



ANARK PUBLISH SERVER DEPLOYMENT

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INTRODUCTION

This document will describe how to install and get started with Anark Publish. Anark Publish software requires the following software installed and running prior to installation. See Minimum System Requirements for details.

- Microsoft Windows
- Microsoft Internet Information Services
- Microsoft SQL Server

NOTE: Anark Publish supports both SQL Server authentication modes, Windows authentication (integrated security) and SQL Server authentication for database access. The database user account that will be used by Anark Publish must have rights to select, insert, update, and delete for the database tables that Anark Publish will use, as well as execute stored procedures on that database. If SQL authentication is preferred, user can be created using SQL Server Management Studio Express installed with SQL server or available as a separate download. The authentication mode and SQL login may be set in the Anark Publish Configuration tool, launched automatically upon installation. If SQL Windows Authentication is used, it will connect to the database with the user set for the Core Service App Pool in IIS and will not allow a SQL login to be set.

NOTE: Using Windows authentication mode for SQL Server will enable IIS Basic Authentication and communication with Anark Publish web services will be over HTTPS. To use HTTPS, customers should install an SSL certificate and bind the certificate to the "Default" web site (https binding), if it is not already setup. This can be done prior or after installing Anark Publish.

NOTE: Anark Publish Daemon Windows service will run under the LocalSystem user account by default, though this can be set during installation. This user should have read/write permissions to the share where input and output files will be located. If SolidWorks MBD Advanced Adapter is deployed, the option to set the Core Daemon service user will not be displayed.

NOTE: To use the SolidWorks MBD Advanced Adapter an "interactive user" account needs to be configured on the server. An interactive user is only required if the SolidWorks MBD Advanced Adapter is deployed.

NOTE: Anark Publish can generate 2D renditions of 3D graphics using software rendering (Windows running on VM) or hardware rendering (Windows running directly on server hardware). **Using software rendering with a VM requires no special server configuration.** However, to use hardware rendering with a graphics card, an "interactive user" account needs to be configured on the server.

MINIMUM SYSTEM REQUIREMENTS

Before installing Anark Publish, confirm that your computer meets or exceeds the following minimum system requirements. Also note that full system administrator privileges are required to install the software.

- Intel Xeon E5, Intel Xeon E7, Intel Core i5, or Intel Core i7, 3 GHz or faster
- 64 GB RAM



Anark Publish Deployment

- 200+ GB free disk space
- Microsoft Windows® Server 2016 with Desktop Experience, Microsoft Windows® Server 2019 with Desktop Experience, or Microsoft Windows® 10 64-bit with MS IIS enabled
- Microsoft .NET 4.7.2 and 3.5 (installed if not present, and online)
- Microsoft SQL Server 2019

NOTE: These minimum system requirements are intended to serve as a general guideline. Working with large assemblies may require additional RAM. Because Anark Publish is generally an I/O bound system, for best results customers should choose a configuration that optimizes I/O performance (SSD, fast HDD, fast Ethernet networks). A CPU with the most modern Intel architecture available and highest clock speed, with a modest number of cores (e.g. 6-8) is preferable over lower clock speeds and a larger number of cores.

As a general idea of the SQL storage space needed by Anark Publish, the recipes files average around 100KB. The log records are the main items that accumulate over time with the average run log size around 780 bytes. Assuming there is one run every 5 minutes, the database will grow by 82MB each year. This growth can be controlled by setting up a SQL agent job to delete only Runs and Run Log records.

For additional information about performance optimization, please refer to the Anark Publish Performance Optimization white paper.

NOTE: Desktop operating system installation is supported for deployment flexibility. To run Anark Publish on a Windows 10 64-bit desktop computer, Microsoft Internet Information Services (IIS) HTTP web server must be enabled and running.

UPGRADING ANARK PUBLISH


To upgrade Anark Publish you will need the user set for the CoreDaemon service. If the SolidWorks MBD Advanced Integration is deployed, you will need the name of the interactive user account used.

When upgrading, the installer will attempt to detect the IIS basic authentication and SSL settings as well as the CoreDaemon user if one has been set. To do this, the IIS Management Console must be enabled in Windows Features and the installer must be launched as an Administrator. Otherwise, you may need to provide the CoreDaemon user to the installer and run the configuration tool after installation. If the default IIS configurations are not being used for the SQL authentication mode chosen, the configuration tool will detect this and provide a message upon launch.

Updating the database is required after any upgrade to make any schema changes that may be required by the software. This update is quick, and is performed from the configuration tool which is launched automatically at the end of the software installation.

To upgrade the software, double-click the installer and enter the information as shown below. Once the installation process completes, please restart the CoreDaemon service.



**Anark
Core**


Anark Core Server 4.5.44.22143

Installation Directory


Core Daemon Options

☐ Default User (LocalSystem)

☒ Set Windows User

User

Password

**Anark
Core**


Anark Core Server 4.5.44.22143

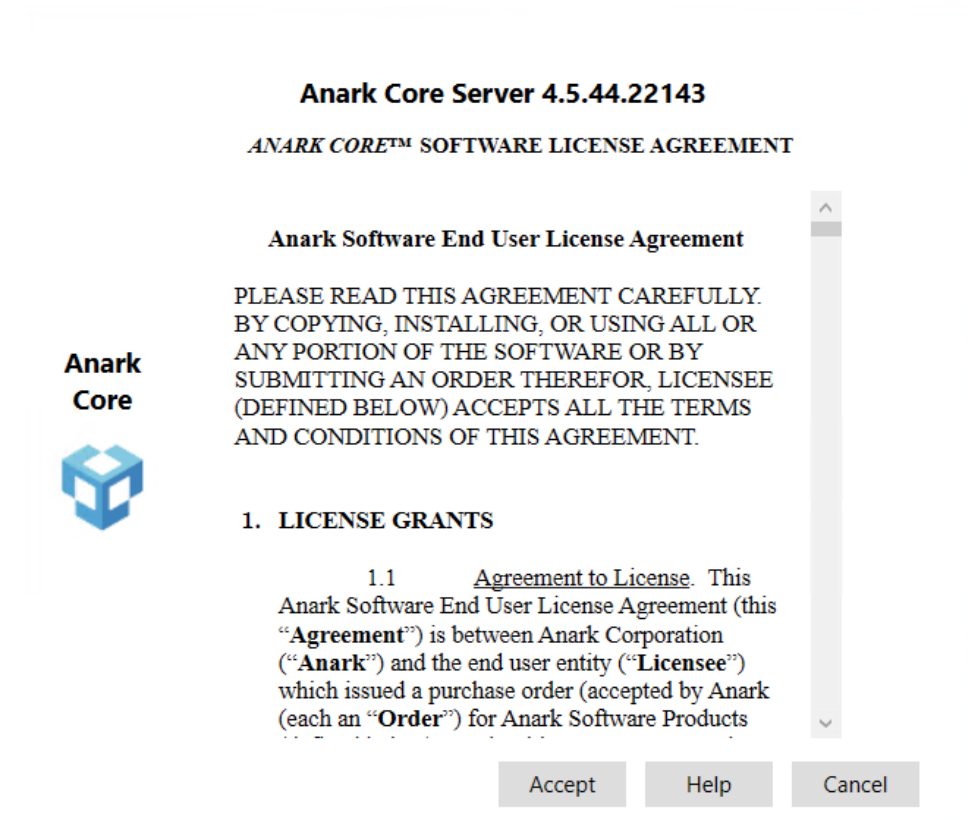
Installation Directory

MBEWorks Options
User Name



INSTALLING ANARK PUBLISH


Launch the Anark Publish Setup.exe to start the server installation. The Anark software license agreement will appear. Please review the Anark Software License Agreement and then select the **Accept** button.



The installation directory and Core Daemon options will appear. The fields should be filled out as follows, then click the **Install** button. Please note the following image is for installations without SolidWorks MBD Advanced Integration. For an example of that, see the bottom image on the previous page.



Anark Core Server 4.5.44.22143



**Anark
Core**

Installation Directory

Core Daemon Options

☐ Default User (LocalSystem)

☒ Set Windows User

User

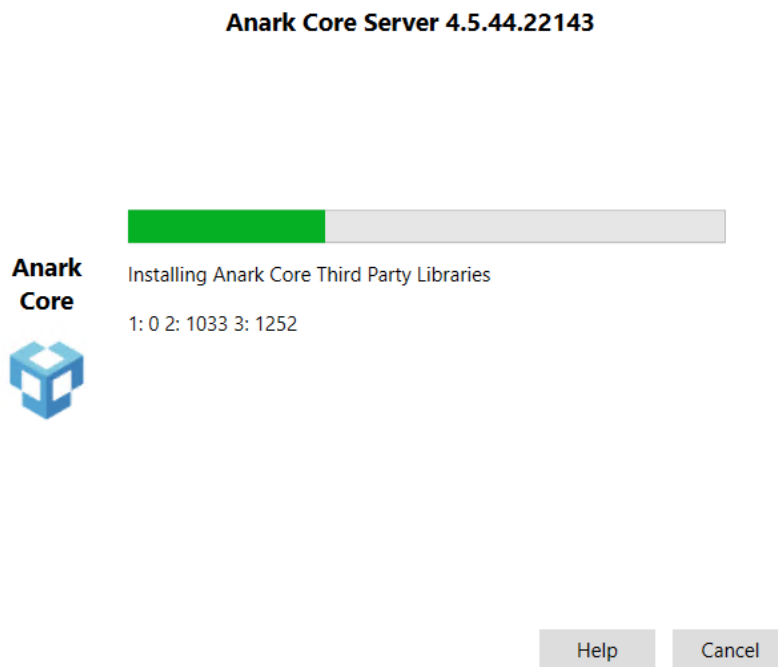
Password

- **Installation Directory:** This is the default install path. Modify the install path only if needed.
- **Core Daemon Options:** Select “Set Windows User” to reveal the User and Password fields and provide a Windows account. Otherwise, select “Default User” which will run the service under the LocalSystem account. These options will not appear if SolidWorks is installed.
- **User:** Set a valid Windows account for the CoreDaemon service to run as. This account should have read/write permissions to the share where input and output files will be located. For domain accounts enter the information as "domain name\loginname". Same user needs to be logged on at the console when processing runs on server.
- **Password:** Set the password for the **User** provided above.
- **User Name:** This option will replace the **Core Daemon Options** if SolidWorks is installed. Set a valid user name if you are planning to use MBEWorks with Anark Publish. This is used to configure the SolidWorks DCOM object. For domain accounts enter the information as "domain name\loginname". Same user needs to be logged on at the console when processing runs on server.

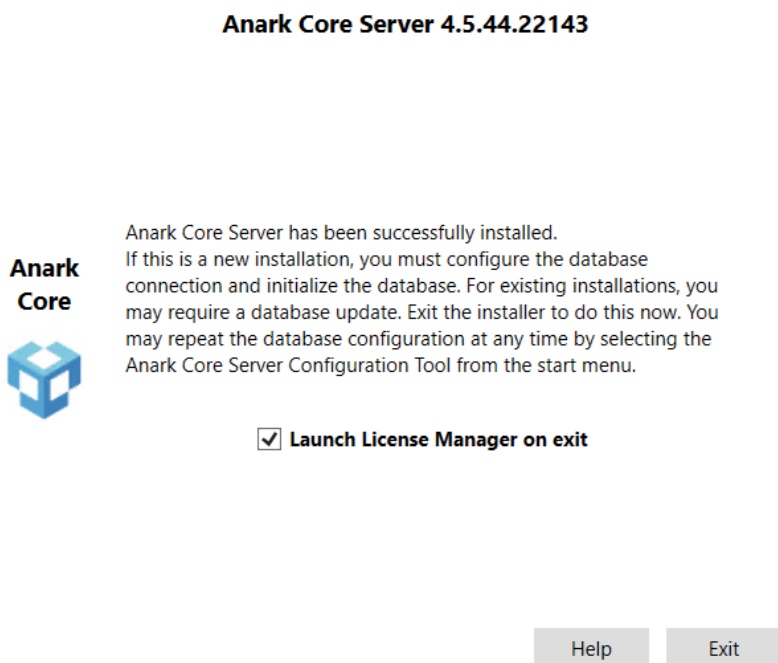


Anark Publish Deployment

The software is now ready to install. Click “Install”.



