ObserveIT Custom Installation

In a custom installation, each of the ObserveIT components can be installed separately and you can distribute the components and use advanced configuration options as needed.

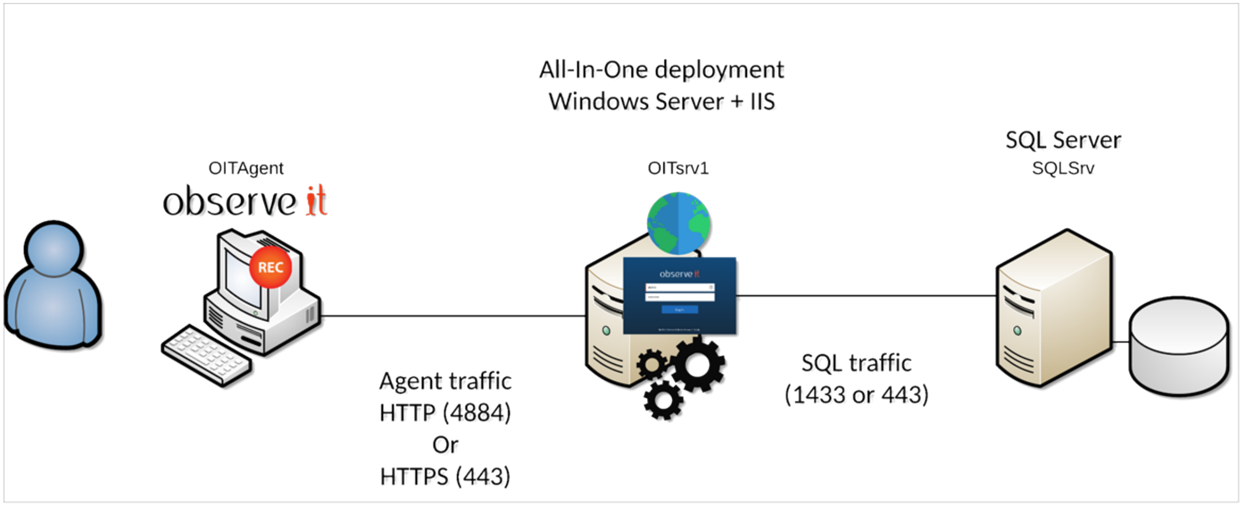
Custom Installation is often used in environments with higher security procedures, requiring each component of the ObserveIT product to be installed separately and using dedicated service accounts; or in large-scale environments requiring custom modifications of some of the server-side components.

Assumptions

This section describes the assumptions for examples included in the Custom Installation steps.

SYSTEM REQUIREMENT ASSUMPTIONS

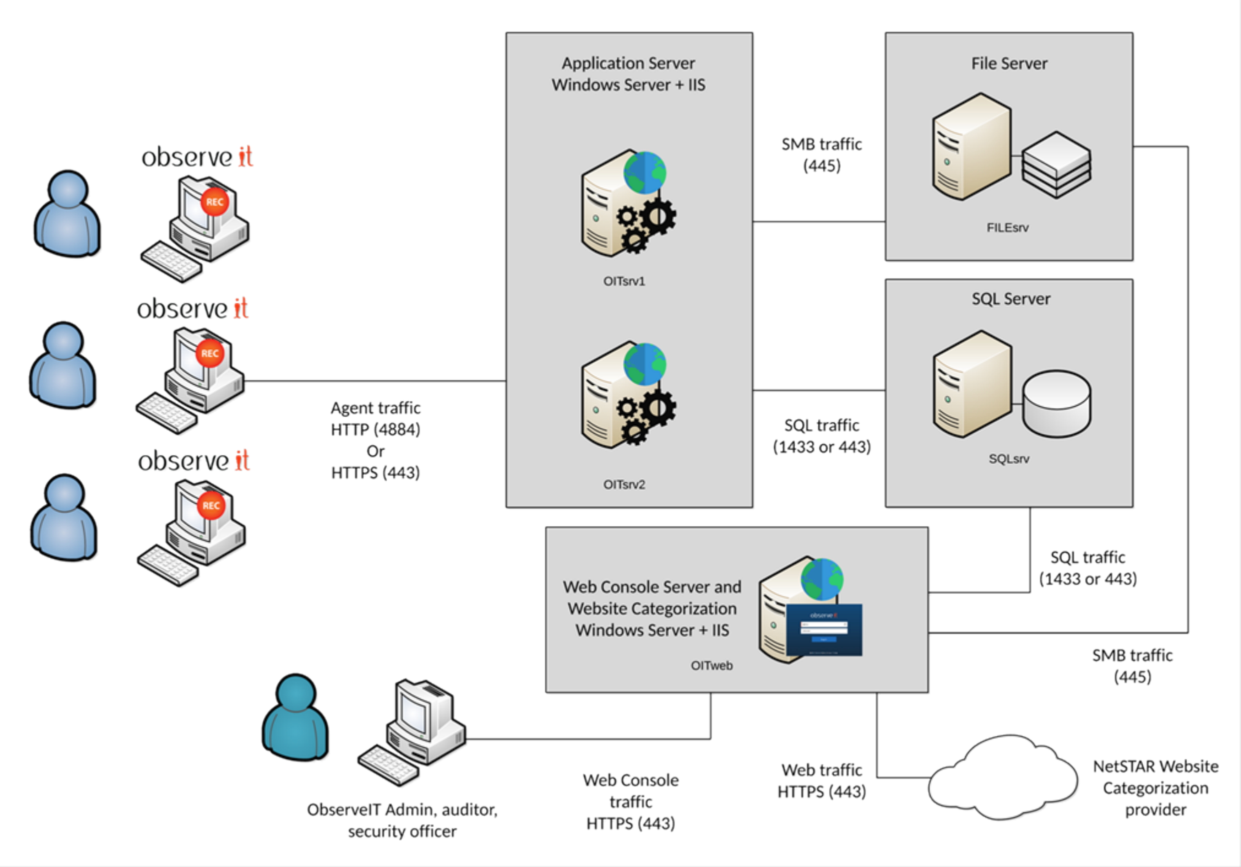
The diagram below shows the system requirements for the Custom Installation that is described in this documentation.



In the Custom Installation examples in the documentation, the following is assumed.

Server Name	Function	Software
SQLSrv	Database server File server	MSSQL Server 2016 Standard Windows Server 2016 Standard SQL Management Studio 17
OITsrv1	ObserveIT Application Server ObserveIT Web Console	Web Console Windows Server 2016 Standard Microsoft IIS 10
OITAgent	ObserveIT Agent	Windows Server 2016 Standard

The diagram below is an example If you use a more complex installation.



The following is assumed:

Server Name	Function	Software
SQLSrv	Database server File server	MSSQL Server 2016 Standard Windows Server 2016 Standard SQL Management Studio 17
OITsrv1	ObserveIT Application Server #1	Windows Server 2016 Standard Standard Microsoft IIS 10
OITsrv2	ObserveIT Application Server #2	Windows Server 2016 Standard Standard Microsoft IIS 10
OITweb	ObserveIT Web Console	Windows Server 2016 Standard Standard Microsoft IIS 10

FILEsrv	File Server	Windows Server 2016 Standard
OITAgent	ObserveIT Agent	Windows Server 2016 Standard

SYSTEM PREREQUISITES ASSUMPTIONS

For the system requirements in a custom installation, the following is required:

- All computers must be members of the same Active Directory domain
- Logon permissions to the computers must be defined with administrative permissions (local administrator)
- Permissions to create a service account user in Active Directory

You must prepare the following in a custom installation:

- Permissions to access the SQL Server database engine (SYSADMIN permissions)
- Permissions to grant the service account DBCREATOR permissions on the SQL Server
- Permissions to create folder(s) and share(s) on the server acting as the file server
- Permissions to grant the service account MODIFY permissions on the file share(s)
- Full network connectivity with no firewall restrictions between the components of the deployment, or permissions to create the appropriate firewall rules to allow the requested traffic type
- For data encryption (data in transit, data at rest, Web Console traffic):
- An internal Certificate Authority (CA) capable of issuing the correct digital certificates (it is possible to use self-signed certificates, however that may add complexity to the deployment)
- For detailed instructions, hardware recommendations and sizing refer to the **ObserveIT General Prerequisites and Recommendations** document which can be obtained by contacting ObserveIT's professional Services team at proserv@observeit.com.

ADDITIONAL ASSUMPTIONS FOR CUSTOM INSTALLATION

The server hosting the ObserveIT server-side website application is a member of an Active Directory domain, but not a domain controller (DC). Hosting IIS on a domain controller may cause adverse security issues and should be avoided. However, it may be possible when installing in an isolated lab environment. When installing on a DC, you need to use the "Active Directory Users and Computers" MMC snap-in and add the ObserveIT service account to the "Administrators" group found in the "Builtin" container, but this will affect all the DCs in the domain.

The reader has prior knowledge of Public Key Infrastructure (PKI) and its related terminology.

Your organization has an SQL server administrator who follows best practices for deploying and maintaining SQL server.

Your organization has a backup administrator, who follows best practices for backing up databases, Operating Systems, and file shares.

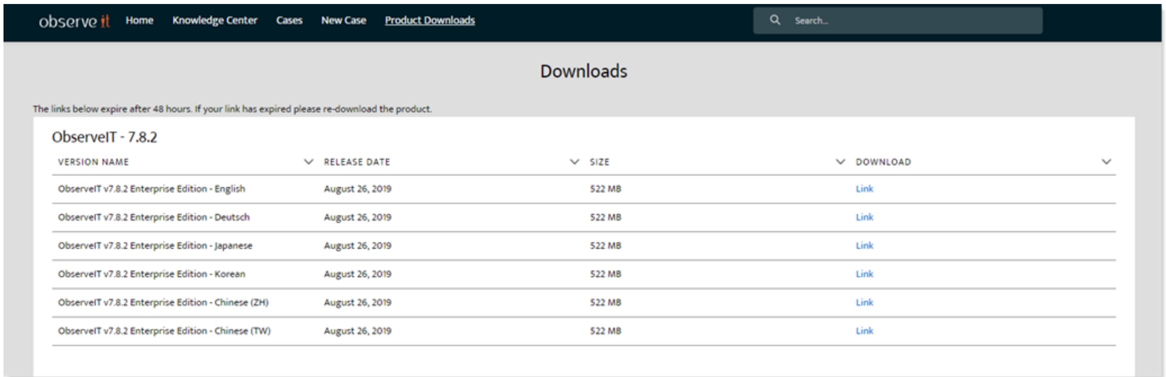
Table of Contents

Downloading the Latest Version

When you're ready to install or update to a new version, you can download the files you need. Files are located in the **Downloads** page of the ObserveIT Support Portal.

> You need a username and password.

1. Download the files you need from here.
2. Log in and from the **Downloads** page, click the **Link** you want.



Downloads

The links below expire after 48 hours. If your link has expired please re-download the product.

