a request body in Json format for https://zvm_ip:port/v1/vpgSettings.

```
"Backup": {
  "RepositoryIdentifier": "String content",
  "RetentionPeriod": "String content",
  "Retry": {
    "IntervalInMinutes":2147483647,
    "Number":2147483647,
    "Retry": Boolean
  },
  "Scheduler": {
    "DayOfWeek": "String content",
    "SchedulerPeriod": "String content",
    "TimeOfDay": "String content"
  }
},

"Basic": {
  "JournalHistoryInHours":2147483647,
  "Name": "String content",
  "Priority": "String content",
  "ProtectedSiteIdentifier": "String content",
  "RecoverySiteIdentifier": "String content",
  "RpoInSeconds":4294967295,
  "ServiceProfileIdentifier": "String content",
  "TestIntervalInMinutes":2147483647,
  "UseWanCompression": Boolean,
  "ZorgIdentifier": "String content"
},

"BootGroups": {
  "BootGroups":[{}
  "BootDelayInSeconds":4294967295,
  "BootGroupIdentifier": "String content",
  "Name": "String content"
  ]
},

"Journal": {
  "DatastoreIdentifier": "String content",
  "Limitation": {
    "HardLimitInMB":2147483647,
    "HardLimitInPercent":2147483647,
    "WarningThresholdInMB":2147483647,
    "WarningThresholdInPercent":2147483647
  }
},

"Networks": {
  "Failover": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String content"
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String content"
    }
  }
},
}
```

```
"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
},
```

```
"Scripting": {
  "PostBackup": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  },
  "PostRecovery": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  },
  "PreRecovery": {
    "Command": "String content",
    "Parameters": "String content",
    "TimeoutInSeconds":2147483647
  }
},
```

```
"Vms":[ {
  "BootGroupIdentifier": "String content",
  "Journal": {
    "DatastoreIdentifier": "String content",
    "Limitation": {
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  }
},
```

```
"Nics":[ {
  "Failover": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": Boolean,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      }
    },
    "NetworkIdentifier": "String content",
    "ShouldReplaceMacAddress": Boolean
  }
},
```

```
"FailoverTest": {
  "Hypervisor": {
    "DnsSuffix": "String content",
    "IpConfig": {
      "Gateway": "String content",
      "IsDhcp": Boolean,
      "PrimaryDns": "String content",
      "SecondaryDns": "String content",
      "StaticIp": "String content",
      "SubnetMask": "String content"
    },
    "NetworkIdentifier": "String content",
    "ShouldReplaceMacAddress": Boolean
  },
},
},
"NicIdentifier": "String content"
}],
"Recovery": {
  "DatastoreClusterIdentifier": "String content",
  "DatastoreIdentifier": "String content",
  "FolderIdentifier": "String content",
  "HostClusterIdentifier": "String content",
  "HostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
},
"VmIdentifier": "String content",
"Volumes":[{
  "Datastore": {
    "DatastoreClusterIdentifier": "String content",
    "DatastoreIdentifier": "String content",
    "IsThin": Boolean
  },
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}
```

When creating a VPG settings object for an existing VPG, the following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings`.

```
{
  "VpgIdentifier": "String content"
}
```

The request body for `https://zvm_ip:port/v1/vpgSettings/commit` is empty.

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms`.

```
{
  "BootGroupIdentifier":"String content",
  "Journal":{
    "DatastoreIdentifier":"String content",
    "Limitation":{
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  },
  "Nics":[{
    "Failover":{
      "Hypervisor":{
        "DnsSuffix":"String content",
        "IpConfig":{
          "Gateway":"String content",
          "IsDhcp":true,
          "PrimaryDns":"String content",
          "SecondaryDns":"String content",
          "StaticIp":"String content",
          "SubnetMask":"String content"
        }
      },
      "NetworkIdentifier":"String content",
      "ShouldReplaceMacAddress":true
    }
  },
  "FailoverTest":{
    "Hypervisor":{
      "DnsSuffix":"String content",
      "IpConfig":{
        "Gateway":"String content",
        "IsDhcp":true,
        "PrimaryDns":"String content",
        "SecondaryDns":"String content",
        "StaticIp":"String content",
        "SubnetMask":"String content"
      }
    },
    "NetworkIdentifier":"String content",
    "ShouldReplaceMacAddress":true
  }
  },
  "NicIdentifier":"String content"
}],
  "Recovery":{
    "DatastoreClusterIdentifier":"String content",
    "DatastoreIdentifier":"String content",
    "FolderIdentifier":"String content",
    "HostClusterIdentifier":"String content",
    "HostIdentifier":"String content",
    "ResourcePoolIdentifier":"String content"
  },
}
```

```
"VmIdentifier": "String content",
  "Volumes": [{
    "Datastore": {
      "DatastoreClusterIdentifier": "String content",
      "DatastoreIdentifier": "String content",
      "IsThin": Boolean
    },
    "IsSwap": Boolean,
    "Preseed": null,
    "RDM": null,
    "VCD": null,
    "VolumeIdentifier": "String content"
```

Request Values

Create a VPG settings object for a new VPG Request values for https://zvm_ip:port/v1/vpgSettings.

PARAMETER	DESCRIPTION															
Backup (Deprecated)	Information related to offsite backup.															
RepositoryIdentifier	The identifier of the repository where offsite backups will be written.															
RetentionPeriod	<p>The length of time to keep offsite backups, up to a maximum of 12 months. Over time, Zerto reduces the number of stored offsite backups to save space.</p> <table border="1"> <thead> <tr> <th>VALID VALUES FOR RetentionPeriod</th> <th># OF BACKUPS SAVED WHEN RUN DAILY</th> <th># OF BACKUPS SAVED WHEN RUN WEEKLY</th> </tr> </thead> <tbody> <tr> <td>OneWeek</td> <td>7</td> <td>1</td> </tr> <tr> <td>OneMonth</td> <td>11</td> <td>5</td> </tr> <tr> <td>ThreeMonths</td> <td>13</td> <td>7</td> </tr> <tr> <td>SixMonths</td> <td>16</td> <td>10</td> </tr> </tbody> </table> <p>The SchedulerPeriod parameter defines whether backups are created daily or weekly.</p> <p>For an explanation of how Zerto reduces the number of offsite backups, see the <i>Zerto Administration Guide</i>.</p>	VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY	OneWeek	7	1	OneMonth	11	5	ThreeMonths	13	7	SixMonths	16	10
VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY														
OneWeek	7	1														
OneMonth	11	5														
ThreeMonths	13	7														
SixMonths	16	10														
Retry	Information about backup retries.															
IntervallnMinutes	How much time to wait, in minutes, after a backup job fails before running the backup job again.															
Number	The number of retries that will be attempted.															
Retry	True: The offsite backup job will rerun automatically if it fails. False: The offsite backup job will not rerun automatically if it fails.															
Scheduler	Offsite backup schedule settings.															
DayOfWeek	The day of the week that the offsite backups will run.															

PARAMETER	DESCRIPTION
SchedulerPeriod	Daily: The offsite backups will run every day. Weekly: The offsite backups will run once a week.
TimeOfDay	The time of day when offsite backup jobs will run. The time is based on a 24-hour clock.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low : The VPG has a low priority for transferring data. Medium : The VPG has a medium priority for transferring data. High : The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0 : No testing is expected. 43200 or null : Testing is expected monthly. 131040 : Testing is expected every three months. 262080 : Testing is expected every six months. 394560 : Testing is expected every nine months. 525600 : Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.

PARAMETER	DESCRIPTION
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
Recovery	Information about the recovery site.
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
DefaultHostClusterIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the storage cluster of the VRA virtual machine. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.

PARAMETER	DESCRIPTION
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.

PARAMETER	DESCRIPTION
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i>
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.

PARAMETER	DESCRIPTION
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumIdentifier	The identifier of the volume.

Create a VPG settings object for an existing VPG Request values for https://zvm_ip:port/v1/vpgSettings.

PARAMETER	DESCRIPTION
VpgIdentifier	The identifier of the existing VPG.

Commit a VPG settings object Request values for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/commit is empty.

Add a virtual machine to a VPG settings object Request values for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms.

PARAMETER	DESCRIPTION
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.

PARAMETER	DESCRIPTION
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.

PARAMETER	DESCRIPTION
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumelIdentifier	The identifier of the volume.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vpgSettings` and `https://zvm_ip:port/v1/vpgSettings/commit`.

```
"String content"
```

The response body for `https://zvm_ip:port/v1/vpgSettings/vms` and for `https://zvm_ip:port/v1/vpgSettings/vms/{VMIDENTIFIER}/nics` is empty.

Response values

The response value for `https://zvm_ip:port/v1/vpgSettings` is the `vpgSettingsIdentifier`.

The response value for `https://zvm_ip:port/v1/vpgSettings/commit` is the task identifier.

VPG Settings: PUT

The PUT method is used to update a VPG settings object.

- [“VPG Settings: GET”, on page 163](#)
- [“VPG Settings: POST”, on page 188](#)
- [“VPG Settings: DELETE”, on page 223](#)

Edit VPG settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`

Edit backup settings object `Deprecated`

Edit basic settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic`

Edit boot settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup`

Edit journal settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal`

Edit network settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks`

Edit recovery settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery`

Edit script settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Edit VM settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Edit NIC settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>
Edit volume settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.
vmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
nicIdentifier	The identifier of a NIC that is to be updated.
volumeId	The identifier of the volume that is to be updated.

Request Body Using Json Format

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
{
  "Backup": {
    "RepositoryIdentifier": "String content",
    "RetentionPeriod": "String content",
    "Retry": {
      "IntervalInMinutes": 2147483647,
      "Number": 2147483647,
      "Retry": true
    },
    "Scheduler": {
      "DayOfWeek": "String content",
      "SchedulerPeriod": "String content",
      "TimeOfDay": "String content"
    }
  },
  "Basic": {
    "JournalHistoryInHours": 2147483647,
    "Name": "String content",
    "Priority": "String content",
    "ProtectedSiteIdentifier": "String content",
    "RecoverySiteIdentifier": "String content",
    "RpoInSeconds": 4294967295,
    "ServiceProfileIdentifier": "String content",
    "TestIntervalInMinutes": 2147483647,
    "UseWanCompression": true,
    "ZorgIdentifier": "String content"
  }
},
```

```
"BootGroups":{
  "BootGroups":[{}
    "BootDelayInSeconds":4294967295,
    "BootGroupIdentifier":"String content",
    "Name":"String content"
  ]
},

"Journal":{
  "DatastoreIdentifier":"String content",
  "Limitation":{
    "HardLimitInMB":2147483647,
    "HardLimitInPercent":2147483647,
    "WarningThresholdInMB":2147483647,
    "WarningThresholdInPercent":2147483647
  }
},

"Networks":{
  "Failover":{
    "Hypervisor":{
      "DefaultNetworkIdentifier":"String content"
    }
  },
  "FailoverTest":{
    "Hypervisor":{
      "DefaultNetworkIdentifier":"String content"
    }
  }
},

"Recovery":{
  "DefaultDatastoreClusterIdentifier":"String content",
  "DefaultDatastoreIdentifier":"String content",
  "DefaultFolderIdentifier":"String content",
  "DefaultHostClusterIdentifier":"String content",
  "DefaultHostIdentifier":"String content",
  "ResourcePoolIdentifier":"String content"
},

"Scripting":{
  "PostBackup":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  },
  "PostRecovery":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  },
  "PreRecovery":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  }
},

"Vms":[{}

```

```
"BootGroupIdentifier":"String content",
"Journal":{
  "DatastoreIdentifier":"String content",
  "Limitation":{
    "HardLimitInMB":4294967295,
    "HardLimitInPercent":4294967295,
    "WarningThresholdInMB":4294967295,
    "WarningThresholdInPercent":4294967295
  }
},
```

```
"Nics":[{
  "Failover":{
    "Hypervisor":{
      "DnsSuffix":"String content",
      "IpConfig":{
        "Gateway":"String content",
        "IsDhcp":true,
        "PrimaryDns":"String content",
        "SecondaryDns":"String content",
        "StaticIp":"String content",
        "SubnetMask":"String content"
      }
    },
    "NetworkIdentifier":"String content",
    "ShouldReplaceMacAddress":true
  }
},
  "FailoverTest":{
    "Hypervisor":{
      "DnsSuffix":"String content",
      "IpConfig":{
        "Gateway":"String content",
        "IsDhcp":true,
        "PrimaryDns":"String content",
        "SecondaryDns":"String content",
        "StaticIp":"String content",
        "SubnetMask":"String content"
      }
    },
    "NetworkIdentifier":"String content",
    "ShouldReplaceMacAddress":true
  }
},
  "NicIdentifier":"String content"
}],
```

```
"Recovery":{
  "DatastoreClusterIdentifier":"String content",
  "DatastoreIdentifier":"String content",
  "FolderIdentifier":"String content",
  "HostClusterIdentifier":"String content",
  "HostIdentifier":"String content",
  "ResourcePoolIdentifier":"String content"
},
```

```
"VmIdentifier":"String content",
"Volumes":[{"
  "Datastore": {
    "DatastoreClusterIdentifier": "String content",
    "DatastoreIdentifier": "String content",
    "IsThin": Boolean
  },
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}],
"VpgIdentifier":"String content",
"VpgSettingsIdentifier":"String content"
}
```

The following is an example of a request body in Json format for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.

```
{
  "JournalHistoryInHours":2147483647,
  "Name":"String content",
  "Priority":"String content",
  "ProtectedSiteIdentifier":"String content",
  "RecoverySiteIdentifier":"String content",
  "RpoInSeconds":4294967295,
  "ServiceProfileIdentifier":"String content",
  "TestIntervalInMinutes":2147483647,
  "UseWanCompression":true,
  "ZorgIdentifier":"String content"
}
```

The following is an example of a request body in Json format for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup.

```
{
  "BootGroups":[{"
    "BootDelayInSeconds":4294967295,
    "BootGroupIdentifier":"String content",
    "Name":"String content"
  }]
}
```

The following is an example of a request body in Json format for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal.

```
{
  "DatastoreIdentifier":"String content",
  "Limitation":{
    "HardLimitInMB":2147483647,
    "HardLimitInPercent":2147483647,
    "WarningThresholdInMB":2147483647,
    "WarningThresholdInPercent":2147483647
  }
}
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks.

```
{
  "Failover":{
    "Hypervisor":{
      "DefaultNetworkIdentifier":"String content"
    }
  },
  "FailoverTest":{
    "Hypervisor":{
      "DefaultNetworkIdentifier":"String content"
    }
  }
}
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery.

```
{
  "DefaultDatastoreClusterIdentifier":"String content",
  "DefaultDatastoreIdentifier":"String content",
  "DefaultFolderIdentifier":"String content",
  "DefaultHostClusterIdentifier":"String content",
  "DefaultHostIdentifier":"String content",
  "ResourcePoolIdentifier":"String content"
}
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting.

```
{
  "PostBackup":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  },
  "PostRecovery":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  },
  "PreRecovery":{
    "Command":"String content",
    "Parameters":"String content",
    "TimeoutInSeconds":2147483647
  }
}
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms.

```
[{
  "BootGroupIdentifier":"String content",
  "Journal":{
    "DatastoreIdentifier":"String content",
    "Limitation":{
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  },
  "Nics":[{
    "Failover":{
      "Hypervisor":{
        "DnsSuffix":"String content",
        "IpConfig":{
          "Gateway":"String content",
          "IsDhcp":true,
          "PrimaryDns":"String content",
          "SecondaryDns":"String content",
          "StaticIp":"String content",
          "SubnetMask":"String content"
        }
      },
      "NetworkIdentifier":"String content",
      "ShouldReplaceMacAddress":true
    }
  },
  "FailoverTest":{
    "Hypervisor":{
      "DnsSuffix":"String content",
      "IpConfig":{
        "Gateway":"String content",
        "IsDhcp":true,
        "PrimaryDns":"String content",
        "SecondaryDns":"String content",
        "StaticIp":"String content",
        "SubnetMask":"String content"
      }
    },
    "NetworkIdentifier":"String content",
    "ShouldReplaceMacAddress":true
  }
  },
  "NicIdentifier":"String content"
}],
"Recovery":{
  "DatastoreClusterIdentifier":"String content",
  "DatastoreIdentifier":"String content",
  "FolderIdentifier":"String content",
  "HostClusterIdentifier":"String content",
  "HostIdentifier":"String content",
  "ResourcePoolIdentifier":"String content"
},
```

```
"VmIdentifier": "String content",
  "Volumes": [{
    "Datastore": {
      "DatastoreClusterIdentifier": "String content",
      "DatastoreIdentifier": "String content",
      "IsThin": Boolean
    },
    "IsSwap": Boolean,
    "Preseed": null,
    "RDM": null,
    "VCD": null,
    "VolumeIdentifier": "String content"
  ]
}]
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}.

```
{
  "Failover": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": true,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": true
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DnsSuffix": "String content",
      "IpConfig": {
        "Gateway": "String content",
        "IsDhcp": true,
        "PrimaryDns": "String content",
        "SecondaryDns": "String content",
        "StaticIp": "String content",
        "SubnetMask": "String content"
      },
      "NetworkIdentifier": "String content",
      "ShouldReplaceMacAddress": true
    }
  },
  "NicIdentifier": "String content"
}
```

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}`.

```
{
  "Volumes": [{
    "Datastore": {
      "DatastoreClusterIdentifier": "String content",
      "DatastoreIdentifier": "String content",
      "IsThin": Boolean
    },
    "IsSwap": Boolean,
    "Preseed": null,
    "RDM": null,
    "VCD": null,
    "VolumeIdentifier": "String content"
  ]
}
```

Request Values

Update a VPG settings object Request values for `https://zvm_ip:port/v1/vpgSettings`.

PARAMETER	DESCRIPTION															
Backup (Deprecated)	Information related to offsite backup.															
RepositoryIdentifier	The identifier of the repository where offsite backups will be written.															
RetentionPeriod	<p>The length of time to keep offsite backups, up to a maximum of 12 months. Over time, Zerto reduces the number of stored offsite backups to save space.</p> <table border="1"> <thead> <tr> <th>VALID VALUES FOR RetentionPeriod</th> <th># OF BACKUPS SAVED WHEN RUN DAILY</th> <th># OF BACKUPS SAVED WHEN RUN WEEKLY</th> </tr> </thead> <tbody> <tr> <td>OneWeek</td> <td>7</td> <td>1</td> </tr> <tr> <td>OneMonth</td> <td>11</td> <td>5</td> </tr> <tr> <td>ThreeMonths</td> <td>13</td> <td>7</td> </tr> <tr> <td>SixMonths</td> <td>16</td> <td>10</td> </tr> </tbody> </table> <p>The SchedulerPeriod parameter defines whether backups are created daily or weekly. For an explanation of how Zerto reduces the number of offsite backups, see the <i>Zerto Administration Guide</i>.</p>	VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY	OneWeek	7	1	OneMonth	11	5	ThreeMonths	13	7	SixMonths	16	10
VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY														
OneWeek	7	1														
OneMonth	11	5														
ThreeMonths	13	7														
SixMonths	16	10														
Retry	Information about backup retries.															
IntervallInMinutes	How much time to wait, in minutes, after a backup job fails before running the backup job again.															
Number	The number of retries that will be attempted.															
Retry	<p>True: The offsite backup job will rerun automatically if it fails. False: The offsite backup job will not rerun automatically if it fails.</p>															
Scheduler	Offsite backup schedule settings.															

PARAMETER	DESCRIPTION
DayOfWeek	The day of the week that the offsite backups will run.
SchedulerPeriod	Daily: The offsite backups will run every day. Weekly: The offsite backups will run once a week.
TimeOfDay	The time of day when offsite backup jobs will run. The time is based on a 24-hour clock.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0: No testing is expected. 43200 or null: Testing is expected monthly. 131040: Testing is expected every three months. 262080: Testing is expected every six months. 394560: Testing is expected every nine months. 525600: Testing is expected every twelve months.
UseWanCompression	True: Data will be compressed before sending it to the recovery site. False: Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.

PARAMETER	DESCRIPTION
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
Recovery	
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
DefaultHostIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the storage cluster of the VRA virtual machine. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site. Note: Two backslash characters (\\) must be specified instead of a single backslash character in every place in the path. For example, specify a path similar to the following: C:\\ZertoScripts\\MyScript.ps1 and not C:\ZertoScripts\MyScript.ps1.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size, in MBs, for this virtual machine. 0 means unlimited. Integer values.

PARAMETER	DESCRIPTION
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.

PARAMETER	DESCRIPTION
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumelIdentifier	The identifier of the volume.

Update the basic settings in a VPG settings object Request values for https://zvm_ip:port/v1/vpgSettings/basic.

PARAMETER	DESCRIPTION
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervallInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0: No testing is expected. 43200 or null: Testing is expected monthly. 131040: Testing is expected every three months. 262080: Testing is expected every six months. 394560: Testing is expected every nine months. 525600: Testing is expected every twelve months.
UseWanCompression	True: Data will be compressed before sending it to the recovery site. False: Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.

Update the bootgroup settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/bootgroup.

PARAMETER	DESCRIPTION
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.

Update the journal settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/journal.

PARAMETER	DESCRIPTION
DatastoreIdentifier	The identifier of the storage used by the journal for the VM.. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. O means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. O means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. O means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. O means unlimited. Integer values.

Update the network settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/networks.

PARAMETER	DESCRIPTION
Failover	Information about the networks used for failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.

Update the recovery settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/recovery.

PARAMETER	DESCRIPTION
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the storage cluster of the VRA virtual machine. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .

Update the scripting settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/scripting.

PARAMETER	DESCRIPTION
PostBackup	Information about scripts that are run after an offsite backup is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.

PARAMETER	DESCRIPTION
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.

Update the virtual machine settings in a VPG settings object Request values for https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}.

PARAMETER	DESCRIPTION
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size, in MBs, for this virtual machine. O means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. O means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning. O means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. O means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.

PARAMETER	DESCRIPTION
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
FolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .

PARAMETER	DESCRIPTION
HostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumIdentifier	The identifier of the volume.

Update the virtual machine settings in a VPG settings object Request values for

https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}/nics/{nicIdentifier}.

PARAMETER	DESCRIPTION
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for failovers.

PARAMETER	DESCRIPTION
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for failover or move by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
DnsSuffix	The DNS name excluding the host.
IpConfig	Information about the IP configuration of the recovery site used for testing failovers.
Gateway	The mask for the network.
IsDhcp	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
PrimaryDns	The IP address of the primary DNS server that handles Internet protocol mapping.
SecondaryDns	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
StaticIp	The IP of the restored virtual machine.
SubnetMask	The subnet mask for the network.
NetworkIdentifier	The network identifier of the network used for testing failover by this virtual machine.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.

Update the virtual machine settings in a VPG settings object Request values for

`https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}/volumes/{volumeId}`.

PARAMETER	DESCRIPTION
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
DatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
RDM	Information about the RDM.
vCD	
VolumIdentifier	The identifier of the volume.

Response Format

The response bodies are empty.

VPG Settings: DELETE

Delete all or part of the VPG settings object.

Note: Mandatory parameters that do not have a default value must be set using the PUT command after using the Delete option.

See also:

- [“VPG Settings: GET”, on page 163](#)
- [“VPG Settings: POST”, on page 188](#)
- [“VPG Settings: PUT”, on page 202](#)

URL

Delete a VPG settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Delete backup settings from a VPG	Deprecated
Delete basic settings from a VPG	<code>https://zvm_ip:port/v1/{vpgSettingsIdentifier}/basic</code>
Delete boot settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup</code>
Delete journal settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Delete network settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Delete recovery settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Delete scripts from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting</code>
Delete a VM from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Reset NIC settings object to Default	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.

Request Body Using Json Format

The request bodies are empty.

Response Format

The response bodies are empty.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

METHOD	URL
PUT	<code>https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}/vms</code>

VRAs API

`/v1/vras` returns information about VRAs or installs or performs actions on a specific VRA. The following API are available:

- “VRAs: GET”, below
- “VRAs: POST”, below
- “VRAs: PUT”, below
- “VRAs: DELETE”, on page 236
- “VRAs: Change Recovery VRA APIs”, on page 237

PURPOSE	METHOD	URL
Information for all VRAs	GET	<code>https://zvm_ip:port/v1/vras</code>
Information for one VRA	GET	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}</code>
Valid VRA IP configuration types	GET	<code>https://zvm_ip:port/v1/vras/ipconfigurationtypes</code>
Valid VRA statuses	GET	<code>https://zvm_ip:port/v1/vras/statuses</code>
Install a VRA	POST	<code>https://zvm_ip:port/v1/vras</code>
Upgrade a VRA	POST	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/upgrade</code>
Edit a VRA	PUT	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}</code>
Delete a VRA	DELETE	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}</code>

HTTP Methods

GET, POST, PUT, DELETE

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

VRAs: GET

Returns information about VRAs.

URL

All VRAs	<code>https://zvm_ip:port/v1/vras</code>
Filtered VRAs	<code>https://zvm_ip:port/v1/vras?vraName={VRANAME}&status={STATUS}&vraVersion={VRAVERSION}&hostVersion={HOSTVERSION}&ipAddress={IPADDRESS}&vraGroup={VRAGROUP}&datastoreName={DATASTORENAME}&datastoreClusterName={DATASTORECLUSTERNAME}&networkName={NETWORKNAME}</code>
Single VRA	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}</code>
Valid VRA IP configuration types Checkpoints	<code>https://zvm_ip:port/v1/vras/ipconfigurationtypes</code>
Valid VRA statuses	<code>https://zvm_ip:port/v1/vras/statuses</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.	
port	The port to access the Zerto Virtual Manager. The default port is 9669.	
vraIdentifier	The identifier of the VRA for which information is returned.	
Filters	Filters are optional and any combination of filters is valid. When no filter is specified, all VRAs are returned. Filters are not case-sensitive.	
	Filter	Description
	vraName	The name of the VRA.
	status	The status of the VRA.
	vraVersion	The version of the VRA.
	hostVersion	The version of the host where the VRA is installed.
	ipAddress	The IP address of the VRA.
	vraGroup	The group the VRA belongs to. VRAs can be grouped together when VRAs use different networks so they can be grouped by network, for example when the same hypervisor manager supports two datacenters with separate networks and you are replicating from one datacenter to the second datacenter.
	datastoreName	The name of the datastore the VRA uses for recovery data.
	datastoreClusterName	The name of the datastore cluster the VRA uses for recovery data.
	networkName	The network the VRA belongs to.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vras` and, without the array statement, for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
[{
  "DatastoreClusterName": "String content",
  "DatastoreIdentifier": "String content",
  "DatastoreName": "String content",
  "HostIdentifier": "String content",
  "HostVersion": "String content",
  "IpAddress": "String content",
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "Link_x007B_0_x007D_": {
    "href": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "MemoryInGB":2147483647,
  "NetworkIdentifier": "String content",
  "NetworkName": "String content",
  "Progress":2147483647,
  "ProtectedCounters": {
    "Vms":2147483647,
    "Volumes":2147483647,
    "Vpgs":2147483647
  },
  "RecoveryCounters": {
    "Vms":2147483647,
    "Volumes":2147483647,
    "Vpgs":2147483647
  },
  "SelfProtectedVpgs":2147483647,
  "Status":0,
  "VraAlerts": {
    "VraAlertsStatus":0
  },
  "VraGroup": "String content",
  "VraIdentifier":18446744073709551615,
  "VraIdentifierStr": "4238742837",
  "VraName": "String content",
  "VraNetworkDataApi": {
    "DefaultGateway": "String content",
    "SubnetMask": "String content",
    "VraIpAddress": "String content",
    "VraIPConfigurationTypeApi": "String content"
  },
  "VraVersion": "String content"
}]
```

The following is an example response Json body for `https://zvm_ip:port/v1/vras/ipconfigurationtypes` and for `https://zvm_ip:port/v1/vras/statuses`.