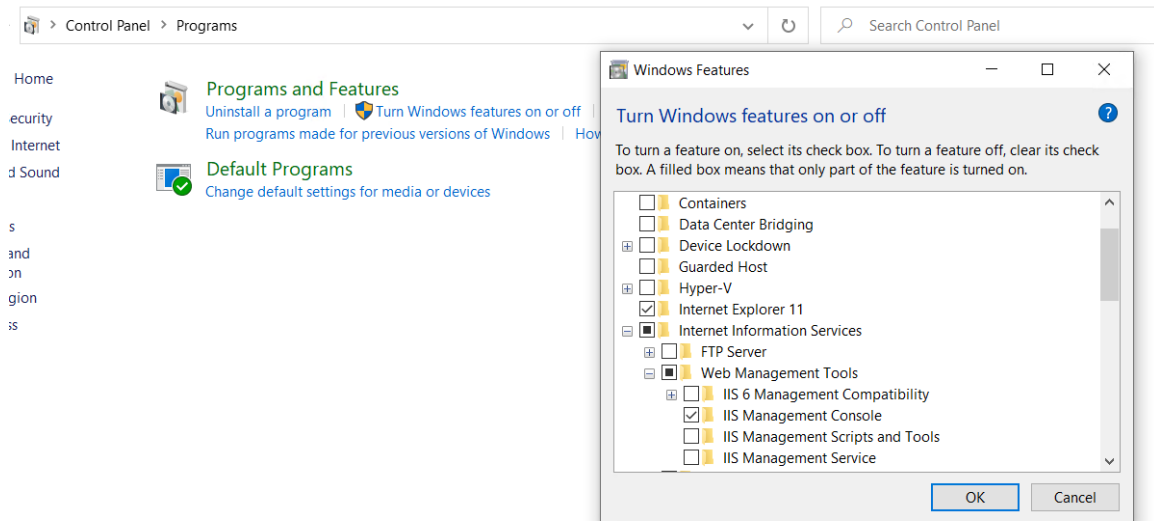
The software will install. Once it has completed the installation, click the **Exit** button. After a brief delay, the Anark Publish Configuration Tool will launch, as will the Anark Publish License Manager if that option is selected.



CONFIGURING ANARK PUBLISH

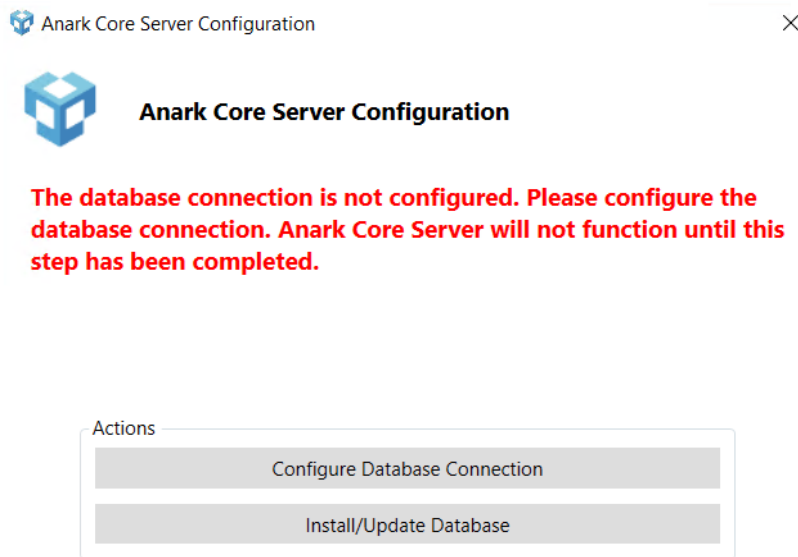
The Anark Configuration Tool provides an easy way to set your configuration and the database schema. It will be launch automatically upon a successful install or upgrade. It can also be launched at any time from the Start menu.

Please note that IIS Management Console may need to be enabled in the Windows Features in order for the configuration tool to set the IIS basic authentication and SSL settings relative to the selected SQL authentication mode. If it is not enabled, configuration may fail with a message that Microsoft.Web.Administration.dll could not be found. To enable IIS Management Console, open the Control Panel and select Programs, then click “Turn Windows features on or off.” The IIS Management Console setting is found in the Web Management Tools under Internet Information Services (see photo below for reference).

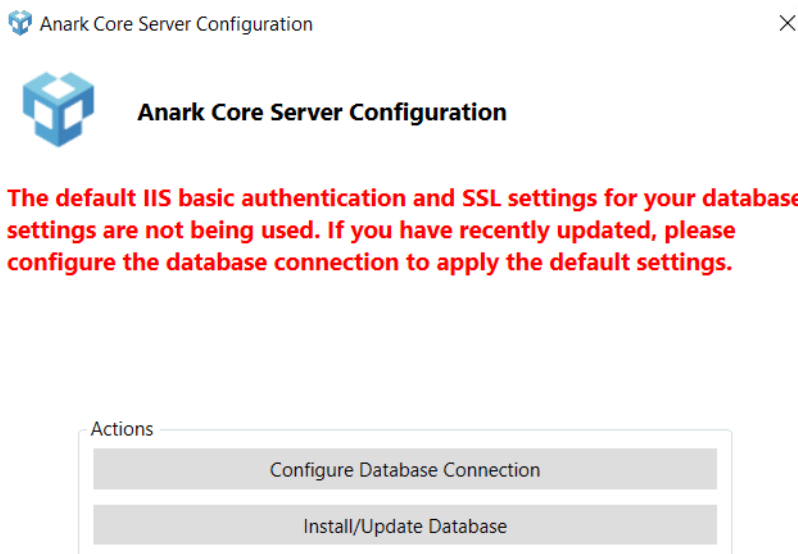


Anark Publish Deployment

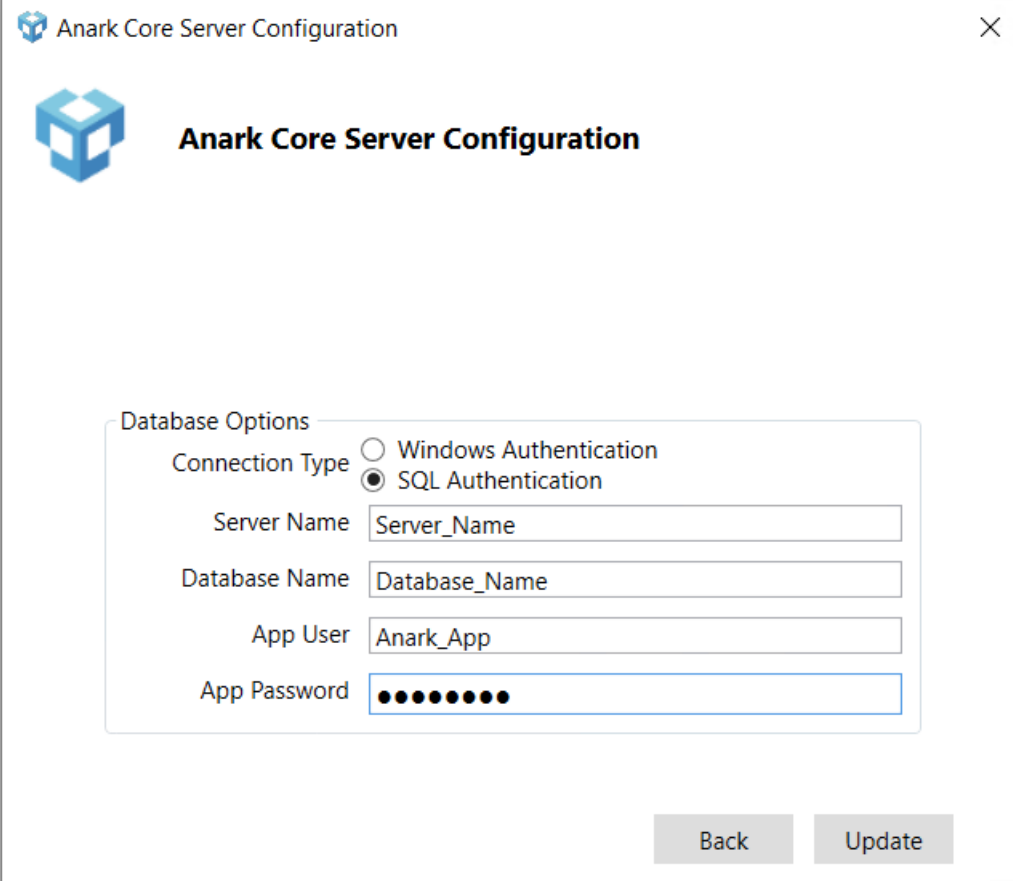
Upon your first install or any other time it cannot detect a connection string in the configuration, it will have a message directing you to configure the database connection, as below.



If Anark Publish has just been upgraded and SQL Windows Authentication was previously set, the corresponding IIS basic authentication and SSL settings may not have been preserved. If so, configuring the database connection will correct this and the tool will display a message, as below.



The first step in configuring Anark Publish is to configure the database connection. Click the button to bring up the options.

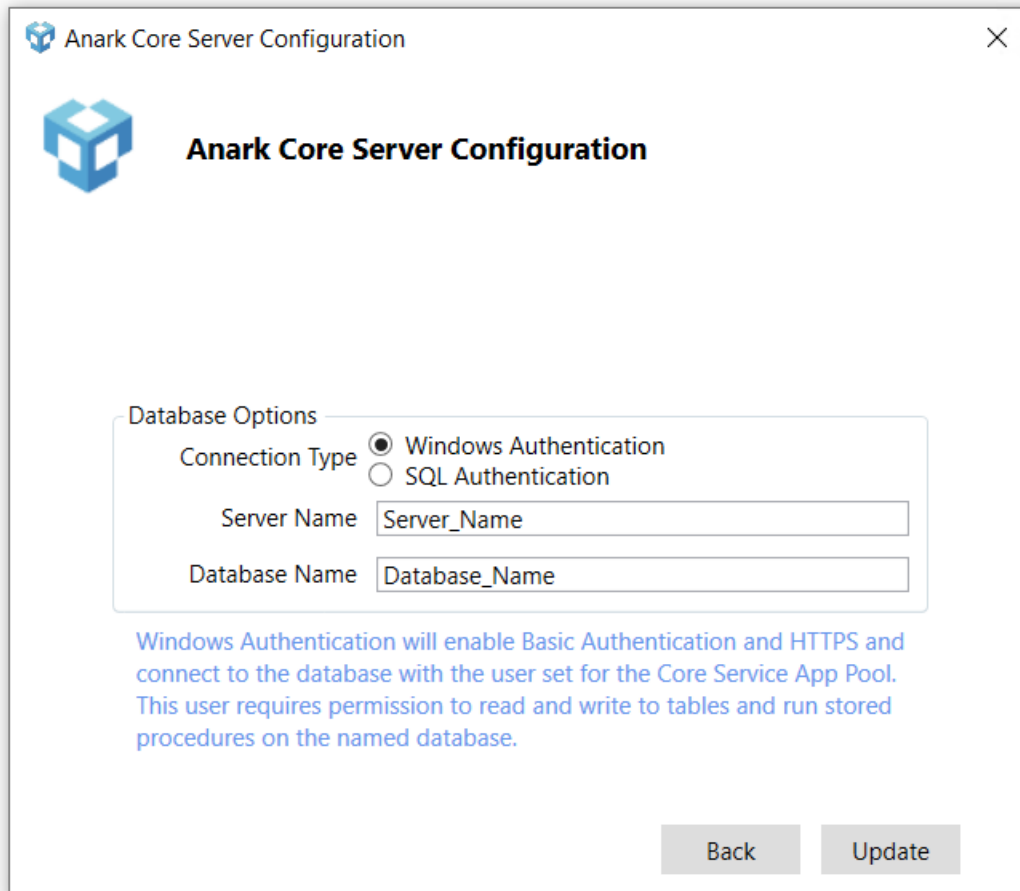


The image shows a Windows-style dialog box titled "Anark Core Server Configuration". It features the Anark logo (a blue cube) in the top left. The main content area is titled "Anark Core Server Configuration" and contains a section labeled "Database Options". Within this section, there are four fields: "Connection Type" with two radio buttons (Windows Authentication and SQL Authentication, where SQL is selected), "Server Name" with a text box containing "Server_Name", "Database Name" with a text box containing "Database_Name", and "App User" with a text box containing "Anark_App". Below these is a password field labeled "App Password" with a masked password of ten dots. At the bottom right of the dialog are two buttons: "Back" and "Update".