ObserveIT - 7.8.2

VERSION NAME	RELEASE DATE	SIZE	DOWNLOAD
ObserveIT v7.8.2 Enterprise Edition - English	August 26, 2019	522 MB	Link
ObserveIT v7.8.2 Enterprise Edition - Deutsch	August 26, 2019	522 MB	Link
ObserveIT v7.8.2 Enterprise Edition - Japanese	August 26, 2019	522 MB	Link
ObserveIT v7.8.2 Enterprise Edition - Korean	August 26, 2019	522 MB	Link
ObserveIT v7.8.2 Enterprise Edition - Chinese (ZH)	August 26, 2019	522 MB	Link
ObserveIT v7.8.2 Enterprise Edition - Chinese (TW)	August 26, 2019	522 MB	Link

3. Save the file to `C:\Temp` on the ObserveIT Application server.
4. Extract the content of the **ZIP** file.

The following folders and files are included:

- DB: Contains the setup files for the 4 ObserveIT SQL databases
- DB_Analytics: Contains the setup files for the ObserveIT analytics database
- Insider Threat Library: Contains the exported rule library for duplication and review
- Mac Agent: Contains the Mac agent install binaries
- ScreenshotsStorageOptimizer: Optimizes screenshot storage for efficiency
- SQLEXPR_x64_ENU: Installation package for SQLExpress for the purpose of the trial (you can use your own instance of SQL in lieu of SQL Express if you prefer)
- TrialAssistant: Install cleanup scripts
- Typical Install: ObserveIT One-Click installation scripts and data
- Unix-Linux Agent: Various unix/linux agent install packages
- Utilities: Several useful tools such as the ObserveIT field-marking utility and Statistics collector

- Web: Contains the Web console and application server packages
- WebsiteCat: Contains the new ObserveIT web categorization module
- Winagent64bit: Contains the ObserveIT windows agent for 64 bit systems
- OIT Quick Start Guide: Contains system minimum requirements and helpful notes for the latest version
- TypicalInstall folder: Contains **ObserveIT.Installer.exe**, a self-contained one-click ObserveIT installer

Custom Installation Steps

Follow these steps to complete the installation process.

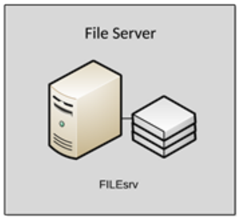
1. Preparing the Environment
    1. Formatting a Disk for Graphic Images Storage and the Database
    2. Creating and Sharing the Graphics Image Folders
    3. Installing Prerequisites for a Custom Installation
    4. Configuring Windows Firewall
2. Preparing Permissions
    1. Creating a Service Account User in Active Directory
    2. Assigning SQL Permissions to the Service Account User
    3. Adding the Service Account User to the Local Administrators Group
    4. Adding the Service Account User to the Local IIS_IUSRS Group
3. Installing and Configuring Databases
    1. Configuring Location for Recorded Screenshots
    2. Installing the ObserveIT Databases
    3. Verifying Database Installation
    4. Moving Database File to Drives
    5. Setting Initial Database File Sizes
    6. Installing Database Maintenance
4. Configuring Microsoft Internet Information Server (IIS)
    1. Obtaining a Digital Certificate
    2. Assigning a Digital Certificate
    3. Creating a New Application Pool in IIS 8.X
    4. Creating a New Website in IIS 8.X for the Application Server
    5. Creating a New Website in IIS 8.X for the Web Console
5. Installing ObserveIT Components
    1. Installing ObserveIT Application Server
    2. Installing ObserveIT Web Management Console
    3. Installing the Screenshots Storage Optimizer
    4. Installing the Website Categorization Module
    5. Verifying the ObserveIT Services Identity
6. Configuring ObserveIT Installation
    1. Configuring the Admin Password
    2. Obtaining a Commercial License
    3. Configuring LDAP Settings

    4. Configuring SMTP Settings
    5. Configuring Screen Capture Data Storage
7. Configuring Traffic Security
    1. Configuring ObserveIT Application Server for Data Transit Encryption
    2. Configuring Windows Agents to Use SSL
    3. Configuring a Mac Agent to use SSL
    4. Configuring a Unix Linux Agent to Use SSL
    5. Configuring Screen Capture Data Storage
8. Installing ObserveIT Agents
    1. Windows Agent Deployment
    2. macOS Agent Deployment
    3. Unix/Linux Deployment

Preparing the Environment

Custom Installation is often used in environments with higher security procedures, requiring each component of the ObserveIT product to be installed separately and using dedicated service accounts; or in large-scale environments requiring custom modifications of some of the server-side components.

The diagram below shows an example of a file server. This is where the configuration starts.



The following tasks describes how to prepare your Windows Server machines for ObserveIT installation.

- Formatting a Disk for Graphic Images Storage and the Database
- Creating and Sharing the Graphics Image Folders
- Installing Prerequisites
- Configuring Windows Firewall

FORMATTING A DISK FOR GRAPHIC IMAGES STORAGE AND THE DATABASE

Screen capture data is configured separately.

As a matter of best practice, for medium to large scale deployments, ObserveIT recorded images are stored on a file share server in the network. Configuring all recorded graphic screenshots to be stored in the file system network share (a UNC path) instead of in the SQL database reduces the overall I/O overhead on the SQL Server.

This section describes how to configure the disks before creating the file share.

For information about creating the file share, see **Creating and Sharing the Graphics Image Folders**.

By default, all the recorded graphic screenshots are stored in the **ObserveIT_Data** database.

If using a file share, it is highly recommended to use a Windows Server 2016 machine with appropriate disk capacity, where the disk drive(s) are connected either locally, or on a storage device such as SAN/NAS using either iSCSI or Fiber Channel (FC). Where this is not possible, use virtual disks that are stored on the fastest and most optimized storage array for write IOPS.

Storage Types

There are a total of 3 types of storage you can use for recording screenshot data:

- **Hot storage**: Recording screenshot data is written immediately after being received from a remote ObserveIT Agent. Because all the graphic images stored on the hot storage are typically small, the disk needs to be formatted with NTFS file system for Windows Server 2016 using the allocation unit size of 4KB (4096K). This ensures best disk location usage and reduce disk space waste.

- **Warm storage**: Recording screenshot data is stored after an active ObserveIT session is closed. The recording screenshot data stored on the warm and archive storage is stored in a ZIP format, with each ZIP file containing all images for a single ObserveIT session. To optimize performance, format the warm and archive storage with 64KB block size. This configuration can be done using Disk Management or the DISKPART command line utility.

- **Archive storage**: Recording screenshot data is moved during an archive operation.

Do not enable disk compression.

Format the Disk Using Computer Management

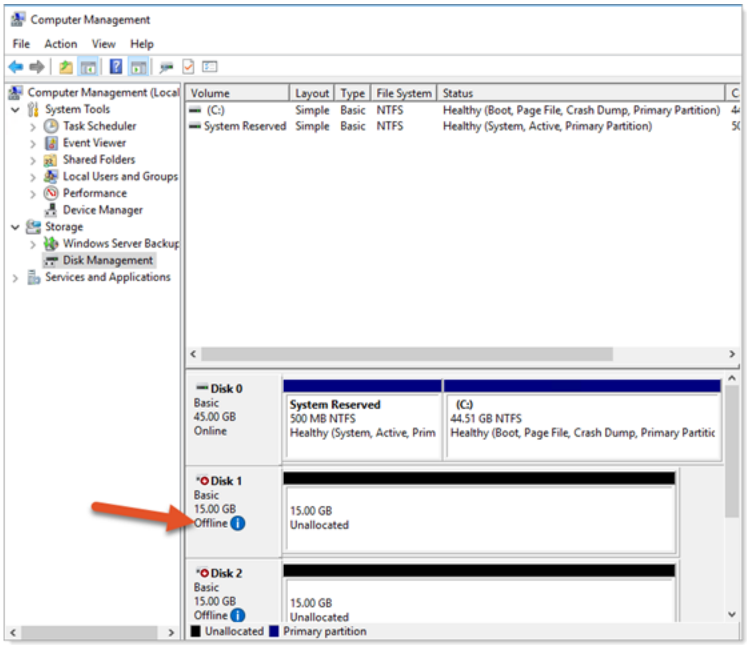
This example assumes the file share is to be located on a Windows Server 2016 Operating System and describes the procedure to configure the disks (and later – the file share) on this Operating System.

In this example, assume the new disk has just been connected to the machine, but no further action was taken.

1. Connect to the computer acting as the ObserveIT file share.
2. From **Start**, type **Computer Management**.

   The **Computer Management** window opens.
3. Expand **Computer Management (Local)**, expand **Storage**, and click **Disk Management**.

   The list of disks appears.
4. Find the new disk in the list. Usually, it is the only one with the status **Offline**.



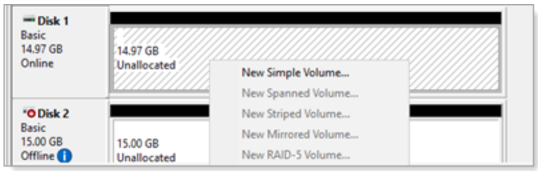
Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	4
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	5(

5. Right-click the disk and select **Online**.

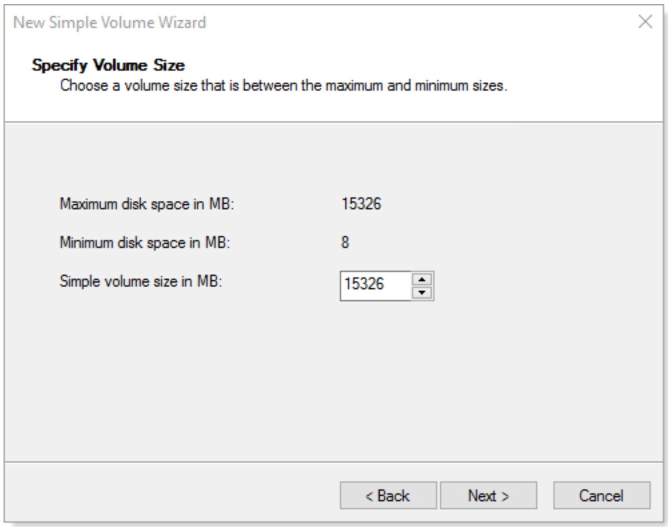
6. Right-click the disk again and select **Initialize Disk**.

7. Click the **GPT (GUID Partition Table)** radio button and click **OK**.

8. Right-click the partition and select **New Simple Volume**.



9. The Wizard opens, click **Next**.



New Simple Volume Wizard

Specify Volume Size

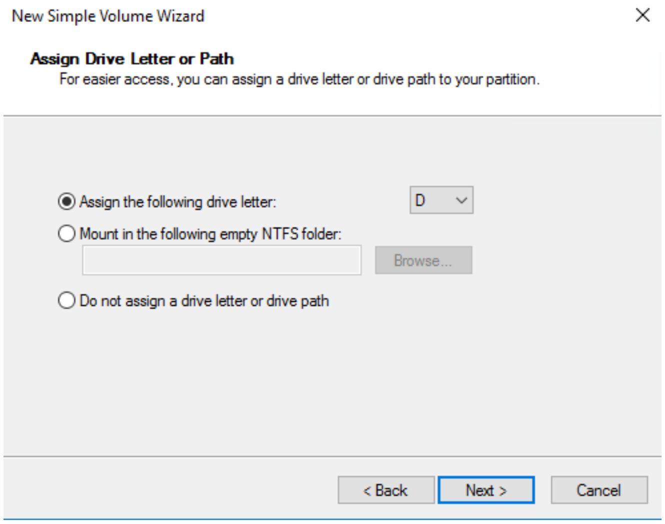
Choose a volume size that is between the maximum and minimum sizes.