```
["String content"]
```

The following is an example response Json body for

`https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/potentials?VmIdentifier={vmId}`

```
{
  "Hosts": [
    {
      "HostIdentifier": "String content",
      "HostName": "String content"
    },
    {
      "HostIdentifier": "String content",
      "HostName": "String content"
    }
  ]
}
```

XML Response Format

For the XML response format, see [“VRAs API GET Method Response Formats”, on page 399](#).

Response Values

Response values for `https://zvm_ip:port/v1/vras` and for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

PARAMETER	DESCRIPTION
DatastoreClusterName	The name of the datastore cluster of the VRA virtual machine.
DatastoreIdentifier	The identifier of the vSphere datastore/Hyper-V storage of the VRA virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DatastoreName	The name of the vSphere datastore/Hyper-V storage of the VRA virtual machine.
HostVersion	The version of the host on which the VRA is installed.
IpAddress	The IP address of the VRA.
Link	The link details.
href	The URL used.
identifier	The VRA identifier.
rel	The next path level of the API relative to the current path.
type	The API interface service.
Link	The link details.
href	The URL used.
rel	The next path level of the API relative to the current path.

PARAMETER	DESCRIPTION
type	The API interface service.
MemoryInGB	The amount of reserved memory allocated to the VRA when it was installed.
NetworkIdentifier	The identifier of the network used to access the VRA.
NetworkName	The name of the network used to access the VRA.
Progress	The percentage progress when installing the VRA.
ProtectionCounters	Details for a VRA on the protection site.
Vms	The number of VMs protected on the host with the VRA installed.
Volumes	The volumes used by the VRA.
Vpgs	The number of VPGs using the VRA.
RecoveryCounters	Details for a VRA on the recovery site.
Vms	The number of VMs recovered to the host with the VRA installed.
Volumes	The volumes used by the VRA.
Vpgs	The number of VPGs using the VRA.
SelfProtectedVpgs	The number of VPGs being protected and recovered on the same site.
Status	<p>The status of the VRA. Possible values are (Json/XML):</p> <p>Installed: The VRA is installed.</p> <p>UnsupportedEsxVersion: The VRA cannot be installed on the ESX/ESXi host as the host version is not supported.</p> <p>NotInstalled: A VRA is not installed.</p> <p>Installing: The VRA is being installed.</p> <p>Removing: The VRA is being removed.</p> <p>InstallationError: The installation of the VRA failed.</p> <p>HostPasswordChanged: The password used to access the host has changed.</p> <p>UpdatingIpSettings: The IP settings of the VRA are updated.</p> <p>DuringChangeHost: The host of the VRA disks is being changed.</p>
VraAlerts	Details on the VRA alert status.
VraAlertsStatus	<p>The alert status of the VRA. Possible values are:</p> <p>0: Normal.</p> <p>1: Warning.</p> <p>2: Error</p>
VraGroup	The group the VRA belongs to, used when VRAs use different networks so they can be grouped by network, for example when the same vCenter Server supports two datacenters with separate networks and you are replicating from one datacenter to the second datacenter.

PARAMETER	DESCRIPTION
VraIdentifier	The internal VRA identifier.
VraIdentifierStr	The internal VRA identifier as a string.
VraName	The name used to identify the VRA in the UI.
VraNetworkDataApi	The VRA network details.
DefaultGateway	The default gateway for the VRA network.
SubnetMask	The subnet mask for the VRA network. The default value is 255.255.255.0.
VraIpAddress	The IP address for the VRA.
VraIpConfigurationTypeApi	The IP configuration used for the VRA. Possible values are: Dhcp: The VRA IP address is allocated via a DHCP server. Static: The VRA is installed with a static IP that was assigned when the VRA was installed.
VraVersion	The storage provisioned for the virtual machine in the recovery site.

Response values for `https://zvm_ip:port/v1/vras/statuses`.

RESPONSE: DESCRIPTION

Possible statuses for a VRA

Installed: The VRA is installed.

UnsupportedEsxVersion: The VRA cannot be installed on the ESX/ESXi host as the host version is not supported.

NotInstalled: A VRA is not installed.

Installing: The VRA is being installed.

Removing: The VRA is being removed.

InstallationError: The installation of the VRA failed.

HostPasswordChanged: The password used to access the host has changed.

UpdatingIpSettings: The IP settings of the VRA are updated.

DuringChangeHost: The host of the VRA disks is being changed.

Response values for `https://zvm_ip:port/v1/vras/ipconfigurationtypes`.

RESPONSE: DESCRIPTION

Possible IP configurations for the VRA:

Dhcp: The VRA IP address is allocated via a DHCP server.

Static: The VRA is installed with a static IP that was assigned when the VRA was installed.

VRAs: POST

Installs a VRA or upgrades a specific VRA.

URL

Install VRA	<code>https://zvm_ip:port/v1/vras</code>
Upgrade a Group of VRAs	<code>https://zvm_ip:port/v1/vras/upgrade</code>
Upgrade a Specific VRA	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/upgrade</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraIdentifier	The identifier of the VRA to be upgraded.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vras`.

```
{
  "DatastoreIdentifier": "String content",
  "GroupName": "String content",
  "HostIdentifier": "String content",
  "HostRootPassword": "String content",
  "MemoryInGb":2,
  "NetworkIdentifier": "String content",
  "UsePublicKeyInsteadOfCredentials": Boolean,
  "VraNetworkDataApi": {
    "DefaultGateway": "String content",
    "SubnetMask": "String content",
    "VraIPAddress": "String content",
    "VraIPConfigurationTypeApi": "String content"
  }
}
```

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vras/upgrade`.

```
{
  "VraIdentifiers":
  [
    "String content",
    "String content",
    ...
    "String content"
  ]
}
```

The request body for `https://zvm_ip:port/v1/vras/{vraIdentifier}/upgrade` is empty.

XML Request Format

For the XML request format, see [“VRAs API POST Method Request and Response Formats”](#), on page 400.

Request Values

Install a VRA Request values for `https://zvm_ip:port/v1/vras`

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
DatastoreIdentifier	The identifier of the vSphere datastore/Hyper-V storage for the VRA virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .	Yes	
GroupName	The group the VRA belongs to, used when VRAs use different networks so they can be grouped by network, for example when the same vCenter Server supports two datacenters with separate networks and you are replicating from one datacenter to the second datacenter. If you want to create a new VRA group, enter the name of the new group.	No	
HostIdentifier	The identifier of the host on which the VRA will be installed.	Yes	
HostRootPassword	vSphere environments: The password used to access the host for the root user. This field is only required for VMware ESXi 4.x and 5.x hosts. A value is required if <i>UsePublicKeyInsteadOfCredentials</i> is set to false.		
MemoryInGB	The amount of memory to allocate to the VRA. The amount determines the maximum buffer size for the VRA for buffering IOs written by the protected virtual machines, before the writes are sent over the network to the recovery VRA. The recovery VRA also buffers the incoming IOs until they are written to the journal. If a buffer becomes full, a <code>Bitmap Sync</code> is performed after space is freed up in the buffer. The value can be in 1-16GB.		
NetworkIdentifier	The identifier of the network to use to access the VRA.		
UsePublicKeyInsteadOfCredentials	vSphere environments True: A password is not needed to access the host. From ESXi 5.5, by default, Zerto Virtual Manager uses a vSphere Installation Bundle, VIB, to connect to the host, which does not require a password. False: A password is needed to access the host. For ESX/i versions earlier than 5.5, this parameter must be set to false and a value specified for <code>HostRootPassword</code> .	No	True
VraNetworkDataApi	The VRA network details.		

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
DefaultGateway	The default gateway for the VRA network when VralPConfigurationTypeApi is set to Static. Mandatory when VralPConfigurationTypeApi is set to Static.		
SubnetMask	The subnet mask for the VRA network when VralPConfigurationTypeApi is set to Static. Mandatory when VralPConfigurationTypeApi is set to Static.		
VralIPAddress	The IP address for the VRA when VralPConfigurationTypeApi is set to Static. Mandatory when VralPConfigurationTypeApi is set to Static.		
VralPConfigurationTypeApi	The IP configuration used for the VRA. Possible values are: Dhcp: The VRA IP address is allocated via a DHCP server. Static: The VRA is installed with a static IP that was assigned when the VRA was installed.		

Note: If a value is not specified in the request, a null value is used. Nulls are specified in Json as null, all lowercase.:

```
{ "DatastoreIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.datastore-361", "GroupName": "groupname", "HostIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.host-103", "MemoryInGb": 3, "NetworkIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.network-108", "VraNetworkDataApi": { "DefaultGateway": null, "SubnetMask": null, "VraIPAddress": null, "VraIPConfigurationTypeApi": "Dhcp" } }
```

The above Json can be shortened to the following, as the values are defaulted to null when not specified:

```
{ "DatastoreIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.datastore-361", "GroupName": "groupname", "HostIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.host-103", "MemoryInGb": 3, "NetworkIdentifier": "8f3dc896-29d7-42d9-b67d-b0a85c520f4b.network-108", "VraNetworkDataApi": { "VraIPConfigurationTypeApi": "Dhcp" } }
```

Upgrade a Group of VRAs Request values for `https://zvm_ip:port/v1/vras/upgrade`

PARAMETER	DESCRIPTION
VralIdentifier	The identifier of the VRA

Response In Json Format

The following is an example response Json body for:

- `https://zvm_ip:port/v1/vras`
- `https://zvm_ip:port/v1/vras/upgrade`
- `https://zvm_ip:port/v1/vras/{vraIdentifier}/upgrade`

```
{
  "TaskIdentifier": "String content"
}
```

XML Response Format

For the XML response format, see “VRAs API POST Method Request and Response Formats”, on page 400.

Response Values

Response values for:

- `https://zvm_ip:port/v1/vras`
- `https://zvm_ip:port/v1/vras/upgrade`
- `https://zvm_ip:port/v1/vras/{VraIdentifier}/upgrade`

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the delete action.

The task identifier can be used with the [Tasks API](#) to monitor the installation or upgrade activity.

VRAs: PUT

Enables editing a specific VRA.

URL

Edit VRA `https://zvm_ip:port/v1/vras/{vraidentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraidentifier	The identifier of the VRA to be edited.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vras`.

```
{
  "GroupName": "String content",
  "HostRootPassword": "String content",
  "UsePublicKeyInsteadOfCredentials": Boolean,
  "VraNetworkDataApi": {
    "DefaultGateway": "String content",
    "SubnetMask": "String content",
    "VraIPAddress": "String content",
    "VraIPConfigurationTypeApi": "String content"
  }
}
```

XML Request Format

For the XML request format, see “VRAs API PUT Method Request and Response Formats”, on page 401.

Request Values

Request values for `https://zvm_ip:port/v1/vras`

PARAMETER	DESCRIPTION	MANDATORY	
GroupName	The group the VRA belongs to, used when VRAs use different networks so they can be grouped by network, for example when the same vCenter Server supports two datacenters with separate networks and you are replicating from one datacenter to the second datacenter. If you want to create a new VRA group, enter the name of the new group.	No	
HostRootPassword	vSphere environments: The password used to access the host for the root user. This field is only required for VMware ESXi 4.x and 5.x hosts. A value is required if <i>UsePublicKeyInsteadOfCredentials</i> is set to <i>false</i> .		
UsePublicKeyInsteadOfCredentials	vSphere environments: Optional. The default is <i>true</i> . True: A password is not needed to access the host. From ESXi 5.5, by default, Zerto Virtual Manager uses a vSphere Installation Bundle, VIB, to connect to the host, which does not require a password. False: A password is needed to access the host. For ESX/i versions earlier than 5.5, this parameter must be set to <i>false</i> and a value specified for <i>HostRootPassword</i> .		
VraNetworkDataApi	The VRA network details.	No	
DefaultGateway	The default gateway for the VRA network when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i> . Mandatory when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i>.	No	
SubnetMask	The subnet mask for the VRA network when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i> . Mandatory when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i>.	No	
VraIPAddress	The IP address for the VRA when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i> . Mandatory when <i>VraIPConfigurationTypeApi</i> is set to <i>Static</i>.	No	
VraIPConfigurationTypeApi	The IP configuration used for the VRA. Possible values are: Dhcp: The VRA IP address is allocated via a DHCP server. Static: The VRA is installed with a static IP that was assigned when the VRA was installed.	No	

Note: If a value is not specified in the request, a null value is used. Nulls are specified in Json as *null*, all lowercase.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
{
  "TaskIdentifier": "String content"
}
```

XML Response Format

For the XML response format, see “VRAs API PUT Method Request and Response Formats”, on page 401.

Response Values

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the action.

VRAs: DELETE

Delete a specified VRA.

URL

Delete VRA `https://zvm_ip:port/v1/vras/{vraldentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraldentifier	The identifier of the VRA to be deleted.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
{
  "TaskIdentifier": "String content"
}
```

XML Response Format

For the XML response format, see “VRAs API DELETE Method Response Formats”, on page 401.

Response Values

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task. The task identifier can be used with the Tasks API to monitor the delete action.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23](#).

VRAs: Change Recovery VRA APIs

Using the Change Recovery VRA APIs, you can change the recovery VRA for all virtual machines at once or specify the virtual machines to change.

There are two ways to run a change recovery VRA operation:

- [“One-Step Operation for Changing Recovery VRA”, on page 237](#)
- [“Multi-Step Operation for Changing Recovery VRA”, on page 239](#)

Privileges Required

Manage VRA

One-Step Operation for Changing Recovery VRA

Run this API to change the recovery VRA for all or specific virtual machines.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/execute</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraIdentifier	The identifier of the VRA.

[Request Body Using Json Format](#)

[Response In Json Format](#)

Request Body Using Json Format

The following is an example request.

```
{
  "VmsAllocations": [
    {
      "VmIdentifier": "vmId",
      "HostIdentifier": "hostId"
    },
    {
      "VmIdentifier": "vmId",
      "HostIdentifier": "null"
    }
  ]
}
```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VmsAllocations	An array holding VMs with the identifiers of their new target host. <ul style="list-style-type: none"> By default this parameter is set to null, which means all VMs will be automatically changed to recover to the most suitable target hosts. When VMs are specified, only those specified will change host, once they pass validations. VMs not specified are kept on their current recovery host. VMs that are specified without a HostIdentifier (null), will be automatically changed to recover to the most suitable target hosts. 	No	Null
VmIdentifier	The internal virtual machine identifier. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .	No	
HostIdentifier	The unique identifier of the host that the VM will be recovered to.	No	

Response In Json Format

The following is an example response.

```
{
  "TaskIdentifier": "String content"
}
```

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task that can be used with the Tasks API to monitor the ongoing status.

Back to [VRAs API](#)

Back to [All APIs](#)

Multi-Step Operation for Changing Recovery VRA

Follow the below steps:

1. [Get a Recovery Host Identifier](#).
2. [Get VRA Alert Status](#).
3. To change the Recovery VRA, first get a list of target hosts for all VMs or specific VMs:
 - Run [Get Potential Target Hosts](#) to get a list of potential target hosts. Then, you can use that list to assign different target hosts for the VMs.
 - Or, run [Get Recommendation](#) to get a list of VMs paired with their recommended target hosts.
4. Run [Validate Prior to Execute](#) to ensure the operation will work successfully.
5. [Execute](#) the change recovery VRA operation.

Get a Recovery Host Identifier

Run this API to get a list of virtual machines and their recovery host identifier. The full API can be found here: [Protected VMs API](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vms</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

PARAMETER	DESCRIPTION
RecoveryHostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, serverid.moref.

Get VRA Alert Status

Run this API to get the VRA Alert Status from the VRA Alerts object. If the status is normal, you can proceed with the change recovery operation. The full API can be found here: [VRAs API](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vras</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

PARAMETER	DESCRIPTION
VraAlerts	Details on the VRA alert status.
VraAlertsStatus	The alert status of the VRA. Possible values are: 0 or Normal 1 or Warning 2 or Error

Get Potential Target Hosts

Run this API to get a list of potential target hosts for the VMs replicating to the specified VRA - {vraIdentifier}.

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/potentials?VmIdentifier=<vmId></code>

Where:

zvm_ip The IP address of the Zerto Virtual Manager where the API is run.

port The port to access the Zerto Virtual Manager. The default port is 9669.

vraIdentifier The identifier of the VRA.

Filters Filters are optional and any combination of filters is valid. Filters are not case-sensitive.

Filter	Description
VmIdentifier	The internal virtual machine identifier. If specified, a list of potential target hosts will be returned for this VM only.

[Request Body Using Json Format](#)

[Response In Json Format](#)

[Request Body Using Json Format](#)

The request body is empty.

Response In Json Format

The following is an example response.

```
{
  "Hosts": [
    {
      "HostIdentifier": "string content",
      "HostName": "string content"
    },
    {
      "HostIdentifier": "string content",
      "HostName": "string content"
    }
  ]
}
```

PARAMETER	DESCRIPTION
Hosts	A list of potential hosts that VM/s can be recovered to. If a VM was specified, only potential hosts for the VM will be returned.
HostIdentifier	The unique identifier of the host.
HostName	The address or DNS name of the host.

Get Recommendation

Run this API to get a list of VMs paired with their recommended target hosts.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/recommendation</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraIdentifier	The identifier of the VRA.

[Request Body Using Json Format](#)

[Response Body Using Json Format](#)

Request Body Using Json Format

The following is an example request.

```
{
  "Constraints": [
    "FixedVmsAllocations":
    {
      "VmIdentifier": "vmId",
      "HostIdentifier": "hostId"
    },
    {
      "VmIdentifier": "vmId",
      "HostIdentifier": "hostId"
    }
  ],
  "VmsToCalculate": ["<vmId>", "<vmId>"]
}
```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
FixedVmsAllocations	An optional constraints object which contains an array of VmIdentifier and HostIdentifier pairings that will be assumed when calculating recommendations for the VMs indicated in the VmsToCalculate array.	No	Null
VmIdentifier	The internal virtual machine identifier. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .	No	
HostIdentifier	The unique identifier of the host that the VM will be recovered to.	No	
VmsToCalculate	An array of vmlDs that will receive recommendations.	Yes	

Response Body Using Json Format

The following is an example response.

```
{
  "Recommendations": [
    {
      "vmRecommendation": ,
      "VmIdentifier": "string content",
      "HostIdentifier": "string content",
      "HostName": "string content"
      "Reason": "string content"
    },
    "vmRecommendation": ,
    "VmIdentifier": "string content",
    "HostIdentifier": "string content",
    "HostName": "string content"
    "Reason": "string content"
  ]
}
```

PARAMETER	DESCRIPTION
Recommendations	
vmRecommendation	A list of recommended target hosts for each VM.
VmIdentifier	The internal virtual machine identifier. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The unique identifier of the host that the VM will be recovered to. The response is null if a host was not successfully recommended.
HostName	The name of the host that the VM will be recovered to.
Reason	The reason describing why a new host could not be recommended. The response is null if a host was successfully recommended.

Back to [VRAs: Change Recovery VRA APIs](#)

Back to [VRAs API](#)

Back to [All APIs](#)

Validate Prior to Execute

Run this API to validate the VM to target host mapping before executing the change recovery VRA operation.

METHOD	URL
POST	https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/validate

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
---------------	---

port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraldentifier	The identifier of the VRA.

[Request Body Using Json Format](#)

[Response Body Using Json Format](#)

[Request Body Using Json Format](#)

The following is an example request.

```
{
  "VmsAllocations": [
    {
      "VmIdentifier": "string content",
      "HostIdentifier": "string content"
    },
    {
      "VmIdentifier": "string content",
      "HostIdentifier": "string content"
    }
  ]
}
```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VmsAllocations	<p>An array holding VMs with the identifiers of their new target host.</p> <ul style="list-style-type: none"> By default this parameter is set to null, which means all VMs will be automatically changed to recover to the most suitable target host/s. When VMs are specified, only those specified will change host (if they pass validations). VMs not specified are kept on their current recovery host. VMs that are specified without a target host (target host is null), will be automatically changed to recover to the most suitable target host/s. 	Yes	
VmIdentifier	The internal virtual machine identifier. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .	Yes	
HostIdentifier	The unique identifier of the host that the VM will be recovered to.		

Response Body Using Json Format

The following is an example response.

```
{
  "VmsValidationResults": [
    {
      "VmIdentifier": "string content",
      "HostIdentifier": "string content",
      "Status": "VmValidationStatusEnum",
      "Reason": "string content"
    },
    {
      "VmIdentifier": "string content",
      "HostIdentifier": "string content",
      "Status": "VmValidationStatusEnum",
      "Reason": "string content"
    }
  ]
}
```

PARAMETER	DESCRIPTION
VmsValidationResults	Array of objects containing VmIdentifier, HostIdentifier, Status, and Reason for each proposed VM and target host change.
VmIdentifier	The internal virtual machine identifier. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
HostIdentifier	The unique identifier of the host on which validation was requested for the VMs.
Status	The status of the proposed change. Possible values are: 0 or Success 1 or Failure 2 or Warning
Reason	The reason for the status in the case of a Warning or Error.

Back to [VRAs: Change Recovery VRA APIs](#)

Back to [VRAs API](#)

Back to [All APIs](#)

Execute

Once the VM to target host mapping is set, run this API to execute the change recovery VRA operation.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vras/{vraIdentifier}/changeRecoveryVra/execute</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
---------------	---

port	The port to access the Zerto Virtual Manager. The default port is 9669.
vraldentifier	The identifier of the VRA containing the VMs.

[Response In Json Format](#)

[Response In Json Format](#)

The following is an example response.

```
{
  "TaskIdentifier": "String content"
}
```

PARAMETER	DESCRIPTION
TaskIdentifier	The identifier of the task that can be used with the Tasks API to monitor the ongoing status.

[Back to VRAs: Change Recovery VRA APIs](#)

[Back to VRAs API](#)

[Back to All APIs](#)

ZORGs API

/v1/vzorgs returns information about Zerto organizations, ZORGs, defined in the Zerto Cloud Manager that is connected to the site where the API runs.

URL

All ZORGs `https://zvm_ip:port/v1/zorgs`

Single ZORG `https://zvm_ip:port/v1/zorgs/{zorgIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
zorgIdentifier	The identifier of the ZORG for which information is returned.

HTTP Method

GET

Security

The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

See Also

Starting a session: [Session: POST](#)

Format

Json, XML

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response Json body for https://zvm_ip:port/v1/zorgs and for https://zvm_ip:port/v1/zorgs/{zorgIdentifier}.

```
[{
  "Link": {
    "href": "String content",
    "identifier": "String content",
    "rel": "String content",
    "type": "String content"
  },
  "ZorgIdentifier": "String content"
  "ZorgName": "String content"
}]
```

XML Response Format

For the XML response format, see [“ZORG API XML Response Format”, on page 402.](#)

Response Values

Response values for https://zvm_ip:port/v1/zorgs and for https://zvm_ip:port/v1/zorgs/{zorgIdentifier}.

PARAMETER	DESCRIPTION
Link	The link details.
href	The URL used.
identifier	The internal ZORG identifier.
rel	The next path level for the API relative to the current path.
type	The API interface service.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
ZorgName	The name of the organization set up in Zerto Cloud Manager that uses a cloud service provider for recovery.

PowerShell Scripts

For complete PowerShell Scripts, see [“Examples”, on page 23.](#)

ZSSP Sessions API

Using this API, the cloud service provider CSP can provide the user a way to access the ZSSP without the need to authenticate. For example, if the ZSSP is integrated in CSP portal, either as separate pages or as an iFrame inside the page of the CSP portal, additional authenticating to ZSSP will not be required.

Required privileges: Manage site permissions.

The following APIs are available:

[Create New Session URL](#)

[View Existing Sessions](#)

[Delete a Specific Session URL](#)

Create New Session URL

Create a session which contains the data that enables the CSP's customers to access the ZSSP site without the need to authenticate.

Note the following:

- The connection is terminated at the end of the session, when the user logs out.
- The session also expires after 30 minutes of inactivity.
- The URL cannot be reused.

METHOD	URL
POST	<code>https://zvm_ip:port/v1/zsspSessions</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The following is an example of a Json request body for `https://zvm_ip:port/v1/zsspSessions`.

```
{
  "LogoutRedirectUrl": "https://131.1.2.3:9672/zcm",
  "ZorgIdentifier": "e67ece8c-9365-4443-8b6b-90946df636b9",
  "ZorgUserName": "johndoe",
  "ZsspAddress": "127.0.0.1:9779"
}
```

PARAMETER	DESCRIPTION	TYPE	MANDATORY	DEFAULT
LogoutRedirectUrl	The URL the customer is redirected to after logging out of the ZSSP or after 10 minutes of inactivity. If this parameter is empty, the user will be redirected to the login page.	string	No	ZSSP Login Screen
ZorgIdentifier	The identifier of the ZORG.	string	Yes	-

PARAMETER	DESCRIPTION	TYPE	MANDATORY	DEFAULT
ZorgUsername	The username that will appear in the events and tasks related to actions performed in the ZSSP site.	string	No	ZORG name without username
ZsspAddress	The base URL the CSP customer uses to access the ZSSP in the CSP's portal.	string	Yes	-

Response In Json Format

The following is an example of a Json response for `https://zvm_ip:port/v1/zsspSessions`.