- **Connection Type:** Select whether the application should connect with Windows authentication or SQL Server authentication. If Windows authentication is selected, the application will connect to the database as the user for the CoreService AppPool and the App User and Password fields will be hidden. If SQL authentication is selected, it will connect with the SQL credentials specified in the App User and Password fields.
- **Server Name:** Enter the database server, in the form HostName\InstanceName. If the instance name is omitted, the default instance will be used.
- **Database Name:** Enter the name of the database catalog. If the named database does not exist, the Install/Update Database option will create it while setting up the database catalog.
- **App User and Password:** Enter the SQL login that will be used when the application is running to read and write to the database. The login's user on that database must have privileges to execute stored procedures and select, insert, update, and delete for the database specified above. Note that the config tool will not create or permission this user. This can be done manually with SQL Server Management Studio.



If Windows Authentication is selected, anonymous authentication will be disabled in IIS and SSL and basic authentication will be enabled. A valid certificate is required for Windows Authentication. Selecting SQL authentication will enable anonymous authentication and disable SSL and basic authentication.



The image shows a Windows-style dialog box titled "Anark Core Server Configuration". It features the Anark logo (a blue cube) and the title "Anark Core Server Configuration". Below the title, there is a section labeled "Database Options" which contains two radio buttons: "Windows Authentication" (selected) and "SQL Authentication". Below these are two text input fields: "Server Name" with the placeholder text "Server_Name" and "Database Name" with the placeholder text "Database_Name". At the bottom of the dialog, there are two buttons: "Back" and "Update". A blue informational text block is located below the input fields, stating: "Windows Authentication will enable Basic Authentication and HTTPS and connect to the database with the user set for the Core Service App Pool. This user requires permission to read and write to tables and run stored procedures on the named database."

Anark Core Server Configuration

Anark Core Server Configuration

Database Options

Connection Type ☒ Windows Authentication ☐ SQL Authentication

Server Name

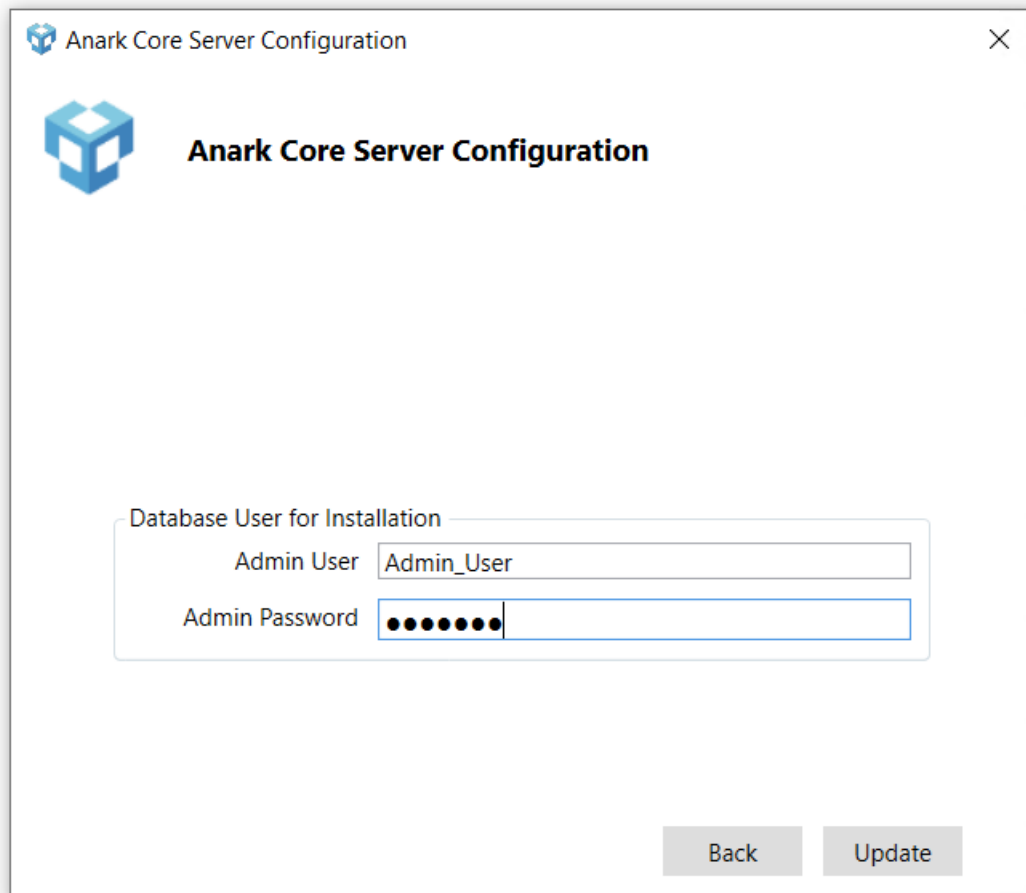
Database Name

Windows Authentication will enable Basic Authentication and HTTPS and connect to the database with the user set for the Core Service App Pool. This user requires permission to read and write to tables and run stored procedures on the named database.

Back Update



Once the database connection has been configured, it will prompt to install or update the database. This can also be done directly from the main menu, though it will fail if the database connection has not been configured yet.



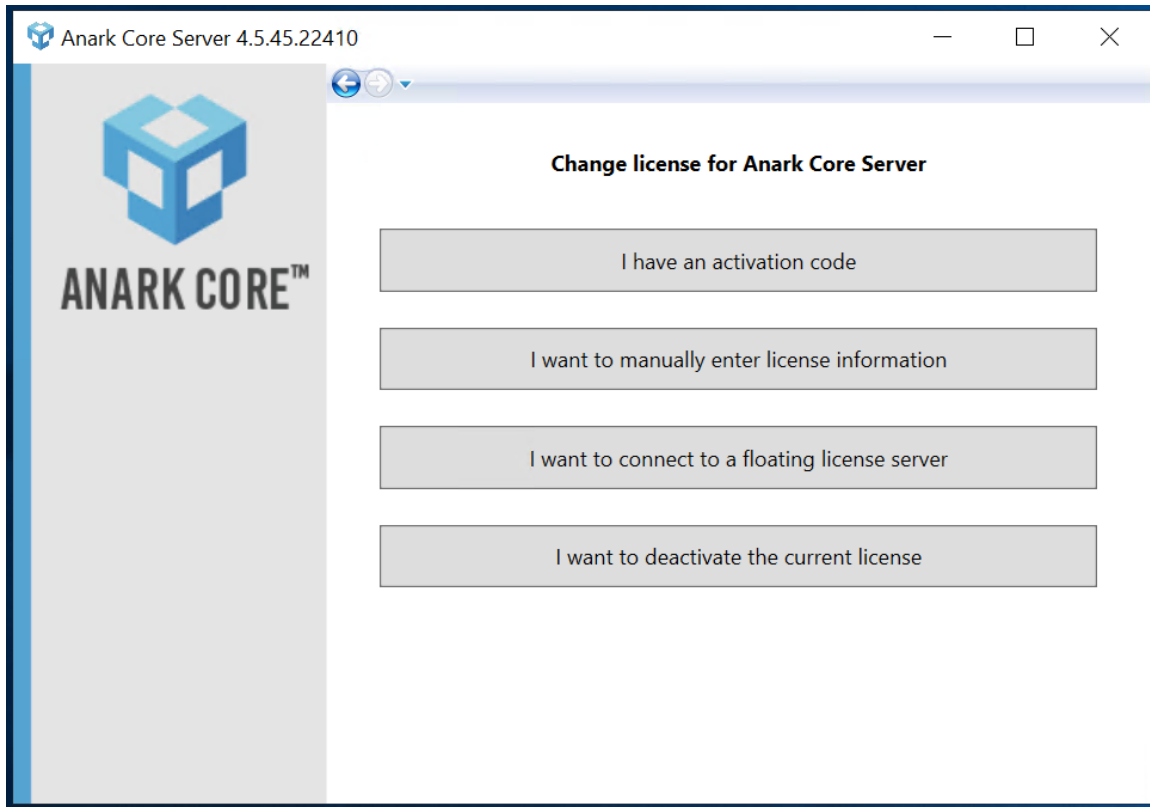
The image shows a Windows-style dialog box titled "Anark Core Server Configuration". It features the Anark logo (a blue cube) on the left. The main heading is "Anark Core Server Configuration". Below this, there is a section titled "Database User for Installation". Inside this section, there are two input fields: "Admin User" with the text "Admin_User" entered, and "Admin Password" with a masked password represented by ten black dots. At the bottom right of the dialog, there are two buttons: "Back" and "Update".

- **Admin User and Password:** This is the SQL login that will be used during installation to setup the database. This login must have rights to create, drop, and alter tables and stored procedures. If the database does not exist yet, it must also have permissions to create database. A Windows domain account may also be used by entering the Windows user name ("domain\loginname") and password, provided the account can connect to the database and has the appropriate permissions.

If SQL authentication has been selected previously, it will test whether it can connect with the credentials provided after it has successfully installed or updated the database. If it fails, it will prompt you to configure the database connection again. Check that the values given are correct. If they are, you may need to create a user on the database for the provided SQL login and grant it the necessary permissions. If the database was created as part of installation, this is almost certainly the case. This can be done with SQL Server Management Studio.



The Anark Publish License Manager allows customers to conveniently activate their Anark Publish licenses as part of the installation process.



LICENSING ANARK PUBLISH

Anark Publish can be licensed either as a “node-locked” license that is anchored to a single computer, or it can be licensed as a “floating” license—where the licenses are provided to users on a first-come basis by the Anark Floating License Server.

In addition, Anark Publish and the Anark Floating License Manager applications can be run within a virtualized environment.