Maximum disk space in MB: 15326

Minimum disk space in MB: 8

Simple volume size in MB: 15326

10. Make sure maximum the values specified in the Maximum disk space in MB and Simple volume size in MB are equal. Click **Next**.



New Simple Volume Wizard

Assign Drive Letter or Path

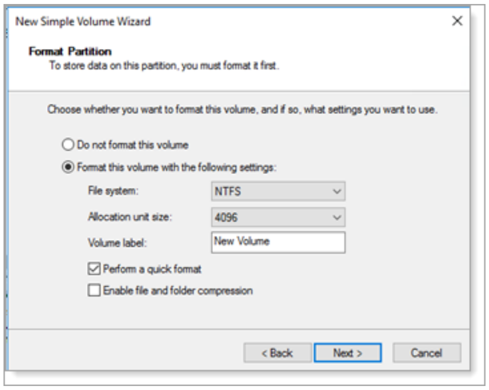
For easier access, you can assign a drive letter or drive path to your partition.

● Assign the following drive letter: D

○ Mount in the following empty NTFS folder:

○ Do not assign a drive letter or drive path

11. Assign an appropriate drive letter. Click **Next**.



New Simple Volume Wizard

Format Partition

To store data on this partition, you must format it first.

Choose whether you want to format this volume, and if so, what settings you want to use.

○ Do not format this volume

● Format this volume with the following settings:

File system: NTFS

Allocation unit size: 4096

Volume label: New Volume

☑ Perform a quick format

□ Enable file and folder compression

12. Click the **Format this volume with the following settings** radio button and select **NTFS**.

13. Set the **Allocation unit size**:

    - 4096 for the hot storage.
    - 64KB for the warm and archive storage.
    - 64KB for SQL database.

14. Assign an appropriate volume label at the **Volume label** field.

15. Make sure **Perform a quick format** checkbox is checked.

16. Click **Next** and review the settings. Click **Finish**.

17. The disk is formatted and you are returned to the **Computer Management** window.

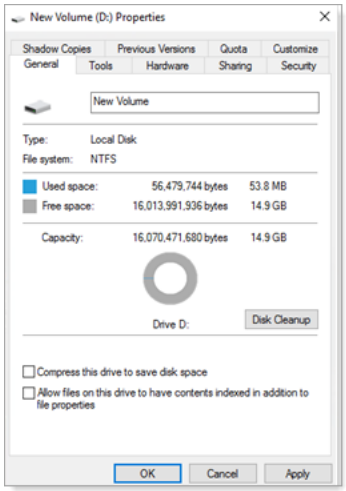
Validating Compression and Indexing Settings

1. From the **Computer Management** window, expand the **Computer Management (Local)** node, expand the **Storage** node, and click the **Disk Management** node.

2. In the main window, locate the volume designated for the ObserveIT screenshot data.

3. Right-click the volume and choose **Properties** from the menu.

4. Make sure the **Allow files on this drive to have contents indexed in addition to file properties** check box is unchecked.



New Volume

Type: Local Disk

File system: NTFS

🟦 Used space:	56,479,744 bytes	53.8 MB
▨ Free space:	16,013,991,936 bytes	14.9 GB
Capacity:	16,070,471,680 bytes	14.9 GB

□ Compress this drive to save disk space

□ Allow files on this drive to have contents indexed in addition to file properties

5. Click **OK**.

CREATING AND SHARING THE GRAPHICS IMAGE FOLDERS

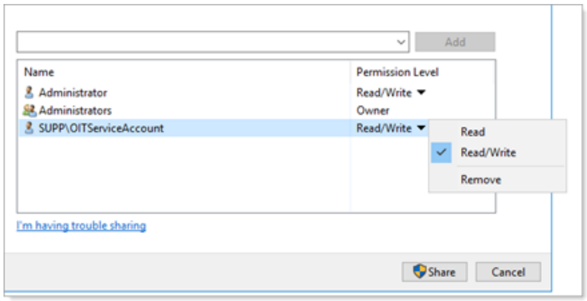
This topic describes how to create a file share so you can share folders on a Windows Server file server.

> If you want to use Network Access Storage (NAS) or a different storage type, see your storage vendor documentation.

1. Connect to the computer acting as the ObserveIT file share.
2. Open Windows File Explorer. (You can open the **Start** menu and type in **explorer**, then Enter.)
3. In Windows **File Explorer**, navigate to a disk where the ObserveIT image store folder is to be located.
4. Create a new folder. (Click **New** and then **Folder**) and right-click some empty space inside the **File Explorer** window).
5. Give the folder an appropriate name, for example: **OITHotStorage**.
6. Right-click the folder, click **Share With**, and click **Specific people**.
7. Type in the account name, for example **OITServiceAccount** and click **Add**.

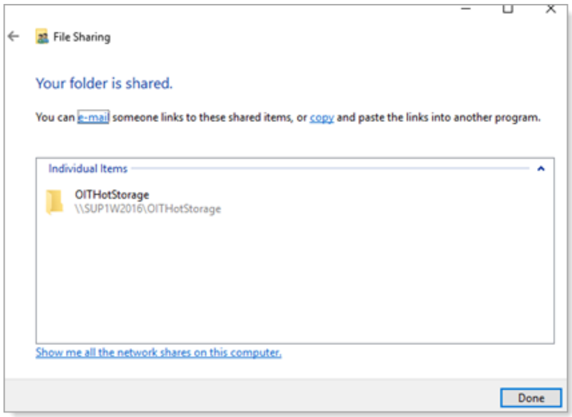
   The new account is added.

8. Select the account and set the Permission Level. Choose **Read/Write**. Click **Share**.



Name	Permission Level
Administrator	Read/Write
Administrators	Owner
SUPP\OITServiceAccount	Read/Write

9. Your folder is shared.



File Sharing

Your folder is shared.

You can e-mail someone links to these shared items, or copy and paste the links into another program.

OITHotStorage
\\SUP1W2016\OITHotStorage

10. Create folders for the ObserveIT Archive folder, for example: OITWarmStorage and OITArchive by repeating the previous steps.

    Make a note to remember the paths to the current shares. You'll need them later.

    For example:

```
\\filesrv\OITData\OITHotStorage
\\filesrv\OITData\OITWarmStorage
\\filesrv\OITData\OITArchive
```

INSTALLING PREREQUISITES FOR A CUSTOM INSTALLATION

ObserveIT Application Server and ObserveIT Web Console require several prerequisites, such as Microsoft Internet Information Services and the .Net Framework. You can install these automatically using

PowerShell.

1. Mount a Windows Server 2016 installation DVD to the virtual machine or insert a Windows Server 2016 DVD into the DVD drive of the server.

   > The following steps are similar for Windows Server 2012/2012R2 Operating Systems. If using one of these systems, mount or insert the appropriate DVD to the machine.

2. Open the **Start** menu and type in **PowerShell**.

3. Right-click the **PowerShell** shortcut and choose **Run as administrator**.

4. If prompted, **Do you want to allow this app to make changes to your device?** Click **Yes**.

5. Copy and paste the following command:

   ```
   Install-WindowsFeature Web-Server, Web-WebServer, Web-Common-Http, Web-Default-Doc, Web-Dir-Browsing, Web-Http-Errors, Web-Static-Content, Web-Health, Web-Http-Logging, Web-Performance, Web-Stat-Compression, Web-Security, Web-Filtering, Web-App-Dev, Web-Net-Ext45, Web-Asp, Web-Asp-Net45, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Mgmt-Tools, Web-Mgmt-Console, NET-WCF-Services45, NET-WCF-HTTP-Activation45 NET-Framework-45-Core, NET-Framework-45-Features, NET-Framework-45-ASPNET
   ```

CONFIGURING WINDOWS FIREWALL

When Windows Firewall is enabled, you need to configure the Windows Firewall on the SQL server and the ObserveIT Application server.

Configuring Windows Firewall on SQL server

In this example, it is assumed that all default ports are used.

1. From the Windows **Run** window, open **PowerShell**.

   Make sure you are running **PowerShell** as an administrator.

2. If prompted **Do you want to allow this app to make changes to your device?**, click **Yes**.

3. Copy and paste the following code into the PowerShell window:

```
New-NetFirewallRule -DisplayName “SQL Server” -Direction Inbound
–Protocol TCP –LocalPort 1433 -Action allow


New-NetFirewallRule -DisplayName “SQL Admin Connection” -
Direction Inbound –Protocol TCP –LocalPort 1434 -Action allow


New-NetFirewallRule -DisplayName “SQL Database Management” -
Direction Inbound –Protocol UDP –LocalPort 1434 -Action allow


New-NetFirewallRule -DisplayName “SQL Debugger/RPC” -Direction
Inbound –Protocol TCP –LocalPort 135 -Action allow
```

4. Close the **PowerShell** window.

Configuring Windows Firewall on ObserveIT Application Server

In this example, it is assumed that all default ports are used.

1. From the Windows **Run** window open **PowerShell**.

   Make sure you are running **PowerShell** as an administrator.

2. If prompted **Do you want to allow this app to make changes to your device?**, click **Yes**.

3. Copy and paste the following code into the **PowerShell** window:

```
New-NetFirewallRule -DisplayName “HTTPS” -Direction Inbound –
Protocol TCP –LocalPort 443 -Action allow
```

4. Close the **PowerShell** window.

Preparing Permissions

In a custom installation, make sure the following permissions are configured:

- Permissions to create a service account user in Active Directory
- Permissions to grant the service account DBCREATOR permissions on the SQL Server
- Permissions to access the SQL Server database engine (SYSADMIN permissions)
- Logon permissions to computers, with administrative permissions (local administrator)

CREATING A SERVICE ACCOUNT USER IN ACTIVE DIRECTORY

This topic describes how to configure permissions to create a service account user in Active Directory. Active Directory is used connect to ObserveIT databases and to run ObserveIT services.

> Permissions are required to set up a an Active Directory. For more information about this, contact the Active Directory team.

1. Connect to a Domain Controller or to a computer with Active Directory Remote Server Administration Tools installed.

2. Click **Start** and type `dsa.msc` and **Enter**.

3. Navigate to the **Organizational Unit** where the ObserveIT Service Account will be located.

4. Right-click the **Organizational Unit**, select**New** > **User**.

   Optional: Type **ObserveIT** into the **First Name** field and **Service Account** into the **Last Name** field.

5. Type **OITServiceAccount** into the **User logon name** field and choose the appropriate UPN suffix. Click **Next**.

6. Configure a password based on your organization's password policy requirements, uncheck the **User must change password at next logon** checkbox, and check the **Password never expires** checkbox. Click **Next**. Click **Finish**.