```
{
  "K6AKCNA6UEHA5A7CDSZAJBUCGH2V6LNXMB3DQ5CPWK83S8SAF84A"
}
```

PARAMETER	DESCRIPTION
ZsspSessionIdentifier	The ZSSP session identifier.

Back to [ZSSP Sessions API](#)

Back to [All APIs](#)

View Existing Sessions

Retrieve a list of existing session URLs. There are two options to retrieve session URLs:

- Retrieve information about **all** existing ZSSP sessions.
- Retrieve information about a **specific** ZSSP session.

The response to both options is the same.

Retrieve information about all existing ZSSP sessions

METHOD	URL
GET	<code>https://zvm_ip:port/v1/zsspSessions</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request Json body is empty.

Retrieve information about a specific ZSSP session

METHOD	URL
GET	<code>https://zvm_ip:port/v1/zsspSessions/{zsspSessionIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
zsspSessionIdentifier	The identifier of the ZSSP session.

Request Body Using Json Format

The request Json body is empty.

Response In Json Format

The following is an example of a Json response body for `https://zvm_ip:port/v1/zsspSessions` and, without the array statement, for `https://zvm_ip:port/v1/zsspSessions/{zsspSessionIdentifier}`

```
[ {
  "CreationTime": "2018-04-03T11:56:20.414Z",
  "LogoutRedirectUrl": "https://131.1.2.3:9672/zcm",
  "Url":
  "https://131.1.2.3:9779/ZvmService/GUI/Index.html#/?type=Portal&locale=en_US&sessionId=K6AKCA6UEHA5A7CDSZAJBUCGH2V6LNXMB3DQ5CPWK83S8SAF84A",
  "ZorgIdentifier": "e67ece8c-9365-4443-8b6b-90946df636b9",
  "ZorgUserName": "johndoe",
  "ZsspAddress": "https://131.1.2.3:9779",
  "ZsspSessionIdentifier": "K6AKCNA6UEHA5A7CDSZAJBUCGH2V6LNXMB3DQ5CPWK83S8SAF84A"
} ]
```

PARAMETER	DESCRIPTION
CreationTime	The time the session was created. The creation time is according to the Zerto Virtual Manager clock where the API is run. The time is in the format <code>yyyy-mm-ddThh:mm:ss.fff</code> , set to UTC.
LogoutRedirectUrl	The URL the customer is redirected to after logging out of the ZSSP or if the user is inactive for more than 10 minutes. The URL can be used to redirect the user to the CSP's portal. If the <code>logoutRedirectUrl</code> is not specified in the request body when creating a ZSSP session, the response is null.
Url	The URL generated when creating a ZSSP session.
ZorgIdentifier	The identifier of the ZORG.
ZorgUserName	The username of the ZORG. If the <code>zorgUserName</code> is not specified in the request body, the response is null.
ZsspAddress	The address of the URL which the customer uses for browsing to access the ZSSP site.
ZsspSessionIdentifier	The identifier of the ZSSP session.

[Back to ZSSP Sessions API](#)

[Back to All APIs](#)

Delete a Specific Session URL

Delete a session of integrated URL.

METHOD	URL
DELETE	<code>https://zvm_ip:port/v1/zsspSessions/{zsspSessionIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
zsspSessionIdentifier	The identifier of the ZSSP session.

Request Body Using Json Format

The request Json body is empty.

Response In Json Format

The response Json body is empty.

Back to [ZSSP Sessions API](#)

Back to [All APIs](#)

Managing vCD APIs

The following are APIs that can be run in a vCD environment:

[vCD Virtualization Sites APIs, on page 251](#)

[VPG Management APIs, on page 255](#)

Note: The protected machines are protected as a vCD vApp in the recovery site vCD. To review which settings are retained, see [Settings Retained when Replicating from a Protected Site vCloud Director to a Recovery Site vCloud Director](#).

vCD Virtualization Sites APIs

In this section you can get information about Org vDCs and unprotected vCD vApps in a site.

Note: The API is exposed over HTTPS. Client code must use the `x-zerto-session` HTTP authorization header.

The following APIs are available:

[List Org vDCs in a Site](#)

[List Networks of an Org vDC in a Site](#)

[List Storage Profiles of an Org vDC in a Site](#)

[List Unprotected vCD vApps in a Site](#)

List Org vDCs in a Site

Use this API to get a list of Org vDCs on a specific site.

[Request Body Using Json Format](#)

Response In Json Format

Request Body Using Json Format

METHOD	URL
GET	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/orgvdc</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
siteIdentifier	The identifier of the site on which the Org vDC resides.

The request Json body is empty.

Response In Json Format

The following is an example response Json body.

```
[{
  "Identifier": "String content",
  "OrgVdcName": "String content"
}]
```

PARAMETER	DESCRIPTION
Identifier	The internal identifier of the Org vDC.
OrgVdcName	The Org vDC name.

Back to [vCD Virtualization Sites APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

List Networks of an Org vDC in a Site

Use the following API to get a list of networks existing in an Org vDC on a specific site.

Request Body Using Json Format

Response In Json Format

Request Body Using Json Format

METHOD	URL
GET	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/orgvdc/{orgvdcidentifier}/networks</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

siteIdentifier	The identifier of the site on which the Org vDC resides.
orgvdcIdentifier	The identifier of an Org vDC,

The request Json body is empty.

Response In Json Format

The following is an example response Json body.

```
[ {  
  "NetworkIdentifier": "String content"  
  "VirtualizationNetworkName": "String content",  
}]
```

PARAMETER	DESCRIPTION
NetworkIdentifier	The internal identification of the Org vDC network.
VirtualizationNetworkName	The orgVDC network name.

Back to [vCD Virtualization Sites APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

List Storage Profiles of an Org vDC in a Site

Use this API to get a list of available storage profiles in an Org vDC.

[Request Body Using Json Format](#)

[Response In Json Format](#)

Request Body Using Json Format

METHOD	URL
GET	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/orgvdc/{orgvdcIdentifier}/storageprofiles</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
siteIdentifier	The identifier of the site on which the Org vDC resides.
orgvdcIdentifier	The identifier of an Org vDC,

The request Json body is empty.

Response In Json Format

The following is an example response Json body.

```
[ {  
  "IsEnabled": Boolean  
  "StoragePolicyIdentifier": "String content",  
  "StoragePolicyName": "String content",  
}]
```

PARAMETER	DESCRIPTION
Is Enabled	True: The storage policy is enabled in vCD. False: The storage policy is disabled in vCD
StoragePolicyIdentifier	The identifier of the storage policy.
StoragePolicyName	The name of the storage policy.

[Back to vCD Virtualization Sites APIs](#)

[Back to Managing vCD APIs](#)

[Back to All APIs](#)

List Unprotected vCenter Server vApps in a Site

Deprecated. See [List Unprotected vCD vApps in a Site](#).

List Unprotected vCD vApps in a Site

Use this API to get a list of vCD vApps that are not protected in a site.

Request Body Using Json Format

METHOD	URL
GET	<code>https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/vcdvapps</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
siteIdentifier	The identifier of the site on which the Org vDC resides.

The request Json body is empty.

Response In Json Format

The following is an example response Json body.

```
[ {  
  "VCDName": "String content",  
  "VCDVappIdentifier": "String content"  
}]
```

PARAMETER	DESCRIPTION
VCDName	The vCD vApp name that is not protected by Zerto.
VCDVappIdentifier	The internal identifier of the vCD vApp that is not protected by Zerto.

Back to [vCD Virtualization Sites APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

VPG Management APIs

Using the **VpgSettings APIs**, you can view existing vCD VPGs, create, update and delete existing vCD VPGs.

There are two ways of creating new vCD VPGs:

- [“Multi-Step Operation for Creating an Empty VPG Template”, on page 255](#)
- [“Two Step Operation”, on page 279](#)

Following is an explanation for both methods.

Multi-Step Operation for Creating an Empty VPG Template

Using this method, you run the following APIs:

1. [Get a VPG Settings Identifier](#)
2. [Get an Empty VPG Template](#)
3. [Add Values in the Empty VPG Template](#)
4. [Get a Full VPG Template](#)

Get a VPG Settings Identifier

Run this API to get a VPG settings identifier. With the VPG Settings Identifier, you can request for an empty VPG template.

[Request Body Using Json Format](#)

[Response In Json Format](#)

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vpgSettings</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request Json body is empty.

Response In Json Format

The following is an example response.

```
{  
  "VpgSettingsIdentifier": "String content"  
}
```

PARAMETER	DESCRIPTION
VpgSettingsIdentifier	The identifier of the VPG settings.

[Back to VPG Management APIs](#)

[Back to Managing vCD APIs](#)

[Back to All APIs](#)

Get an Empty VPG Template

Run this API to get an empty VPG template. The empty template includes mandatory fields for creating a VPG.

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vpgSettings/VpgSettingsIdentifier</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

[Request Body Using Json Format](#)

[Response In Json Format](#)

[Request Body Using Json Format](#)

The request body is empty.

[Response In Json Format](#)

The following is an example response.

```
[{  
  "Backup": "String Content",  
  "Basic": {  
    "JournalHistoryInHours": number,  
    "Name": "String Content",  
    "Priority": "String Content",  
    "ProtectedSiteIdentifier": "String Content",  
    "RecoverySiteIdentifier": "String Content",  
    "RpoInSeconds": Number,  
    "ServiceProfileIdentifier": "String Content",  
    "TestIntervalInMinutes": Number,  
    "UseWanCompression": Boolean,  
    "ZorgIdentifier": "String Content"  
  },  
}
```

```
"BootGroups": {
  "BootGroups": [{
    "BootDelayInSeconds": Number,
    "BootGroupIdentifier": "String Content",
    "Name": "String Content"
  }]
},

"Journal": {
  "DatastoreIdentifier": "String Content",
  "Limitation": {
    "HardLimitInMB": Number,
    "HardLimitInPercent": Number,
    "WarningThresholdInMB": Number,
    "WarningThresholdInPercent": Number
  }
},

"Networks": {
  "Failover": {
    Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": "String Content"
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": "String Content"
  }
},
"Protected": {
  "VCD": {
    "VCDVappIdentifier": "String Content"
  }
}

"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String Content",
  "DefaultDatastoreIdentifier": "String Content",
  "DefaultFolderIdentifier": "String Content",
  "DefaultHostClusterIdentifier": "String Content",
  "DefaultHostIdentifier": "String Content",
  "ResourcePoolIdentifier": "String Content"
  "VCD": {
    "OrgVcdIdentifier": "String Content"
  }
},

"Scripting": {
  "PostBackup": "String Content",
  "PostRecovery": {
    "Command": "String Content",
    "Parameters": null,
    "TimeoutInSeconds": Number
  },
  "PreRecovery": {
    "Command": "String Content",
    "Parameters": "String Content",
    "TimeoutInSeconds": Number
  }
},
}
```

```
"Vms": [],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}]
```

PARAMETER	DESCRIPTION
Backup (Deprecated)	Information related to offsite backup.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0: No testing is expected. 43200 or null: Testing is expected monthly. 131040: Testing is expected every three months. 262080: Testing is expected every six months. 394560: Testing is expected every nine months. 525600: Testing is expected every twelve months.
UseWanCompression	True: Data will be compressed before sending it to the recovery site. False: Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.

PARAMETER	DESCRIPTION
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	Information related to networks used in hypervisors.
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
VCD	Information related to networks used in vCDs.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	Information related to networks used in hypervisors.
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
VCD	Information related to networks used in a vCD environment.
Protected	Information about the protected site.
VCD	Null
Recovery	Information about the recovery.
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.

PARAMETER	DESCRIPTION
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhdx files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VCD	Null. Information about the vCD recovery vApp.
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session. The session is identified by the VpgSettingsIdentifier, and must be stated when running the current API.
VpgSettingsIdentifier	The identifier received after running the following POST API: <code>https://zvm_ip:port/v1/vpgSettings</code>

[Back to VPG Management APIs](#)

[Back to Managing vCD APIs](#)

[Back to All APIs](#)

Add Values in the Empty VPG Template

Once you get the empty template, add values for the new VPG.

Some parameters appear as stand alone with the value *null*, even though they have sub-parameters. See for example the parameter *OrgVcdIdentifier*:

```
"Recovery": {
  "DefaultDatastoreIdentifier": null,
  "DefaultFolderIdentifier": null,
  "DefaultHostClusterIdentifier": null,
  "DefaultHostIdentifier": null,
  "ResourcePoolIdentifier": null
  "VCD": {
    "OrgVcdIdentifier": null
  }
}
```

By running this API with a value in *OrgVcdIdentifier*, you are defining the recovery site as a vCD site. After adding the values in the empty template, you run a GET API to receive the full template, with the newly defined parameters. If you added a value to the *OrgVcdIdentifier* parameter, the *Networks* section expands from the original *Networks* section:

```
"Networks": {
  "Failover": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": null
  }
}
```

To the full section:

```
"Networks": {
  "Failover": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": {
      "CopyNatRules": "String content",
      "IsEnableGuestCustomization": "true",
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String content",
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String content",
        "RecoveryOrgVdcNetworkIdentifier": "String content"
        "ReverseTestOrgVdcNetworkIdentifier": "String content"
      }
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": {
      "CopyNatRules": "String content",
      "IsEnableGuestCustomization": "true",
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String content",
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String content",
        "RecoveryOrgVdcNetworkIdentifier": "String content"
        "ReverseTestOrgVdcNetworkIdentifier": "String content"
      }
    }
  }
}
```

Note: Not all parameters with a value of *null*, are expanded after they are filled.

METHOD	URL
PUT	https://zvm_ip:port/v1/vpgSettings/VpgSettingsIdentifier

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the session.

Request Body Using Json Format

Response In Json Format

Request Body Using Json Format

The following is an example vCD request Json body.

```
[{
  "Backup": "String Content",
  "Basic": {
    "JournalHistoryInHours": number,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": Number,
    "ServiceProfileIdentifier": "String Content",
    "TestIntervalInMinutes": Number,
    "UseWanCompression": Boolean,
    "ZorgIdentifier": "String Content"
  },
  "BootGroups": {
    "BootGroups": [{
      "BootDelayInSeconds": Number,
      "BootGroupIdentifier": "String Content",
      "Name": "String Content"
    }]
  },
  "Journal": {
    "DatastoreIdentifier": "String Content",
    "Limitation": {
      "HardLimitInMB": Number,
      "HardLimitInPercent": Number,
      "WarningThresholdInMB": Number,
      "WarningThresholdInPercent": Number
    }
  },
  "Networks": {
    "Failover": {
      "Hypervisor": {
        "DefaultNetworkIdentifier": "String Content"
      }
      "VCD": "String Content"
    },
    "FailoverTest": {
      "Hypervisor": {
        "DefaultNetworkIdentifier": "String Content"
      }
      "VCD": "String Content"
    }
  },
  "Protected": {
    "VCD": {
      "VCDVappIdentifier": "String Content"
    }
  }
}
```

```

"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String Content",
  "DefaultDatastoreIdentifier": "String Content",
  "DefaultFolderIdentifier": "String Content",
  "DefaultHostClusterIdentifier": "String Content",
  "DefaultHostIdentifier": "String Content",
  "ResourcePoolIdentifier": "String Content"
  "VCD": {
    "OrgVcdIdentifier": "String Content"
  }
},
"Scripting": {
  "PostBackup": "String Content",
  "PostRecovery": {
    "Command": "String Content",
    "Parameters": null,
    "TimeoutInSeconds": Number
  },
  "PreRecovery": {
    "Command": "String Content",
    "Parameters": "String Content",
    "TimeoutInSeconds": Number
  }
},
"Vms": [],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}]

```

PARAMETER	DESCRIPTION
Backup (Deprecated)	Information related to offsite backup.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpolnSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.

PARAMETER	DESCRIPTION
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	Information related to networks used in hypervisors.

PARAMETER	DESCRIPTION
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
VCD	Information related to networks used in vCDs.
FailoverTest	Information about the networks used for testing failover.
Hypervisor	Information related to networks used in hypervisors.
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
VCD	Information related to networks used in a vCD environment.
Protected	Information about the protected site.
VCD	Null when the protected site is hypervisor.
Recovery	Information about the recovery.
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhd files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VCD	Null. Information about the vCD recovery vApp.
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
PostRecovery	Information about scripts that are run after a recovery operation is performed.

PARAMETER	DESCRIPTION
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session. The session is identified by the VpgSettingsIdentifier, and must be stated when running the current API.
VpgSettingsIdentifier	The identifier received after running the following POST API: <code>https://zvm_ip:port/v1/vpgSettings</code>

Response In Json Format

The response body is empty.

Back to [VPG Management APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

Get a Full VPG Template

After you add the values to the basic parameters, run this API to receive a more detailed template. The detailed template includes sub-parameters of the parameters to which you added values, as explained in the previous API. See [Add Values in the Empty VPG Template](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vpgSettings/VpgSettingsIdentifier</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the session.

[Request Body Using Json Format](#)

[Response In Json Format](#)

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example vCD response Json body.

```
[{
  "Backup": null
  "RepositoryIdentifier": "String content",
  "RetentionPeriod": "String content",
  "Retry": {
    "IntervalInMinutes":2147483647,
    "Number":2147483647,
    "Retry": Boolean
  },
  "Scheduler": {
    "DayOfWeek": "String content",
    "SchedulerPeriod": "String content",
    "TimeOfDay": "String content"
  }
},

"Basic": {
  "JournalHistoryInHours":2147483647,
  "Name": "String content",
  "Priority": "String content",
  "ProtectedSiteIdentifier": "String content",
  "RecoverySiteIdentifier": "String content",
  "RpoInSeconds":4294967295,
  "ServiceProfileIdentifier": "String content",
  "TestIntervalInMinutes":2147483647,
  "UseWanCompression": Boolean,
  "ZorgIdentifier": "String content"
},

"BootGroups": {
  "BootGroups":[{}
    "BootDelayInSeconds":4294967295,
    "BootGroupIdentifier": "String content",
    "Name": "String content"
  ]
},

"Journal": {
  "DatastoreIdentifier": "String content",
  "Limitation": {
    "HardLimitInMB":2147483647,
    "HardLimitInPercent":2147483647,
    "WarningThresholdInMB":2147483647,
    "WarningThresholdInPercent":2147483647
  }
},
}
```

```
"Networks": {
  "Failover": {
    Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": {
      "CopyNatRules": "String content",
      "IsEnableGuestCustomization": "true",
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String content",
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String content",
        "RecoveryOrgVdcNetworkIdentifier": "String content"
        "ReverseTestOrgVdcNetworkIdentifier": "String content"
      }
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": null
    }
    "VCD": {
      "CopyNatRules": "String content",
      "IsEnableGuestCustomization": "true",
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String content",
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String content",
        "RecoveryOrgVdcNetworkIdentifier": "String content"
        "ReverseTestOrgVdcNetworkIdentifier": "String content"
      }
    }
  },
  "Protected": {
    "VCD": {
      "VCDVappIdentifier": null
    }
  }
}
```

```
"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
  "VCD": {
    "OrgVcdIdentifier": null
  }
},
```

```
"Scripting": {
  "PostBackup": {
    "PostRecovery": {
      "Command": null,
      "Parameters": null
      "TimeoutInSeconds": 300
    },
    "PreRecovery": {
      "Command": null,
      "Parameters": null,
      "TimeoutInSeconds":300
    }
  },
},
"Vms":[{"
  "BootGroupIdentifier": "String content",
  "Journal": {
    "DatastoreIdentifier": "String content",
    "Limitation": {
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  }
},
"Nics":[{"
  "Failover": {
    "Hypervisor": null
    "VCD": {
      "IpAddress": "String content",
      "IpMode": "String content",
      "IsConnected": Boolean,
      "IsPrimary": Boolean,
      "RecoveryOrgVdcNetworkIdentifier": "String content"
      "ShouldReplaceMacAddress": "String content"
    }
  },
  "FailoverTest": {
    "Hypervisor": null,
    "VCD": "String",
    "IpAddress": "String content",
    "IpMode": "String content",
    "IsConnected": Boolean,
    "IsPrimary": Boolean,
    "RecoveryOrgVdcNetworkIdentifier": "String content"
    "ShouldReplaceMacAddress": "String content"
  },
  "NicIdentifier": "String content"
},
},
```

```

"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String content"
  "VCD": {
    "StorageProfileIdentifier": "String content"
  }
},
"VmIdentifier": "String content",
"Volumes":[
  {
    "Datastore": null
    "IsSwap": Boolean,
    "Preseed": {
      "DatastoreIdentifier":"String content",
      "Path":"String content"
    },
    "VCD": {
      "IsThin": Boolean
    }
    "VolumeIdentifier": String
  },
]
}
"VpgIdentifier": null
"VpgSettingsIdentifier": "String content"
}],
}

```

PARAMETER	DESCRIPTION															
Backup (Deprecated)	Information related to offsite backup.															
RepositoryIdentifier	The identifier of the repository where offsite backups will be written.															
RetentionPeriod	<p>The length of time to keep offsite backups, up to a maximum of 12 months. Over time, Zerto reduces the number of stored offsite backups to save space.</p> <table border="1"> <thead> <tr> <th>VALID VALUES FOR RetentionPeriod</th> <th># OF BACKUPS SAVED WHEN RUN DAILY</th> <th># OF BACKUPS SAVED WHEN RUN WEEKLY</th> </tr> </thead> <tbody> <tr> <td>OneWeek</td> <td>7</td> <td>1</td> </tr> <tr> <td>OneMonth</td> <td>11</td> <td>5</td> </tr> <tr> <td>ThreeMonths</td> <td>13</td> <td>7</td> </tr> <tr> <td>SixMonths</td> <td>16</td> <td>10</td> </tr> </tbody> </table> <p>The SchedulerPeriod parameter defines whether backups are created daily or weekly.</p> <p>For an explanation of how Zerto reduces the number of offsite backups, see the <i>Zerto Administration Guide</i>.</p>	VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY	OneWeek	7	1	OneMonth	11	5	ThreeMonths	13	7	SixMonths	16	10
VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY														
OneWeek	7	1														
OneMonth	11	5														
ThreeMonths	13	7														
SixMonths	16	10														

PARAMETER	DESCRIPTION
Retry	Information about backup retries.
IntervallInMinutes	How much time to wait, in minutes, after a backup job fails before running the backup job again.
Number	The number of retries that will be attempted.
Retry	True: The offsite backup job will rerun automatically if it fails. False: The offsite backup job will not rerun automatically if it fails.
Scheduler	Offsite backup schedule settings.
DayOfWeek	The day of the week that the offsite backups will run.
SchedulerPeriod	How often are backups created. Possible values are: <ul style="list-style-type: none"> ■ Daily: The offsite backups will run every day. ■ Weekly: The offsite backups will run once a week.
TimeOfDay	The time of day when offsite backup jobs will run. The time is based on a 24-hour clock.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.

PARAMETER	DESCRIPTION
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	-
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.

PARAMETER	DESCRIPTION
Hypervisor	Information about the hypervisor protected site.
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
VCD	Information about the vCD protected site.
CopyNatRules	<p>Whether to copy the NAT rules on protected vApp networks to the recovery vApp during recovery. Possible values are:</p> <ul style="list-style-type: none"> ■ Use automatically allocated IP ■ Use source external IP <p>When both the protected and recovery sites are vCD environments, the NAT rules on protected vApp networks are automatically copied to the recovery vApp during recovery.</p>
IsEnableGuestCustomization	<ul style="list-style-type: none"> ■ True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines. ■ False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.
DefaultRecoveryOrgVdcNetworkIdentifier	The default recovery Org vDC network to use in the recovery site.
Mapping	
ProtectedOrgVdcNetworkIdentifier	The OrgVdc network used on the protected site.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site.
ReverseTestOrgVdcNetworkIdentifier	
FailoverTest	Information about the networks used for testing failover.
Hypervisor	Information about the hypervisor recovery site.
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
VCD	

PARAMETER	DESCRIPTION
CopyNatRules	<p>Whether to copy the NAT rules on source vApp networks to the recovery vApp during recovery. Possible values are:</p> <p>AutoAllocatedByRecovery KeepSourceExternalIP NoCopy</p> <p>The automatic setting is applied as automatic and the manual setting is applied as manual using the IPs on the source.</p> <p>When both the protected and recovery sites are vCD environments, the NAT rules on source vApp networks are automatically copied to the recovery vApp during recovery.</p> <p>The automatic setting is applied as automatic and the manual setting is applied as manual using the IPs on the source.</p>
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The default recovery Org vDC network to use in the recovery site.
Mapping	
ProtectedOrgVdcNetworkIdentifier	The OrgVdc network used on the protected site.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site.
ReverseTestOrgVdcNetworkIdentifier	
Protected	
VCD	
VCDVappIdentifier	The identifier of the vCD vApp to protect. When protecting virtual machines in a vCenter Server, this value is <code>null</code> . Get the identifier using the API List Unprotected vCD vApps in a Site .
Recovery	
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhdX files. The identifier comprises the server identifier and the storage moref, with the format, <code>serverid.moref</code> .

PARAMETER	DESCRIPTION
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VCD	
OrgVcdIdentifier	The OrgvCD identifier when recovering to vCD. Get the identifier using VMware only: Resource Pools .
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup: null	Information about scripts that are run after an offsite backup is performed.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine

PARAMETER	DESCRIPTION
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.more</i>
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	Information about the networks used for failover in a hypervisor.
VCD	
IpAddress	The IP address of the vCD.
IpMode	The mask for the network.
IsConnected	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
IsPrimary	True: the DNS server that handles Internet protocol mapping is the primary. False: the DNS server that handles Internet protocol mapping is not the primary.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	Information about the networks used for testing failover by this virtual machine.
Hypervisor	-
VCD	

PARAMETER	DESCRIPTION
IpAddress	The IP address of the vCD.
IpMode	The mask for the network.
IsConnected	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
IsPrimary	True: the DNS server that handles Internet protocol mapping is the primary. False: the DNS server that handles Internet protocol mapping is not the primary.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
DefaultResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
Volumes	Information about the volumes used by the virtual machine.

PARAMETER	DESCRIPTION
Datastore	Information about the datastore used by the virtual machine.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the volume. Note: Only when the recovery site is a vSphere site.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
DatastoreIdentifier	The identifier of the datastore where the disk is stored.
Path	The path to the vmdk (vSphere) or vhdx (Hyper-V) file in the recovery site. For all environments: <ul style="list-style-type: none"> Use a single forward slash (/) to separate the components of a path. For example: ZertoVMs/dummy_vra_znest175hv02.zertolab.local/RecoveryVolumes/41b4fac2/vm44/VM-1.vhdx. Backslash (\) is not supported .
VCD	
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumIdentifier	The identifier of the volume.
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session.
VpgSettingsIdentifier	The identifier received after running the following POST API: <code>https://zvm_ip:port/v1/vpgSettings</code>

[Back to VPG Management APIs](#)

[Back to Managing vCD APIs](#)

[Back to All APIs](#)

Two Step Operation

Using this method to create a VPG, you run the following APIs:

1. [“Create an Empty VPG Template”, on page 280](#)
2. [“Add Values in the Full VPG Template”, on page 280](#)

Create an Empty VPG Template

Run this API to get a VPG settings identifier. This action creates an empty VPG template.

Request Body Using Json Format

Response In Json Format

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vpgSettings</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response.