PLEASE NOTE:

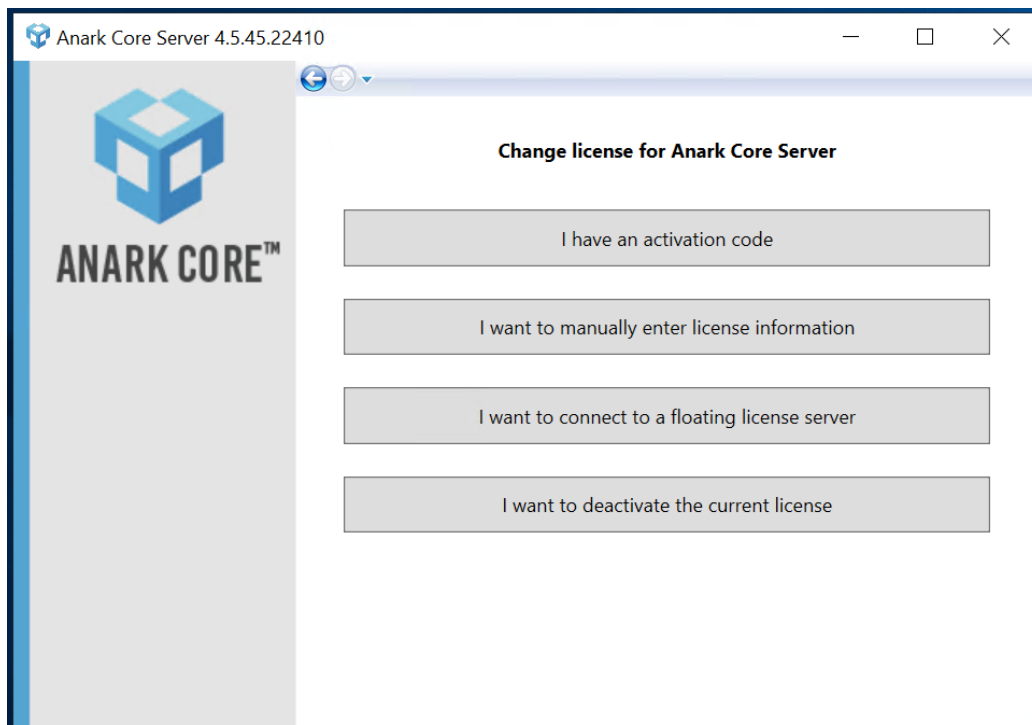
IF ANARK PUBLISH OR THE ANARK FLOATING LICENSE MANAGER APPLICATIONS ARE RUN IN A VIRTUAL MACHINE, THE LICENSE ACTIVATION PROCEDURES BELOW ARE NOT RELEVANT. INSTEAD, PLEASE CONTACT YOUR ANARK SALES REPRESENTATIVE AND INCLUDE THE HOSTNAME OF THE VIRTUAL DEVICE THAT THE SOFTWARE RUNS WITHIN.

NODE-LOCKED LICENSES

There are two ways to activate licenses on Anark Publish—on-line with an activation code or through e-mail (manually) with a license file.

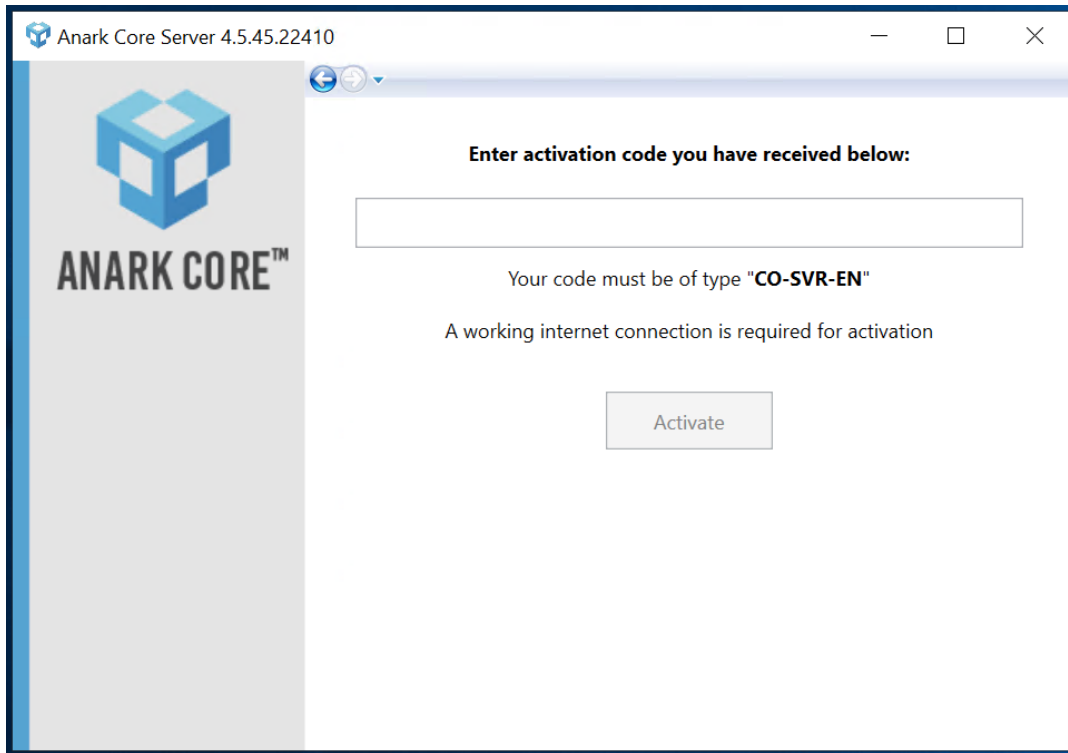
Note: If you are operating behind a restricted network that cannot successfully connect to Anark’s licensing activation server, then you should let your reseller know that you want to activate manually via a license file.

During installation, the Anark Publish License Manager application will appear. Optionally you may launch the Anark Publish License Manager from the Windows Start menu: **Start > All Programs > Anark > Anark Publish > Anark Publish License Manager**.



ACTIVATION CODE

If you choose to activate via activation code, the following UI will be presented.

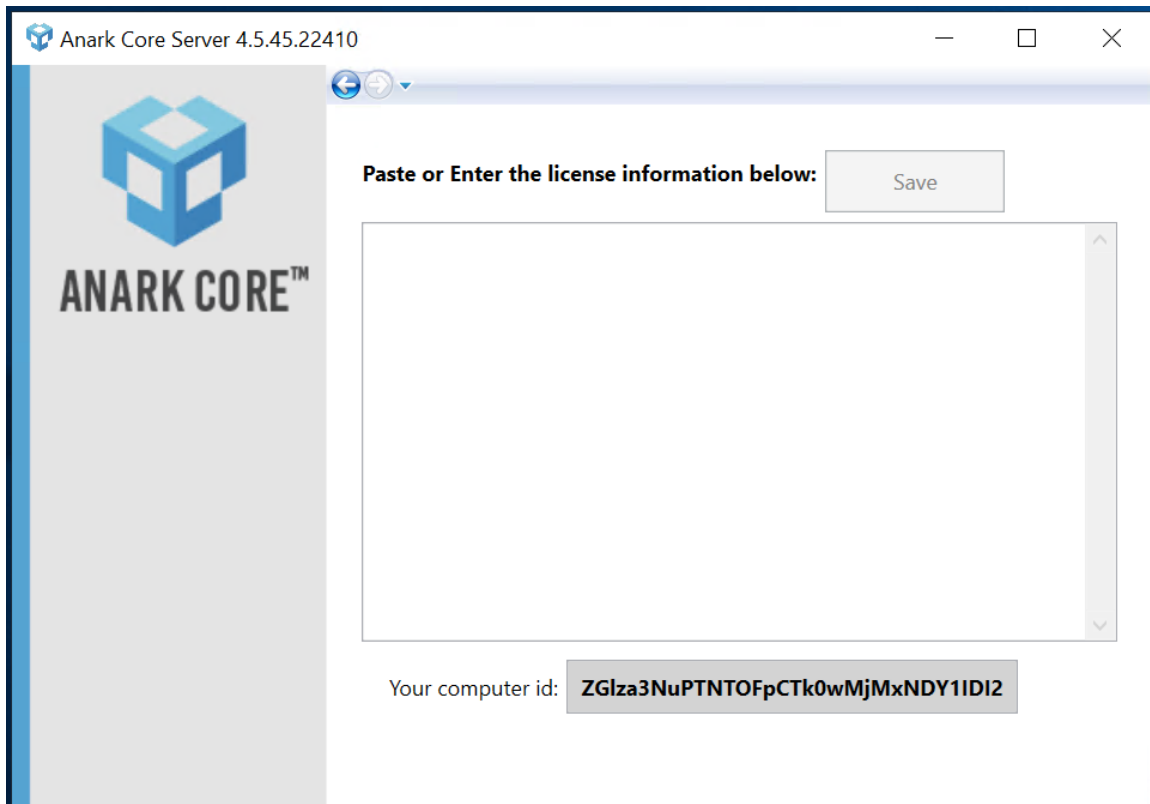


Copy the activation code that was provided by your reseller into the activation code field. Click on the **Activate** button. The licensing manager will try to connect to the **anark.com** licensing server to activate the license. When it is successful, you will see the license information. Your software is now licensed for use.



LICENSE FILE

If you choose to activate manually by entering the license file information, the following UI will be presented.



The image shows a web browser window titled "Anark Core Server 4.5.45.22410". On the left is a sidebar with the Anark Core logo and the text "ANARK CORE™". The main content area has the heading "Paste or Enter the license information below:" followed by a "Save" button. Below this is a large, empty text input field. At the bottom, it displays "Your computer id:" followed by the ID "ZGIza3NuPTNTOFpCTk0wMjMxNDY1IDI2" in a highlighted box.

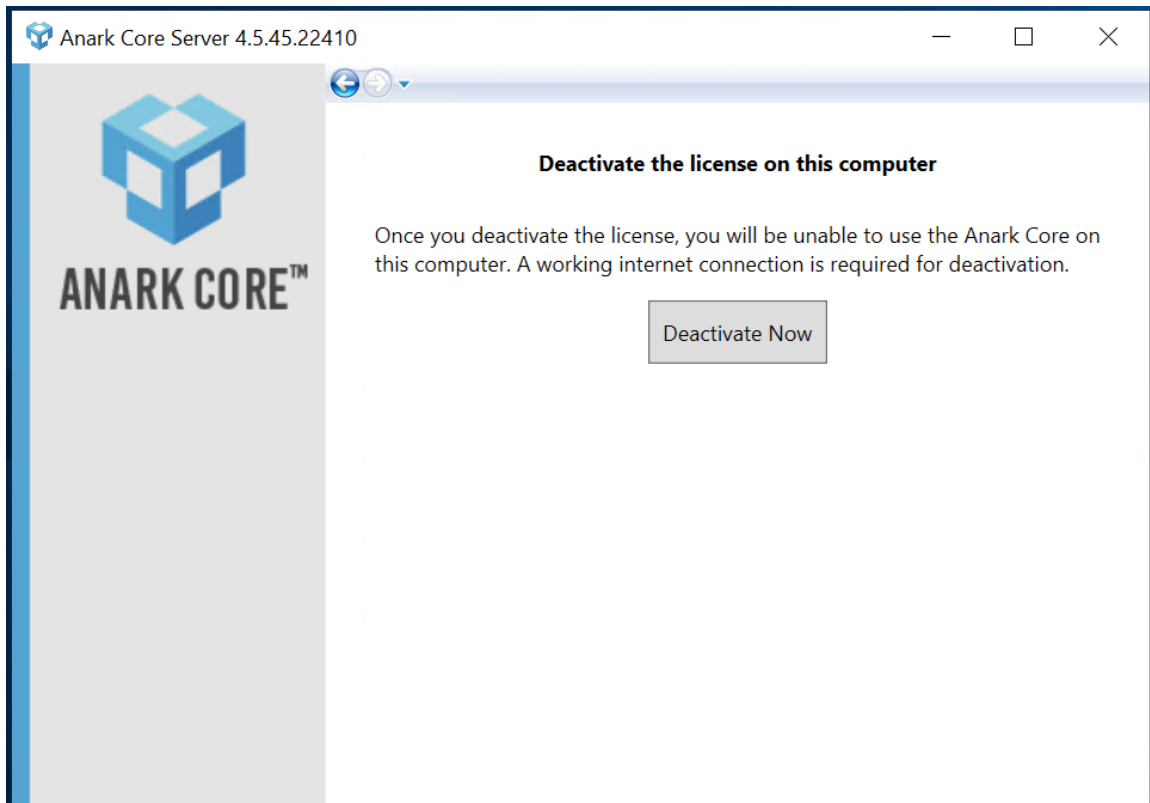
Copy the computer ID, paste this into an e-mail, and send this information to your reseller. They will perform the activation and provide a license file in a return e-mail. Copy all text in the licensing file into the provided field. Click the **Save** button to save your license file information. Your software is now licensed for use.