7. Close the **Active Directory Users and Computers** window.

ASSIGNING SQL PERMISSIONS TO THE SERVICE ACCOUNT USER

This procedure describes how to configure permissions to access the SQL Server database engine (SYSADMIN permissions) and grant the ObserveIT Server Account user the **dbcreater** role on the SQL server.

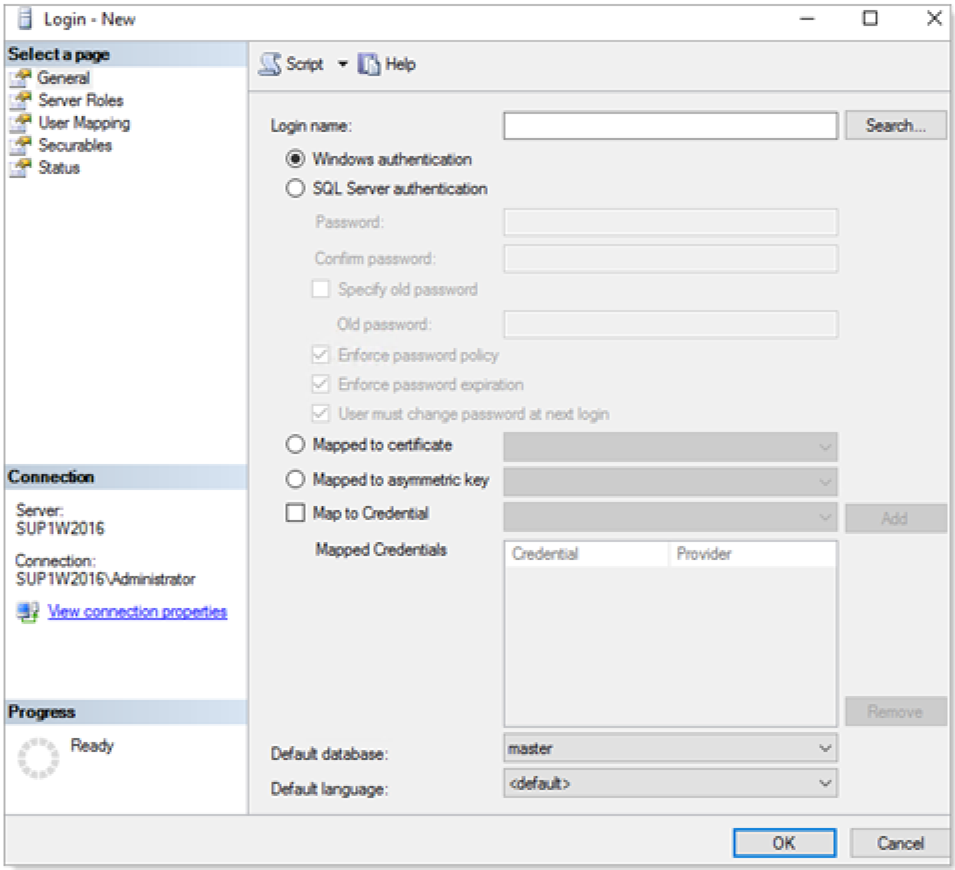
> Use the following steps to grant the ObserveIT Service Account user the dbcreator role on the SQL server. This permission is required only during the installation phase and may be removed when the installation is complete. Removing this permission will prevent ObserveIT from creating additional archive databases with the service account and will require appropriate credentials when creating a new archive.

1. Connect to the SQL server or to a computer with SQL Server Management Studio installed.
2. Open SQL Server Management Studio, type the SQL server's FQDN or IP address in the **Server name** field and click **Connect**.
3. Select the authentication.

   Choose **Windows Authentication** if your account has sysadmin permissions on the SQL server.

   Otherwise, choose **SQL Server Authentication** and log in with a sysadmin-level account. Click **OK** to connect.
4. From the menu on the left, expand **Security** right-click **Logins** and select **New Login**.

   The **Login** screen opens.



Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Login name:

● Windows authentication

○ SQL Server authentication

Password:

Confirm password:

□ Specify old password

Old password:

☑ Enforce password policy

☑ Enforce password expiration

☑ User must change password at next login

○ Mapped to certificate

○ Mapped to asymmetric key

□ Map to Credential

Mapped Credentials

Credential	Provider

Default database: master

Default language: <default>

Connection

Server:
SUP1W2016

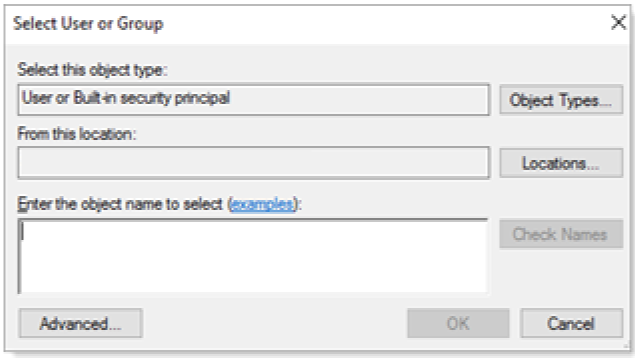
Connection:
SUP1W2016\Administrator

View connection properties

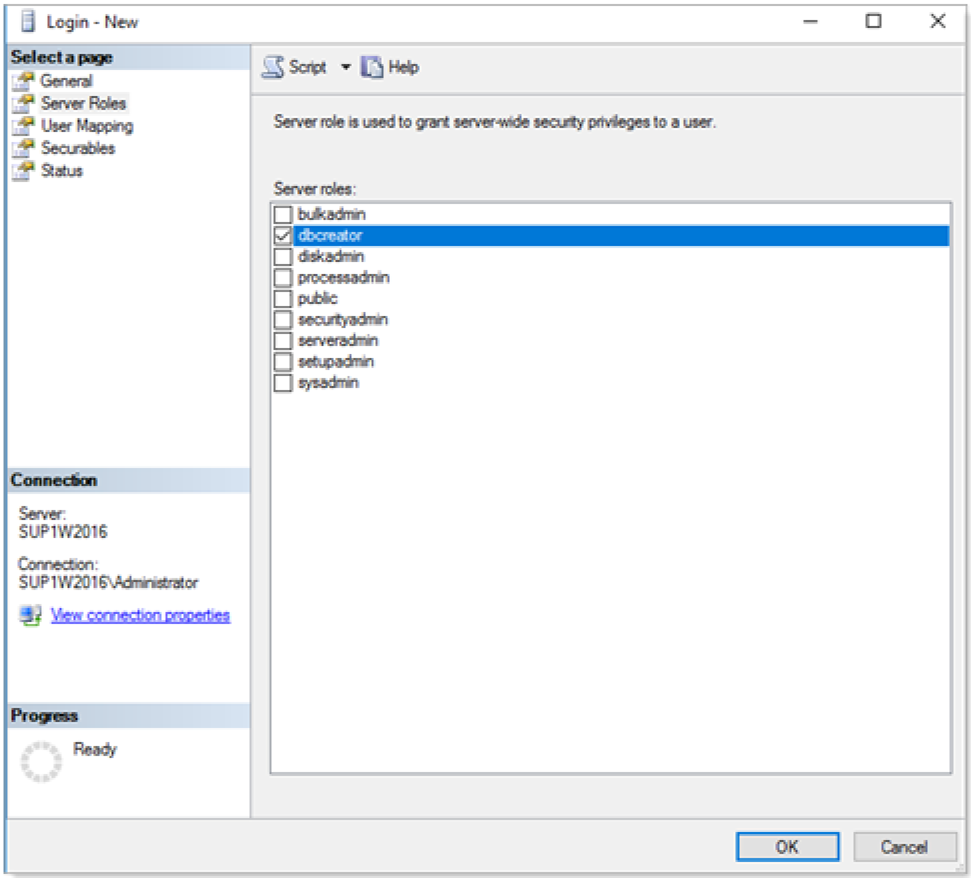
Progress

Ready

5. Click **Search**.



6. Click **Locations** and choose the location where the ObserveIT Service Account is located. Click **OK**.
7. In **Enter the object name to select** area, type the username for the ObserveIT Service Account user account, for example, **OITServiceAccount**. Click **OK**.
8. In the **Login** screen from the menu on the left, select **Select a Page** > **Server Roles**.



Server role is used to grant server-wide security privileges to a user.

Server roles:

□ bulkadmin
☑ dbcreator
□ diskadmin
□ processadmin
□ public
□ securityadmin
□ serveradmin
□ setupadmin
□ sysadmin

Connection

Server:
SUP1W2016

Connection:
SUP1W2016\Administrator

View connection properties

Progress

Ready

9. Select **dbcreator** and click **OK**.

10. Close the SQL Management Server Studio.

ADDING THE SERVICE ACCOUNT USER TO THE LOCAL ADMINISTRATORS GROUP

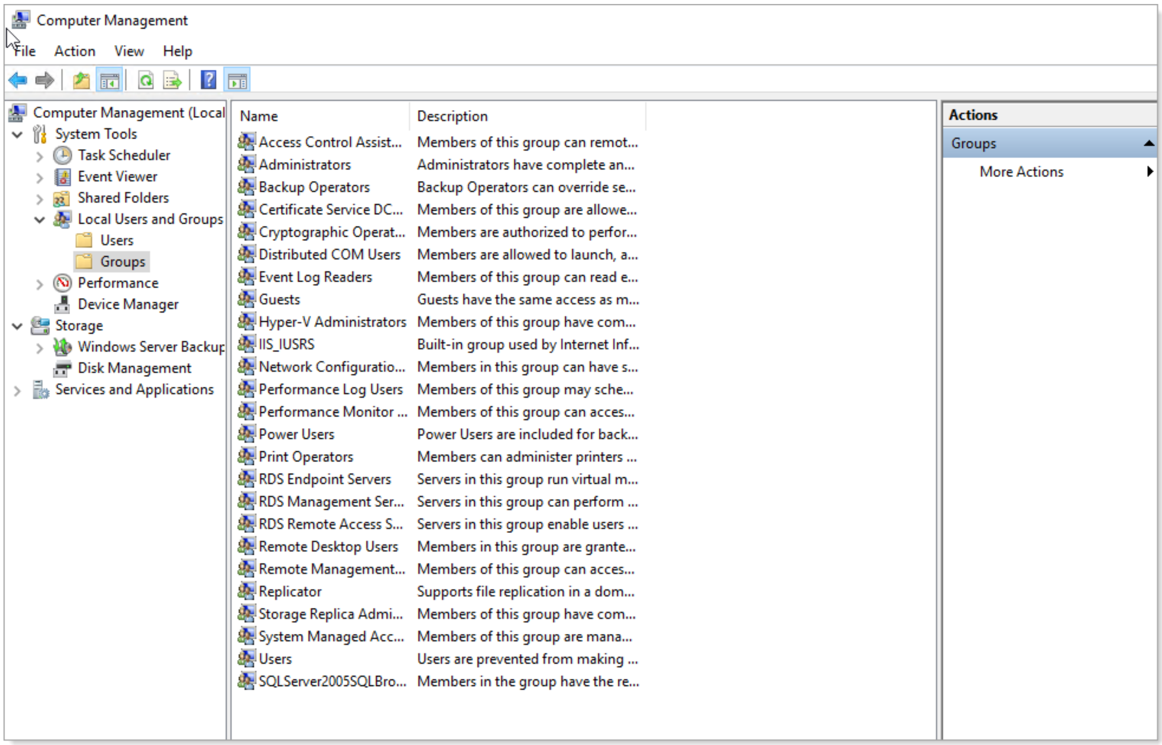
This topic describes how to addd the ObserveIT service account user to the local Administrators group on the ObserveIT Application Server(s) (and Web Console machine if installed on a separate computer).