```
{  
  "VpgSettingsIdentifier": "f9e631d3-9bfb-463a-9958-2fa2c6ac7640"  
}
```

PARAMETER	DESCRIPTION
VpgSettingsIdentifier	The identifier of the VPG settings.

Back to [VPG Management APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

Add Values in the Full VPG Template

Request Body Using Json Format

Response In Json Format

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vpgSettings</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettings	The identifier of the VPG settings.

Request Body Using Json Format

The following is an example vCD request Json body.

Note:

```
[{
  "Backup": {
    "RepositoryIdentifier": "String Content",
    "RetentionPeriod": ,
    "Retry": {
      "IntervalInMinutes":2147483647,
      "Number":2147483647,
      "Retry": Boolean
    },
    "Scheduler": {
      "DayOfWeek": "String Content",
      "SchedulerPeriod": "String Content",
      "TimeOfDay": "String Content"
    }
  },
  "Basic": {
    "JournalHistoryInHours":2147483647,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds":4294967295,
    "ServiceProfileIdentifier": "String Content",
    "TestIntervalInMinutes":2147483647,
    "UseWanCompression": Boolean,
    "ZorgIdentifier": "String Content"
  },
  "BootGroups": {
    "BootGroups":[
      {
        "BootDelayInSeconds":4294967295,
        "BootGroupIdentifier": "String Content",
        "Name": "String Content"
      }
    ]
  },
  "Journal": {
    "DatastoreIdentifier": "String Content",
    "Limitation": {
      "HardLimitInMB":2147483647,
      "HardLimitInPercent":2147483647,
      "WarningThresholdInMB":2147483647,
      "WarningThresholdInPercent":2147483647
    }
  }
},
```

```
"Networks": {
  "Failover": {
    Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": {
      "CopyNatRules": "String Content",
      "IsEnableGuestCustomization": Boolean,
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String Content"
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String Content",
        "RecoveryOrgVdcNetworkIdentifier": "String Content",
        "ReverseTestOrgVdcNetworkIdentifier": "String Content"
      }
    }
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": {
      "CopyNatRules": "String Content",
      "IsEnableGuestCustomization": Boolean
      "DefaultRecoveryOrgVdcNetworkIdentifier": "String Content",
      "Mapping": {
        "ProtectedOrgVdcNetworkIdentifier": "String Content",
        "RecoveryOrgVdcNetworkIdentifier": "String Content",
        "ReverseTestOrgVdcNetworkIdentifier": "String Content"
      }
    }
  },
  "Protected": {
    "VCD": {
      "VCDVappIdentifier": "String Content"
    }
  }
},
"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String Content",
  "DefaultDatastoreIdentifier": "String Content",
  "DefaultFolderIdentifier": "String Content",
  "DefaultHostClusterIdentifier": "String Content",
  "DefaultHostIdentifier": "String Content",
  "ResourcePoolIdentifier": "String Content"
  "VCD": {
    "OrgVcdIdentifier": "String Content"
  }
},
```

```
"Scripting": {
  "PostBackup": {
    "PostRecovery": {
      "Command": "String Content",
      "Parameters": "String Content",
      "TimeoutInSeconds": Number
    },
    "PreRecovery": {
      "Command": "String Content",
      "Parameters": "String Content",
      "TimeoutInSeconds": Number
    }
  },
},
"Vms": [{
  "BootGroupIdentifier": ,
  "Journal": {
    "DatastoreIdentifier": "String Content"
    "Limitation": {
      "HardLimitInMB": Number,
      "HardLimitInPercent": Number,
      "WarningThresholdInMB": Number,
      "WarningThresholdInPercent": Number
    }
  },
},
"Nics": [{
  "Failover": {
    "Hypervisor": "String Content"
    "VCD": {
      "IpAddress": "String Content",
      "IpMode": "String Content",
      "IsConnected": Boolean,
      "IsPrimary": Boolean,
      "RecoveryOrgVdcNetworkIdentifier": "String Content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
},
  "FailoverTest": {
    "Hypervisor": "String Content",
    "VCD": {
      "IpAddress": "String Content",
      "IpMode": "String Content",
      "IsConnected": Boolean,
      "IsPrimary": Boolean
      "RecoveryOrgVdcNetworkIdentifier": "String Content",
      "ShouldReplaceMacAddress": Boolean
    }
  },
},
  "NicIdentifier": "String Content"
},
},
```

```

"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String content",
  "DefaultDatastoreIdentifier": "String content",
  "DefaultFolderIdentifier": "String content",
  "DefaultHostClusterIdentifier": "String content",
  "DefaultHostIdentifier": "String content",
  "ResourcePoolIdentifier": "String Content"
  "VCD": {
    "StorageProfileIdentifier": "String content"
  }
},
"VmIdentifier": "String content",
"Volumes": {
  "Datastore": "String Content",
  "IsSwap: Boolean
  "Preseed": {
    "DatastoreIdentifier":"String content",
    "Path":"String content"
  },
  "VCD": {
    "IsThin": Boolean
  }
  "VolumeIdentifier": "String content"
},
}
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String content"
}]

```

PARAMETER	DESCRIPTION															
Backup (Deprecated)	Information related to offsite backup.															
RepositoryIdentifier	The identifier of the repository where offsite backups will be written.															
RetentionPeriod	<p>The length of time to keep offsite backups, up to a maximum of 12 months. Over time, Zerto reduces the number of stored offsite backups to save space.</p> <table border="1"> <thead> <tr> <th>VALID VALUES FOR RetentionPeriod</th> <th># OF BACKUPS SAVED WHEN RUN DAILY</th> <th># OF BACKUPS SAVED WHEN RUN WEEKLY</th> </tr> </thead> <tbody> <tr> <td>OneWeek</td> <td>7</td> <td>1</td> </tr> <tr> <td>OneMonth</td> <td>11</td> <td>5</td> </tr> <tr> <td>ThreeMonths</td> <td>13</td> <td>7</td> </tr> <tr> <td>SixMonths</td> <td>16</td> <td>10</td> </tr> </tbody> </table> <p>The SchedulerPeriod parameter defines whether backups are created daily or weekly.</p> <p>For an explanation of how Zerto reduces the number of offsite backups, see the <i>Zerto Administration Guide</i>.</p>	VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY	OneWeek	7	1	OneMonth	11	5	ThreeMonths	13	7	SixMonths	16	10
VALID VALUES FOR RetentionPeriod	# OF BACKUPS SAVED WHEN RUN DAILY	# OF BACKUPS SAVED WHEN RUN WEEKLY														
OneWeek	7	1														
OneMonth	11	5														
ThreeMonths	13	7														
SixMonths	16	10														
Retry	Information about backup retries.															

PARAMETER	DESCRIPTION
IntervallInMinutes	How much time to wait, in minutes, after a backup job fails before running the backup job again.
Number	The number of retries that will be attempted.
Retry	True: The offsite backup job will rerun automatically if it fails. False: The offsite backup job will not rerun automatically if it fails.
Scheduler	Offsite backup schedule settings.
DayOfWeek	The day of the week that the offsite backups will run.
SchedulerPeriod	Daily: The offsite backups will run every day. Weekly: The offsite backups will run once a week.
TimeOfDay	The time of day when offsite backup jobs will run. The time is based on a 24-hour clock.
Basic	Basic VPG settings.
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: Low: The VPG has a low priority for transferring data. Medium: The VPG has a medium priority for transferring data. High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the source site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the target site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued. Default appears if default service profile is selected.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.

PARAMETER	DESCRIPTION
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: 0 : No testing is expected. 43200 or null : Testing is expected monthly. 131040 : Testing is expected every three months. 262080 : Testing is expected every six months. 394560 : Testing is expected every nine months. 525600 : Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
ZorgIdentifier	The identifier of the ZORG, Zerto organization, defined in the Zerto Cloud Manager.
BootGroups	Information about boot groups.
BootGroups	
BootDelayInSeconds	Specifies the delay, in seconds, between starting up the virtual machines in this group and starting up the virtual machines in the next group.
BootGroupIdentifier	The identifier of a boot group.
Name	The name of a boot group.
Journal	Information about the journal.
DatastoreIdentifier	The identifier of the storage used by the journal for the VM. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Can be either in MB or in percentage.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Can be either in MB or in percentage.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Can be either in MB or in percentage.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values. Can be either in MB or in percentage.

PARAMETER	DESCRIPTION
Networks	Information about the networks that connect the protected and recovery sites.
Failover	Information about the networks used for failover.
Hypervisor	Information about the hypervisor protected site.
DefaultNetworkIdentifier	The network identifier of the network to use during a failover or move operation in which the recovered virtual machines will run.
VCD	Information about the vCD protected site.
CopyNatRules	<p>Whether to copy the NAT rules on source vApp networks to the recovery vApp during recovery.</p> <p>Possible values are:</p> <p>auto source dont</p> <p>The automatic setting is applied as automatic and the manual setting is applied as manual using the IPs on the source.</p> <p>When both the protected and recovery sites are vCD environments, the NAT rules on source vApp networks are automatically copied to the recovery vApp during recovery.</p>
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The default recovery Org vDC network to use in the recovery site.
Mapping	
ProtectedOrgVdcNetworkIdentifier	The OrgVdc network used on the protected site.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site. Should this be added: ...recovery site, for failover/move.
ReverseTestOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site for when testing failover.

PARAMETER	DESCRIPTION
FailoverTest	Information about the networks used for testing failover.
Hypervisor	-
DefaultNetworkIdentifier	The network identifier of the network to use when testing the failover of virtual machines in the recovery site.
VCD	
CopyNatRules	<p>Whether to copy the NAT rules on source vApp networks to the recovery vApp during recovery. Possible values are:</p> <p>auto source dont</p> <p>The automatic setting is applied as automatic and the manual setting is applied as manual using the IPs on the source.</p> <p>When both the protected and recovery sites are vCD environments, the NAT rules on source vApp networks are automatically copied to the recovery vApp during recovery.</p> <p>The automatic setting is applied as automatic and the manual setting is applied as manual using the IPs on the source.</p>
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The default recovery Org vDC network to use in the recovery site.
Mapping	
ProtectedOrgVdcNetworkIdentifier	The OrgVdc network used on the protected site.
RecoveryOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site.
ReverseTestOrgVdcNetworkIdentifier	The OrgVdc network used on the recovery site for when testing failover.
	Failover Test to Original Site. What is name of param?
Protected	

PARAMETER	DESCRIPTION
VCD	
VCDVappIdentifier	The identifier of the protected vCD vApp.
Recovery	
DefaultDatastoreClusterIdentifier	The identifier of the default datastore cluster used in the recovery site. Note: Only when the recovery site is a vSphere site.
DefaultDatastoreIdentifier	The identifier of the default storage where the metadata files for the virtual machines are stored, such as the vmx or vhdX files. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the default folder used for recovery. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the default host cluster that handles the replicated data. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the default host that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
VCD	
OrgVcdIdentifier	The OrgvCD identifier when recovering to vCD. Get the identifier using VMware only: Resource Pools .
Scripting	Information about the scripts to run, either before or after recovery operation, or after an offsite backup is run.
PostBackup	Information about scripts that are run after an offsite backup is performed.
PostRecovery	Information about scripts that are run after a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.

PARAMETER	DESCRIPTION
PreRecovery	Information about scripts that are run before a recovery operation is performed.
Command	The full path of the script. The script must be located on the same machine as the Zerto Virtual Manager for the recovery site.
Parameters	Parameters to pass to the script.
TimeoutInSeconds	The time-out, in seconds, for the script to run.
Vms	Information about the virtual machines in a VPG.
BootGroupIdentifier	The boot group identifier of a virtual machine.
Journal	Journal information of the virtual machine
DatastoreIdentifier	The identifier of the storage used by the journal for the virtual machine. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values. Can be either in MB or in percentage.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values. Can be either in MB or in percentage.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values. Can be either in MB or in percentage.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values. Can be either in MB or in percentage.
Nics	Information about NICs used by the virtual machine in the VPG.
Failover	Information about the networks used for failover by this virtual machine.
Hypervisor	Not active when running a vCD API
VCD	The DNS name excluding the host.
IpAddress	Information about the IP configuration of the recovery site used for failovers.
IpMode	The mask for the network.

PARAMETER	DESCRIPTION
IsConnected	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
IsPrimary	The IP address of the primary DNS server that handles Internet protocol mapping.
RecoveryOrgVdcNetworkIdentifier	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
FailoverTest	
Hypervisor	Not active when running a vCD API
VCD	The DNS name excluding the host.
IpAddress	Information about the IP configuration of the recovery site used for failovers.
IpMode	The mask for the network.
IsConnected	True: DHCP will be used for the virtual machine on the recovery site. False: A static IP address will be used for the virtual machine on the recovery site.
IsPrimary	The IP address of the primary DNS server that handles Internet protocol mapping.
RecoveryOrgVdcNetworkIdentifier	The IP address of the alternate, secondary, DNS server that handles Internet protocol mapping.
ShouldReplaceMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	Information about the recovery site.
DatastoreClusterIdentifier	The identifier of the datastore cluster used in the recovery site for the VM. Note: Only when the recovery site is a vSphere site.

PARAMETER	DESCRIPTION
DefaultDatastoreIdentifier	The identifier of the storage. The identifier comprises the server identifier and the storage moref, with the format, <i>serverid.moref</i> .
DefaultFolderIdentifier	The identifier of the folder used for recovery by the virtual machine. The identifier comprises the server identifier and the folder moref, with the format, <i>serverid.moref</i> .
DefaultHostClusterIdentifier	The identifier of the host cluster that handles the replicated data. The identifier comprises the server identifier and the host cluster moref, with the format, <i>serverid.moref</i> .
DefaultHostIdentifier	The identifier of the host that handles the replicated data. The identifier comprises the server identifier and the host moref, with the format, <i>serverid.moref</i> .
DefaultResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines. The identifier comprises the server identifier and the resource pool moref, with the format, <i>serverid.moref</i> .
ResourcePoolIdentifier	The identifier of the resource pool for the recovered virtual machines.
VCD	
StorageProfileIdentifier	
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .
Volumes	Information about the volumes used by the virtual machine.
Datastore	Information about the datastore used by the virtual machine.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
Preseed	Information about the disk used for preseeding.
DatastoreIdentifier	The identifier of the datastore where the disk is stored.
Path	The path to the vmdk (vSphere) or vhdx (Hyper-V) file in the recovery site. For all environments: <ul style="list-style-type: none"> ■ Use a single forward slash (/) to separate the components of a path. For example: ZertoVMs/dummy_vra_znest175hv02.zertolab.local/RecoveryVolumes/41b4fac2/vm44/VM-1.vhdx. Backslash (\) is not supported .
VCD	

PARAMETER	DESCRIPTION
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumelIdentifier	The identifier of the volume.
VpgIdentifier	The identifier of the VPG.
VpgSettingsIdentifier	The identifier of the VPG settings object

Response In Json Format

The response body is empty.

Back to [VPG Management APIs](#)

Back to [Managing vCD APIs](#)

Back to [All APIs](#)

Settings Retained when Replicating from a Protected Site vCloud Director to a Recovery Site vCloud Director

The following tables display settings that are retained when replicating from a protected site vCloud Director to a recovery site vCloud Director:

- [Edge Gateway Services, on page 293](#)
- [vApp Properties, on page 293](#)
- [Network, on page 294](#)
- [VM Properties, on page 294](#)

Edge Gateway Services

SETTING	SETTING RETAINED?
DHCP	No
Firewall	No
Static Routing	No
NAT	Configurable

vApp Properties

SETTING	SETTING RETAINED?
Leases (Runtime / Storage)	No
vApp Description	No
VM Start / Stop	Yes

SETTING	SETTING RETAINED?
Sharing	No
Metadata	Yes

Network

SETTING	SETTING RETAINED?
ORG Network	No (protected ORG vDC networks need to be mapped to recovery ORG vDC networks)
Isolated vApp network	Yes (same gateway address used)
Routed vApp Network	Yes (same gateway address used, routed organization network mapped)
vApp Network Without NIC On It	Yes (same gateway address used)

VM Properties

SETTING	SETTING RETAINED?
Metadata and Description	No

METHOD	URL
PUT	<code>https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}/vms</code>

Note:

vSphere to vCD VPG Management APIs

Using the **VpgSettings APIs**, you can create, edit and delete VPGs from a protected vSphere site to a recovery vCD site.

The same VPGSettings parameters apply across all platforms. When recovering from vSphere to vCD, only **RecoveryOrgVdcNetworkIdentifier** and **RecoveryStoragePolicyIdentifier** parameters are specific to vCD.

This section includes the following:

- [“vSphere to vCD - Create New VPG Settings”, on page 295](#)
- [“vSphere to vCD - Edit Existing VPG Settings”, on page 306](#)
- [“vSphere to vCD - Delete Existing VPG Settings”, on page 320](#)

vSphere to vCD - Create New VPG Settings

To create a VPG, run the following APIs:

1. [Get a VPG Settings Identifier](#)
2. [Get an Empty VPG Template](#)
3. [Add Values in the Empty VPG Template](#)
4. [Get a Full VPG Template](#)

Get a VPG Settings Identifier

Run this API to get a VPG settings identifier. With the VPG Settings Identifier, you can request for an empty VPG template.

Request Body Using Json Format

Response In Json Format

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vpgSettings</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

You can create a skeleton VPG settings object by using the following request body:

```
{ }
```

Response In Json Format

The following is an example response.

```
{  
  "VpgSettingsIdentifier": "String content"  
}
```

PARAMETER	DESCRIPTION
VpgSettingsIdentifier	The identifier of the VPG settings.

[Back to vSphere to vCD VPG Management APIs](#)

[Back to All APIs](#)

Get an Empty VPG Template

Run this API to get an empty VPG template to create a new VPG. Use this template to add parameters values for the VPG Settings Identifier. See [Add Values in the Empty VPG Template](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

[Request Body Using Json Format](#)

[Response In Json Format](#)

[Request Body Using Json Format](#)

The request body is empty.

[Response In Json Format](#)

The following is an example response.

```
[{
  "Backup": "String Content",
  "Basic": {
    "JournalHistoryInHours": number,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": Number,
    "ServiceProfileIdentifier": "String Content",
    "TestIntervalInMinutes": Number,
    "UseWanCompression": Boolean,
    "ZorgIdentifier": "String Content"
  },
  "BootGroups": {
    "BootGroups": [{
      "BootDelayInSeconds": Number,
      "BootGroupIdentifier": "String Content",
      "Name": "String Content"
    }]
  }
},
```

```
"Journal": {
  "DatastoreIdentifier": "String Content",
  "Limitation": {
    "HardLimitInMB": Number,
    "HardLimitInPercent": Number,
    "WarningThresholdInMB": Number,
    "WarningThresholdInPercent": Number
  }
},

"Networks": {
  "Failover": {
    Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    }
    "VCD": null
  }
},
"Protected": {
  "VCD": null
}

"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String Content",
  "DefaultDatastoreIdentifier": "String Content",
  "DefaultFolderIdentifier": "String Content",
  "DefaultHostClusterIdentifier": "String Content",
  "DefaultHostIdentifier": "String Content",
  "ResourcePoolIdentifier": "String Content"
  "VCD": null
},

"Scripting": {
  "PostBackup": "String Content",
  "PostRecovery": {
    "Command": "String Content",
    "Parameters": null,
    "TimeoutInSeconds": Number
  },
  "PreRecovery": {
    "Command": "String Content",
    "Parameters": "String Content",
    "TimeoutInSeconds": Number
  }
},

"Vms": [],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}]
```

Add Values in the Empty VPG Template

Add values for the new VPG by running a PUT API. The empty template includes mandatory fields for creating a VPG. The mandatory fields are specified in the [Request Body Using Json Format](#).

By running the PUT API with a value in **RecoveryOrgVdcIdentifier**, you are defining the recovery site as a vCD site. When **RecoveryOrgVdcIdentifier** is set, both the **RecoveryOrgVdcNetworkIdentifier** and **RecoveryStoragePolicyIdentifier** get a default value.

After adding the values in the empty template, run a GET API to receive the full template, with the newly defined parameters and their sub-parameters. Run a PUT API to add values for the sub-parameters. See [Get a Full VPG Template](#).

Note: Once all parameters are set, commit the changes using POST commit with the full JSON request body:

```
https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}/commit
```

METHOD	URL
PUT	https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

[Request Body Using Json Format](#)

[Response In Json Format](#)

Request Body Using Json Format

The following is an example vSphere to vCD request Json body.

```
[{
  "Basic": {
    "Name": "string content",
    "ProtectedSiteIdentifier": "string content",
    "RecoverySiteIdentifier": "string content"
    "ServiceProfileIdentifier": "string content"
  },
  "Networks": {
    "Failover": {
      "VCD": {
        "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
      }
    },
    "FailoverTest": {
      "VCD": {
        "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
      }
    }
  }
},
]
```

```

"Recovery": {
  "VCD": {
    "OrgVdcIdentifier": "'+RecoveryOrgVdcIdentifier+'"
  }
},
"Vms": [
  {
    "Recovery": {
      "VCD": {
        "StoragePolicyIdentifier": "string content"
      }
    }
  },
  {
    "VmIdentifier": "string content"
  }
]
}

```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Basic			
Name	The name of the VPG.	Yes	
ProtectedSiteIdentifier	The identifier of the site where the VPG will be protected. This is the site where the API runs.		Current site
RecoverySiteIdentifier	The identifier of the site where the VPG will be recovered.	Yes	
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.	Yes (for ZCM)	
Networks			
Failover	Information about the networks used for failover.		
vCD			
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."		None
FailoverTest	Information about the networks used for testing failover.		
vCD			
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."		None
Recovery			
vCD			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
OrgVdclIdentifier	The identifier of an Org vDC.	Yes	
Vms			
VmIdentifier	The identifier of the protected VMs.	Yes	

Response In Json Format

The response body is empty.

Get a Full VPG Template

After you add the values to the mandatory parameters, run this API to receive a more detailed template. The detailed template includes sub-parameters of the parameters to which you added values. Add values to the sub-parameters using the PUT API. See [Add Values in the Empty VPG Template](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

Request Body Using Json Format

Response In Json Format

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example vCD response Json body.

```
[{
  "Basic": {
    "JournalHistoryInHours": 24,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": 300,
    "ServiceProfileIdentifier": "string content"
    "TestIntervalInMinutes": 262080,
    "UseWanCompression": Boolean, },
}
```

```
"Journal": {
  "Limitation": {
    "HardLimitInMB": 153600,
    "HardLimitInPercent": 0,
    "WarningThresholdInMB": 115200,
    "WarningThresholdInPercent": 0
  }
},

"Networks": {
  "Failover": {
    "VCD": {
      "IsEnableGuestCustomization": Boolean
      "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
    }
  }
  "FailoverTest": {
    "VCD": {
      "IsEnableGuestCustomization": Boolean
      "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
    }
  }
},

"Recovery": {
  "VCD": {
    "OrgVdcIdentifier": "String Content"
  }
},

"Vms": [
  {
    "Journal": {
      "Limitation": {
        "HardLimitInMB": 153600,
        "HardLimitInPercent": 0,
        "WarningThresholdInMB": 115200,
        "WarningThresholdInPercent": 0
      }
    }
  }
],
```

```

"Nics": [
  {
    "Failover":{
      "VCD": {
        "IpAddress": null,
        "IpMode": "String Content",
        "IsConnected": Boolean,
        "IsPrimary": Boolean
        "IsResetMacAddress": Boolean
        "RecoveryOrgVdcNetworkIdentifier":"String content",
      }
    },
    "FailoverTest":{
      "VCD": {
        "IpAddress": null,
        "IpMode": "String Content",
        "IsConnected": Boolean,
        "IsPrimary": Boolean
        "IsResetMacAddress": Boolean
        "RecoveryOrgVdcNetworkIdentifier":"String content",
      }
    },
    "NicIdentifier":"String content"
  }
],
"Recovery":{
  "VCD": {
    "StoragePolicyIdentifier": "string content",
  }
},
"VmIdentifier": "string content",
"Volumes":[
  {
    "IsSwap": Boolean,
    "VCD": {
      "IsThin": Boolean
    },
    "VolumeIdentifier":"String content"
  }
],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}

```

PARAMETER	DESCRIPTION
Basic	
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data.

PARAMETER	DESCRIPTION
ProtectedSiteIdentifier	The identifier of the site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
Journal	
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	
Failover	Information about the networks used for failover.
VCD	
IsEnableGuestCustomization	<ul style="list-style-type: none"> ■ True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines. ■ False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available. <p>Note: The same value should be set for both failover and failover test.</p>

PARAMETER	DESCRIPTION
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."
FailoverTest	Information about the networks used for failover test.
VCD	
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p> <p>Note: The same value should be set for both failover and failover test.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."
Recovery	
VCD	
OrgVdcIdentifier	The identifier of an Org vDC.
Vms	
Journal	
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	
Failover	Information about the networks used for failover by this virtual machine.
VCD	

PARAMETER	DESCRIPTION
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."
FailoverTest	Information about the networks used for failover test by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	
VCD	

PARAMETER	DESCRIPTION
StoragePolicyIdentifier	The identifier of the recovery storage policy. When the VmIdentifier is set, the StoragePolicyIdentifier is set by default. Default value is none or "00000000-0000-0000-0000-000000000000."
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .
Volumes	Information about the volumes used by the virtual machine.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
VCD	
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumIdentifier	The identifier of the volume.
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session.
VpgSettingsIdentifier	The identifier received after running the following POST API: <code>https://zvm_ip:port/v1/vpgSettings</code>

Back to [vSphere to vCD VPG Management APIs](#)

Back to [All APIs](#)

vSphere to vCD - Edit Existing VPG Settings

The PUT method is used to update a existing VPG settings object.

Edit VPG settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Edit basic settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Edit journal settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Edit network settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Edit VM settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Edit NIC settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>
Edit volume settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

vpgSettingsIdentifier	The identifier of the VPG settings object.
vmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .
nicIdentifier	The identifier of a NIC that is to be updated.
volumeId	The identifier of the volume that is to be updated.

Request Body Using Json Format

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
[{
  "Basic": {
    "JournalHistoryInHours": 24,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": 300,
    "ServiceProfileIdentifier": "string content"
    "TestIntervalInMinutes": 262080,
    "UseWanCompression": Boolean,  },
  "Journal": {
    "Limitation": {
      "HardLimitInMB": 153600,
      "HardLimitInPercent": 0,
      "WarningThresholdInMB": 115200,
      "WarningThresholdInPercent": 0
    }
  },
  "Networks": {
    "Failover": {
      "VCD": {
        "IsEnableGuestCustomization": Boolean
        "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
      }
    }
    "FailoverTest": {
      "VCD": {
        "IsEnableGuestCustomization": Boolean
        "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
      }
    }
  },
  "Recovery": {
    "VCD": {
      "OrgVdcIdentifier": "String Content"
    }
  },
  "Vms": [
    {
```

```

"Journal":{
  "Limitation":{
    "HardLimitInMB":153600,
    "HardLimitInPercent":0,
    "WarningThresholdInMB":115200,
    "WarningThresholdInPercent":0
  }
},
"Nics": [
{
  "Failover":{
    "VCD": {
      "IpAddress": null,
      "IpMode": "String Content",
      "IsConnected": Boolean,
      "IsPrimary": Boolean
      "IsResetMacAddress": Boolean
      "RecoveryOrgVdcNetworkIdentifier":"String content",
    }
  },
  "FailoverTest":{
    "VCD": {
      "IpAddress": null,
      "IpMode": "String Content",
      "IsConnected": Boolean,
      "IsPrimary": Boolean
      "IsResetMacAddress": Boolean
      "RecoveryOrgVdcNetworkIdentifier":"String content",
    }
  },
  "NicIdentifier":"String content"
}
],
"Recovery":{
  "VCD": {
    "StoragePolicyIdentifier": "string content",
  }
},
"VmIdentifier": "string content",
"Volumes":[
{
  "IsSwap": Boolean,
  "VCD": {
    "IsThin": Boolean
  },
  "VolumeIdentifier":"String content"
}
],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}
    
```