Please Note: If a computer Id is not visible as shown above, the software is probably running in a virtual machine. To activate your license within a virtual environment, please send the hostname of the virtual machine (not the hostname of the physical host) to Anark. Anark will then generate a license file to activate the software.



DEACTIVATE NODE-LOCKED LICENSE

If in the future you want to deactivate the license to move it to a new computer, open the Anark Publish License Manager and click on the **“I want to deactivate the current license”** button. In the next screen, click on the **Deactivate Now** button.



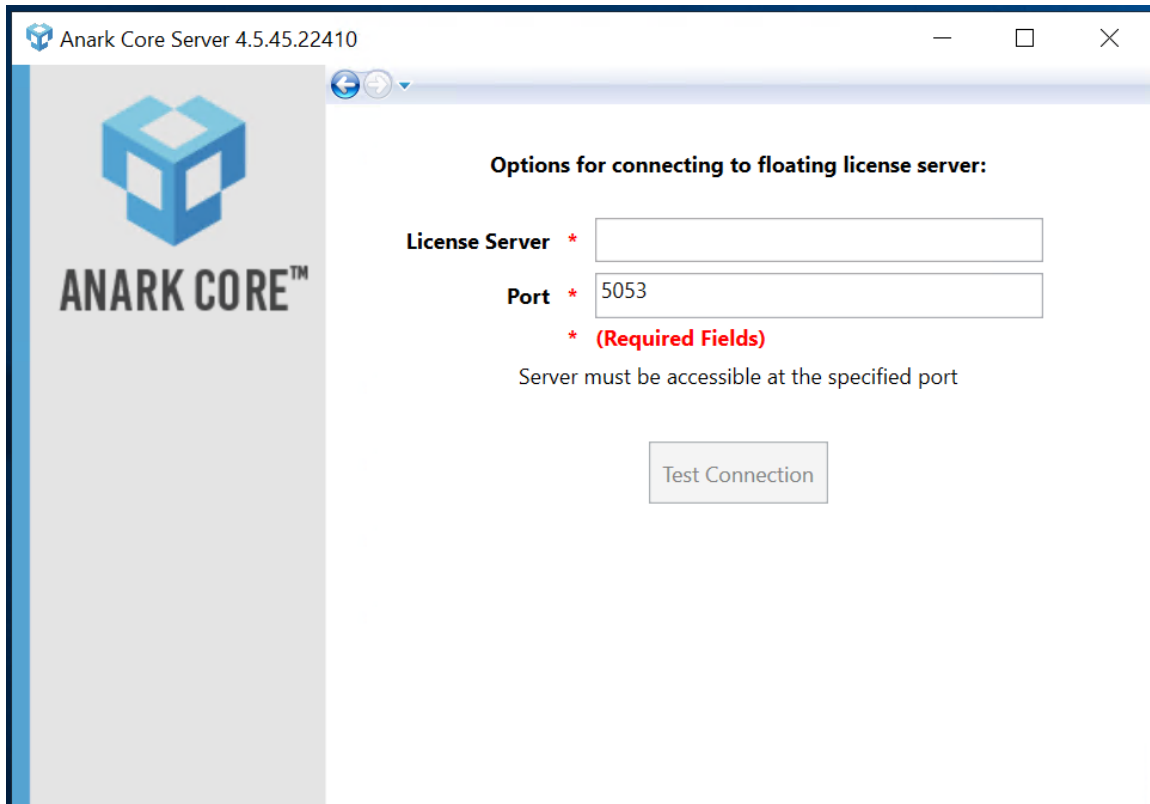
This will deactivate the current license and increase the activation count for your activation code. You may now uninstall and reinstall the software on a different computer. You are now free to use your activation code to activate Anark Publish on another computer.



FLOATING LICENSES

Before connecting your Anark Publish installation to the Anark Floating License Server, you must first install and license the Anark Floating License Server. Please see the section [Installing Anark Floating Licensing Server](#) for more information.

To connect your Anark Publish installation to the Anark Floating License Server, from the Anark Publish License Manager, click the “**I want to connect to a floating license server**” button.



Anark Core Server 4.5.45.22410

Options for connecting to floating license server:

License Server *

Port *

* (Required Fields)

Server must be accessible at the specified port

Test Connection

A form will appear to enter the following information:

License Server—the host name or IP of the computer on which the Anark Floating License Server is running.

Port—the port number that will carry the communications between Anark Publish and the Anark Floating License Server. Port 5053 is the default port—already preconfigured when you install Anark Floating License Server.

Note: If the Anark Floating License Server is running behind a firewall, a policy rule allowing traffic to pass through the designated port may be required from your IT administrator.

Once the information is entered, click on the **Test Connection** button to validate that Anark Publish can reach Anark Floating License Server. If it connects successfully, the license will be activated.



COMMAND LINE

The Anark Publish License Manager can also be run from the command line, which allows for batch updates and silent installs. The available commands are: “licensecode”, “floatinglicenseserver”, and “floatinglicenseport”.

To modify the activation code:

```
>LicenseManagementApp.exe licensecode= CO-WS-XX -XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXXXXX
```

To modify the floating license server and port:

```
>LicenseManagementApp.exe floatinglicenseserver=servername floatinglicenseport=port
```



INSTALLING ANARK FLOATING LICENSE SERVER

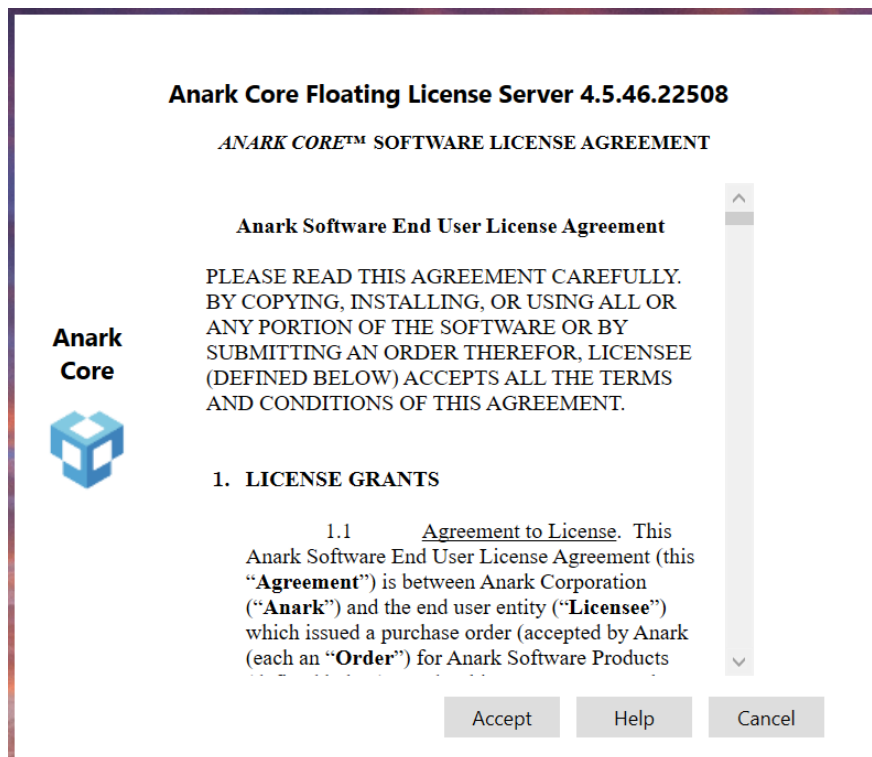
MINIMUM SYSTEM REQUIREMENTS

- 1 GB RAM
- 1+ GB free disk space
- Windows® Server 2016 with Desktop Experience, Windows® Server 2019 with Desktop Experience, or Windows® 10 (x86-64 only)

INSTALLATION

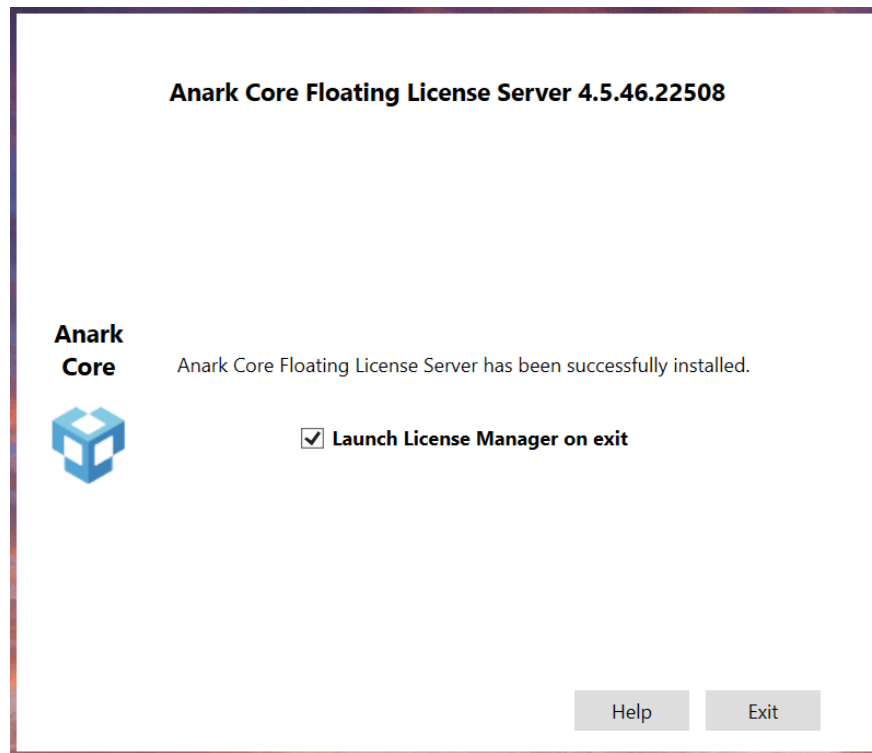
Included with the Anark Publish Installer .zip file is the Anark Floating License Server Installer. To install the Anark Floating License Server, double click on the Anark Floating License Server .exe file.

If any prerequisites are needed, a dialog will first appear to install the prerequisites. After installing the prerequisites, the following dialog will appear that allows you to pick the install path for the Anark Floating License Server. Change this path as needed and click the **Install** button. The software will begin to install.



Once the software is installed, click the **Exit** button to exit.





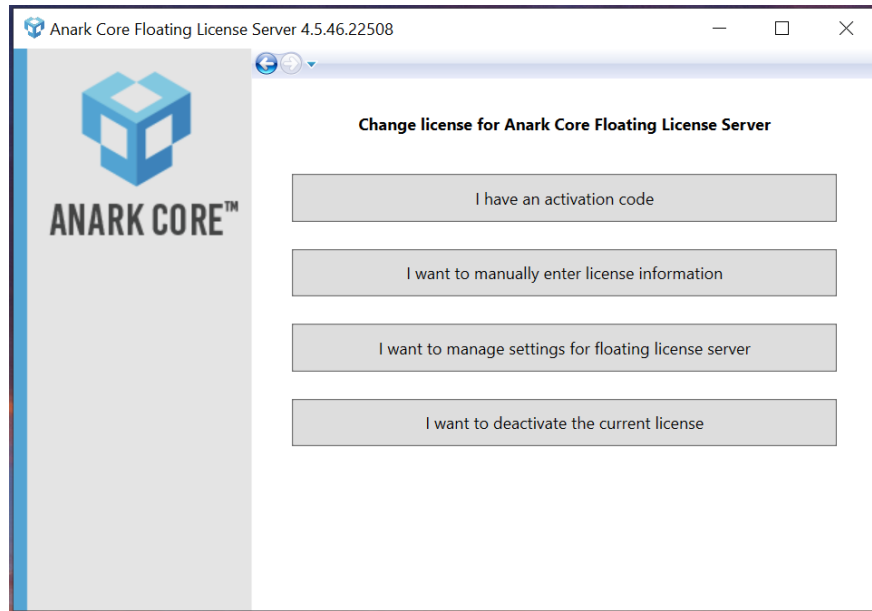
LICENSING ANARK FLOATING LICENSE SERVER

There are two ways to activate a license for Anark Floating License Server—on-line with an activation code or through e-mail (manually) with a license file.