> This is only required during the installation phase; the Service Account can be removed as soon as the installation has completed successfully.

1. On the ObserveIT Application Server, from **Start**, type **Computer Management**.

   The **Computer Management** window opens.

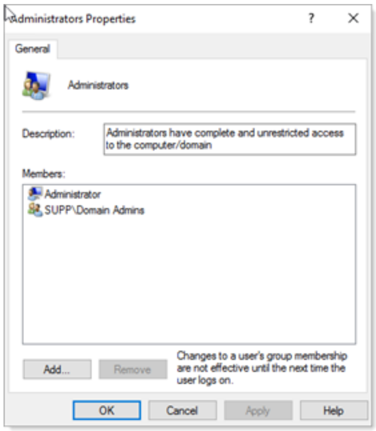
2. Expand **System Tools** and click **Local Users and Groups**. Expand **Groups** folder.



Name	Description
Access Control Assist...	Members of this group can remot...
Administrators	Administrators have complete an...
Backup Operators	Backup Operators can override se...
Certificate Service DC...	Members of this group are allowe...
Cryptographic Operat...	Members are authorized to perfor...
Distributed COM Users	Members are allowed to launch, a...
Event Log Readers	Members of this group can read e...
Guests	Guests have the same access as m...
Hyper-V Administrators	Members of this group have com...
IIS_IUSRS	Built-in group used by Internet Inf...
Network Configuratio...	Members in this group can have s...
Performance Log Users	Members of this group may sche...
Performance Monitor ...	Members of this group can acces...
Power Users	Power Users are included for back...
Print Operators	Members can administer printers ...
RDS Endpoint Servers	Servers in this group run virtual m...
RDS Management Ser...	Servers in this group can perform ...
RDS Remote Access S...	Servers in this group enable users ...
Remote Desktop Users	Members in this group are grante...
Remote Management...	Members of this group can acces...
Replicator	Supports file replication in a dom...
Storage Replica Admi...	Members of this group have com...
System Managed Acc...	Members of this group are mana...
Users	Users are prevented from making ...
SQLServer2005SQLBro...	Members in the group have the re...

3. From the list of Groups, double-click **Administrators** group.

   The **Administrator Properties** dialog box opens.



Administrators Properties

General

Administrators

Description: Administrators have complete and unrestricted access to the computer/domain

Members:

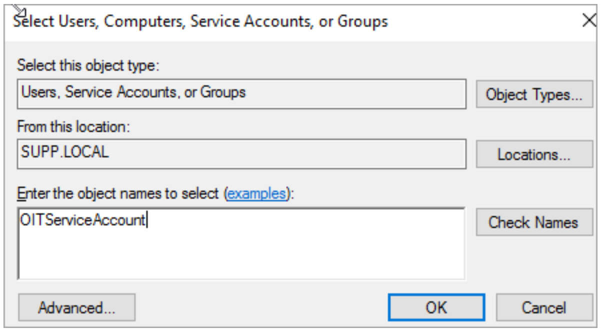
- Administrator
- SUPP\Domain Admins

Changes to a user's group membership are not effective until the next time the user logs on.

4. Click **Add**.

   The **Select Users, Computers, Service Accounts, or Groups** dialog box opens.

5. In the **Enter the object name to select** area, for example, **OITServiceAccount**.



Select Users, Computers, Service Accounts, or Groups

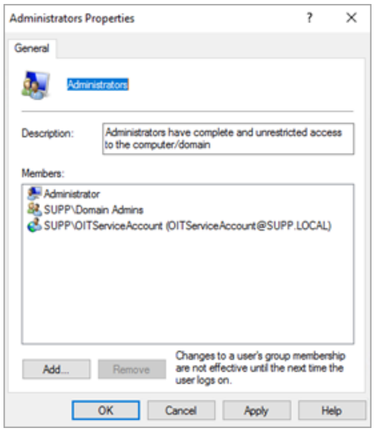
Select this object type: Users, Service Accounts, or Groups

From this location: SUPP.LOCAL

Enter the object names to select (examples): OITServiceAccount

6. Click **OK**.

   The **Administrator Properties** dialog box opens and **OITServiceAccount** appears in the **Members** list.



Administrators

Description: Administrators have complete and unrestricted access to the computer/domain

Members:

- Administrator
- SUPP\Domain Admins
- SUPP\OITServiceAccount (OITServiceAccount@SUPP.LOCAL)

Changes to a user's group membership are not effective until the next time the user logs on.

7. Click **OK**.

8. If you plan to deploy more than one ObserveIT Application Server, or if you plan to install the ObserveIT Web Console on a separate machine, repeat on all the computers that will host the ObserveIT Application and Web Console applications.

ADDING THE SERVICE ACCOUNT USER TO THE LOCAL IIS_IUSRS GROUP

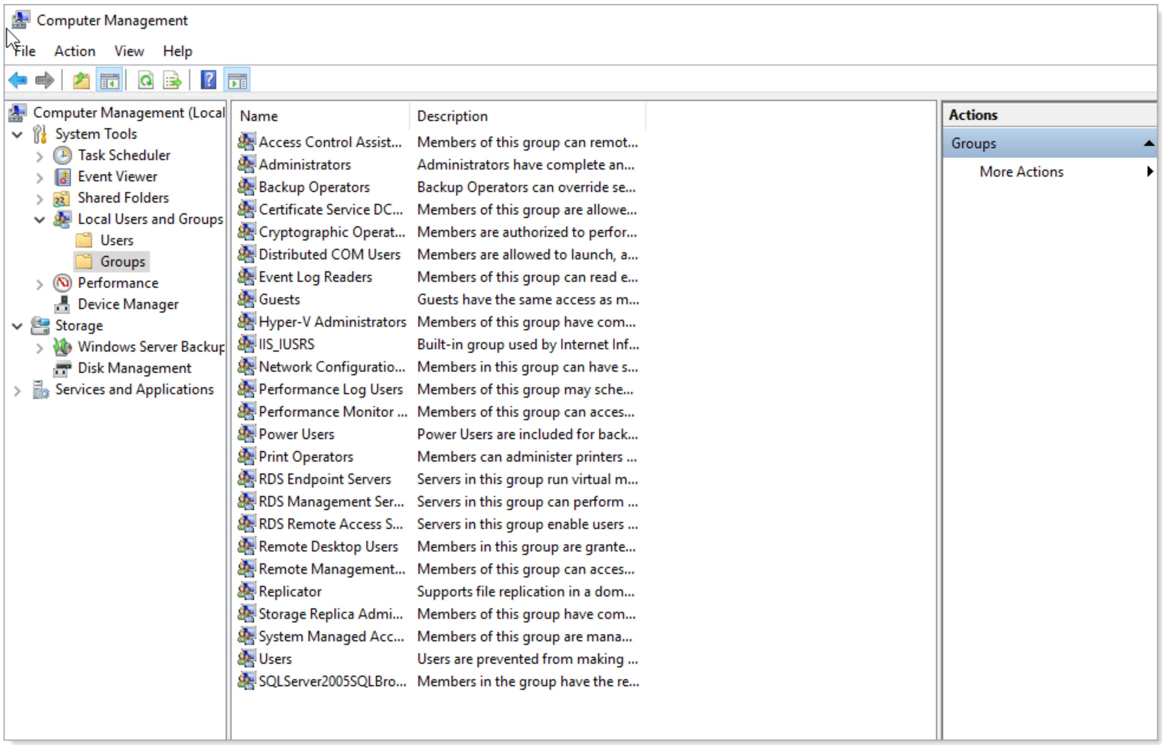
This topic describes how to add the ObserveIT service account user to the local IIS_IUSRS group on the ObserveIT Application Server(s) (and the Web Console machine if installed on a separate computer).

> This step is only required during the installation phase; the Service Account can be removed as soon as the installation has completed successfully.

1. On the ObserveIT Application Server, from **Start**, type **Computer Management**.

   The **Computer Management** window opens.

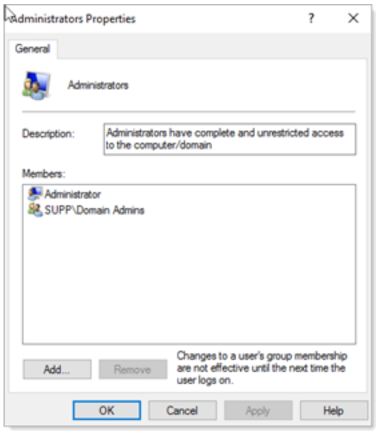
2. Expand **System Tools** and click **Local Users and Groups**. Expand **Groups** folder.



Name	Description
Access Control Assist...	Members of this group can remot...
Administrators	Administrators have complete an...
Backup Operators	Backup Operators can override se...
Certificate Service DC...	Members of this group are allowe...
Cryptographic Operat...	Members are authorized to perfor...
Distributed COM Users	Members are allowed to launch, a...
Event Log Readers	Members of this group can read e...
Guests	Guests have the same access as m...
Hyper-V Administrators	Members of this group have com...
IIS_IUSRS	Built-in group used by Internet Inf...
Network Configuratio...	Members in this group can have s...
Performance Log Users	Members of this group may sche...
Performance Monitor ...	Members of this group can acces...
Power Users	Power Users are included for back...
Print Operators	Members can administer printers ...
RDS Endpoint Servers	Servers in this group run virtual m...
RDS Management Ser...	Servers in this group can perform ...
RDS Remote Access S...	Servers in this group enable users ...
Remote Desktop Users	Members in this group are grante...
Remote Management...	Members of this group can acces...
Replicator	Supports file replication in a dom...
Storage Replica Admi...	Members of this group have com...
System Managed Acc...	Members of this group are mana...
Users	Users are prevented from making ...
SQLServer2005SQLBro...	Members in the group have the re...

3. From the list of Groups, double-click **IIS_IUSRS** group.

   The **Administrator Properties** dialog box opens.



Administrators

Description: Administrators have complete and unrestricted access to the computer/domain

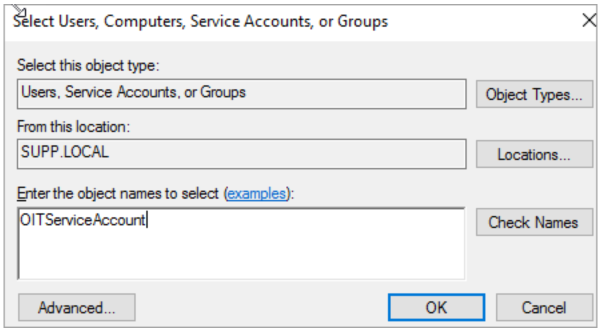
Members:
Administrator
SUPP\Domain Admins

Changes to a user's group membership are not effective until the next time the user logs on.