The following is an example of a request body in Json format for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.

```
"Basic": {
  "JournalHistoryInHours": 24,
  "Name": "String Content",
  "Priority": "String Content",
  "ProtectedSiteIdentifier": "String Content",
  "RecoverySiteIdentifier": "String Content",
  "RpoInSeconds": 300,
  "ServiceProfileIdentifier": "string content"
  "TestIntervalInMinutes": 262080,
  "UseWanCompression": Boolean, },
}
```

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal`.

```
"Journal": {
  "Limitation": {
    "HardLimitInMB": 153600,
    "HardLimitInPercent": 0,
    "WarningThresholdInMB": 115200,
    "WarningThresholdInPercent": 0
  }
},
```

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks`.

```
"Networks": {
  "Failover": {
    "VCD": {
      "IsEnableGuestCustomization": Boolean
      "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
    }
  }
  "FailoverTest": {
    "VCD": {
      "IsEnableGuestCustomization": Boolean
      "DefaultRecoveryOrgVdcNetworkIdentifier": "string content"
    }
  }
},
```

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms`.

```
"Vms": [
  "Journal":{
    "Limitation":{
      "HardLimitInMB":4294967295,
      "HardLimitInPercent":4294967295,
      "WarningThresholdInMB":4294967295,
      "WarningThresholdInPercent":4294967295
    }
  }
},
```

```
"Nics": [
  {
    "Failover":{
      "VCD": {
        "IpAddress": null
        "IpMode": "String Content",
        "IsConnected": Boolean,
        "IsPrimary": Boolean
        "IsResetMacAddress": Boolean
        "RecoveryOrgVdcNetworkIdentifier":"String content",
      }
    },
    "FailoverTest":{
      "VCD": {
        "IpAddress": null,
        "IpMode": "String Content",
        "IsConnected": Boolean,
        "IsPrimary": Boolean
        "IsResetMacAddress": Boolean
        "RecoveryOrgVdcNetworkIdentifier":"String content",
      }
    },
    "NicIdentifier":"String content"
  }
],
"Recovery":{
  "VCD": {
    "StoragePolicyIdentifier": "string content",
  }
},
"VmIdentifier": "string content",
"Volumes":[
  {
    "IsSwap": Boolean,
    "VCD": {
      "IsThin": Boolean
    },
    "VolumeIdentifier":"String content"
  }
],
}
```

The following is an example of a request body in Json format for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}`.

```
{
  "Nics": [
    {
      "Failover":{
        "VCD": {
          "IpAddress": null,
          "IpMode": "String Content",
          "IsConnected": Boolean,
          "IsPrimary": Boolean
          "IsResetMacAddress": Boolean
          "RecoveryOrgVdcNetworkIdentifier":"String content",
        }
      },
      "FailoverTest":{
        "VCD": {
          "IpAddress": null,
          "IpMode": "String Content",
          "IsConnected": Boolean,
          "IsPrimary": Boolean
          "IsResetMacAddress": Boolean
          "RecoveryOrgVdcNetworkIdentifier":"String content",
        }
      },
      "NicIdentifier":"String content"
    }
  ],
}
```

The following is an example of a request body in Json format for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}.

```
"Volumes":[
  {
    "IsSwap": Boolean,
    "VCD": {
      "IsThin": Boolean
    },
    "VolumeIdentifier":"String content"
  }
],
]
```

Request Values

Update a VPG settings object Request values for https://zvm_ip:port/v1/vpgSettings.

PARAMETER	DESCRIPTION
Basic	
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.

PARAMETER	DESCRIPTION
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the site where the VPG virtual machines will be recovered.
RpolnSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.
Journal	
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Networks	
Failover	Information about the networks used for failover.
VCD	

PARAMETER	DESCRIPTION
IsEnableGuestCustomization	<ul style="list-style-type: none"> ■ True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines. ■ False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available. <p>Note: The same value should be set for both failover and failover test.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default
FailoverTest	Information about the networks used for failover test.
VCD	
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p> <p>Note: The same value should be set for both failover and failover test.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default.
Recovery	
VCD	
OrgVdcIdentifier	The identifier of an Org vDC.
Vms	
Journal	
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.

PARAMETER	DESCRIPTION
Nics	
Failover	Information about the networks used for failover by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
FailoverTest	Information about the networks used for failover test by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
NicIdentifier	The identifier of the NIC for which settings are returned.

PARAMETER	DESCRIPTION
Recovery	
VCD	
StoragePolicyIdentifier	The identifier of the recovery storage policy. When the VmIdentifier is set, the StoragePolicyIdentifier is set by default.
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .
Volumes	Information about the volumes used by the virtual machine.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
VCD	
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumIdentifier	The identifier of the volume.
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session.
VpgSettingsIdentifier	The identifier received after running the following POST API: <code>https://zvm_ip:port/v1/vpgSettings</code>

Update the basic settings in a VPG settings object Request values for `https://zvm_ip:port/v1/vpgSettings/basic`.

PARAMETER	DESCRIPTION
Basic	
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).
Name	The name of the VPG.
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data.
ProtectedSiteIdentifier	The identifier of the site where the VPG virtual machines will be protected. This is the site where the API runs.
RecoverySiteIdentifier	The identifier of the site where the VPG virtual machines will be recovered.
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.

PARAMETER	DESCRIPTION
ServiceProfileIdentifier	The identifier of the service profile to use for the VPG when a Zerto Cloud Manager is used.
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months.
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.

Update the journal settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/journal.

PARAMETER	DESCRIPTION
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.

Update the network settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/networks.

PARAMETER	DESCRIPTION
Networks	
Failover	Information about the networks used for failover.
VCD	
IsEnableGuestCustomization	True : The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines. False : The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available. Note : The same value should be set for both failover and failover test.

PARAMETER	DESCRIPTION
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default
FailoverTest	Information about the networks used for failover test.
VCD	
IsEnableGuestCustomization	<p>True: The computer name and network settings configured for this virtual machine are applied to its Guest OS when the virtual machine is powered on. Use this option to enable re-IPing the recovered virtual machines.</p> <p>False: The computer name and network settings configured for this virtual machine are not applied to its Guest OS when the virtual machine is powered on. Re-IPing is not available.</p> <p>Note: The same value should be set for both failover and failover test.</p>
DefaultRecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the default recovery settings applied to every virtual machine in the VPG. When OrgVdcIdentifier is set, DefaultRecoveryOrgVdcNetworkIdentifier is set by default.

Update the virtual machine settings in a VPG settings object Request values for
https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}.

PARAMETER	DESCRIPTION
Vms	
Journal	
Limitation	Information about the journal limitations.
HardLimitInMB	The maximum journal size in MBs. 0 means unlimited. Integer values.
HardLimitInPercent	The percentage of the virtual machine volume size the journal can grow to. 0 means unlimited. Integer values.
WarningThresholdInMB	The journal size, in MBs, that generates a warning that the journal is nearing its hard limit. 0 means unlimited. Integer values.
WarningThresholdInPercent	The percentage of the virtual machine volume size that generates a warning. 0 means unlimited. Integer values.
Nics	
Failover	Information about the networks used for failover by this virtual machine.
VCD	
IpMode	<p>The IP mode. Possible values are:</p> <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.

PARAMETER	DESCRIPTION
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
FailoverTest	Information about the networks used for failover test by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
NicIdentifier	The identifier of the NIC for which settings are returned.
Recovery	
VCD	
StoragePolicyIdentifier	The identifier of the recovery storage policy. When the VmIdentifier is set, the StoragePolicyIdentifier is set by default.
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .

PARAMETER	DESCRIPTION
Volumes	Information about the volumes used by the virtual machine.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
VCD	
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumelIdentifier	The identifier of the volume.

Update the virtual machine settings in a VPG settings object Request values for

https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}/nics/{nicIdentifier}.

PARAMETER	DESCRIPTION
Nics	
Failover	Information about the networks used for failover by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is therecovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default
FailoverTest	Information about the networks used for failover test by this virtual machine.
VCD	
IpMode	The IP mode. Possible values are: <ul style="list-style-type: none"> ■ Static IP Pool - pulls IP addresses from the network's IP pool. ■ Static Manual - allows you to specify an IP address. ■ DHCP - pulls IP addresses from a DHCP server.

PARAMETER	DESCRIPTION
IsConnected	True: Is NIC connected False: Is NIC not connected.
IsPrimary	True: The DNS server that handles Internet protocol mapping is the primary. False: The DNS server that handles Internet protocol mapping is not the primary.
IsResetMacAddress	True: The Media Access Control (MAC) address used on the protected site will be copied to the recovery site. False: The Media Access Control (MAC) address used on the protected site will not be copied to the recovery site.
RecoveryOrgVdcNetworkIdentifier	The identifier of the Org vDC network. This is the recovery settings applied to the virtual machine When OrgVdcIdentifier is set, RecoveryOrgVdcNetworkIdentifier is set by default

Update the virtual machine settings in a VPG settings object Request values for

`https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}/volumes/{volumeId}`.

PARAMETER	DESCRIPTION
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .
Volumes	Information about the volumes used by the virtual machine.
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.
VCD	
IsThin	True: The recovery volumes are thin-provisioned. False: The recovery volumes are <i>not</i> thin-provisioned.
VolumelIdentifier	The identifier of the volume.

Response Format

The response bodies are empty.

vSphere to vCD - Delete Existing VPG Settings

Delete all or part of an existing VPG settings object.

Note: Mandatory parameters that do not have a default value must be set using the PUT command after using the Delete option.

URL

Delete a VPG settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Delete basic settings from a VPG	<code>https://zvm_ip:port/v1/{vpgSettingsIdentifier}/basic</code>
Delete journal settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal</code>
Delete network settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Delete recovery settings from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery</code>
Delete a VM from a VPG	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Reset NIC settings object to Default	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics/{nicIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.

Request Body Using Json Format

The request bodies are empty.

Response Format

The response bodies are empty.

vSphere to Azure VPG Management APIs

Using the **VpgSettings APIs**, you can create, edit and delete VPGs from a protected vSphere site to a recovery Microsoft Azure site.

The same VPGSettings parameters apply across all platforms. When recovering from vSphere to Azure, the following parameters are specific to Azure:

- **SecurityGroupIdentifier**
- **SubnetIdentifier**
- **VirtualNetworkIdentifier**
- **VmInstanceType**
- **RecoveryDiskType**

This section includes the following:

- [“vSphere to Azure - Create New VPG Settings”, on page 322](#)
- [“vSphere to Azure - Edit Existing VPG Settings”, on page 336](#)
- [“vSphere to Azure - Delete Existing VPG Settings”, on page 351](#)

vSphere to Azure - Create New VPG Settings

To create a VPG, run the following APIs:

1. [Get a VPG Settings Identifier](#)
2. [Get an Empty VPG Template](#)
3. [Add Values in the Empty VPG Template](#)
4. [Get a Full VPG Template](#)

Get a VPG Settings Identifier

Run this API to get a VPG settings identifier. With the VPG Settings Identifier, you can request for an empty VPG template.

[Request Body Using Json Format](#)

[Response In Json Format](#)

METHOD	URL
POST	<code>https://zvm_ip:port/v1/vpgSettings</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.

Request Body Using Json Format

You can create a skeleton VPG settings object by using the following request body:

```
{ }
```

Response In Json Format

The following is an example response.

```
{  
  "VpgSettingsIdentifier": "String content"  
}
```

PARAMETER	DESCRIPTION
VpgSettingsIdentifier	The identifier of the VPG settings.

[Back to vSphere to Azure VPG Management APIs](#)

[Back to All APIs](#)

Get an Empty VPG Template

Run this API to get an empty VPG template to create a new VPG. Use this template to add parameters values for the VPG Settings Identifier. See [Add Values in the Empty VPG Template](#).

METHOD	URL
GET	<code>https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

Request Body Using Json Format

Response In Json Format

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example response.

```
[{
  "Backup": "String Content",
  "Basic": {
    "JournalHistoryInHours": number,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": Number,
    "ServiceProfileIdentifier": "String Content",
    "TestIntervalInMinutes": Number,
    "UseWanCompression": Boolean,
    "ZorgIdentifier": "String Content"
  },
  "BootGroups": {
    "BootGroups": [{
      "BootDelayInSeconds": Number,
      "BootGroupIdentifier": "String Content",
      "Name": "String Content"
    }]
  },
  "Journal": {
    "DatastoreIdentifier": "String Content",
    "Limitation": {
      "HardLimitInMB": Number,
      "HardLimitInPercent": Number,
      "WarningThresholdInMB": Number,
      "WarningThresholdInPercent": Number
    }
  }
},
```

```
"Networks": {
  "Failover": {
    Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    },
    "PublicCloud": null,
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": {
      "DefaultNetworkIdentifier": "String Content"
    },
    "PublicCloud": null,
    "VCD": null
  }
},
"Protected":{
  "VCD": null
},
"Recovery": {
  "DefaultDatastoreClusterIdentifier": "String Content",
  "DefaultDatastoreIdentifier": "String Content",
  "DefaultFolderIdentifier": "String Content",
  "DefaultHostClusterIdentifier": "String Content",
  "DefaultHostIdentifier": "String Content",
  "PublicCloud": null,
  "ResourcePoolIdentifier": "String Content"
  "VCD": null
},
"Scripting": {
  "PostBackup": "String Content",
  "PostRecovery": {
    "Command": "String Content",
    "Parameters": null,
    "TimeoutInSeconds": Number
  },
  "PreRecovery": {
    "Command": "String Content",
    "Parameters": "String Content",
    "TimeoutInSeconds": Number
  }
},
"Vms": [],
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}]
```

Add Values in the Empty VPG Template

Add values for the new VPG by running a PUT API. The empty template includes mandatory fields for creating a VPG. The mandatory fields are specified in the [Request Body Using Json Format](#).

By running the PUT API with a value in **RecoverySiteIdentifier**, you are defining the recovery site as an Azure site.

After adding the values in the empty template, run a GET API to receive the full template, with the newly defined parameters and their sub-parameters. Run a PUT API to add values for the sub-parameters. See [Get a Full VPG Template](#).

Note: Once all parameters are set, commit the changes using POST commit with the full JSON request body:

```
https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}/commit
```

METHOD	URL
PUT	https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

[Request Body Using Json Format](#)

[Response In Json Format](#)

[Request Body Using Json Format](#)

The following is an example vSphere to Azure request Json body.

```
[{
  "Basic": {
    "Name": "string content",
    "ProtectedSiteIdentifier": "string content",
    "RecoverySiteIdentifier": "string content"
  },
  "Networks": {
    "Failover": {
      "PublicCloud": {
        "VirtualNetworkIdentifier": "string content",
        "SubnetIdentifier": "string content",
        "SecurityGroupIdentifier": "string content"
      }
    },
    "FailoverTest": {
      "PublicCloud": {
        "VirtualNetworkIdentifier": "string content",
        "SubnetIdentifier": "string content",
        "SecurityGroupIdentifier": "string content"
      }
    }
  }
},
```

```

"Recovery": {
  "PublicCloud": {
    "Failover": {
      "VmInstanceType": string,
      "Azure":{
        "RecoveryDiskType": string
      }
    },
    "FailoverTest": {
      "VmInstanceType": string,
      "Azure":{
        "RecoveryDiskType": string
      }
    }
  }
},
"Vms": [
  {
    "VmIdentifier": "string content"
  }
]
}

```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Basic			
Name	The name of the VPG.	Yes	
ProtectedSiteIdentifier	The identifier of the site where the VPG will be protected. This is the site where the API runs.	Yes	Current site
RecoverySiteIdentifier	The identifier of the site where the VPG will be recovered.	Yes	
Networks			
Failover	Information about the networks used for failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
Recovery			
PublicCloud			
Failover			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
Vms			
VmIdentifier	The identifier of the selected VM to be protected.	Yes	

Response In Json Format

The response body is empty.

Get a Full VPG Template

After you add the values to the mandatory parameters, run this API to receive a more detailed template. The detailed template includes sub-parameters of the parameters to which you added values. Add values to the sub-parameters using the PUT API. See [Add Values in the Empty VPG Template](#).

METHOD	URL
GET	https://zvm_ip:port/v1/vpgSettings/{VpgSettingsIdentifier}

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
VpgSettingsIdentifier	The identifier of the VPG settings.

[Request Body Using Json Format](#)

[Response In Json Format](#)

Request Body Using Json Format

The request body is empty.

Response In Json Format

The following is an example Azure response Json body.

```
{
  "Backup": null,
  "Basic": {
    "JournalHistoryInHours": 24,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": 300,
    "ServiceProfileIdentifier": "string content"
    "TestIntervalInMinutes": 262080,
    "UseWanCompression": Boolean,  },
  "BootGroups":null,
  "Journal":null,
```

```
"Networks": {
  "Failover": {
    "Hypervisor": null,
    "PublicCloud": {
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": null,
    "PublicCloud": {
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  }
},
```

```
"Recovery": {
  "DefaultDatastoreClusterIdentifier": null,
  "DefaultDatastoreIdentifier": null,
  "DefaultFolderIdentifier": null,
  "DefaultHostClusterIdentifier": null,
  "DefaultHostIdentifier": null,
  "PublicCloud": {
    "Failover": {
      "VmInstanceType": "string content",
      "Azure":{
        "RecoveryDiskType": "string content"
      }
    },
    "FailoverTest": {
      "VmInstanceType": "string content",
      "Azure":{
        "RecoveryDiskType": "string content"
      }
    }
  },
  "ResourcePoolIdentifier": null,
  "VCD": null
},
```

```
"Vms":[
{
  "BootGroupIdentifier": null,
  "Journal": null,
```

```
"Nics": [  
  {  
    "Failover": {  
      "Hypervisor": null,  
      "PublicCloud": {  
        "PrivateIP": "string content",  
        "VirtualNetworkIdentifier": "string content",  
        "SubnetIdentifier": "string content",  
        "SecurityGroupIdentifier": "string content"  
      },  
      "VCD": null  
    },  
    "FailoverTest": {  
      "Hypervisor": null,  
      "PublicCloud": {  
        "PrivateIP": "string content",  
        "VirtualNetworkIdentifier": "string content",  
        "SubnetIdentifier": "string content",  
        "SecurityGroupIdentifier": "string content"  
      },  
      "VCD": null  
    },  
    "NicIdentifier": "String content"  
  }  
],
```

```
"Recovery": {  
  "DatastoreClusterIdentifier": null,  
  "DatastoreIdentifier": null,  
  "FolderIdentifier": null,  
  "HostClusterIdentifier": null,  
  "HostIdentifier": null,  
  "PublicCloud": {  
    "Failover": {  
      "VmInstanceType": "string content",  
      "Azure": {  
        "RecoveryDiskType": "string content"  
      }  
    },  
    "FailoverTest": {  
      "VmInstanceType": "string content",  
      "Azure": {  
        "RecoveryDiskType": "string content"  
      }  
    }  
  },  
  "ResourcePoolIdentifier": null,  
  "VCD": null  
},  
"VmIdentifier": "string content",
```

```
"Volumes": [{  
  "Datastore": null,  
  "IsSwap": Boolean,  
  "Preseed": null,  
  "RDM": null,  
  "VCD": null,  
  "VolumeIdentifier": "String content"  
}]  
},  
]
```

```
"VpgIdentifier": "String Content",
"VpgSettingsIdentifier": "String Content"
}
```

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Basic			
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).		24
Name	The name of the VPG.	Yes	
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data. 		Medium
ProtectedSiteIdentifier	The identifier of the site where the VPG will be protected. This is the site where the API runs.	Yes	
RecoverySiteIdentifier	The identifier of the site where the VPG will be recovered.	Yes	
RpInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.		300
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months. 		262080
UseWanCompression	True: Data will be compressed before sending it to the recovery site. False: Data will not be compressed before sending it to the recovery site.		True
Networks			
Failover	Information about the networks used for failover.		
PublicCloud			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
Recovery			
PublicCloud			
Failover			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
Vms			
Nics			
Failover	Information about the networks used for failover.		
PublicCloud			
PrivateIP			DHCP
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
NicIdentifier	The identifier of the NIC for which settings are returned. Protecting to Azure this value is NULL.		
Recovery			
PublicCloud			
Failover			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .		
Volumes	Information about the volumes used by the virtual machine.		
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.		
VolumIdentifier	The identifier of the volume.		
VpgIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session.		
VpgSettingsIdentifier	The identifier received after running the following POST API: https://zvm_ip:port/v1/vpgSettings		

[Back to vSphere to Azure VPG Management APIs](#)

[Back to All APIs](#)

vSphere to Azure - Edit Existing VPG Settings

The PUT method is used to update an existing VPG settings object.

Edit VPG settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}</code>
Edit basic settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic</code>
Edit network settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks</code>
Edit VM settings object	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}</code>
Edit a specific volume, of a specific VM	<code>https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}</code>

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.
vmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.moref</i> .

[Request Body Using Json Format](#)

[Request Values](#)

[Response Format](#)

Request Body Using Json Format

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
{
  "Backup": null,
  "Basic": {
    "JournalHistoryInHours": 24,
    "Name": "String Content",
    "Priority": "String Content",
    "ProtectedSiteIdentifier": "String Content",
    "RecoverySiteIdentifier": "String Content",
    "RpoInSeconds": 300,
    "ServiceProfileIdentifier": "string content",
    "TestIntervalInMinutes": 262080,
    "UseWanCompression": Boolean,
  },
  "BootGroups": null,
  "Journal": null,
}
```

```
"Networks": {
  "Failover": {
    "Hypervisor": null,
    "PublicCloud": {
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": null,
    "PublicCloud": {
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  }
},
```

```
"Recovery": {
  "DefaultDatastoreClusterIdentifier": null,
  "DefaultDatastoreIdentifier": null,
  "DefaultFolderIdentifier": null,
  "DefaultHostClusterIdentifier": null,
  "DefaultHostIdentifier": null,
  "PublicCloud": {
    "Failover": {
      "VmInstanceType": "string content",
      "Azure":{
        "RecoveryDiskType": "string content"
      }
    },
    "FailoverTest": {
      "VmInstanceType": "string content",
      "Azure":{
        "RecoveryDiskType": "string content"
      }
    }
  },
  "ResourcePoolIdentifier": null,
  "VCD": null
},
```

```
"Vms":[
{
  "BootGroupIdentifier": null,
  "Journal": null,
```

```
"Nics": [
{
  "Failover": {
    "Hypervisor": null,
    "PublicCloud": {
      "PrivateIP": "string content",
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": null,
    "PublicCloud": {
      "PrivateIP": "string content",
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "NicIdentifier": "String content"
}
],
```

```
"Recovery": {
  "DatastoreClusterIdentifier": null,
  "DatastoreIdentifier": null,
  "FolderIdentifier": null,
  "HostClusterIdentifier": null,
  "HostIdentifier": null,
  "PublicCloud": {
    "Failover": {
      "VmInstanceType": "string content",
      "Azure": {
        "RecoveryDiskType": "string content"
      }
    },
    "FailoverTest": {
      "VmInstanceType": "string content",
      "Azure": {
        "RecoveryDiskType": "string content"
      }
    }
  },
  "ResourcePoolIdentifier": null,
  "VCD": null
},
"VmIdentifier": "string content",
```

```
"Volumes": [{
  "Datastore": null,
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}]
},
]
```

```
"VpgIdentifier": "String Content",  
"VpgSettingsIdentifier": "String Content"  
}
```

The following is an example of a request body in Json format for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.

```
{  
  "JournalHistoryInHours": 24,  
  "Name": "String Content",  
  "Priority": "String Content",  
  "ProtectedSiteIdentifier": "String Content",  
  "RecoverySiteIdentifier": "String Content",  
  "RpoInSeconds": 300,  
  "ServiceProfileIdentifier": "string content"  
  "TestIntervalInMinutes": 262080,  
  "UseWanCompression": Boolean, },  
}
```

The following is an example of a request body in Json format for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks.

```
{  
  "Failover": {  
    "Hypervisor": null,  
    "PublicCloud": {  
      "VirtualNetworkIdentifier": "string content",  
      "SubnetIdentifier": "string content",  
      "SecurityGroupIdentifier": "string content"  
    },  
    "VCD": null  
  },  
  "FailoverTest": {  
    "Hypervisor": null,  
    "PublicCloud": {  
      "VirtualNetworkIdentifier": "string content",  
      "SubnetIdentifier": "string content",  
      "SecurityGroupIdentifier": "string content"  
    },  
    "VCD": null  
  }  
}
```

The following is an example of a request body in Json format for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}

```
{  
  "BootGroupIdentifier": null,  
  "Journal": null,  
}
```

```
"Nics": [
{
  "Failover": {
    "Hypervisor": null,
    "PublicCloud": {
      "PrivateIP": "string content",
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "FailoverTest": {
    "Hypervisor": null,
    "PublicCloud": {
      "PrivateIP": "string content",
      "VirtualNetworkIdentifier": "string content",
      "SubnetIdentifier": "string content",
      "SecurityGroupIdentifier": "string content"
    },
    "VCD": null
  },
  "NicIdentifier": "String content"
}
],
```

```
"Recovery": {
  "DatastoreClusterIdentifier": null,
  "DatastoreIdentifier": null,
  "FolderIdentifier": null,
  "HostClusterIdentifier": null,
  "HostIdentifier": null,
  "PublicCloud": {
    "Failover": {
      "VmInstanceType": "string content",
      "Azure": {
        "RecoveryDiskType": "string content"
      }
    },
    "FailoverTest": {
      "VmInstanceType": "string content",
      "Azure": {
        "RecoveryDiskType": "string content"
      }
    }
  },
  "ResourcePoolIdentifier": null,
  "VCD": null
},
"VmIdentifier": "string content",
```

```
"Volumes": [{
  "Datastore": null,
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}]
}
```

The following is an example of a request body in Json format for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}`.