Note: If you are operating behind a restricted network that cannot successfully connect to Anark’s license activation server, then you should let your reseller know that you want to activate manually via a license file.

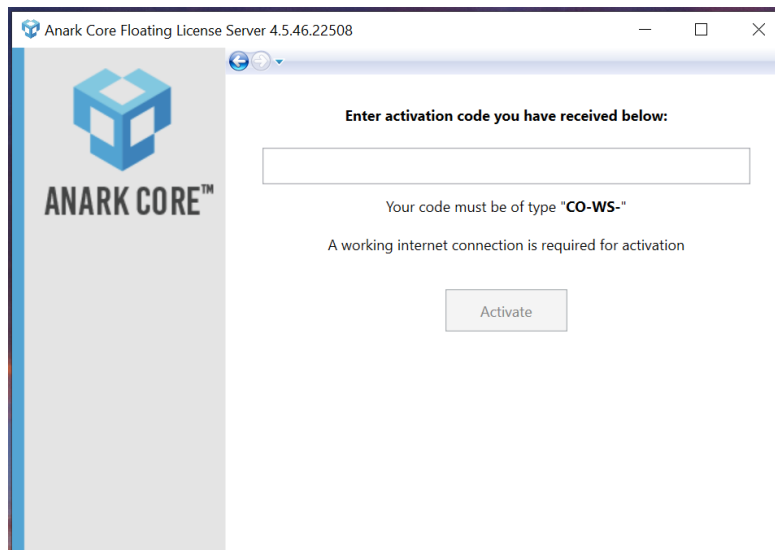
During installation, the Anark Floating License Manager application will appear. Optionally you may launch the Anark Floating License Manager from Windows Start menu: **Start > Anark > Anark Core Floating License Server > Anark Core Floating License Manager**. Select either the **“I have an activation code”** button or the **“I want to manually enter license information”** button depending on your preference.





ACTIVATION CODE

If you choose to activate via activation code, the following UI will be presented.

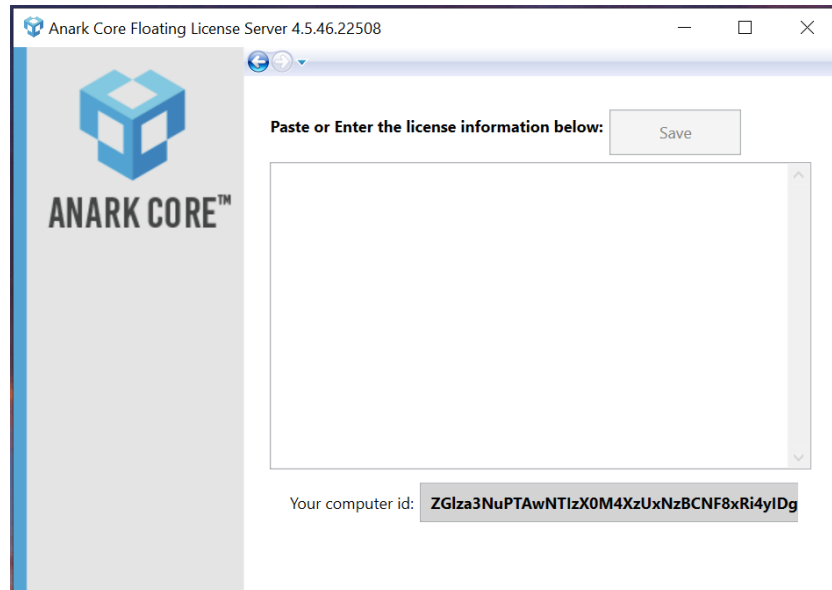


Copy the activation code that was provided by your reseller into the activation code field. Click on the **Activate** button. The Anark Publish License Manager will try to connect to the **anark.com** license server to activate the license. When it is successful, your software is now licensed but not ready for use. A page will appear that allows you to configure your floating license server.

LICENSE FILE

If you choose to activate manually by entering the license file information, the following UI will be presented.





Copy the computer ID, paste this into an e-mail, and send this information to your reseller. They will perform the activation and provide a license file in a return e-mail. Copy all the text in the license file into the provided field. Click on the **Save** button to save your license file information.

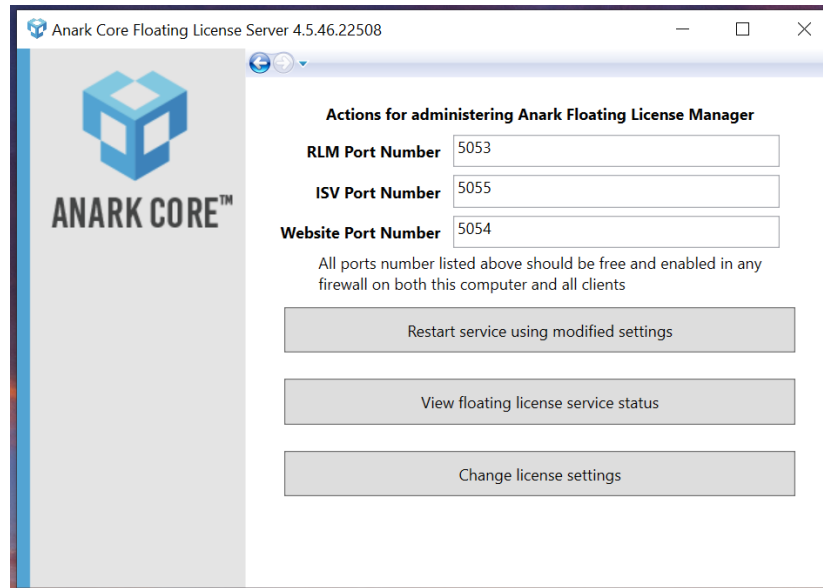
Your software is now licensed but not ready for use. A page will appear that allows you to configure your floating license server.

CONFIGURING ANARK FLOATING LICENSE SERVER

After successfully licensing the Anark Floating License Server software, a configuration page will appear. The default **RLM Port Number**, **ISV Port Number** and **Website Port Number** (for the administrator web server) can be modified. By default, the port number matches the default port number configured in Anark Publish.

If you have firewalls running on your floating license host computer, please remember to install a policy to allow both incoming and outgoing connections on all three ports that you chose. Similarly, all client computers that intend to connect to this floating license server should also have exceptions in their firewall configuration to connect to this host computer on the chosen ports. If you change the **RLM Port Number** from its default value, clients will need the new chosen port number when they try to connect to the floating license host.

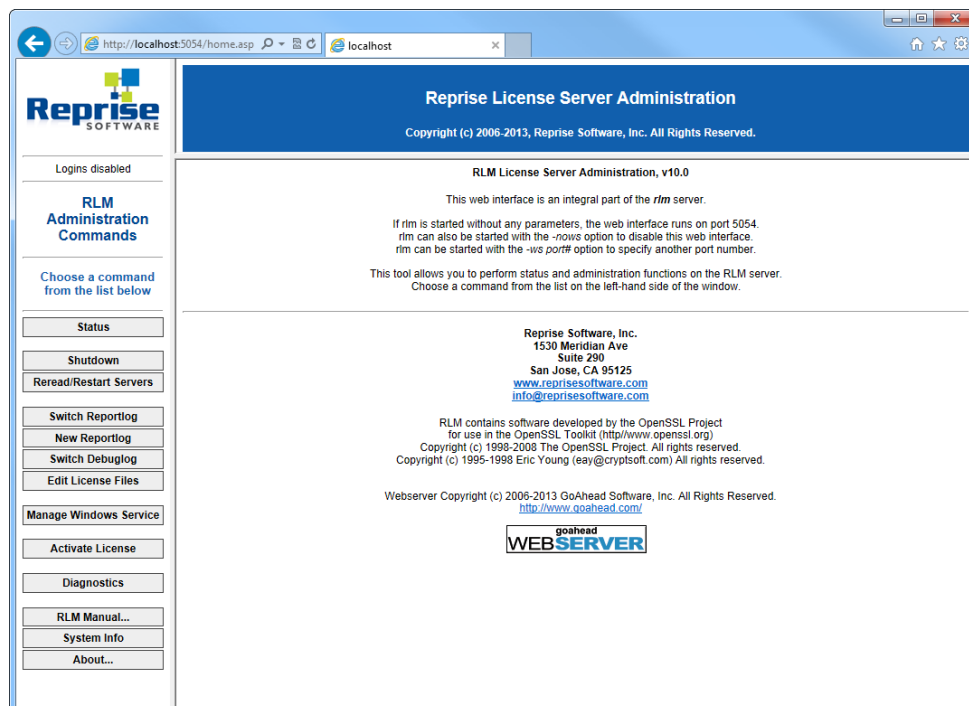




After configuring the port numbers, click on the **“Start floating license service button”** to create and run a Windows Service for the licensing server. Once the service is running, a new option **“View floating license server status”** will become available in the menu.

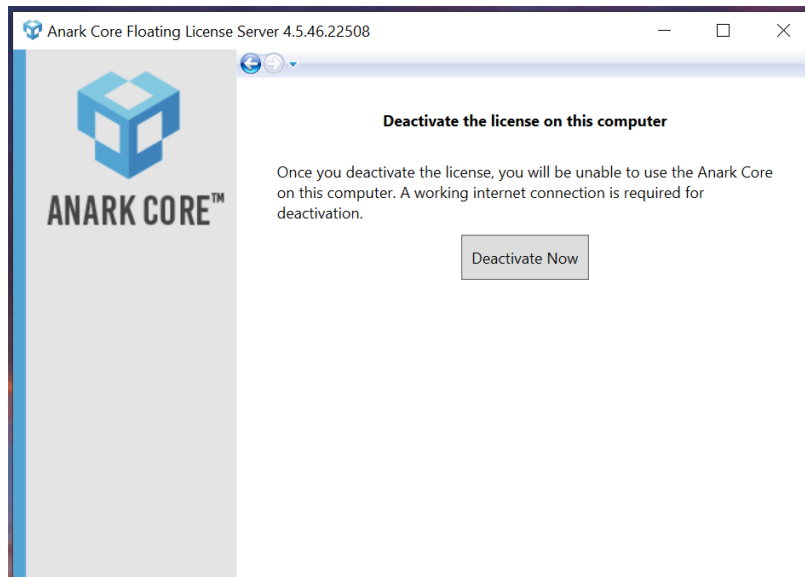
To view the status of the license server, as well as provide access to a variety of administrative functions, click on the **“View floating license server status”** button.

The administrator web page for the licensing server will appear. Here you will find more licensing server administrator functionality. To find out more information, click on the **RLM Manual** button on this web page.



DEACTIVATE FLOATING LICENSE SERVER

If in the future you want to deactivate the license to move it to a new computer, open the Anark Floating License Manager and click on the **“I want to deactivate the current license”** button. In the next screen, click on the **Deactivate Now** button.



This will deactivate the current license and increase the activation count for your activation code. You may now uninstall and reinstall the software on a different computer. You are now free to use your activation code to activate Anark Floating License Server on another computer.