4. Click **Add**.

The **Select Users, Computers, Service Accounts, or Groups** dialog box opens.

5. In the **Enter the object name to select** area, type **OITServiceAccount**.



Select Users, Computers, Service Accounts, or Groups

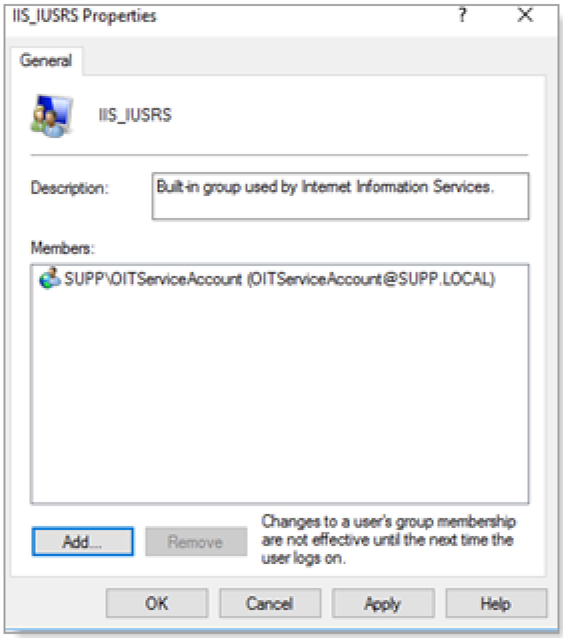
Select this object type: Users, Service Accounts, or Groups

From this location: SUPP.LOCAL

Enter the object names to select (examples): OITServiceAccount

6. Click **OK**.

The **IRS_IUSRS Properties** dialog box opens and **OITServiceAccount** appears in the **Members** list.



IIS_IUSRS Properties

IIS_IUSRS

Description: Built-in group used by Internet Information Services.

Members:

SUPP\OITServiceAccount (OITServiceAccount@SUPP.LOCAL)

Changes to a user's group membership are not effective until the next time the user logs on.

7. Click **OK**.

8. If you plan to deploy more than one ObserveIT Application Server, or if you plan to install the ObserveIT Web Console on a separate machine, repeat on all the computers that will host the ObserveIT Application and Web Console applications.

Installing and Configuring Databases

When performing a custom installation, the database is the first component of ObserveIT that needs to be installed.

To successfully in install the database you need to:

- **Choose the location of the recorded graphic screenshots storage**: By default, all the recorded graphic screenshots are stored in the **ObserveIT_Data** database. In medium to large deployments of ObserveIT, it is strongly recommended to configure all recorded graphic screenshots to be stored in the file system network share (a UNC path) instead of in the SQL database. This will reduce the overall I/O overhead on the SQL Server. (For information about formatting the volumes.
- **Install the ObserveIT databases**: By default, ObserveIT uses Microsoft SQL Server databases for data storage. This storage includes user activity configuration data, user analytics data, textual audit metadata and possibly the screenshots captured by the ObserveIT Agents for video replay.
- Install the ObserveIT Analytics database.
- Add the ObserveIT Application Server(s) machine account to the ObserveIT databases.

  Choose the location of the recorded graphic screenshots storage.

  2. Edit the database installer configuration file to use file system storage for recorded graphic screenshots.

  3. Install the ObserveIT databases.

  4. Install the ObserveIT Analytics database.

  5. Add the ObserveIT Application Server(s) machine account to the ObserveIT databases.

You need to do complete the following tasks:

- Install the ObserveIT Databases
- Verify Database Installation
- Move Database File to Drives
- Set MDF and LDF File Size
- Install Database Maintenance

CONFIGURING LOCATION FOR RECORDED SCREENSHOTS

By default, all the recorded graphic screenshots are stored in the "ObserveIT_Data" database on the SQL Server.

In medium to large deployments of ObserveIT, it is recommended to configure all recorded graphic screenshots to be stored in the file system network share (a UNC path) instead of in the SQL database. This reduces the overall I/O overhead on the SQL Server.

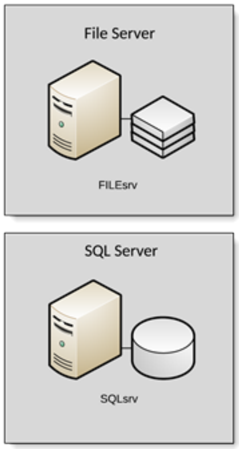
A functional SQL Server database is still required for storing all the recorded metadata, image pointers, and configuration settings.

INSTALLING THE OBSERVEIT DATABASES

This topic describes how to attach the databases to the SQL server machine.

The DB install process can also be run directly on the SQL Server machine.

The diagram below shows the file server and the SQL database. The SQL database is installed after you configure the file server.



Prerequisites

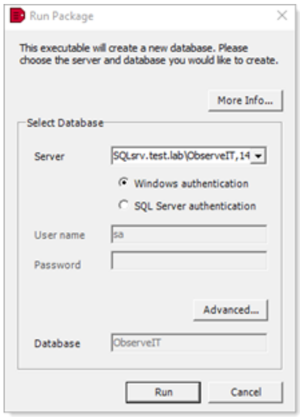
- The database installer requires .NET Framework 4.5
- See Installing Prerequisites for more information.

Installing the Databases

1. Connect to the computer where you downloaded and extracted the ObserveIT Setup files.

2. Run the **SQLPackage.exe** file located in the **DB** folder which was created when you extracted the setup files from the archive.

   The **Database Installer** main window appears.

   Run Package

   This executable will create a new database. Please choose the server and database you would like to create.

   Select Database

   Server: SQLsrv.test.lab\ObserveIT,14

   ● Windows authentication

   ○ SQL Server authentication

   User name: sa

   Password:

   Database: ObserveIT

3. Select the SQL Server on which to install the database. The details of the **Server** field are in the following format:

   `<ServerFQDN>\<InstanceName>,<Port>`

   For example:

   `SQLsrv.test.lab\ObserveIT,1433`

4. If the account you are currently using is an SQL Server administrator, select **Windows Authentication** as the authentication method. Otherwise, select **SQL Server Authentication** and provide a user name and password with privileges to create databases and user accounts. If you select **Windows Authentication**, you will need to perform additional tasks.

5. Click **Run** to begin the installation.

   If the connection is successful, the installation will proceed. If not, check the connectivity to the SQL server and make sure the connection string is correct.

   Hint: Check the Windows Firewall on the SQL Server and either turn it off, or add the relevant rules to allow SQL Server connectivity (TCP port 1433), check protocol bindings (TCP/IP must be enabled), and check the SQL Server listening port.

6. **Click OK** to ignore the following message:

   Warning – Unable to create ObserveITUser (ObserveITUser Name: ObserveITUser)! (User does not have permission to perform this action.) Press OK if you wish to continue anyway.

   > If you did not receive this error, it means that the ObserveIT service account has SYSADMIN permissions on the SQL Server. It is strongly suggested that you stop the installation at this phase, delete the resulting databases, change the ObserveIT service account permissions to DBCREATOR, and then re-execute the database installer program. While, by itself, this is not a problem, the result is that the ObserveIT database and the subsequent connection strings used by all the ObserveIT components will use the "ObserveITUser" account in SQL Server instead of the ObserveIT service account. To fix this issue you will need to manually change the connection strings and change the SQL Server database settings. Contact support for information on how to perform these changes.

   The message .**ObserveIT database successfully installed** appears.

7. Acknowledge the message the message **ObserveIT database successfully installed**. When the 4 databases are created, the window closes.

Installing the Analytics Database

1. Connect to the computer where you downloaded and extracted the ObserveIT Setup files.

2. Run the **SQLPackage.exe** file located in the **DB_Analytics** folder which was created when you extracted the setup files from the archive.

3. Select the SQL Server on which to install the database. The details of the **Server** field are in the following format:

   ```
   <ServerFQDN>\<InstanceName>,<Port>
   ```

   For example:

   ```
   SQLsrv.test.lab\ObserveIT,1433
   ```

4. If the account you are currently using is an SQL Server administrator, select **Windows Authentication** as the authentication method. Otherwise, select **SQL Server Authentication** and provide a user name and password with privileges to create databases and user accounts. If you select **Windows Authentication**, you will need to perform additional tasks.

5. From **File Explorer**, navigate and open the **DB_Analytics** folder and double-click the **SQLPackage** file.

6. Click **Run**.

If the connection is successful, the installation will proceed. If not, check the connectivity to the SQL server and make sure the connection string is correct.

Hint: Check the Windows Firewall on the SQL Server and either turn it off, or add the relevant rules to allow SQL Server connectivity (TCP port 1433), check protocol bindings (TCP/IP must be enabled), and check the SQL Server listening port.

7. **Click OK** to ignore the following message.

   Warning – Unable to create ObserveITUser (ObserveITUser Name: ObserveITUser)! (User does not have permission to perform this action.) Press OK if you wish to continue anyway.

   > If you did not receive this error, it means that the ObserveIT service account has SYSADMIN permissions on the SQL Server. It is strongly suggested that you stop the installation at this phase, delete the resulting databases, change the ObserveIT service account permissions to DBCREATOR, and then re-execute the database installer program. While, by itself, this is not a problem, the result is that the ObserveIT database and the subsequent connection strings used by all the ObserveIT components will use the “ObserveITUser” account in SQL Server instead of the ObserveIT service account. To fix this issue you will need to manually change the connection strings and change the SQL Server database settings. Contact support for information on how to perform these changes.

   The message .**ObserveIT database successfully installed** appears.

8. Acknowledge the success message **ObserveIT database successfully installed**.

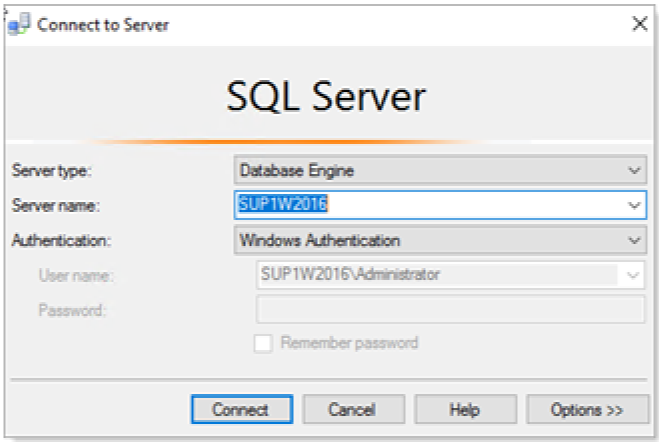
VERIFYING DATABASE INSTALLATION

This topic describes how to verify that the databases were successfully installed on the SQL server.