```
{
  "Datastore": null,
  "IsSwap": Boolean,
  "Preseed": null,
  "RDM": null,
  "VCD": null,
  "VolumeIdentifier": "String content"
}
```

Request Values

[Update a VPG settings object](#)

[Update the basic settings in a VPG settings object](#)

[Update the network settings in a VPG settings object](#)

[Update the virtual machine settings in a VPG settings object - vmIdentifier](#)

[Update the virtual machine settings in a VPG settings object - volumeld](#)

[Update a VPG settings object](#) Request values for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Basic			
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).		24
Name	The name of the VPG.	Yes	
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data. 		Medium
ProtectedSiteIdentifier	The identifier of the site where the VPG will be protected. This is the site where the API runs.	Yes	
RecoverySiteIdentifier	The identifier of the site where the VPG will be recovered.	Yes	
RpolnSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.		300

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months. 		262080
UseWanCompression	True : Data will be compressed before sending it to the recovery site. False : Data will not be compressed before sending it to the recovery site.		True
Networks			
Failover	Information about the networks used for failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
Recovery			
PublicCloud			
Failover			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
Vms			
Nics			
Failover	Information about the networks used for failover.		

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
PublicCloud			
PrivateIP			DHCP
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
NicIdentifier	The identifier of the NIC for which settings are returned. Protecting to Azure this value is NULL.		
Recovery			
PublicCloud			
Failover			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .		
Volumes	Information about the volumes used by the virtual machine.		
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.		
VolumIdentifier	The identifier of the volume.		
VpplIdentifier	The VPG identifier will be specified if a VPG was already created in a previous session.		
VpgSettingsIdentifier	The identifier received after running the following POST API: https://zvm_ip:port/v1/vpgSettings		

Update the basic settings in a VPG settings object Request values for https://zvm_ip:port/v1/vpgSettings/basic

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
JournalHistoryInHours	The time that all write commands are saved in the journal. The value is between 1 and 336 (14 days).		24
Name	The name of the VPG.	Yes	
Priority	The priority specified for the VPG. Possible values are: <ul style="list-style-type: none"> ■ Low: The VPG has a low priority for transferring data. ■ Medium: The VPG has a medium priority for transferring data. ■ High: The VPG has a high priority for transferring data. 		Medium
ProtectedSiteIdentifier	The identifier of the site where the VPG will be protected. This is the site where the API runs.	Yes	
RecoverySiteIdentifier	The identifier of the site where the VPG will be recovered.	Yes	
RpoInSeconds	The maximum desired time between each automatic checkpoint being written to the journal before an alert is issued.		300
TestIntervalInMinutes	The time, in minutes, recommended between testing the integrity of the VPG. A warning is issued if a test is not done within this time frame. Possible values are: <ul style="list-style-type: none"> ■ 0: No testing is expected. ■ 43200 or null: Testing is expected monthly. ■ 131040: Testing is expected every three months. ■ 262080: Testing is expected every six months. ■ 394560: Testing is expected every nine months. ■ 525600: Testing is expected every twelve months. 		262080
UseWanCompression	True: Data will be compressed before sending it to the recovery site. False: Data will not be compressed before sending it to the recovery site.		True

Update the network settings in a VPG settings object Request values for

https://zvm_ip:port/v1/vpgSettings/networks

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Failover	Information about the networks used for failover.		
PublicCloud			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None

Update the virtual machine settings in a VPG settings object - **vmIdentifier** Request values for
https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
Nics			
Failover	Information about the networks used for failover.		
PublicCloud			
PrivateIP			DHCP

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
FailoverTest	Information about the networks used for testing failover.		
PublicCloud			
VirtualNetworkIdentifier	The identifier of the virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available vNets .	Yes	
SubnetIdentifier	The identifier of the subnet which is under the specified virtual network. This is the default recovery settings applied to every virtual machine in the VPG. See Available Subnets .	Yes	
SecurityGroupIdentifier	The identifier of the Azure network security to be associated with the virtual machines in this VPG. This is the default recovery settings applied to every virtual machine in the VPG. See Security Groups .	Yes	None
NicIdentifier	The identifier of the NIC for which settings are returned. Protecting to Azure this value is NULL.		
Recovery			
PublicCloud			
Failover			

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
FailoverTest			
VmInstanceType	The virtual machine instance type, within the virtual machine series, to assign to recovered virtual machines. Different sizes within a virtual machine series vary, for example in a number of cores, RAM, and local storage size. See VM Instance Type .	Yes	
Azure			
RecoveryDiskType	The Azure recovery storage type to which the entire VPG will be recovered; UnmanagedStandard or ManagedPremiumSSD .	Yes	UnmanagedStandard
VmIdentifier	The identifier of the virtual machine. The identifier comprises the server identifier and the virtual machine moref, with the format, <i>serverid.more</i> .		
Volumes	Information about the volumes used by the virtual machine.		
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.		
VolumelIdentifier	The identifier of the volume.		

Update the virtual machine settings in a VPG settings object - **volumelId** Request values for

https://zvm_ip:port/v1/vpgSettings/vms/{vmIdentifier}/{vmIdentifier}/volumes/{volumeId}

PARAMETER	DESCRIPTION	MANDATORY	DEFAULT
IsSwap	True: The recovery disk is marked as a temp data disk. False: The recovery disk is not marked as a temp data disk.		
VolumelIdentifier	The identifier of the volume.		

Response Format

The response bodies are empty.

vSphere to Azure - Delete Existing VPG Settings

Delete all or part of an existing VPG settings object.

Note: Mandatory parameters that do not have a default value must be set using the PUT command after using the Delete option.

[URL](#)

[Request Body Using Json Format](#)

[Response Format](#)

URL

Delete a VPG settings object `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`

Delete basic settings from a VPG `https://zvm_ip:port/v1/{vpgSettingsIdentifier}/basic`

Delete network settings from a VPG `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks`

Delete recovery settings from a VPG `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery`

Delete a VM from a VPG `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}`

Where:

zvm_ip	The IP address of the Zerto Virtual Manager where the API is run.
port	The port to access the Zerto Virtual Manager. The default port is 9669.
vpgSettingsIdentifier	The identifier of the VPG settings object.

[Request Body Using Json Format](#)

The request bodies are empty.

[Response Format](#)

The response bodies are empty.

This section provides examples of Zerto RESTful API XML request and response formats.

- "V1/ API XML Response Format", below
- "Alerts API XML Response Format", on page 352
- "Events API XML Response Format", on page 353
- "Datastores API XML Response Format", on page 356
- "Local Site API XML Response Format", on page 362
- "Peer Sites API XML Request and Response Formats", on page 363
- "Resources Report API XML Response Formats", on page 364
- "Service Profiles API XML Response Formats", on page 367
- "Tasks API XML Response Format", on page 367
- "Virtualization Sites API XML Response Format", on page 369
- "VMs API XML Response Format", on page 370
- "VPGs API XML Request and Response Formats", on page 372
- "VPG Settings API XML Request and Response Formats", on page 376
- "VRAs API XML Request and Response Formats", on page 399
- "ZORG API XML Response Format", on page 402

V1/ API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/`.

```
<ArrayOfLink_String xmlns="http://schemas.zerto.com/zvm/api">
  <Link_String>
    <href>String content</href>
    <rel>String content</rel>
    <type>String content</type>
  </Link_String>
  ...
</ArrayOfLink_String>
```

Alerts API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/alerts` and, without the array statement, for `https://zvm_ip:port/v1/alerts/{alertId}`.

```
<ArrayOfAlertApi xmlns="http://schemas.zerto.com/zvm/api">
  <AlertApi>
    <AffectedVpgs>
      <ResourceLink>
        <href>String content</href>
        <identifier>String content</identifier>
        <rel>String content</rel>
        <type>String content</type>
      </ResourceLink>
      ...
    </AffectedVpgs>
  </AlertApi>
</ArrayOfAlertApi>
```

```
<AffectedZorgs>
  <ResourceLink>
    <href>String content</href>
    <identifier>String content</identifier>
    <rel>String content</rel>
    <type>String content</type>
  </ResourceLink>
  ...
</AffectedZorgs>

<Description>String content</Description>
<Entity>String content</Entity>
<HelpIdentifier>String content</HelpIdentifier>
<IsDismissed>true</IsDismissed>
<Level>String content</Level>

<Link>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</Link>

<Site>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</Site>
<TurnedOn>1999-05-31T11:20:00</TurnedOn>
</AlertApi>
...
</ArrayOfAlertApi>
```

The following is an example response XML body for https://zvm_ip:port/v1/alerts/entities, https://zvm_ip:port/v1/alerts/helpidentifiers, and https://zvm_ip:port/v1/alerts/levels.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Events API XML Response Format

The following is an example response XML body for https://zvm_ip:port/v1/events and, without the array statement, for https://zvm_ip:port/v1/events/{eventId}.

```
<ArrayOfEventApi xmlns="http://schemas.zerto.com/zvm/api">
  <EventApi>
    <Description>String content</Description>
    <EntityType>String content</EntityType>
    <EventCategory>String content</EventCategory>
    <EventCompletedSuccessfully>true</EventCompletedSuccessfully>
    <EventIdentifier>String content</EventIdentifier>
    <EventType>String content</EventType>
```

```
<HelpLink>String content</HelpLink>
<Link>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</Link>
<Link__x007B_0_x007D_>
  <href>String content</href>
  <rel>String content</rel>
  <type>String content</type>
</Link__x007B_0_x007D_>
<OccurredOn>1999-05-31T11:20:00</OccurredOn>
```

```
<RelatedEntities>
  <Alerts>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Alerts>
  <FlrSessions>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </FlrSessions>
  <Hosts>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Hosts>
  <Sites>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Sites>
  <Vpgs>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Vpgs>
  <Zorgs>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Zorgs>
</RelatedEntities>
<SiteIdentifier>String content</SiteIdentifier>
<SiteName>String content</SiteName>
<UserName>String content</UserName>
```

```
<Vpgs>
  <VpgApiLink>
    <Link__x007B_0_x007D_>
      <href>String content</href>
      <rel>String content</rel>
      <type>String content</type>
    </Link__x007B_0_x007D_>
    <VpgIdentifier>String content</VpgIdentifier>
    <VpgName>String content</VpgName>
  </VpgApiLink>
  ...
</Vpgs>
```

```
<ZorgIdentifier>String content</ZorgIdentifier>
<ZorgName>String content</ZorgName>
</EventApi>
...
</ArrayOfEventApi>
```

The following is an example response XML body for https://zvm_ip:port/v1/events/categories, https://zvm_ip:port/v1/events/entities, and https://zvm_ip:port/v1/events/types.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Datstores API XML Response Format

The following is an example response XML body for https://zvm_ip:port/v1/datstores.

```
<ArrayOfDatastoreApi xmlns="http://schemas.zerto.com/zvm/api"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <DatastoreApi>
    <Config>
      <Devices xmlns:a="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
<a:string>naa.64ed2a2559082bd7f08f25962af9e6c3</a:string>
      </Devices>
      <OwningCluster i:nil="true"/>
      <Type i:nil="true"/>
    </Config>
    <DatastoreIdentifier>stringcontent</DatastoreIdentifier>
    <DatastoreName>Cluster1</DatastoreName>
    <Health i:nil="true"/>
    <Stats>
      <AvailabilityStatus>Normal</AvailabilityStatus>
      <NumIncomingVMs>0</NumIncomingVMs>
      <NumOutgoingVMs>0</NumOutgoingVMs>
      <NumVRAs>0</NumVRAs>
      <Usage>
```

```
<Datastore>
  <CapacityInBytes>429228294144</CapacityInBytes>
  <FreeInBytes>100755570688</FreeInBytes>
  <ProvisionedInBytes>375117592644</ProvisionedInBytes>
  <UsedInBytes>328472723456</UsedInBytes>
</Datastore>
<Zerto i:nil="true"/>
</Usage>
</Stats>
</DatastoreApi>
<DatastoreApi>
  <Config>
```

```
</Devices> xmlns:a="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
</Devices>
<OwningCluster i:nil="true"/>
<Type>VMFS</Type>
</Config>
<DatastoreIdentifier>stringcontent</DatastoreIdentifier>
<DatastoreName>Cluster1</DatastoreName>
<Health i:nil="true"/>
<Stats>
  <AvailabilityStatus>Normal</AvailabilityStatus>
  <NumIncomingVMs>0</NumIncomingVMs>
  <NumOutgoingVMs>0</NumOutgoingVMs>
  <NumVRAs>0</NumVRAs>
</Usage>
```

```
<Datastore>
  <CapacityInBytes>429228294144</CapacityInBytes>
  <FreeInBytes>100755570688</FreeInBytes>
  <ProvisionedInBytes>375117592644</ProvisionedInBytes>
  <UsedInBytes>328472723456</UsedInBytes>
</Datastore>
<Zerto
```

```
<Appliances>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Appliances>
<Journal>
  <ProvisionedInBytes>33570816</ProvisionedInBytes>
  <UsedInBytes>749731840</UsedInBytes>
</Journal>
<Protected>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Protected>
<Recovery>
  <ProvisionedInBytes>29366272</ProvisionedInBytes>
  <UsedInBytes>11507073024</UsedInBytes>
</Recovery>
<Scratch>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Scratch>
<Unknown>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Unknown>
</Zerto>
</Usage>
</Stats>
</DatastoreApi>
<DatastoreApi>
  </Config>
```

```
</Devices>xmlns:a="http://schemas.microsoft.com/2003/10/Serialization/Arrays"> </Devi
ces>
```

```
<OwningCluster i:nil="true"/>
<Type>VMFS</Type>
</Config>
<DatastoreIdentifier>stringcontent</DatastoreIdentifier>
<DatastoreName>Cluster1</DatastoreName>
<Health i:nil="true"/>
<Stats>
  <AvailabilityStatus>Normal</AvailabilityStatus>
  <NumIncomingVMs>0</NumIncomingVMs>
  <NumOutgoingVMs>0</NumOutgoingVMs>
  <NumVRAs>0</NumVRAs>
</Usage>
```

```
<Datastore>
  <CapacityInBytes>429228294144</CapacityInBytes>
  <FreeInBytes>100755570688</FreeInBytes>
  <ProvisionedInBytes>375117592644</ProvisionedInBytes>
  <UsedInBytes>328472723456</UsedInBytes>
</Datastore>
<Zerto
```

```

    <Appliances>
      <ProvisionedInBytes>0</ProvisionedInBytes>
      <UsedInBytes>0</UsedInBytes>
    </Appliances>
    <Journal>
      <ProvisionedInBytes>33570816</ProvisionedInBytes>
      <UsedInBytes>749731840</UsedInBytes>
    </Journal>
    <Protected>
      <ProvisionedInBytes>0</ProvisionedInBytes>
      <UsedInBytes>0</UsedInBytes>
    </Protected>
    <Recovery>
      <ProvisionedInBytes>29366272</ProvisionedInBytes>
      <UsedInBytes>11507073024</UsedInBytes>
    </Recovery>
    <Scratch>
      <ProvisionedInBytes>0</ProvisionedInBytes>
      <UsedInBytes>0</UsedInBytes>
    </Scratch>
    <Unknown>
      <ProvisionedInBytes>0</ProvisionedInBytes>
      <UsedInBytes>0</UsedInBytes>
    </Unknown>
  </Zerto>
</Usage>
</Stats>
</DatastoreApi>
</ArrayOfDatastoreApi>

```

The following is an example response XML body for `https://zvm_ip:port/v1/datastores/{datastoreIdentifier}`.

```

<DatastoreApi xmlns="http://schemas.zerto.com/zvm/api"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <Config>
    </Devices> xmlns:a="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
      <a:string>naa.64ed2a2559082bdb9c9895992af926e6</a:string>
      <a:string>naa.64ed2a2559088b6eb8a4659a2af926fa</a:string>
    </Devices>
    <OwningCluster i:nil="true"/>
    <Type>VMFS</Type>
  </Config>
  <DatastoreIdentifier>stringcontent</DatastoreIdentifier>
  <DatastoreName>Cluster1</DatastoreName>
  <Health i:nil="true"/>
  <Stats>
    <AvailabilityStatus>Normal</AvailabilityStatus>
    <NumIncomingVMs>0</NumIncomingVMs>
    <NumOutgoingVMs>0</NumOutgoingVMs>
    <NumVRAs>0</NumVRAs>
  </Usage>
  <Datastore>
    <CapacityInBytes>429228294144</CapacityInBytes>
    <FreeInBytes>100755570688</FreeInBytes>
    <ProvisionedInBytes>375117592644</ProvisionedInBytes>
    <UsedInBytes>328472723456</UsedInBytes>
  </Datastore>
</Zerto>

```

```
<Appliances>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Appliances>
<Journal>
  <ProvisionedInBytes>33570816</ProvisionedInBytes>
  <UsedInBytes>749731840</UsedInBytes>
</Journal>
<Protected>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Protected>
<Recovery>
  <ProvisionedInBytes>29366272</ProvisionedInBytes>
  <UsedInBytes>11507073024</UsedInBytes>
</Recovery>
<Scratch>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Scratch>
<Unknown>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Unknown>
</Zerto>
</Usage>
</Stats>
</DatastoreApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/volumes?volumeType={volumeType}&vpgIdentifier={vpgIdentifier}&datastoreIdentifier={datastoreIdentifier}&vmIdentifier={vmIdentifier}`.

```
<ArrayOfVolumeApi xmlns="http://schemas.zerto.com/zvm/api"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <VolumeApi>
    </Datastore>
    <Identifier>stringcontent</Identifier>
    <Name>stringcontent</Name>
  </Datastore>
  <IsThinProvisioned>true</IsThinProvisioned>
  <OwningVm>
    <Identifier>689ddcc7-21df-48aa-a9db-ba10bec79a47.vm-641</Identifier>
    <Name>Z-VRA-172.20.118.4</Name>
  </OwningVm>
  <Path>
    <FileName>stringcontent</FileName>
    <Full>[BK4BL08_EQL_DS3]stringcontent</Full>
    <Relative>stringcontent</Relative>
  </Path>
  <ProtectedVm>
    <Identifier>stringcontent</Identifier>
    <Name>stringcontent</Name>
  </ProtectedVm>
  <Size>
    <ProvisionedInBytes>33570816</ProvisionedInBytes>
    <UsedInBytes>441450496</UsedInBytes>
```

```
</Size>
<VolumeType>Journal</VolumeType>
<Vpg>
  <Identifier>stringcontent</Identifier>
  <Name>stringcontent</Name>
</Vpg>
</VolumeApi>
</VolumeApi>
</Datastore>
  <Identifier>stringcontent</Identifier>
  <Name>stringcontent</Name>
</Datastore>
<IsThinProvisioned>true</IsThinProvisioned>
<OwningVm>
  <Identifier>stringcontent</Identifier>
  <Name>stringcontent</Name>
</OwningVm>
<Path>
  <FileName>stringcontent</FileName>
  <Full>[BK4BL08_EQL_DS3]stringcontent</Full>
  <Relative>stringcontent</Relative>
</Path>
<ProtectedVm>
  <Identifier>stringcontent</Identifier>
  <Name>stringcontent</Name>
</ProtectedVm>
<Size>
  <ProvisionedInBytes>33570816</ProvisionedInBytes>
  <UsedInBytes>441450496</UsedInBytes>
</Size>
<VolumeType>Journal</VolumeType>
<Vpg>
  <Identifier>stringcontent</Identifier>
  <Name>stringcontent</Name>
</Vpg>
</VolumeApi>
</ArrayOfVolumeApi>
```

```
<Appliances>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Appliances>
<Journal>
  <ProvisionedInBytes>33570816</ProvisionedInBytes>
  <UsedInBytes>749731840</UsedInBytes>
</Journal>
<Protected>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Protected>
<Recovery>
  <ProvisionedInBytes>29366272</ProvisionedInBytes>
  <UsedInBytes>11507073024</UsedInBytes>
</Recovery>
<Scratch>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Scratch>
<Unknown>
  <ProvisionedInBytes>0</ProvisionedInBytes>
  <UsedInBytes>0</UsedInBytes>
</Unknown>
</Zerto>
</Usage>
</Stats>
</DatastoreApi>
```

Local Site API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/localsite`.

```
<LocalSiteApi xmlns="http://schemas.zerto.com/zvm/api">
  <ContactEmail>String content</ContactEmail>
  <ContactName>String content</ContactName>
  <ContactPhone>String content</ContactPhone>
  <IsReplicationToSelfEnabled>boolean</IsReplicationToSelfEnabled>
  <Link>
    <href>String content</href>
    <identifier>String content</identifier>
    <rel>String content</rel>
    <type>String content</type>
  </Link>
  <Location>String content</Location>
  <SiteIdentifier>String content</SiteIdentifier>
  <SiteName>String content</SiteName>
  <UtcOffsetInMinutes>2147483647</UtcOffsetInMinutes>
  <Version>String content</Version>
</LocalSiteApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/localsite/pairingstatuses`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Peer Sites API XML Request and Response Formats

The `https://zvm_ip:port/v1/peersites` API has GET and POST methods:

- “Peer Sites API GET Method Request and Response Formats”, below
- “Peer Sites API POST Method Request and Response Formats”, on page 363
- “Peer Sites API DELETE Method Request and Response Formats”, on page 364

Peer Sites API GET Method Request and Response Formats

The following is an example response XML body for `https://zvm_ip:port/v1/peersites` and, without the array statement, for `https://zvm_ip:port/v1/peersites/{siteIdentifier}`.

```
<ArrayOfPeerSiteApi xmlns="http://schemas.zerto.com/zvm/api">
  <PeerSiteApi>
    <HostName>String content</HostName>
    <IncomingThroughputInMb>1.26743233E+15</IncomingThroughputInMb>
    <Link>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </Link>
    <Link_x007B_0_x007D_>
      <href>String content</href>
      <rel>String content</rel>
      <type>String content</type>
    </Link_x007B_0_x007D_>
    <Location>String content</Location>
    <OutgoingBandWidth>1.26743233E+15</OutgoingBandWidth>
    <PairingStatus>Paired</PairingStatus>
    <PeerSiteName>String content</PeerSiteName>
    <Port>2147483647</Port>
    <ProvisionedStorage>2147483647</ProvisionedStorage>
    <SiteIdentifier>String content</SiteIdentifier>
    <UsedStorage>2147483647</UsedStorage>
    <Version>String content</Version>
  </PeerSiteApi>
  ...
</ArrayOfPeerSiteApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/peersites/pairingstatuses`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Peer Sites API POST Method Request and Response Formats

The `https://zvm_ip:port/v1/peersites` POST API has both request and response bodies.

Request Body Format

The following is an example request XML body for `https://zvm_ip:port/v1/peersites`.

```
<ArrayOfPeerSiteApi xmlns="http://schemas.zerto.com/zvm/api">
  <HostName>String content</HostName>
  <Port>9669</Port>
</ArrayOfPeerSiteApi>
```

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/peersites`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Peer Sites API DELETE Method Request and Response Formats

The following is an example request XML body for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}`.

```
<ArrayOfPeerSiteApi xmlns="http://schemas.zerto.com/zvm/api">
  <IsKeepTargetDisks>Boolean</IsKeepTargetDisks>
</ArrayOfPeerSiteApi>
```

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/peersites/{SiteIdentifier}`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Resources Report API XML Response Formats

Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/reports/resources`.

```
<ArrayOfVmResourcesReportApi xmlns:i="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://schemas.zerto.com/zvm/api">
  <VmResourcesReportApi>
    <Performance
      xmlns:a="http://schemas.datacontract.org/2004/07/Zerto.Zvm.Api.Interfaces.ResourcesReports.Vm
InfoApiDataItems">
      <a:BandwidthInBps>-1</a:BandwidthInBps>
      <a:ThroughputInBps>-1</a:ThroughputInBps>
    </Performance>
  </VmResourcesReportApi>
</ArrayOfVmResourcesReportApi>
```

```
<ProtectedSite
xmlns:a="http://schemas.datacontract.org/2004/07/Zerto.Zvm.Api.Interfaces.ResourcesReports.Vm
InfoApiDataItems">
  <a:SiteName>Site-20</a:SiteName>
  <a:VcdOrgName/>
  <a:Compute>
    <a:ClusterName>Cluster</a:ClusterName>
    <a:HostName>172.20.99.6</a:HostName>
    <a:OrgVdcName/>
    <a:ResourcePoolName/>
    <a:VraName>Z-VRA-172.20.99.6</a:VraName>
  </a:Compute>
  <a:Storage>
    <a:VolumesProvisionedStorageInGB>0.5</a:VolumesProvisionedStorageInGB>
    <a:VolumesUsedStorageInGB>0.498</a:VolumesUsedStorageInGB>
    <a:NumberOfVolumes>1</a:NumberOfVolumes>
  </a:Storage>
  <a:VmInfo>
    <a:Cpu>
      <a:CpuLimitationInMhz>0</a:CpuLimitationInMhz>
      <a:CpuReservedInMhz>0</a:CpuReservedInMhz>
      <a:CpuUsedInMhz>0</a:CpuUsedInMhz>
      <a:NumberOfvCpus>1</a:NumberOfvCpus>
    </a:Cpu>
    <a:HardwareVersion>vmx-08</a:HardwareVersion>
    <a:Memory>
      <a:ActiveGuestMemoryInMB>5</a:ActiveGuestMemoryInMB>
      <a:ConsumedHostMemoryInMB>129</a:ConsumedHostMemoryInMB>
      <a:MemoryInMB>256</a:MemoryInMB>
      <a:MemoryLimitationInMB>0</a:MemoryLimitationInMB>
      <a:MemoryReservedInMB>0</a:MemoryReservedInMB>
    </a:Memory>
    <a:VmIdentifier>949ab3d4-5e41-4a10-ad55-87f2414326d5.vm-102</a:VmIdentifier>
    <a:VmName>Forex-AppServer</a:VmName>
  </a:VmInfo>
</ProtectedSite>
```

```
<RecoverySite
xmlns:a="http://schemas.datacontract.org/2004/07/Zerto.Zvm.Api.Interfaces.ResourcesReports.Vm
InfoApiDataItems">
  <a:SiteName>Site-30</a:SiteName>
  <a:VcdOrgName/>
  <a:Compute>
    <a:ClusterName>Cluster</a:ClusterName>
    <a:HostName>172.20.99.24</a:HostName>
    <a:OrgVdcName/>
    <a:ResourcePoolName/>
    <a:VraName>Z-VRA-172.20.99.24</a:VraName>
    <a:FailoverOrMoveInstanceFamily/>
    <a:FailoverOrMoveInstanceType/>
    <a:FailoverTestInstanceFamily/>
    <a:FailoverTestInstanceType/>
  </a:Compute>
  <a:Storage>
    <a:VolumesProvisionedStorageInGB>0.5</a:VolumesProvisionedStorageInGB>
    <a:VolumesUsedStorageInGB>0</a:VolumesUsedStorageInGB>
    <a:DatastoreName>ZNest126 MSFT DS</a:DatastoreName>
    <a:JournalProvisionedStorageInGB>16</a:JournalProvisionedStorageInGB>
    <a:JournalUsedStorageInGB>0.297</a:JournalUsedStorageInGB>
    <a:StoragePolicyName/>
  </a:Storage>
</RecoverySite>
```

```
<SampleTime>2018-04-12T22:00:00.000Z</SampleTime>
<Vpg
xmlns:a="http://schemas.datacontract.org/2004/07/Zerto.Zvm.Api.Interfaces.ResourcesReports.Vm
InfoApiDataItems">
  <a:CrmIdentifier/>
  <a:ProtectedAndRecoveryType>VC2VC</a:ProtectedAndRecoveryType>
  <a:ServiceProfileName/>
  <a:VpgName>New York</a:VpgName>
  <a:ZorgName/>
</Vpg>
</VmResourcesReportApi>
</ArrayOfVmResourcesReportApi>
```

Service Profiles API XML Response Formats

The following is an example response XML body for `https://zvm_ip:port/v1/serviceprofiles` and, without the array statement, for `https://zvm_ip:port/v1/serviceprofiles/{siteIdentifier}`.

```
<ArrayOfServiceProfileApi xmlns="http://schemas.zerto.com/zvm/api">
  <ServiceProfileApi>
    <Description>String content</Description>
    <History>P428DT10H30M12.3S</History>
    <JournalWarningThresholdInPercent>4294967295</JournalWarningThresholdInPercent>
    <Link>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </Link>
    <MaxJournalSizeInPercent>4294967295</MaxJournalSizeInPercent>
    <Rpo>P428DT10H30M12.3S</Rpo>
    <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
    <ServiceProfileName>String content</ServiceProfileName>
    <TestInterval>P428DT10H30M12.3S</TestInterval>
  </ServiceProfileApi>
  ...
</ArrayOfServiceProfileApi>
```

Tasks API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/tasks` and, without the array statement, for `https://zvm_ip:port/v1/tasks/{taskIdentifier}`.

```
<ArrayOfTaskApi xmlns="http://schemas.zerto.com/zvm/api">
  <TaskApi>
    <CompleteReason>String content</CompleteReason>
    <Completed>1999-05-31T11:20:00</Completed>
    <InitiatedBy>String content</InitiatedBy>
    <IsCancellable>true</IsCancellable>
    <Link>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </Link>
  </TaskApi>
</ArrayOfTaskApi>
```

```
<RelatedEntities>
  <Hosts>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Hosts>
  <Sites>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Sites>
  <Vpgs>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </Vpgs>
  <FlrSessions>
    <ResourceLink>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ResourceLink>
    ...
  </FlrSessions>
</RelatedEntities>
<Started>1999-05-31T11:20:00</Started>
<Status>
  <Progress>2147483647</Progress>
  <State>FirstUnusedValue</State>
</Status>
<TaskIdentifier>String content</TaskIdentifier>
<Type>String content</Type>
</TaskApi>
...
</ArrayOfTaskApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/tasks/types`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

Virtualization Sites API XML Response Format

Virtualization sites The following is an example response XML body for `https://zvm_ip:port/v1/virtualizationsites` and, without the array statement, for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}`.

