SYNERGITA - SYSTEM AVAILABILITY & DR PLAN

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Introduction

Synergita is a cloud hosted multi-tenant software product. This document highlights the various mechanisms, which are put in place to ensure the availability of the system, the capability to scale the infrastructure to meet unexpected load and also the preparedness to bring the services back in the event of a disaster.
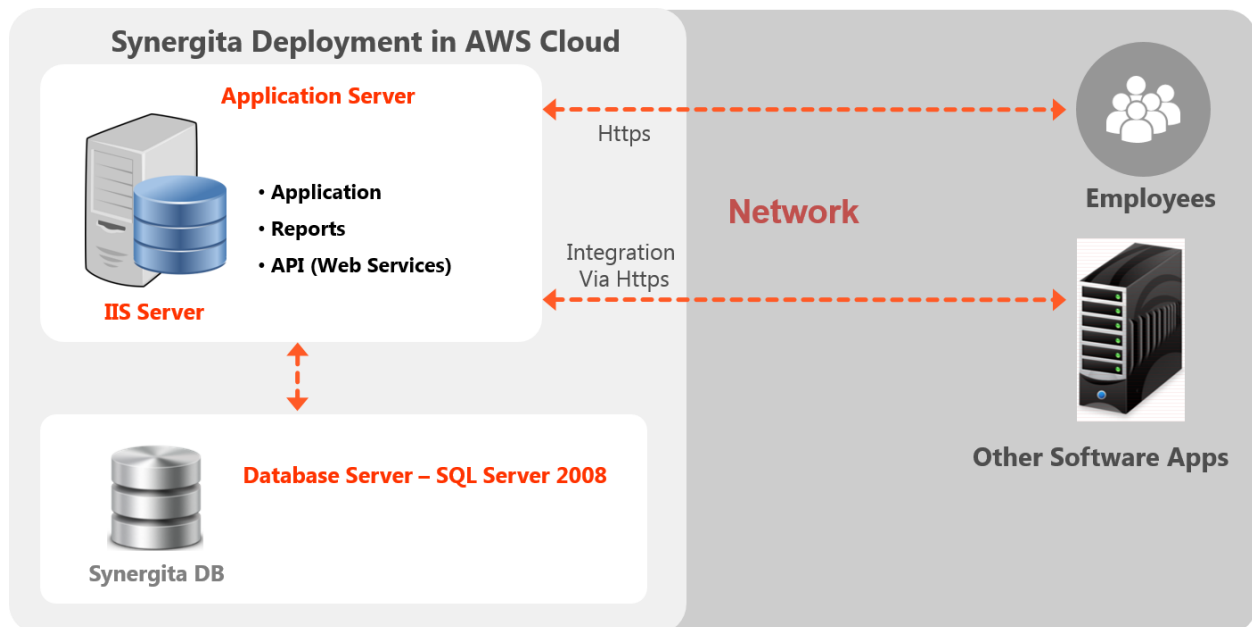
Cloud Infrastructure

Synergita is hosted in Amazon Cloud Environment. Our servers are hosted in the US-East (Virginia) region.

Deployment Architecture

Application and database are hosted in separate instances. All the interactions between application and database servers happen through secured Microsoft Distributed Transaction Coordinator (MSDTC).

Synergita provides APIs, which helps to integrate easily with other software products (HRIS, Payroll products, etc.). The data transmission happens through SSL protocol and so the data in-transit is absolutely safe.

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Application Availability

Amazon AWS in our cloud provider. AWS assures 99.999% of availability for our hosting infrastructure. In the event of any network/hardware failure, we can easily setup the application in a different region and bring the services back in quick time.

All our services are continuously monitored by Site 24x7 (https://www.site24x7.com/) and incase of any interruption in the services, our production support team is alerted and the problem shall be attended immediately thereby ensuring best possible availability.

Recovery Time Objective and Recovery Point Objective

Recovery time objective (RTO) - The time it takes after a disruption to restore the software application to its accepted service level.

Synergita offers an RTO of 8 business hours to all customers.

For example, if a disaster occurs at 12:00 PM (noon), the application will be restored to the acceptable service level by 8:00 PM.

Recovery point objective (RPO) - The acceptable amount of data loss measured in time.

Synergita offers an RTO of 4 business hours to all customers.

For example, if a disaster occurs at 12:00 PM (noon), all the data that was in the system before 8:00 AM shall be recovered.

Application Scalability

Synergita application architecture is designed to scale the infrastructure both vertically and horizontally.

Total Network Monitor (http://total-network-monitor.en.softonic.com) is used for monitoring the resources usage and the following critical parameters of the server.

- CPU Load %
- Instance Physical Memory %
- Disk space
- SQL Server browsing service
- SQL Server service
- Task scheduler
- Critical CPU load
- Critical Physical Memory

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The trend of resources usage, number of users accessing the application at any point in time, new users added to the system are regularly monitored and the future load is predicted upfront. When the need arises, the infrastructure is vertically scaled by adding additional resources. Cloud environment allows to scale the infrastructure whenever required very easily.

Synergita can also scale horizontally as required. Using load balancer, the incoming requests can be distributed to multiple application servers. This allows to add as many additional application servers as needed. This approach is tested periodically.

Disaster Recovery Plan

Synergita has clearly-defined disaster recovery plan to bring back the services, in the occurrence of a disaster. This section gives a high level overview of the same.

Infrastructure

All our application & database servers use AWS Elastic Block Store (EBS) for storing the data. When the servers fail due to hardware failures, the data stored in EBS can be recovered easily. We can easily create additional server instances and attach the EBS storage to the new server and bring back the services quickly.

Email Services

Synergita uses http://mandrill.com/ for dispatching email notifications. Mandrill sends 15 billion emails every month for more than 8 million customers and provides reliable services.

Conclusion

Disaster recovery is all about being prepared to manage the unforeseen circumstances. We have put in place all the standard processes/procedures to provide best possible availability of all our services and also manage unexpected situations.