1. Connect to the SQL server or to a computer with **SQL Management Studio** installed.

2. Open **Microsoft SQL Server Management Studio**.

   The **Connect to server window** opens.



Connect to Server

SQL Server

Server type: Database Engine

Server name: SUP1W2016

Authentication: Windows Authentication

User name: SUP1W2016\Administrator

Password:

□ Remember password

3. Type in the SQL server's FQDN or IP address into the **Server** name field.

4. Select **Windows Authentication** if your account has sysadmin permissions on the SQL server. Otherwise, choose **SQL Server Authentication** and log in with a sysadmin-level account.

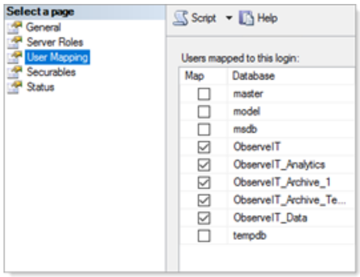
5. Click **Connect**.

6. In the Microsoft SQL Server Management Studio, Expand **Databases**. You should see five new ObserveIT databases.

7. Expand **Security** > **Logins**.

8. Right-click the **ObserveIT Service Account user** – in this example, OITServiceAccount – and select **Properties**.

9. Select **User Mapping** from **Select a Page** menu.



Users mapped to this login:

Map	Database
□	master
□	model
□	msdb
☑	ObserveIT
☑	ObserveIT_Analytics
☑	ObserveIT_Archive_1
☑	ObserveIT_Archive_Te...
☑	ObserveIT_Data
□	tempdb

10. Under **User mapped to this login** click the ObserveIT database.

11. Make sure the checkbox in the **Map column** is checked.

12. Make sure that the checkbox for **db_owner** is checked.

13. Repeat for all databases.

14. Click **OK** and close **SQL Management Studio**.

MOVING DATABASE FILE TO DRIVES

The best practice for SQL databases is to place the database data files (.mdf) and the database log files (.ldf) on separate drives.

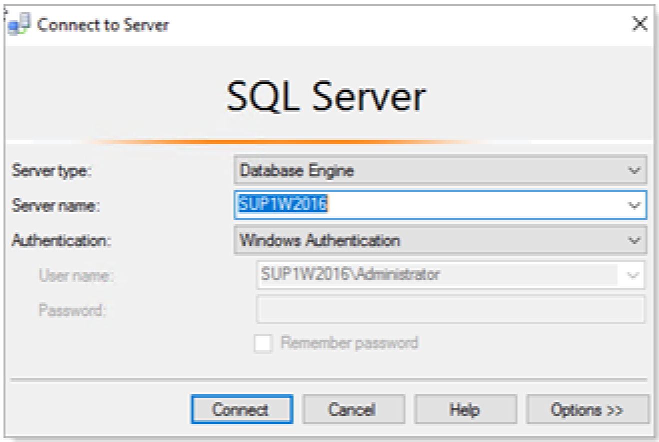
This topic describes how to move the ObserveIT database files to designated drives.

> The following steps assume two designated drives are present at the SQL machine. In the example, the database drive is assigned the drive letter E:, while the log drive is assigned the drive letter F:.

1. Connect to the SQL server or to a computer with **SQL Server Management Studio** installed.

2. Open **Microsoft SQL Server Management Studio**.

   The **Connect to server window** opens.



Connect to Server

SQL Server

Server type: Database Engine

Server name: SUP1W2016

Authentication: Windows Authentication

User name: SUP1W2016\Administrator

Password:

□ Remember password

3. Type in the SQL server's FQDN or IP address into the **Server** name field.

4. Select **Windows Authentication** if your account has sysadmin permissions on the SQL server. Otherwise, choose **SQL Server Authentication** and log in with a sysadmin-level account.

5. Click **Connect**.

6. Paste the following code into the **New Query** window:

   This action will stop all ObserveIT databases and will cause downtime for all ObserveIT services.

```
USE MASTER;

GO

ALTER DATABASE ObserveIT_Data

SET SINGLE_USER

WITH ROLLBACK IMMEDIATE;

GO

EXEC MASTER.dbo.sp_detach_db @dbname = N'ObserveIT_Data'

GO

USE MASTER;

GO

ALTER DATABASE ObserveIT

SET SINGLE_USER

WITH ROLLBACK IMMEDIATE;

GO
```

```
EXEC MASTER.dbo.sp_detach_db @dbname = N'ObserveIT'
GO
USE MASTER;
GO
ALTER DATABASE ObserveIT_Archive_1
SET SINGLE_USER
WITH ROLLBACK IMMEDIATE;
GO
EXEC MASTER.dbo.sp_detach_db @dbname = N'ObserveIT_Archive_1'
GO
USE MASTER;
GO
ALTER DATABASE ObserveIT_Archive_Template
SET SINGLE_USER
WITH ROLLBACK IMMEDIATE;
```

```
GO

EXEC MASTER.dbo.sp_detach_db @dbname = N'ObserveIT_Archive_
Template'

GO

USE MASTER;

GO

ALTER DATABASE ObserveIT_Analytics

SET SINGLE_USER

WITH ROLLBACK IMMEDIATE;

GO

EXEC MASTER.dbo.sp_detach_db @dbname = N'ObserveIT_Analytics'

GO
```

7. Click **Execute**. Wait for the query to finish.

8. Format 2 new disks in the machine. See "Formatting a Disk for Graphic Images Storage and the Database" on page 14

   > In the example below: disk E: for the database data files and disk F: for the database log files.

   From **File Explorer**, navigate to disk E:.

9. Create a new folder, **MSSQLDATA**.

10. Navigate to disk F:.

11. Create a new folder, MSSQLLog.

12. Open PowerShell and run as an administrator.

13. If prompted **Do you want to allow this app to make changes to your device?** click **Yes**.

14. Paste the following code into the PowerShell window:

```
Get-ChildItem 'C:\Program Files\Microsoft SQL
Server\MSSQL13.MSSQLSERVER\MSSQL\DATA\' | Where-Object {$_.Name
-like "*observeit*" -and $_.Name -like "*mdf"} | Move-Item -
Destination E:\MSSQLDATA\


Get-ChildItem 'C:\Program Files\Microsoft SQL
Server\MSSQL13.MSSQLSERVER\MSSQL\DATA\' | Where-Object {$_.Name
-like "*observeit*" -and $_.Name -like "*ldf"} | Move-Item -
Destination F:\MSSQLLog\
```

15. **Enter** key at the final prompt.

16. Return to the **SQL Server Management Studio**.

17. Click **New Query**.

18. Paste the following code into the **New Query** window:

```
CREATE DATABASE [ObserveIT_Data] ON

( FILENAME = N'E:\MSSQLDATA\ObserveIT_Data_Data.mdf' ),

( FILENAME = N'F:\MSSQLLog\ObserveIT_Data_Log.ldf' )

FOR ATTACH

GO
```

```
CREATE DATABASE [ObserveIT] ON

( FILENAME = N'E:\MSSQLDATA\ObserveIT_Data.mdf' ),

( FILENAME = N'F:\MSSQLLog\ObserveIT_Log.ldf' )

FOR ATTACH

GO

CREATE DATABASE [ObserveIT_Analytics] ON

( FILENAME = N'E:\MSSQLDATA\ObserveIT_Analytics_Data.mdf' ),

( FILENAME = N'F:\MSSQLLog\ObserveIT_Analytics_Log.ldf' )

FOR ATTACH

GO

CREATE DATABASE [ObserveIT_Analytics] ON

( FILENAME = N'E:\MSSQLDATA\ObserveIT_Archive_1_Data.mdf' ),

( FILENAME = N'F:\MSSQLLog\ObserveIT_Archive_1_Log.ldf' )

FOR ATTACH

GO
```

```
CREATE DATABASE [ObserveIT_Archive_Template] ON

( FILENAME = N'E:\MSSQLDATA\ObserveIT_Archive_Template_Data.mdf'
),

( FILENAME = N'F:\MSSQLLog\ObserveIT_Archive_Template_Log.ldf' )

FOR ATTACH

GO
```

19. Click **Execute**. Wait for the query to finish.

20. Close the **SQL Server Management Studio**.

INSTALLING DATABASE MAINTENANCE

The ObserveIT databases have to be maintained on a regular basis in order for the system to work properly and efficient.

To ensure optimal database health and performance, add the automated maintenance procedure for your ObserveIT databases.

1. Connect to the machine containing the ObserveIT database or the machine where **SQL Server Management Studio** is installed.

2. Download the file: http://files.observeit.com/support/OIT-DB-Maintenance.zip

3. In **File Explorer**, navigate to the folder you downloaded.

4. Extract the files from **OIT-DB-Maintenance.zip**..

   From the extracted files, select and double-click **dbmaintprepare.sql** file.

   If prompted **How do you want to open this file?** choose **SQL Management Studio** or **SSMS**. Click **OK**.

5. Open **SQL ServerManagement Studio**, specify the server name, authentication type and Login and Password to the ObserveIT SQL instance (if connecting via SQL Server Authentication). Click

Connect.

If successfully completed, a confirmation message appears in the **Messages** pane.

6. Return to the **File Explorer** window. From **File Explorer**, select and double-click **OIT-DB-Maint-Create-Jobs.sql** file.

7. From **SQL ServerManagement Studio**, select **Query** > **Execute**.

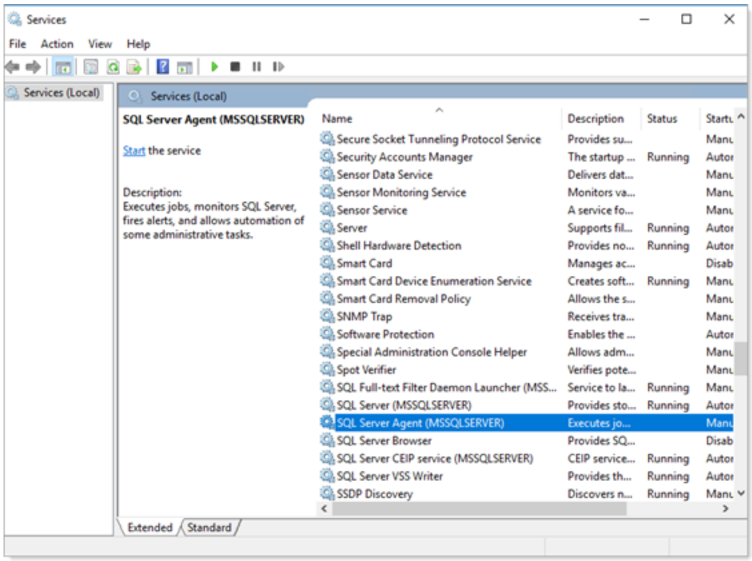
   If successfully completed, a confirmation message appears under the **Messages** pane. Ignore any warnings received.