```
<ArrayOfVirtualizationSiteApi xmlns="http://schemas.zerto.com/zvm/api">
  <VirtualizationSiteApi>
    <SiteIdentifier>String content</SiteIdentifier>
    <VirtualizationSiteName>String content</VirtualizationSiteName>
  </VirtualizationSiteApi>
  ...
</ArrayOfVirtualizationSiteApi>
```

Datastore clusters The following is an example response XML body for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastoreclusters`.

```
<ArrayOfDatastoreClusterNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreClusterNativeApi>
    <DatastoreClusterName>String content</DatastoreClusterName>
  </DatastoreClusterNativeApi>
  ...
</ArrayOfDatastoreClusterNativeApi>
```

Datastores The following is an example response XML body for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/datastores`.

```
<ArrayOfDatastoreNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreNativeApi>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <DatastoreName>String content</DatastoreName>
  </DatastoreNativeApi>
  ...
</ArrayOfDatastoreNativeApi>
```

Folders The following is an example response XML body for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/folders`.

```
<ArrayOfFolderNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <FolderNativeApi>
    <FolderIdentifier>String content</FolderIdentifier>
    <FolderName>String content</FolderName>
  </FolderNativeApi>
  ...
</ArrayOfFolderNativeApi>
```

Host clusters The following is an example response XML body for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hostclusters`.

```
<ArrayOfHostClusterNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <HostClusterNativeApi>
    <ClusterIdentifier>String content</ClusterIdentifier>
    <VirtualizationClusterName>String content</VirtualizationClusterName>
  </HostClusterNativeApi>
  ...
</ArrayOfHostClusterNativeApi>
```

Hosts The following is an example response XML body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts` and, without the array statement, for `https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/hosts/{hostIdentifier}`.

```
<ArrayOfHostNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <HostNativeApi>
    <HostIdentifier>String content</HostIdentifier>
    <VirtualizationHostName>String content</VirtualizationHostName>
  </HostNativeApi>
  ...
</ArrayOfHostNativeApi>
```

Networks The following is an example response XML body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/networks`.

```
<ArrayOfNetworkNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <NetworkNativeApi>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <VirtualizationNetworkName>String content</VirtualizationNetworkName>
  </NetworkNativeApi>
  ...
</ArrayOfNetworkNativeApi>
```

VMware only - Org vDCs The following is an example response XML body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/orgvdc`s.

```
<ArrayOfOrgVdcNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <OrgVdcNativeApi>
    <Identifier>String content</Identifier>
    <OrgVdcName>String content</OrgVdcName>
  </OrgVdcNativeApi>
  ...
</ArrayOfOrgVdcNativeApi>
```

VMware only - Resource Pools The following is an example response XML body for

`https://zvm_ip:port/v1/virtualizationsites/{siteIdentifier}/resourcepools`.

```
<ArrayOfResourcePoolNativeApi xmlns="http://schemas.zerto.com/zvm/api">
  <ResourcePoolNativeApi>
    <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
    <ResourcepoolName>String content</ResourcepoolName>
  </ResourcePoolNativeApi>
  ...
</ArrayOfResourcePoolNativeApi>
```

VMs API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/vms` and, without the array statement, for `https://zvm_ip:port/v1/vms/{vmId}`.

```
<ArrayOfVmApi xmlns="http://schemas.zerto.com/zvm/api">
  <VmApi>
    <ActualRPO>2147483647</ActualRPO>
    <Entities>
      <Protected>VCVpg</Protected>
      <Recovery>VCVpg</Recovery>
      <Source>VCVpg</Source>
      <Target>VCVpg</Target>
    </Entities>
    <IOPS>2147483647</IOPS>
    <LastTest>1999-05-31T11:20:00</LastTest>
    <Link>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </Link>
    <Link_x007B_0_x007D_>
      <href>String content</href>
      <rel>String content</rel>
      <type>String content</type>
    </Link_x007B_0_x007D_>
    <OrganizationName>String content</OrganizationName>
    <Priority>Low</Priority>
    <ProtectedSite_>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </ProtectedSite_>
    <ProvisionedStorageInMB>2147483647</ProvisionedStorageInMB>
    <RecoverySite_>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </RecoverySite_>
    <SourceSite>String content</SourceSite>
    <Status>Initializing</Status>
    <SubStatus>None</SubStatus>
    <TargetSite>String content</TargetSite>
    <ThroughputInMB>1.26743233E+15</ThroughputInMB>
    <UsedStorageInMB>2147483647</UsedStorageInMB>
    <VmIdentifier>String content</VmIdentifier>
    <VmName>String content</VmName>
    <Volumes_>
      <VmVolumeApi>
        VmVolumeIdentifier>
      </VmVolumeApi>
    </Volumes_>
    <VpgName>String content</VpgName>
    <EnabledActions>
      <IsFlrEnabled>False</IsFlrEnabled>
    </EnabledActions>
    <VpgIdentifier>String content</VpgIdentifier>
  </VmApi>
  ...
</ArrayOfVmApi>
```

VPGs API XML Request and Response Formats

The `https://zvm_ip:port/v1/vpgs` API has GET, POST and DELETE methods:

- “VPGs API GET Method Response Formats”, below
- “VPGs API POST Method Request and Response Formats”, on page 374
- “VPGs API DELETE Method Request and Response Formats”, on page 376

VPGs API GET Method Response Formats

The `https://zvm_ip:port/v1/vpgs` GET APIs have response bodies.

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/vpgs` and, without the array statement, for `https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}`.

```
<ArrayOfVpgApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgApi>
    <ActiveProcessesApi>
      <RunningFailOverTestApi>
        <Stage>String content</Stage>
      </RunningFailOverTestApi>
    </ActiveProcessesApi>
    <ActualRPO>2147483647</ActualRPO>
    <BackupEnabled>true</BackupEnabled>
  </VpgApi>
  <Entities>
    <Protected>VCVpg</Protected>
    <Recovery>VCVpg</Recovery>
    <Source>VCVpg</Source>
    <Target>VCVpg</Target>
  </Entities>
  <IOPS>2147483647</IOPS>
  <LastTest>1999-05-31T11:20:00</LastTest>
  <Link>
    <href>String content</href>
    <identifier>String content</identifier>
    <rel>String content</rel>
    <type>String content</type>
  </Link>
  <Link__x007B_0_x007D_>
    <href>String content</href>
    <rel>String content</rel>
    <type>String content</type>
  </Link__x007B_0_x007D_>
  <OrganizationName>String content</OrganizationName>
  <Priority>Low</Priority>
  <ProgressPercentage>1.26743233E+15</ProgressPercentage>
  <ProtectedSite>
    <href>String content</href>
    <identifier>String content</identifier>
    <rel>String content</rel>
    <type>String content</type>
  </ProtectedSite>
  <ProvisionedStorageInMB>2147483647</ProvisionedStorageInMB>
</ArrayOfVpgApi>
```

```
<RecoverySite>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</RecoverySite>

<ServiceProfile>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</ServiceProfile>

<ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
<ServiceProfileName>String content</ServiceProfileName>
<SourceSite>String content</SourceSite>
<Status>Initializing</Status>
<SubStatus>None</SubStatus>

<TargetSite>String content</TargetSite>
<ThroughputInMB>1.26743233E+15</ThroughputInMB>
<UsedStorageInMB>2147483647</UsedStorageInMB>
<VmsCount>2147483647</VmsCount>
<VpgIdentifier>String content</VpgIdentifier>
<VpgName>String content</VpgName>

<Zorg>
  <href>String content</href>
  <identifier>String content</identifier>
  <rel>String content</rel>
  <type>String content</type>
</Zorg>

</VpgApi>
...
</ArrayOfVpgApi>
```

The following is an example response XML body for
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints/summary.

```
<VpgCheckpointsSummaryApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgDateCheckpointsInfo>
    <VpgDateCheckpointInfoApi>
      <Count>4294967295</Count>
      <Date>1999-05-31T11:20:00</Date>
    </VpgDateCheckpointInfoApi>
    <VpgDateCheckpointInfoApi>
      <Count>4294967295</Count>
      <Date>1999-05-31T11:20:00</Date>
    </VpgDateCheckpointInfoApi>
  </VpgDateCheckpointsInfo>
</VpgCheckpointsSummaryApi>
```

The following is an example response XML body for
https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/checkpoints.

```
<ArrayOfCheckpointApi xmlns="http://schemas.zerto.com/zvm/api">
  <CheckpointApi>
    <CheckpointIdentifier>String content</CheckpointIdentifier>
    <Tag>String content</Tag>
    <TimeStamp>1999-05-31T11:20:00</TimeStamp>
  </CheckpointApi>
  ...
</ArrayOfCheckpointApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/vpgs/entitytypes`, `https://zvm_ip:port/v1/vpgs/failovercommitpolicies`, `https://zvm_ip:port/v1/vpgs/failovershutdownpolicies`, `https://zvm_ip:port/v1/vpgs/priorities`, `https://zvm_ip:port/v1/vpgs/retentionpolicies`, `https://zvm_ip:port/v1/vpgs/statuses`, and for `https://zvm_ip:port/v1/vpgs/substatuses`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

VPGs API POST Method Request and Response Formats

The `https://zvm_ip:port/v1/vpgs` POST APIs have both request and response bodies.

Request Body Format

The following is an example request XML body for `https://zvm_ip:port/v1/vpgs`.

```
<VpgCreateDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <OrgVdcIdentifier>String content</OrgVdcIdentifier>
  <Priority>Low</Priority>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <SourceSiteIdentifier>String content</SourceSiteIdentifier>
  <TargetSiteIdentifier>String content</TargetSiteIdentifier>
  <VcVappIdentifier>String content</VcVappIdentifier>
  <VcdVappIdentifier>String content</VcdVappIdentifier>
  <VmsIdentifiers>
    <string xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">String
content</string>
    <string xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">String
content</string>
  </VmsIdentifiers>~
  <VpgName>String content</VpgName>
  <ZorgIdentifier>String content</ZorgIdentifier>
</VpgCreateDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Checkpoints`.

```
<CheckpointsDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <CheckpointName>String content</CheckpointName>
</CheckpointsDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneStart`.

```
<CloneStartDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <CheckpointIdentifier>String content</CheckpointIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
</CloneStartDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover.`

```
<FailoverDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <CheckpointIdentifier>String content</CheckpointIdentifier>
  <CommitPolicy>Commit</CommitPolicy>
  <ShutdownPolicy>None</ShutdownPolicy>
  <TimeToWaitBeforeShutdownInSec>2147483647</TimeToWaitBeforeShutdownInSec>
  <IsReverseProtection>true</IsReverseProtection>
</FailoverDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTest.`

```
<FailOverTestStartDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <CheckpointIdentifier>String content</CheckpointIdentifier>
</FailOverTestStartDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTestStop.`

```
<StopFailoverTestDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <FailoverTestSuccess>true</FailoverTestSuccess>
  <FailoverTestSummary>String content</FailoverTestSummary>
</StopFailoverTestDataApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit.`

```
<FailoverCommitDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <IsReverseProtection>true</IsReverseProtection>
</FailoverCommitDataApi>
```

The request bodies for the other VPGs POST APIs, such as

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback`, is empty.

Response Body Format

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/vpgs,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Checkpoints,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/CloneStart,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Failover,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverCommit,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverRollback,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTest,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/FailoverTestStop,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Forcesync,`
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Pause,` and for
`https://zvm_ip:port/v1/vpgs/{protectionGroupIdentifier}/Resume.`

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

VPGs API DELETE Method Request and Response Formats

The `https://zvm_ip:port/v1/vpgs` DELETE APIs have both request and response bodies.

Request Body Format

The following is an example request XML body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`.

```
<VpgDeleteDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <Force>true</Force>
  <KeepRecoveryVolumes>true</KeepRecoveryVolumes>
</VpgDeleteDataApi>
```

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/vpgs/{VpgIdentifier}`.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

VPG Settings API XML Request and Response Formats

The `https://zvm_ip:port/v1/vpgSettings` API has GET, POST, PUT and DELETE methods:

- [“GET Method Request and Response Formats”, below](#)
- [“POST Method Request and Response Formats”, on page 385](#)
- [“PUT Method Request and Response Formats”, on page 391](#)
- [“DELETE Method Response Formats”, on page 398](#)

GET Method Request and Response Formats

Request Body Formats

All GET method request bodies are empty.

Response Body Formats

The `https://zvm_ip:port/v1/vpgSettings` GET APIs have response bodies.

The following is an example response XML body for `https://zvm_ip:port/v1/vpgSettings` and, without the array statement, for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
<ArrayOfVpgSettingsApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgSettingsApi>
    <Backup>
      <RepositoryIdentifier>String content</RepositoryIdentifier>
      <RetentionPeriod>String content</RetentionPeriod>
      <Retry>
        <IntervalInMinutes>2147483647</IntervalInMinutes>
        <Number>2147483647</Number>
        <Retry>true</Retry>
      </Retry>
      <Scheduler>
        <DayOfWeek>String content</DayOfWeek>
        <SchedulerPeriod>String content</SchedulerPeriod>
        <TimeOfDay>String content</TimeOfDay>
      </Scheduler>
    </Backup>
```

```
<Basic>
  <JournalHistoryInHours>2147483647</JournalHistoryInHours>
  <Name>String content</Name>
  <Priority>String content</Priority>
  <ProtectedSiteIdentifier>String content</ProtectedSiteIdentifier>
  <RecoverySiteIdentifier>String content</RecoverySiteIdentifier>
  <RpoInSeconds>4294967295</RpoInSeconds>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <TestIntervalInMinutes>2147483647</TestIntervalInMinutes>
  <UseWanCompression>true</UseWanCompression>
  <ZorgIdentifier>String content</ZorgIdentifier>
</Basic>
```

```
<BootGroups>
  <BootGroups>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
    <VpgSettingsBootGroupApi>
      ...
    </VpgSettingsBootGroupApi>
  </BootGroups>
</BootGroups>
```

```
<Journal>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <Limitation>
    <HardLimitInMB>2147483647</HardLimitInMB>
    <HardLimitInPercent>2147483647</HardLimitInPercent>
    <WarningThresholdInMB>2147483647</WarningThresholdInMB>
    <WarningThresholdInPercent>2147483647</WarningThresholdInPercent>
  </Limitation>
</Journal>
```

```
<Networks>
  <Failover>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </Failover>
  <FailoverTest>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </FailoverTest>
</Networks>
```

```
<Recovery>
  <DefaultDatastoreClusterIdentifier>String content</DefaultDatastoreClusterIdentifier>
  <DefaultDatastoreIdentifier>String content</DefaultDatastoreIdentifier>
  <DefaultFolderIdentifier>String content</DefaultFolderIdentifier>
  <DefaultHostClusterIdentifier>String content</DefaultHostClusterIdentifier>
  <DefaultHostIdentifier>String content</DefaultHostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>
```

```
<Scripting>
  <PostBackup>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostBackup>
  <PostRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostRecovery>
  <PreRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PreRecovery>
</Scripting>
```

```
<Vms>
```

```
<VpgSettingsVmApi>
  <BootGroupIdentifier>String content</BootGroupIdentifier>
  <Journal>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <Limitation>
      <HardLimitInMB>4294967295</HardLimitInMB>
      <HardLimitInPercent>4294967295</HardLimitInPercent>
      <WarningThresholdInMB>4294967295</WarningThresholdInMB>
      <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
    </Limitation>
  </Journal>
```

```
<Nics>
```

```
<VpgSettingsVmNicApi>
  <Failover>
    <Hypervisor>
      <DnsSuffix>String content</DnsSuffix>
      <IpConfig>
        <Gateway>String content</Gateway>
        <IsDhcp>true</IsDhcp>
        <PrimaryDns>String content</PrimaryDns>
        <SecondaryDns>String content</SecondaryDns>
        <StaticIp>String content</StaticIp>
        <SubnetMask>String content</SubnetMask>
      </IpConfig>
      <NetworkIdentifier>String content</NetworkIdentifier>
      <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
    </Hypervisor>
  </Failover>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>

<NicIdentifier>String content</NicIdentifier>

</VpgSettingsVmNicApi>
<VpgSettingsVmNicApi>
  <Failover>
    ...
  </Failover>

  <FailoverTest>
    ...
  </FailoverTest>

  <NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
</Nics>

<Recovery>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <FolderIdentifier>String content</FolderIdentifier>
  <HostClusterIdentifier>String content</HostClusterIdentifier>
  <HostIdentifier>String content</HostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>

<VmIdentifier>String content</VmIdentifier>

<Volumes>
  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>

  <VpgSettingsVmVolumeApi>
    ...
  </VpgSettingsVmVolumeApi>

</Volumes>
</VpgSettingsVmApi>
```

```
<VpgSettingsVmApi>
...
</VpgSettingsVmApi>
</Vms>
<VpgIdentifier>String content</VpgIdentifier>
<VpgSettingsIdentifier>String content</VpgSettingsIdentifier>
</VpgSettingsApi>
<VpgSettingsApi>
...
</VpgSettingsApi>
</ArrayOfVpgSettingsApi>
```

The following is an example response XML body for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/backup.

```
<VpgSettingsBackupApi xmlns="http://schemas.zerto.com/zvm/api">
  <RepositoryIdentifier>String content</RepositoryIdentifier>
  <RetentionPeriod>String content</RetentionPeriod>
  <Retry>
    <IntervalInMinutes>2147483647</IntervalInMinutes>
    <Number>2147483647</Number>
    <Retry>true</Retry>
  </Retry>
  <Scheduler>
    <DayOfWeek>String content</DayOfWeek>
    <SchedulerPeriod>String content</SchedulerPeriod>
    <TimeOfDay>String content</TimeOfDay>
  </Scheduler>
</VpgSettingsBackupApi>
```

The following is an example response XML body for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/backup/dayofweek,
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/backup/retentionperiod, and for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/backup/schedulerperiod.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

The following is an example response XML body for
https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.

```
<VpgSettingsBasicApi xmlns="http://schemas.zerto.com/zvm/api">
  <JournalHistoryInHours>2147483647</JournalHistoryInHours>
  <Name>String content</Name>
  <Priority>String content</Priority>
  <ProtectedSiteIdentifier>String content</ProtectedSiteIdentifier>
  <RecoverySiteIdentifier>String content</RecoverySiteIdentifier>
  <RpoInSeconds>4294967295</RpoInSeconds>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <TestIntervalInMinutes>2147483647</TestIntervalInMinutes>
  <UseWanCompression>true</UseWanCompression>
  <ZorgIdentifier>String content</ZorgIdentifier>
</VpgSettingsBasicApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup.`

```
<VpgSettingsBootGroupsApi xmlns="http://schemas.zerto.com/zvm/api">
  <BootGroups>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
  </BootGroups>
</VpgSettingsBootGroupsApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal.`

```
<VpgSettingsJournalApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <Limitation>
    <HardLimitInMB>2147483647</HardLimitInMB>
    <HardLimitInPercent>2147483647</HardLimitInPercent>
    <WarningThresholdInMB>2147483647</WarningThresholdInMB>
    <WarningThresholdInPercent>2147483647</WarningThresholdInPercent>
  </Limitation>
</VpgSettingsJournalApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks.`

```
<VpgSettingsNetworksApi xmlns="http://schemas.zerto.com/zvm/api">
  <Failover>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </Failover>
  <FailoverTest>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </FailoverTest>
</VpgSettingsNetworksApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/priority.`

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery.`

```
<VpgSettingsRecoveryApi xmlns="http://schemas.zerto.com/zvm/api">
  <DefaultDatastoreClusterIdentifier>String content</DefaultDatastoreClusterIdentifier>
  <DefaultDatastoreIdentifier>String content</DefaultDatastoreIdentifier>
  <DefaultFolderIdentifier>String content</DefaultFolderIdentifier>
  <DefaultHostClusterIdentifier>String content</DefaultHostClusterIdentifier>
  <DefaultHostIdentifier>String content</DefaultHostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</VpgSettingsRecoveryApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting.`

```
<VpgSettingsScriptsApi xmlns="http://schemas.zerto.com/zvm/api">
  <PostBackup>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostBackup>
  <PostRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostRecovery>
  <PreRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PreRecovery>
</VpgSettingsScriptsApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms` and, without the array statement, for `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}`.

```
<ArrayOfVpgSettingsVmApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgSettingsVmApi>
    <BootGroupIdentifier>String content</BootGroupIdentifier>
    <Journal>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <Limitation>
        <HardLimitInMB>4294967295</HardLimitInMB>
        <HardLimitInPercent>4294967295</HardLimitInPercent>
        <WarningThresholdInMB>4294967295</WarningThresholdInMB>
        <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
      </Limitation>
    </Journal>
  </VpgSettingsVmApi>
</ArrayOfVpgSettingsVmApi>

<Nics>
  <VpgSettingsVmNicApi>
    <Failover>
      <Hypervisor>
        <DnsSuffix>String content</DnsSuffix>
        <IpConfig>
          <Gateway>String content</Gateway>
          <IsDhcp>true</IsDhcp>
          <PrimaryDns>String content</PrimaryDns>
          <SecondaryDns>String content</SecondaryDns>
          <StaticIp>String content</StaticIp>
          <SubnetMask>String content</SubnetMask>
        </IpConfig>
        <NetworkIdentifier>String content</NetworkIdentifier>
        <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
      </Hypervisor>
    </Failover>
  </VpgSettingsVmNicApi>
</Nics>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>
<NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
```

```
<VpgSettingsVmNicApi>
  <Failover>
    ...
  </Failover>
  <FailoverTest>
    ...
  </FailoverTest>
  <NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
</Nics>
```

```
<Recovery>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <FolderIdentifier>String content</FolderIdentifier>
  <HostClusterIdentifier>String content</HostClusterIdentifier>
  <HostIdentifier>String content</HostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>
```

```
<VmIdentifier>String content</VmIdentifier>
<Volumes>
  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>
  <VpgSettingsVmVolumeApi>
    ...
  </VpgSettingsVmVolumeApi>
</Volumes>
</VpgSettingsVmApi>
```

```
</VpgSettingsVmApi>
...
</VpgSettingsVmApi>
</ArrayOfVpgSettingsVmApi>
```

The following is an example response XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics and, without the array statement, for https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/nics/{nicIdentifier}.