SETTING UP INTERACTIVE USER

An "interactive user" is a user that is logged on at the physical console before processing runs on Anark Publish. Please note that an interactive user account is only required if the SolidWorks MBD Advanced Integration is deployed. This domain account should have read/write permissions to the share where input and output files will be located. Anark Publish will use the logged in user's token to overcome the session 0 based limitation of Windows Services which was introduced starting with Windows Server 2008 R2 and Windows 7.

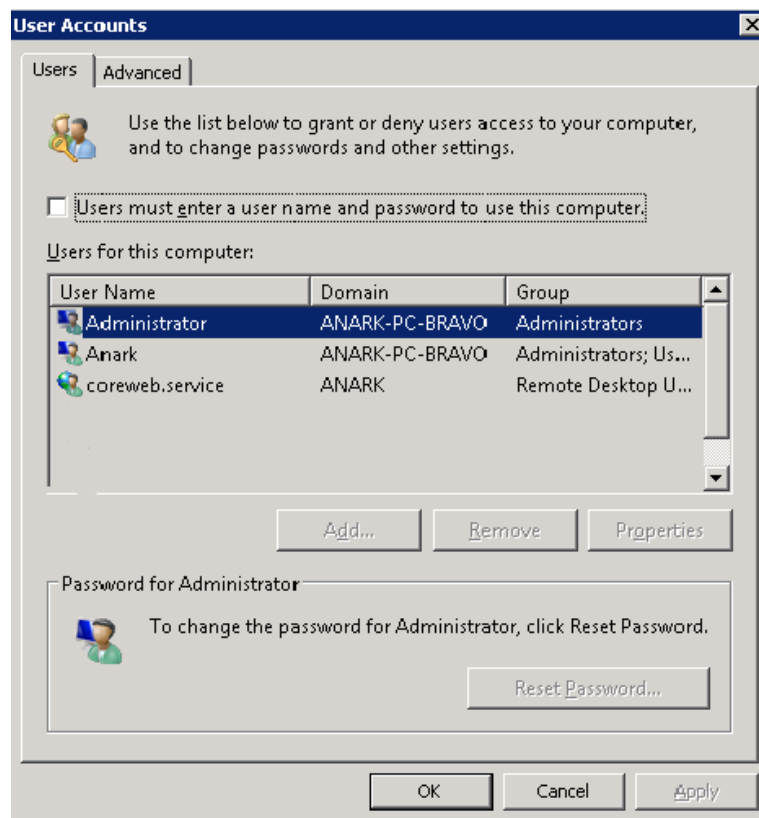
If an "interactive user" is required to process runs on the server, after finishing installation, the administrator needs to login the user that will be used by Anark Publish. This user needs to be logged in at the console. After the user is logged in, run "query session" in command prompt and the logged in user name should be listed against session name "console" to process the runs using Anark Publish.

C:\>query session

SESSIONNAME	USERNAME	ID	STATE	TYPE	DEVICE
>console	administrator	0	active	wdcon	
rdp-tcp#1	client1	1	active	wdtshare	
rdp-tcp		2	listen	wdtshare	

It is also recommended to configure the Windows built in auto logon mechanism to enable the specified user to logon automatically. To enable and configure auto logon, either use the free utility that is available at <http://technet.microsoft.com/en-us/sysinternals/bb963905.aspx> or perform the below steps.

Click Start, Run and enter control userpasswords2 and you should see a dialog box as shown below.



Anark Publish Deployment

If the “Users must enter a user name and password to use this computer” checkbox is not shown, close the dialog and

Open a CMD prompt and enter the following (all on one line):

```
reg add "HKLM\SOFTWARE\Microsoft\windows NT\CurrentVersion\winlogon" /v AutoAdminLogon /t REG_SZ /d "1" /f
```

On the command prompt, enter control userpasswords2

Clear the “Users must enter a user name and password to use this computer” checkbox for the user that needs to be logged on automatically. Click OK.

Enter the user name and password that will be used for auto logon and click OK.

You may find that you need to configure the default domain, as well. If so, enter the following (all on one line) at a CMD prompt; enter your domain name in place for “YOURDOMAINNAME”.

```
reg add "HKLM\SOFTWARE\Microsoft\windows NT\CurrentVersion\winlogon" /v DefaultDomainName /t REG_SZ /d "YOURDOMAINNAME" /f
```

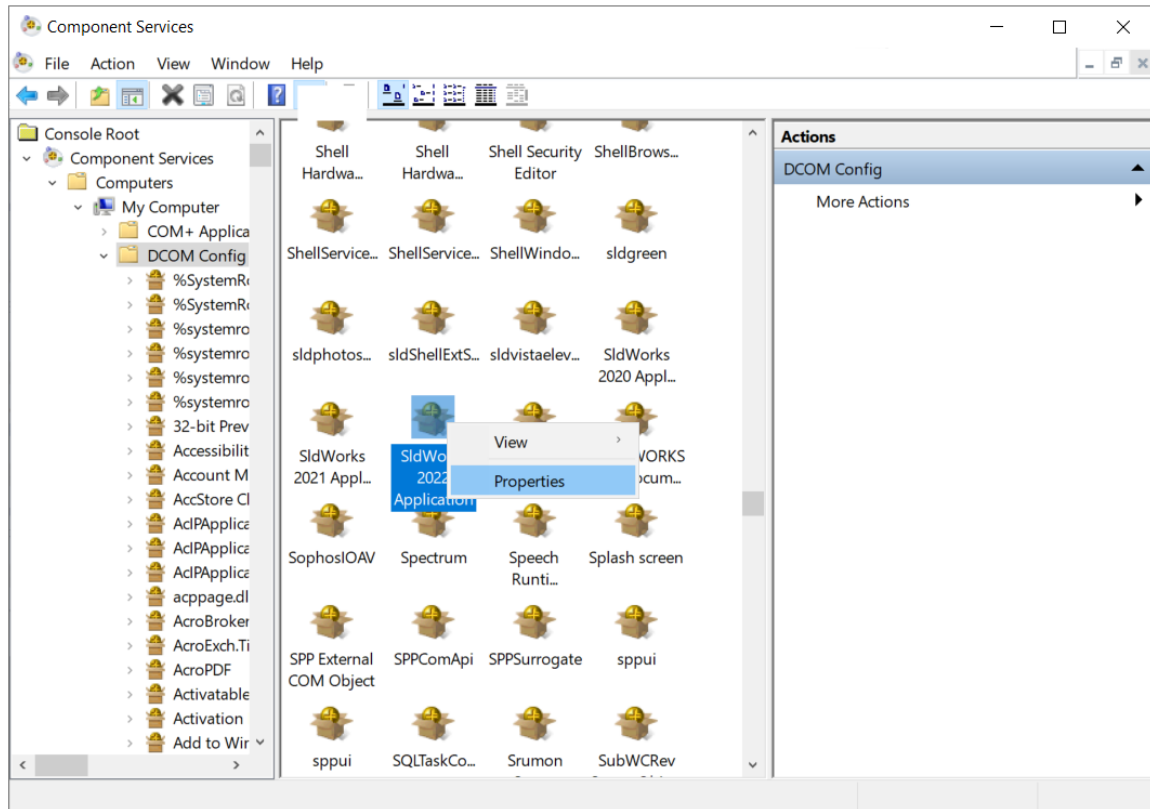
When the computer starts up the account you specified will be logged in automatically. Note that the password is encrypted on the computer.

If an “interactive user” is provided to the installer, the installation will attempt to grant it the DCOM permissions it requires to launch a SolidWorks session when processing SolidWorks files. If multiple versions of SolidWorks are installed, it grants these permissions to the latest version installed. If you wish to change to a different “interactive user” after installation or Anark Publish fails in all attempts to process a SolidWorks file, it is likely these permissions will need to be set manually. This can be done by performing the following instructions.

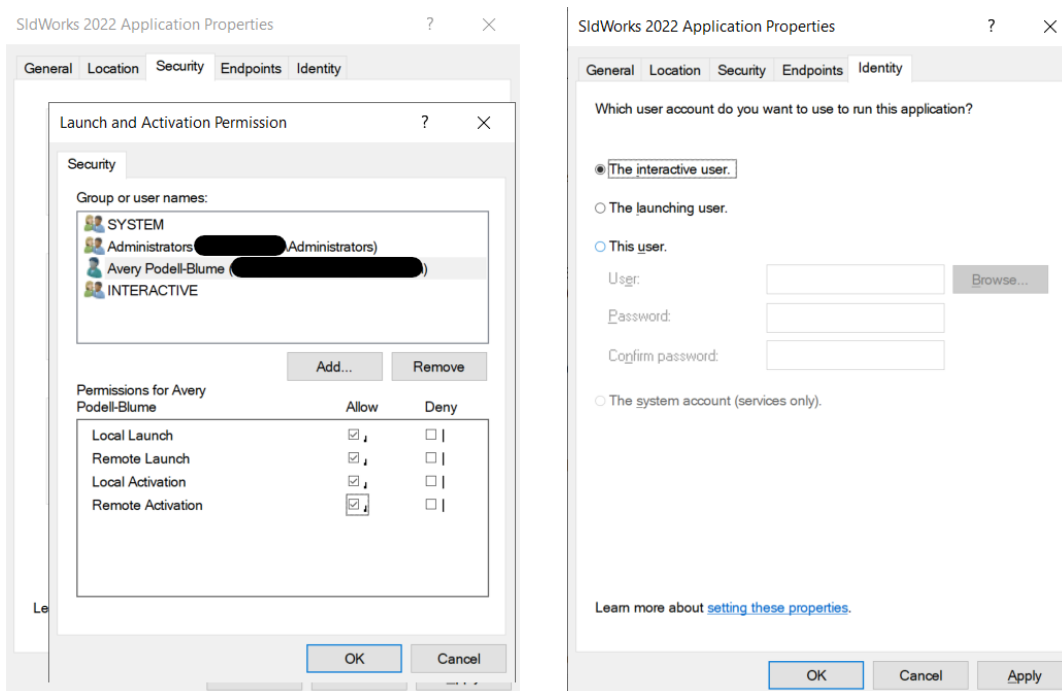
First, an Administrator user for the server should open the “Component Services” application. This is a Windows OS tool and can be found through the Start menu. Navigate to Component Services > Computers > My Computer > DCOM Config and right-click the latest version of SolidWorks, selecting “Properties”, as shown in the following screenshot.



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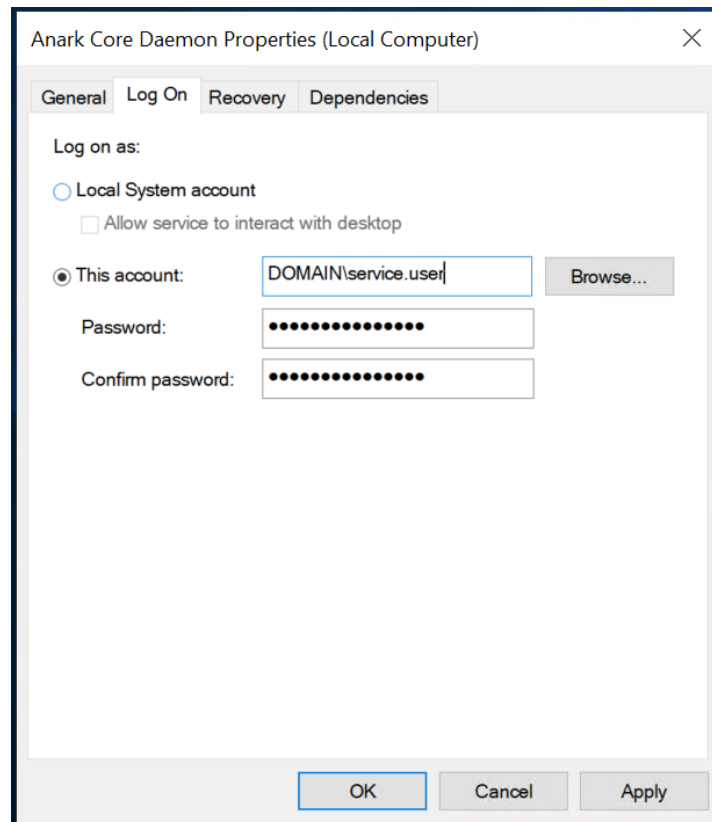
In the opened Properties window, go to the Security tab and select “Customize” for the Launch and Activation Permissions. Then, click the “Edit” button, add your chosen interactive user and grant them all Activation and Launch permissions. Next, go to the Identity tab and select “The interactive user” option. Finally, click “Apply” and exit.