```
<ArrayOfVpgSettingsVmNicApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgSettingsVmNicApi>
    <Failover>
      <Hypervisor>
        <DnsSuffix>String content</DnsSuffix>
        <IpConfig>
          <Gateway>String content</Gateway>
          <IsDhcp>true</IsDhcp>
          <PrimaryDns>String content</PrimaryDns>
          <SecondaryDns>String content</SecondaryDns>
          <StaticIp>String content</StaticIp>
          <SubnetMask>String content</SubnetMask>
        </IpConfig>
        <NetworkIdentifier>String content</NetworkIdentifier>
        <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
      </Hypervisor>
    </Failover>
    <FailoverTest>
      <Hypervisor>
        <DnsSuffix>String content</DnsSuffix>
        <IpConfig>
          <Gateway>String content</Gateway>
          <IsDhcp>true</IsDhcp>
          <PrimaryDns>String content</PrimaryDns>
          <SecondaryDns>String content</SecondaryDns>
          <StaticIp>String content</StaticIp>
          <SubnetMask>String content</SubnetMask>
        </IpConfig>
        <NetworkIdentifier>String content</NetworkIdentifier>
        <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
      </Hypervisor>
    </FailoverTest>
    <NicIdentifier>String content</NicIdentifier>
  </VpgSettingsVmNicApi>
  <VpgSettingsVmNicApi>
    <Failover>
      ...
    </Failover>
    <FailoverTest>
      ...
    </FailoverTest>
    <NicIdentifier>String content</NicIdentifier>
  </VpgSettingsVmNicApi>
</ArrayOfVpgSettingsVmNicApi>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes` and, without the array statement, for `https://zvm_ip:port/v1/vpgSettings/volumes/{volumeId}`.

```
<ArrayOfVpgSettingsVmVolumeApi xmlns="http://schemas.zerto.com/zvm/api">
  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>
  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>
</ArrayOfVpgSettingsVmVolumeApi>
```

POST Method Request and Response Formats

Request Body Formats

The following is an example request XML body for `https://zvm_ip:port/v1/vpgSettings`.

```
<VpgSettingsApi xmlns="http://schemas.zerto.com/zvm/api">
  <Backup>
    <RepositoryIdentifier>String content</RepositoryIdentifier>
    <RetentionPeriod>String content</RetentionPeriod>
    <Retry>
      <IntervalInMinutes>2147483647</IntervalInMinutes>
      <Number>2147483647</Number>
      <Retry>true</Retry>
    </Retry>
    <Scheduler>
      <DayOfWeek>String content</DayOfWeek>
      <SchedulerPeriod>String content</SchedulerPeriod>
      <TimeOfDay>String content</TimeOfDay>
    </Scheduler>
  </Backup>
```

```
<Basic>
  <JournalHistoryInHours>2147483647</JournalHistoryInHours>
  <Name>String content</Name>
  <Priority>String content</Priority>
  <ProtectedSiteIdentifier>String content</ProtectedSiteIdentifier>
  <RecoverySiteIdentifier>String content</RecoverySiteIdentifier>
  <RpoInSeconds>4294967295</RpoInSeconds>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <TestIntervalInMinutes>2147483647</TestIntervalInMinutes>
  <UseWanCompression>true</UseWanCompression>
  <ZorgIdentifier>String content</ZorgIdentifier>
</Basic>
```

```
<BootGroups>
  <BootGroups>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
    <VpgSettingsBootGroupApi>
      ...
    </VpgSettingsBootGroupApi>
  </BootGroups>
</BootGroups>
```

```
<Journal>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <Limitation>
    <HardLimitInMB>2147483647</HardLimitInMB>
    <HardLimitInPercent>2147483647</HardLimitInPercent>
    <WarningThresholdInMB>2147483647</WarningThresholdInMB>
    <WarningThresholdInPercent>2147483647</WarningThresholdInPercent>
  </Limitation>
</Journal>
```

```
<Networks>
  <Failover>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </Failover>
  <FailoverTest>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </FailoverTest>
</Networks>
```

```
<Recovery>
  <DefaultDatastoreClusterIdentifier>String content</DefaultDatastoreClusterIdentifier>
  <DefaultDatastoreIdentifier>String content</DefaultDatastoreIdentifier>
  <DefaultFolderIdentifier>String content</DefaultFolderIdentifier>
  <DefaultHostClusterIdentifier>String content</DefaultHostClusterIdentifier>
  <DefaultHostIdentifier>String content</DefaultHostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>
```

```
<Scripting>
  <PostBackup>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostBackup>
  <PostRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostRecovery>
  <PreRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PreRecovery>
</Scripting>
```

```
<Vms>
```

```
<VpgSettingsVmApi>
  <BootGroupIdentifier>String content</BootGroupIdentifier>
  <Journal>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <Limitation>
      <HardLimitInMB>4294967295</HardLimitInMB>
      <HardLimitInPercent>4294967295</HardLimitInPercent>
      <WarningThresholdInMB>4294967295</WarningThresholdInMB>
      <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
    </Limitation>
  </Journal>
```

```
<Nics>
```

```
<VpgSettingsVmNicApi>
  <Failover>
    <Hypervisor>
      <DnsSuffix>String content</DnsSuffix>
      <IpConfig>
        <Gateway>String content</Gateway>
        <IsDhcp>true</IsDhcp>
        <PrimaryDns>String content</PrimaryDns>
        <SecondaryDns>String content</SecondaryDns>
        <StaticIp>String content</StaticIp>
        <SubnetMask>String content</SubnetMask>
      </IpConfig>
      <NetworkIdentifier>String content</NetworkIdentifier>
      <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
    </Hypervisor>
  </Failover>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>

<NicIdentifier>String content</NicIdentifier>

</VpgSettingsVmNicApi>
<VpgSettingsVmNicApi>
  <Failover>
    ...
  </Failover>

  <FailoverTest>
    ...
  </FailoverTest>

  <NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
</Nics>

<Recovery>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <FolderIdentifier>String content</FolderIdentifier>
  <HostClusterIdentifier>String content</HostClusterIdentifier>
  <HostIdentifier>String content</HostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>

<VmIdentifier>String content</VmIdentifier>
<Volumes>

  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>
  <VpgSettingsVmVolumeApi>
    ...
  </VpgSettingsVmVolumeApi>

</Volumes>
</VpgSettingsVmApi>
```

```
<VpgSettingsVmApi>
  ...
</VpgSettingsVmApi>

</Vms>
<VpgIdentifier>String content</VpgIdentifier>
<VpgSettingsIdentifier>String content</VpgSettingsIdentifier>
</VpgSettingsApi>
```

The request body for the API `https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/commit` is empty.

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms`.

```
<VpgSettingsVmApi xmlns="http://schemas.zerto.com/zvm/api">
  <BootGroupIdentifier>String content</BootGroupIdentifier>
  <Journal>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <Limitation>
      <HardLimitInMB>4294967295</HardLimitInMB>
      <HardLimitInPercent>4294967295</HardLimitInPercent>
      <WarningThresholdInMB>4294967295</WarningThresholdInMB>
      <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
    </Limitation>
  </Journal>
```

```
<Nics>
  <VpgSettingsVmNicApi>
    <Failover>
      <Hypervisor>
        <DnsSuffix>String content</DnsSuffix>
        <IpConfig>
          <Gateway>String content</Gateway>
          <IsDhcp>true</IsDhcp>
          <PrimaryDns>String content</PrimaryDns>
          <SecondaryDns>String content</SecondaryDns>
          <StaticIp>String content</StaticIp>
          <SubnetMask>String content</SubnetMask>
        </IpConfig>
        <NetworkIdentifier>String content</NetworkIdentifier>
        <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
      </Hypervisor>
    </Failover>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>
<NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
```

```

    <VpgSettingsVmNicApi>
      <Failover>
        ...
      </Failover>
      <FailoverTest>
        ...
      </FailoverTest>
      <NicIdentifier>String content</NicIdentifier>
    </VpgSettingsVmNicApi>
  </Nics>

  <Recovery>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <FolderIdentifier>String content</FolderIdentifier>
    <HostClusterIdentifier>String content</HostClusterIdentifier>
    <HostIdentifier>String content</HostIdentifier>
    <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
  </Recovery>

  <VmIdentifier>String content</VmIdentifier>
  <Volumes>
    <VpgSettingsVmVolumeApi>
      <Datastore>
        <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
        <DatastoreIdentifier>String content</DatastoreIdentifier>
        <IsThin>true</IsThin>
      </Datastore>
      <ExistingVolume>
        <DatastoreIdentifier>String content</DatastoreIdentifier>
        <ExistedVmIdentifier>String content</ExistedVmIdentifier>
        <Mode>String content</Mode>
        <Path>String content</Path>
      </ExistingVolume>
      <IsSwap>true</IsSwap>
      <VolumeIdentifier>String content</VolumeIdentifier>
    </VpgSettingsVmVolumeApi>
    <VpgSettingsVmVolumeApi>
      ...
    </VpgSettingsVmVolumeApi>
  </Volumes>
</VpgSettingsVmApi>

```

The following is an example request XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics.

```

<VpgSettingsVmNicApi xmlns="http://schemas.zerto.com/zvm/api">
  <Failover>
    <Hypervisor>
      <DnsSuffix>String content</DnsSuffix>
      <IpConfig>
        <Gateway>String content</Gateway>
        <IsDhcp>true</IsDhcp>
        <PrimaryDns>String content</PrimaryDns>
        <SecondaryDns>String content</SecondaryDns>
        <StaticIp>String content</StaticIp>
        <SubnetMask>String content</SubnetMask>
      </IpConfig>
      <NetworkIdentifier>String content</NetworkIdentifier>
      <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
    </Hypervisor>
  </Failover>

```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>
<NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
```

Response Body Formats

The following is an example response XML body for `https://zvm_ip:port/v1/vpgSettings`.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

The following is an example response XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/commit`.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

The response XML bodies for the following APIs are empty:

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms`

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/nics`

PUT Method Request and Response Formats

Request Body Formats

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}`.

```
<VpgSettingsApi xmlns="http://schemas.zerto.com/zvm/api">
  <Backup>
    <RepositoryIdentifier>String content</RepositoryIdentifier>
    <RetentionPeriod>String content</RetentionPeriod>
    <Retry>
      <IntervalInMinutes>2147483647</IntervalInMinutes>
      <Number>2147483647</Number>
      <Retry>true</Retry>
    </Retry>
    <Scheduler>
      <DayOfWeek>String content</DayOfWeek>
      <SchedulerPeriod>String content</SchedulerPeriod>
      <TimeOfDay>String content</TimeOfDay>
    </Scheduler>
  </Backup>
```

```
<Basic>
  <JournalHistoryInHours>2147483647</JournalHistoryInHours>
  <Name>String content</Name>
  <Priority>String content</Priority>
  <ProtectedSiteIdentifier>String content</ProtectedSiteIdentifier>
  <RecoverySiteIdentifier>String content</RecoverySiteIdentifier>
  <RpoInSeconds>4294967295</RpoInSeconds>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <TestIntervalInMinutes>2147483647</TestIntervalInMinutes>
  <UseWanCompression>true</UseWanCompression>
  <ZorgIdentifier>String content</ZorgIdentifier>
</Basic>
```

```
<BootGroups>
  <BootGroups>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
    <VpgSettingsBootGroupApi>
      ...
    </VpgSettingsBootGroupApi>
  </BootGroups>
</BootGroups>
```

```
<Journal>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <Limitation>
    <HardLimitInMB>2147483647</HardLimitInMB>
    <HardLimitInPercent>2147483647</HardLimitInPercent>
    <WarningThresholdInMB>2147483647</WarningThresholdInMB>
    <WarningThresholdInPercent>2147483647</WarningThresholdInPercent>
  </Limitation>
</Journal>
```

```
<Networks>
  <Failover>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </Failover>
  <FailoverTest>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </FailoverTest>
</Networks>
```

```
<Recovery>
  <DefaultDatastoreClusterIdentifier>String content</DefaultDatastoreClusterIdentifier>
  <DefaultDatastoreIdentifier>String content</DefaultDatastoreIdentifier>
  <DefaultFolderIdentifier>String content</DefaultFolderIdentifier>
  <DefaultHostClusterIdentifier>String content</DefaultHostClusterIdentifier>
  <DefaultHostIdentifier>String content</DefaultHostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>
```

```
<Scripting>
  <PostBackup>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostBackup>
  <PostRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostRecovery>
  <PreRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PreRecovery>
</Scripting>
```

```
<Vms>
```

```
<VpgSettingsVmApi>
  <BootGroupIdentifier>String content</BootGroupIdentifier>
  <Journal>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <Limitation>
      <HardLimitInMB>4294967295</HardLimitInMB>
      <HardLimitInPercent>4294967295</HardLimitInPercent>
      <WarningThresholdInMB>4294967295</WarningThresholdInMB>
      <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
    </Limitation>
  </Journal>
```

```
<Nics>
```

```
<VpgSettingsVmNicApi>
  <Failover>
    <Hypervisor>
      <DnsSuffix>String content</DnsSuffix>
      <IpConfig>
        <Gateway>String content</Gateway>
        <IsDhcp>true</IsDhcp>
        <PrimaryDns>String content</PrimaryDns>
        <SecondaryDns>String content</SecondaryDns>
        <StaticIp>String content</StaticIp>
        <SubnetMask>String content</SubnetMask>
      </IpConfig>
      <NetworkIdentifier>String content</NetworkIdentifier>
      <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
    </Hypervisor>
  </Failover>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>

<NicIdentifier>String content</NicIdentifier>

</VpgSettingsVmNicApi>
<VpgSettingsVmNicApi>
  <Failover>
    ...
  </Failover>

  <FailoverTest>
    ...
  </FailoverTest>

  <NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
</Nics>

<Recovery>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <FolderIdentifier>String content</FolderIdentifier>
  <HostClusterIdentifier>String content</HostClusterIdentifier>
  <HostIdentifier>String content</HostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>

<VmIdentifier>String content</VmIdentifier>
<Volumes>

  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>

  <VpgSettingsVmVolumeApi>
    ...
  </VpgSettingsVmVolumeApi>

</Volumes>
</VpgSettingsVmApi>
```

```
<VpgSettingsVmApi>
  ...
</VpgSettingsVmApi>
</Vms>
<VpgIdentifier>String content</VpgIdentifier>
<VpgSettingsIdentifier>String content</VpgSettingsIdentifier>
</VpgSettingsApi>
```

The following is a an example request XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/backup.

```
<VpgSettingsBackupApi xmlns="http://schemas.zerto.com/zvm/api">
  <RepositoryIdentifier>String content</RepositoryIdentifier>
  <RetentionPeriod>String content</RetentionPeriod>
  <Retry>
    <IntervalInMinutes>2147483647</IntervalInMinutes>
    <Number>2147483647</Number>
    <Retry>true</Retry>
  </Retry>
  <Scheduler>
    <DayOfWeek>String content</DayOfWeek>
    <SchedulerPeriod>String content</SchedulerPeriod>
    <TimeOfDay>String content</TimeOfDay>
  </Scheduler>
</VpgSettingsBackupApi>
```

The following is a an example request XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/basic.

```
<VpgSettingsBasicApi xmlns="http://schemas.zerto.com/zvm/api">
  <JournalHistoryInHours>2147483647</JournalHistoryInHours>
  <Name>String content</Name>
  <Priority>String content</Priority>
  <ProtectedSiteIdentifier>String content</ProtectedSiteIdentifier>
  <RecoverySiteIdentifier>String content</RecoverySiteIdentifier>
  <RpoInSeconds>4294967295</RpoInSeconds>
  <ServiceProfileIdentifier>String content</ServiceProfileIdentifier>
  <TestIntervalInMinutes>2147483647</TestIntervalInMinutes>
  <UseWanCompression>true</UseWanCompression>
  <ZorgIdentifier>String content</ZorgIdentifier>
</VpgSettingsBasicApi>
```

The following is a an example request XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/bootgroup.

```
<VpgSettingsBootGroupsApi xmlns="http://schemas.zerto.com/zvm/api">
  <BootGroups>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
    <VpgSettingsBootGroupApi>
      <BootDelayInSeconds>4294967295</BootDelayInSeconds>
      <BootGroupIdentifier>String content</BootGroupIdentifier>
      <Name>String content</Name>
    </VpgSettingsBootGroupApi>
  </BootGroups>
</VpgSettingsBootGroupsApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/journal.`

```
<VpgSettingsJournalApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <Limitation>
    <HardLimitInMB>2147483647</HardLimitInMB>
    <HardLimitInPercent>2147483647</HardLimitInPercent>
    <WarningThresholdInMB>2147483647</WarningThresholdInMB>
    <WarningThresholdInPercent>2147483647</WarningThresholdInPercent>
  </Limitation>
</VpgSettingsJournalApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/networks.`

```
<VpgSettingsNetworksApi xmlns="http://schemas.zerto.com/zvm/api">
  <Failover>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </Failover>
  <FailoverTest>
    <Hypervisor>
      <DefaultNetworkIdentifier>String content</DefaultNetworkIdentifier>
    </Hypervisor>
  </FailoverTest>
</VpgSettingsNetworksApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/recovery.`

```
<VpgSettingsRecoveryApi xmlns="http://schemas.zerto.com/zvm/api">
  <DefaultDatastoreClusterIdentifier>String content</DefaultDatastoreClusterIdentifier>
  <DefaultDatastoreIdentifier>String content</DefaultDatastoreIdentifier>
  <DefaultFolderIdentifier>String content</DefaultFolderIdentifier>
  <DefaultHostClusterIdentifier>String content</DefaultHostClusterIdentifier>
  <DefaultHostIdentifier>String content</DefaultHostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</VpgSettingsRecoveryApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/scripting.`

```
<VpgSettingsScriptsApi xmlns="http://schemas.zerto.com/zvm/api">
  <PostBackup>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostBackup>
  <PostRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PostRecovery>
  <PreRecovery>
    <Command>String content</Command>
    <Parameters>String content</Parameters>
    <TimeoutInSeconds>2147483647</TimeoutInSeconds>
  </PreRecovery>
</VpgSettingsScriptsApi>
```

The following is an example request XML body for

`https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}`.

```
<VpgSettingsVmApi xmlns="http://schemas.zerto.com/zvm/api">
  <BootGroupIdentifier>String content</BootGroupIdentifier>
  <Journal>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <Limitation>
      <HardLimitInMB>4294967295</HardLimitInMB>
      <HardLimitInPercent>4294967295</HardLimitInPercent>
      <WarningThresholdInMB>4294967295</WarningThresholdInMB>
      <WarningThresholdInPercent>4294967295</WarningThresholdInPercent>
    </Limitation>
  </Journal>
```

```
<Nics>
  <VpgSettingsVmNicApi>
    <Failover>
      <Hypervisor>
        <DnsSuffix>String content</DnsSuffix>
        <IpConfig>
          <Gateway>String content</Gateway>
          <IsDhcp>true</IsDhcp>
          <PrimaryDns>String content</PrimaryDns>
          <SecondaryDns>String content</SecondaryDns>
          <StaticIp>String content</StaticIp>
          <SubnetMask>String content</SubnetMask>
        </IpConfig>
        <NetworkIdentifier>String content</NetworkIdentifier>
        <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
      </Hypervisor>
    </Failover>
```

```
<FailoverTest>
  <Hypervisor>
    <DnsSuffix>String content</DnsSuffix>
    <IpConfig>
      <Gateway>String content</Gateway>
      <IsDhcp>true</IsDhcp>
      <PrimaryDns>String content</PrimaryDns>
      <SecondaryDns>String content</SecondaryDns>
      <StaticIp>String content</StaticIp>
      <SubnetMask>String content</SubnetMask>
    </IpConfig>
    <NetworkIdentifier>String content</NetworkIdentifier>
    <ShouldReplaceMacAddress>true</ShouldReplaceMacAddress>
  </Hypervisor>
</FailoverTest>
```

```
<NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
<VpgSettingsVmNicApi>
  <Failover>
    ...>
  </Failover>
  <FailoverTest>
    ...>
  </FailoverTest>
  <NicIdentifier>String content</NicIdentifier>
</VpgSettingsVmNicApi>
</Nics>
```

```
<Recovery>
  <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <FolderIdentifier>String content</FolderIdentifier>
  <HostClusterIdentifier>String content</HostClusterIdentifier>
  <HostIdentifier>String content</HostIdentifier>
  <ResourcePoolIdentifier>String content</ResourcePoolIdentifier>
</Recovery>

<VmIdentifier>String content</VmIdentifier>
<Volumes>
  <VpgSettingsVmVolumeApi>
    <Datastore>
      <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <IsThin>true</IsThin>
    </Datastore>
    <ExistingVolume>
      <DatastoreIdentifier>String content</DatastoreIdentifier>
      <ExistedVmIdentifier>String content</ExistedVmIdentifier>
      <Mode>String content</Mode>
      <Path>String content</Path>
    </ExistingVolume>
    <IsSwap>true</IsSwap>
    <VolumeIdentifier>String content</VolumeIdentifier>
  </VpgSettingsVmVolumeApi>
  <VpgSettingsVmVolumeApi>
    ...
  </VpgSettingsVmVolumeApi>
</Volumes>
</VpgSettingsVmApi>
```

The following is an example request XML body for

https://zvm_ip:port/v1/vpgSettings/{vpgSettingsIdentifier}/vms/{vmIdentifier}/volumes/{volumeId}.

```
<VpgSettingsVmVolumeApi xmlns="http://schemas.zerto.com/zvm/api">
  <Datastore>
    <DatastoreClusterIdentifier>String content</DatastoreClusterIdentifier>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <IsThin>true</IsThin>
  </Datastore>
  <ExistingVolume>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <ExistedVmIdentifier>String content</ExistedVmIdentifier>
    <Mode>String content</Mode>
    <Path>String content</Path>
  </ExistingVolume>
  <IsSwap>true</IsSwap>
  <VolumeIdentifier>String content</VolumeIdentifier>
</VpgSettingsVmVolumeApi>
```

Response Body Formats

All PUT method response bodies are empty.

DELETE Method Response Formats

All DELETE method request and response bodies are empty.

VRAs API XML Request and Response Formats

The `https://zvm_ip:port/v1/vras` API has GET, POST, PUT and DELETE methods:

- “VRAs API GET Method Response Formats”, below
- “VRAs API POST Method Request and Response Formats”, on page 400
- “VRAs API PUT Method Request and Response Formats”, on page 401
- “VRAs API DELETE Method Response Formats”, on page 401

VRAs API GET Method Response Formats

The `https://zvm_ip:port/v1/vras` GET APIs have response bodies.

The following is an example response XML body for `https://zvm_ip:port/v1/vras` and, without the array statement, for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
<ArrayOfVraApi xmlns="http://schemas.zerto.com/zvm/api">
  <VraApi>
    <DatastoreClusterName>String content</DatastoreClusterName>
    <DatastoreIdentifier>String content</DatastoreIdentifier>
    <DatastoreName>String content</DatastoreName>
    <HostIdentifier>String content</HostIdentifier>
    <HostVersion>String content</HostVersion>
    <IpAddress>String content</IpAddress>
  </VraApi>
  <Link>
    <href>String content</href>
    <identifier>String content</identifier>
    <rel>String content</rel>
    <type>String content</type>
  </Link>
  <Link__x007B_0_x007D_>
    <href>String content</href>
    <rel>String content</rel>
    <type>String content</type>
  </Link__x007B_0_x007D_>
  <MemoryInGB>2147483647</MemoryInGB>
  <NetworkIdentifier>String content</NetworkIdentifier>
  <NetworkName>String content</NetworkName>
  <Progress>2147483647</Progress>
  <ProtectedCounters>
    <Vms>2147483647</Vms>
    <Volumes>2147483647</Volumes>
    <Vpgs>2147483647</Vpgs>
  </ProtectedCounters>
  <RecoveryCounters>
    <Vms>2147483647</Vms>
    <Volumes>2147483647</Volumes>
    <Vpgs>2147483647</Vpgs>
  </RecoveryCounters>
  <SelfProtectedVpgs>2147483647</SelfProtectedVpgs>
  <Status>Installed</Status>
  <VraGroup>String content</VraGroup>
  <VraIdentifier>18446744073709551615</VraIdentifier>
  <VraName>String content</VraName>
</ArrayOfVraApi>
```

```
<VraNetworkDataApi>
  <DefaultGateway>String content</DefaultGateway>
  <SubnetMask>String content</SubnetMask>
  <VraIPAddress>String content</VraIPAddress>
  <VraIPConfigurationTypeApi>String content</VraIPConfigurationTypeApi>
</VraNetworkDataApi>

<VraVersion>String content</VraVersion>
</VraApi>
...
</ArrayOfVraApi>
```

The following is an example response XML body for `https://zvm_ip:port/v1/vras/ipconfigurationtypes` and for `https://zvm_ip:port/v1/vras/statuses`.

```
<ArrayOfstring xmlns="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
  <string>String content</string>
  ...
</ArrayOfstring>
```

VRAs API POST Method Request and Response Formats

The `https://zvm_ip:port/v1/vras` POST APIs have both request and response bodies.

Request Body Format

The following is an example request XML body for `https://zvm_ip:port/v1/vras`.

```
<VraCreateDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <DatastoreIdentifier>String content</DatastoreIdentifier>
  <GroupName>String content</GroupName>
  <HostIdentifier>String content</HostIdentifier>
  <HostRootPassword>String content</HostRootPassword>
  <MemoryInGb>2147483647</MemoryInGb>
  <NetworkIdentifier>String content</NetworkIdentifier>
  <UsePublicKeyInsteadOfCredentials>true</UsePublicKeyInsteadOfCredentials>
  <VraNetworkDataApi>
    <DefaultGateway>String content</DefaultGateway>
    <SubnetMask>String content</SubnetMask>
    <VraIPAddress>String content</VraIPAddress>
    <VraIPConfigurationTypeApi>String content</VraIPConfigurationTypeApi>
  </VraNetworkDataApi>
</VraCreateDataApi>
```

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/vras` and for `https://zvm_ip:port/v1/vras/{vraIdentifier}/upgrade`.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

VRAs API PUT Method Request and Response Formats

The `https://zvm_ip:port/v1/vras` PUT APIs have both request and response bodies.

Request Body Format

The following is an example request XML body for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
<VraEditDataApi xmlns="http://schemas.zerto.com/zvm/api">
  <GroupName>String content</GroupName>
  <HostRootPassword>String content</HostRootPassword>
  <UsePublicKeyInsteadOfCredentials>true</UsePublicKeyInsteadOfCredentials>
  <VraNetworkDataApi>
    <DefaultGateway>String content</DefaultGateway>
    <SubnetMask>String content</SubnetMask>
    <VraIPAddress>String content</VraIPAddress>
    <VraIPConfigurationTypeApi>String content</VraIPConfigurationTypeApi>
  </VraNetworkDataApi>
</VraEditDataApi>
```

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/vras/{vraIdentifier}`.

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

VRAs API DELETE Method Response Formats

The `https://zvm_ip:port/v1/vras/{vraIdentifier}` DELETE API has a response body.

Response Body Format

The following is an example response XML body for `https://zvm_ip:port/v1/vras/{vraIdentifier}.f`

```
<string xmlns="http://schemas.microsoft.com/2003/10/Serialization/">String content</string>
```

ZORG API XML Response Format

The following is an example response XML body for `https://zvm_ip:port/v1/zorgs` and, without the array statement, for `https://zvm_ip:port/v1/zorgs/{zorgIdentifier}`.

```
<ArrayOfZorgApi xmlns="http://schemas.zerto.com/zvm/api">
  <ZorgApi>
    <Link>
      <href>String content</href>
      <identifier>String content</identifier>
      <rel>String content</rel>
      <type>String content</type>
    </Link>
    <ZorgIdentifier>String content</ZorgIdentifier>
    <ZorgName>String content</ZorgName>
  </ZorgApi>
  ...
</ArrayOfZorgApi>
```

ZORG API XML Response Format

Zerto helps customers accelerate IT transformation by eliminating the risk and complexity of modernization and cloud adoption. By replacing multiple legacy solutions with a single IT Resilience Platform™, Zerto is changing the way disaster recovery, backup and cloud are managed. At enterprise scale, Zerto's software platform delivers continuous availability for an always-on customer experience while simplifying workload mobility to protect, recover and move applications freely across hybrid and multi-clouds. Zerto is trusted by over 6,000 customers globally and is powering resiliency offerings for Microsoft Azure, IBM Cloud, AWS, SunGard AS and more than 350 cloud services providers.

Learn more at [Zerto.com](https://www.zerto.com)

For assistance using Zerto software, contact: [@Zerto Support](#).