CONFIGURING COREDAEMON WINDOWS SERVICE

The CoreDaemon Windows service should be set to a user with read/write permissions to the share where input and output files will be located. If a CoreDaemon user was set during installation, additional configuration is not required. Otherwise, the CoreDaemon Windows service will be running under the LOCALSYSTEM account after installation.

After installation, an Administrator can manually set the CoreDaemon user. To do so, go to Administrative Tools->Services, double click on CoreDaemon Windows service, it will pop up a dialog as shown below. Select the “Log On” tab, click on “This account” and enter the account credentials and restart the service.



CONFIGURING SERVER QUEUE

Anark Publish automation runs will be processed concurrently; Anark Publish limits the concurrent processing to the number of cores on the server. Any run submitted to the server is queued and server processes it as soon it is ready. Concurrent processing of runs that needs to use advanced adapter import (NX, Creo, SolidWorks, Inventor) which spawns CAD application in the background behaves differently. Server restricts the advanced adapter import action to happen sequentially for effective utilization of server resources. If there are multiple runs in the queue that uses advanced adapter import, after server finishes the import for the first run and while it is executing other actions in the recipe (transforming and exporting), next run in the queue that uses advanced format import will start processing.

Anark Publish uses first in, first out (FIFO) for processing the runs from the queue by default. It can be also configured to improve the quality of service (QoS) by assigning a priority to the server automation run. A server automation run can be assigned a priority (High, Normal or Low) when the web service is invoked or the system can assign a priority to the automation run based on the preferences set by the administrator. Server administrator can configure each server to process runs with certain priorities, for ex: if there are 2 servers, one server can process High and Normal priority runs and the other server can process High and Low priority runs. Server processes the runs in the following order: High, Normal, Low.

Preferences in the Prefs.xml file, located in <ANARK PUBLISH INSTALLATION FOLDER>\CoreDaemon\Preferences folder, should be configured to enable QoS. There is no need to do any configuration if the default queue processing (FIFO) is preferred. Preferences that can be configured are shown below.

Anark.Server.Queue.ProcessRunsWithPriorities	Run priorities this server should process. Multiple values should be comma separated. Valid values are High, Normal and Low. Default value is Normal.
Anark.Server.Queue.HighPriorityRunRule.FileSizeLowerThanMB	If the size of the files in the folder that contains the input CAD file is lower than the specified MB, run will be assigned a High priority. This preference is used for publishing runs (export). Default value is -1 which results in server ignoring the preference.
Anark.Server.Queue.LowPriorityRunRule.FileSizeGreaterThanMB	If the size of the files in the folder that contains the input CAD file is greater than the specified MB, run will be assigned a Low priority. This preference is used for publishing runs (export). Default value is -1 which results in server ignoring the preference. If file size is between the limits of low and high priority rule, then the run is assigned a Normal priority.
Anark.Server.Queue.DefaultPriorityForNonPublishingRuns	Priority for non-publishing runs (PDF Add/ Remove Watermark, PDF Assemble/ Disassemble, get PDF comments or fields). Valid values are High, Normal or Low. Default value is Normal.



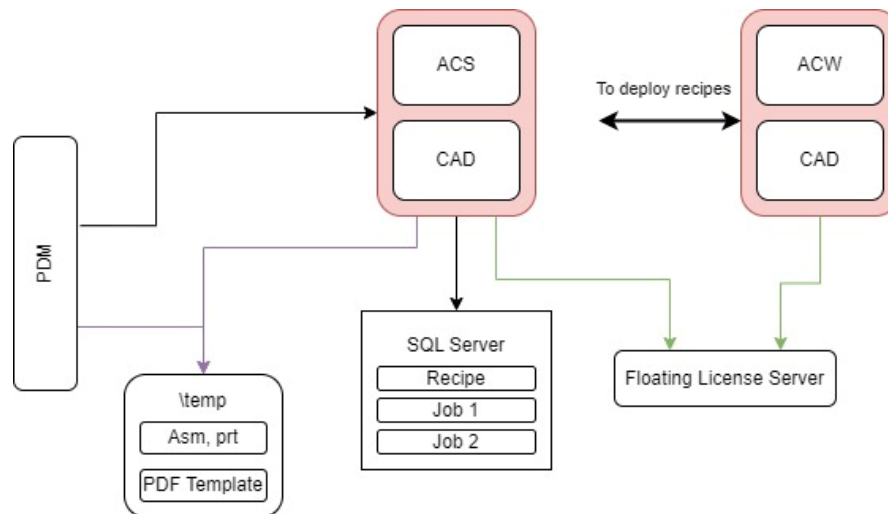
Anark.Server.Queue.SiteName	<p>SiteName establishes a Run affinity to the site/server that enqueued the Run. If you have site names specified, then the clients at each geographically separated site will talk only with their local server, and that server will also be the one that processes the Runs for that site. In other words, this preference ensures that the Anark Publish running on a specific site will pick up the runs for that site from the queue for processing, even though they are entered into the shared SQL database.</p> <p>If there is no issue with bandwidth or data access to remote sites, do not use site names (do not set this preference).</p> <p>The advantage of using site names as opposed to a separate SQL database for each site is central monitoring and logging, plus fewer database installations to maintain.</p>
Anark.Server.Queue.PollingTimeInMilliseconds	<p>Queue polling time in milliseconds. Default value is 5000 ms (5 seconds).</p>

Restart Anark Publish Daemon Windows service after updating any preference for it to take effect.

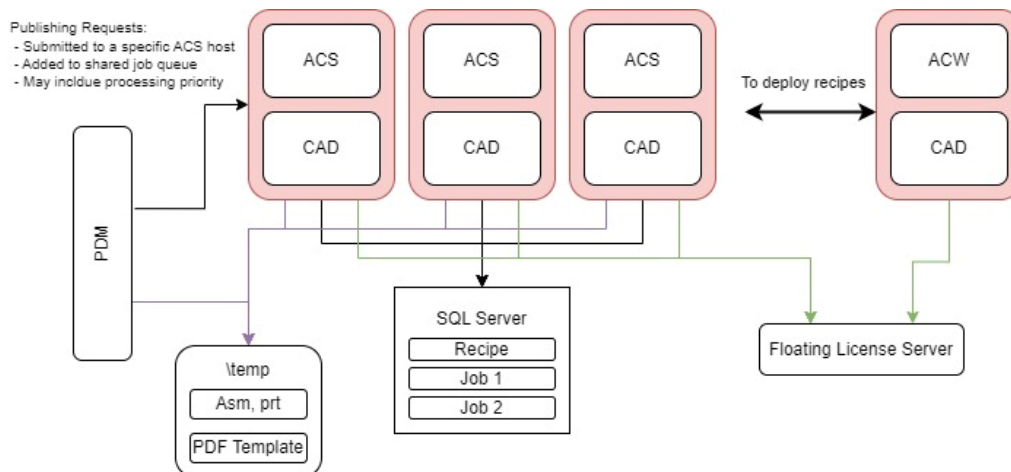


DEPLOYMENT ARCHITECTURES

Anark Publish can be deployed as a single instance like so:



For larger volumes and greater concurrent processing capacity, Anark Publish can be deployed as a cluster of instances that share a common job queue stored in a single SQL Server instance:



There are several characteristics of a multi-instance Anark Publish cluster worth noting:

- Anark Publish provides a built-in load-balanced solution (FIFO: First In, First Out). There is typically no need for traditional load-balancing solutions like the F5, although such solutions can still be used to create a high-availability cluster. A common/shared SQL Server instance provides a common job queue, from which jobs are dispatched to available Anark Publish instances.
- Anark Publish handles all job-queueing; there is no need to implement a custom job queueing solution. Anark Publish publishing requests can be submitted from numerous different sources, and each request will be queued within the centralized job queue.
- Anark Publish can support an arbitrary number of processing “lanes.” The benefit of establishing processing lanes is to direct processing jobs toward one or more available instances of Anark

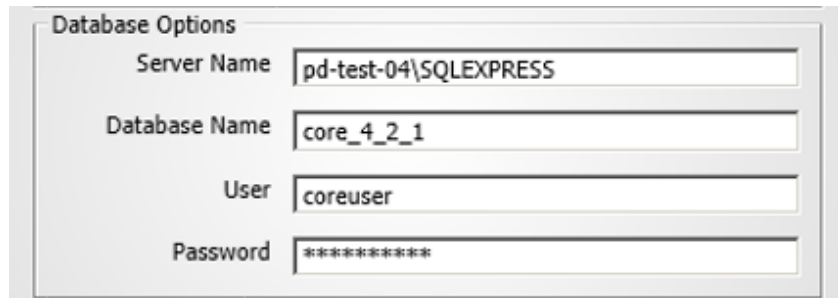


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Publish. In practice, processing lanes can be used to enhance the quality of service and eliminate processing bottlenecks. For example, a subset of the cluster can be dedicated to processing only parts, while the remainder of the instances can be used to process assemblies.

- Anark Publish webservice API's allow for the assignment of processing priority. Each Anark Publish processing request can include a runPriority parameter that influences which “processing lane” the job will be directed to.

For multi-instance deployments of Anark Publish, configure all instances of Anark Publish to connect to the same SQL database. The screenshot below shows SQL Server hostname, database name, user account and password. Each instance of Anark Publish should be configured using these same connection details.



The screenshot shows a 'Database Options' dialog box with four input fields. The 'Server Name' field contains 'pd-test-04\SQLEXPRESS'. The 'Database Name' field contains 'core_4_2_1'. The 'User' field contains 'coreuser'. The 'Password' field contains a series of asterisks '*****'.

Database Options	
Server Name	pd-test-04\SQLEXPRESS
Database Name	core_4_2_1
User	coreuser
Password	*****



TROUBLESHOOTING

Additional Log Information

By default, Anark Publish filters out informational and debug-level log messages to conserve database resources, but occasionally this information can help diagnose a problem. To enable the collection of more log records, modify this file:

C:\Program Files\Anark\Anark Publish\CoreDaemon\Preferences\Prefs.xml

Change the highlighted text from “**Error**” to “**Debug**”:

```
<PreferenceEntry>
  <Key>Anark.Logging.Preference.1</Key>
  <Value xsi:type="LoggingPolicyEntry">
    <ApplicationType>Run</ApplicationType>
    <SinkType>Database</SinkType>
    <Level>Error</Level>
    <Topic />
  </Value>
</PreferenceEntry>
<PreferenceEntry>
  <Key>Anark.Logging.Preference.2</Key>
  <Value xsi:type="LoggingPolicyEntry">
    <ApplicationType>SpawnedProcess</ApplicationType>
    <SinkType>Transport</SinkType>
    <Level>Error</Level>
    <Topic />
  </Value>
</PreferenceEntry>
<PreferenceEntry>
  <Key>Anark.Logging.Level</Key>
  <Value xsi:type="xsd:string">Error</Value>
</PreferenceEntry>
```

The valid values for that setting, ordered by the most logging to the least, are:

```
Debug
Info
Warn
Error
```

Restart the Anark Publish Daemon Windows service after updating any preference for it to take effect.

In addition, you can check to see if Anark Publish is up and running and responding to requests by entering the URL below into a web-browser. If you see a web-page Anark Publish is up and running.

<http://hostname/coreservice/help>