8. Close the **SQL Server Management Studio**.

9. Open the **Start** menu and type in **Run**.

10. Type in **services.msc** to open the **Services** window. Press **Enter**.

11. Locate **SQL Server Agent** service.



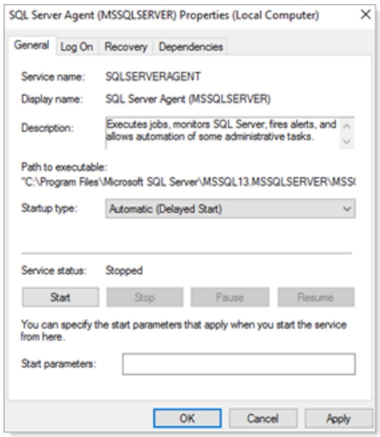
SQL Server Agent (MSSQLSERVER)

Start the service

Description:
Executes jobs, monitors SQL Server, fires alerts, and allows automation of some administrative tasks.

Name	Description	Status	Startu
Secure Socket Tunneling Protocol Service	Provides su...		Manu
Security Accounts Manager	The startup ...	Running	Autor
Sensor Data Service	Delivers dat...		Manu
Sensor Monitoring Service	Monitors va...		Manu
Sensor Service	A service fo...		Manu
Server	Supports fil...	Running	Autor
Shell Hardware Detection	Provides no...	Running	Autor
Smart Card	Manages ac...		Disab
Smart Card Device Enumeration Service	Creates soft...	Running	Manu
Smart Card Removal Policy	Allows the s...		Manu
SNMP Trap	Receives tra...		Manu
Software Protection	Enables the ...		Autor
Special Administration Console Helper	Allows adm...		Manu
Spot Verifier	Verifies pote...		Manu
SQL Full-text Filter Daemon Launcher (MSS...	Service to la...	Running	Manu
SQL Server (MSSQLSERVER)	Provides sto...	Running	Autor
SQL Server Agent (MSSQLSERVER)	Executes jo...		Manu
SQL Server Browser	Provides SQ...		Disab
SQL Server CEIP service (MSSQLSERVER)	CEIP service...	Running	Autor
SQL Server VSS Writer	Provides th...	Running	Autor
SSDP Discovery	Discovers n...	Running	Manu

12. Right-click the service and click **Properties**.



SQL Server Agent (MSSQLSERVER) Properties (Local Computer)

Service name: SQLSERVERAGENT

Display name: SQL Server Agent (MSSQLSERVER)

Description: Executes jobs, monitors SQL Server, fires alerts, and allows automation of some administrative tasks.

Path to executable:
"C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER\MSS(

Startup type: Automatic (Delayed Start)

Service status: Stopped

You can specify the start parameters that apply when you start the service from here.

Start parameters:

13. Change the value for **Startup Type** field to **Automatic (Delayed Start).**
14. Click **Start**.
15. Click **OK**.
16. Close the window.

Configuring Microsoft Internet Information Server (IIS)

The ObserveIT Application Server and the Web Management Console are implemented as ASP.NET Web applications that run on Microsoft Internet Information Server (IIS) 8.0 or higher, depending on the Windows Server version.

You need to prepare Internet Information Services (IIS) for installing ObserveIT Web applications.

If you have multiple Application Servers and/or a separate Web Console machine, you need to configure IIS for each machine.

Related Topics:

OBTAINING A DIGITAL CERTIFICATE

A digital certificate is the digital equivalent of an ID card used with a public key encryption system. Also known as digital IDs, digital certificates are issued by trusted third parties known as Certification Authorities (CAs). This document assumes that the reader has prior knowledge of Public Key Infrastructure (PKI) and its related terminology.

For further details, refer to the Microsoft Knowledge Base article, see How to implement SSL in IIS.

Digital Certificate Source

A digital certificate must be issued from a Certificate Authority (CA), either a 3rd-party commercial CA (such as, Verisign, Thawte, Godaddy, Rapid SSL, and others), or from an internal CA. Third-party CAs sell digital certificates at prices ranging from a few dollars to a few hundred dollars per year, depending on the type of certificate issued, and other considerations, such as the CA's reputation.

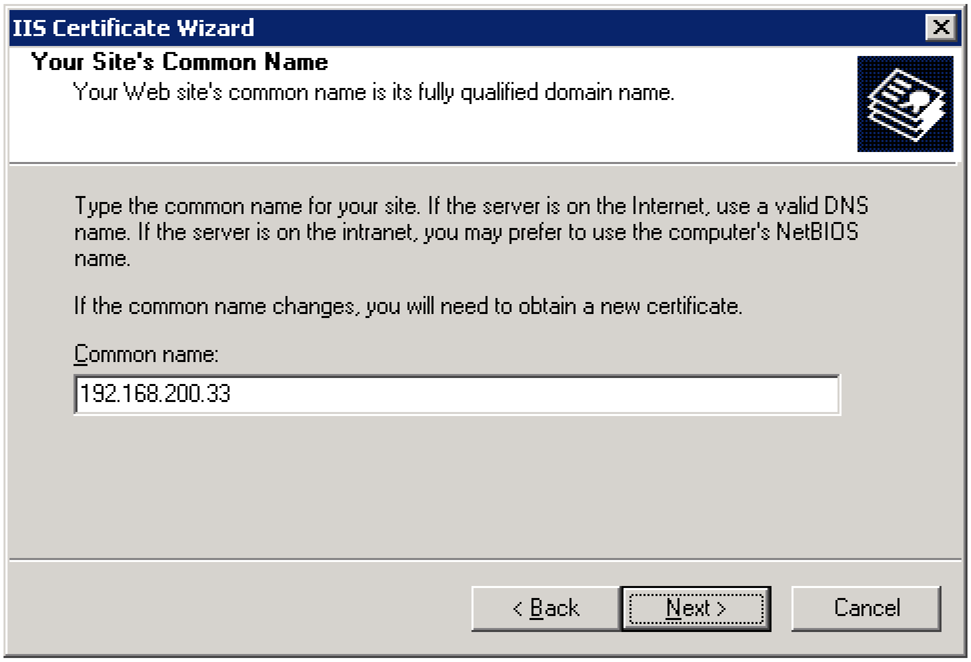
However, most operating systems are preconfigured to trust a list of known 3rd-party CAs. This facilitates deployment since you do not need to import anything to the computers running the ObserveIT Agents. To avoid paying for a digital certificate, you can use an internal CA. Note that Windows Server 2008/2012 has a built-in CA that you can install and use.

In cases where an internal CA is not required, or where such a deployment cannot be achieved, you can also use a Self-Signed Digital Certificate.

> After a digital certificate is obtained, you must import the root CA digital certificate or the self-signed digital certificate to each client computer running the ObserveIT Agent, so that they trust your digital certificate source.

Digital Certificate Common Name

1. When issuing a digital certificate for the ObserveIT Application Server, you must make sure that the Common Name field or the Issued to field on that certificate contains the same name as the URL of the ObserveIT Application Server.



IIS Certificate Wizard

Your Site's Common Name

Your Web site's common name is its fully qualified domain name.

Type the common name for your site. If the server is on the Internet, use a valid DNS name. If the server is on the intranet, you may prefer to use the computer's NetBIOS name.

If the common name changes, you will need to obtain a new certificate.

Common name: 192.168.200.33

For example, if the ObserveIT Agents use the following Fully Qualified Domain Name (or FQDN) to connect to the ObserveIT Application Server:

server100.mydomain.local

Then the same exact name MUST be used when issuing the digital certificate for the ObserveIT Application Server.

2. When connecting to the ObserveIT Application Server, an IP address can be used instead of an FQDN. If the following IP address is used by the ObserveIT Agents to connect to the ObserveIT Application Server:

   192.168.200.33

   The same exact IP address MUST be used when issuing the digital certificate for the ObserveIT Application Server.

3. at ObserveIT.ClientSetupActions.ClientInstaller.Install(IDictionary stateSaver)

4. If you do not follow these guidelines, an error message similar to one of the following appears:

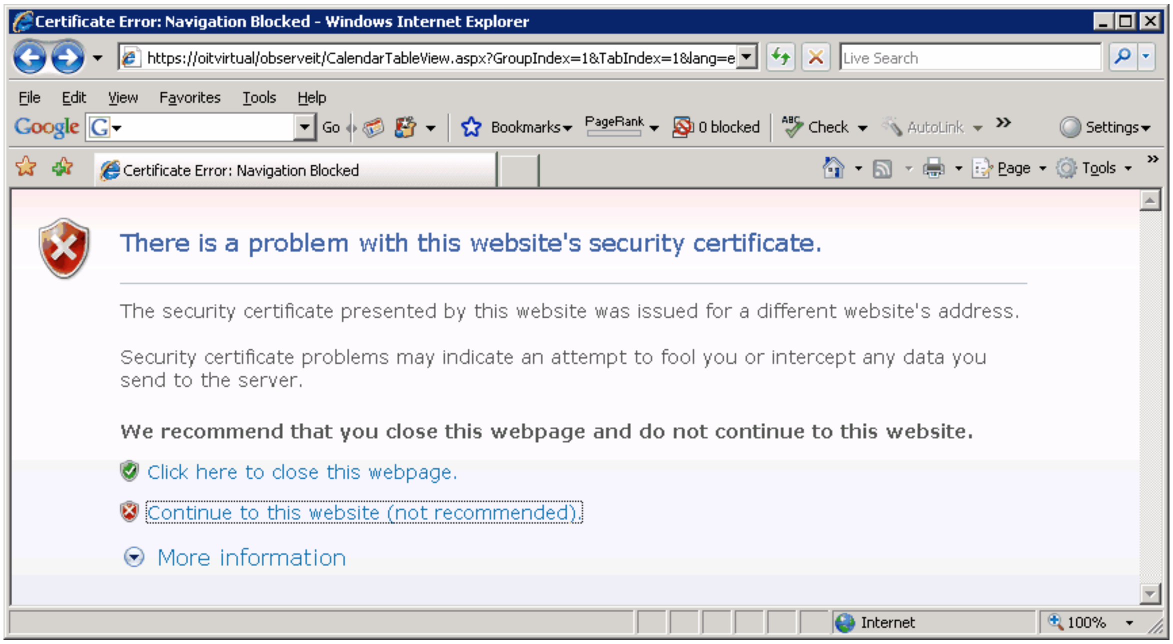
   System.Net.WebException: The underlying connection was closed: Unable to connect to the remote server.

```
 at ObserveIT.ClientSetupActions.RegisterServerManager.GetLicenseStatus()

 at ObserveIT.ClientSetupActions.ClientInstaller.Install(IDictionary stateSaver)
```

-Or-

```
System.Net.WebException: The underlying connection was closed: Could not establish trust relationship with remote server.

 at System.Net.HttpWebRequest.CheckFinalStatus()

 at System.Net.HttpWebRequest.EndGetRequestStream(IAsyncResult asyncResult)

 at System.Net.HttpWebRequest.GetRequestStream()

 at System.Web.Services.Protocols.SoapHttpClientProtocol.Invoke(String methodName, Object[] parameters)

 at ObserveIT.ClientSetupActions.Proxy.HeartBeatPrxClone.IsAlive()
```

> While not viewable by the ObserveIT Agent, if you manually try to connect to the ObserveIT Web Console while using an FQDN or IP address that does not match the one listed in the server's SSL digital certificate, a warning appears in the Web browser, similar to that shown in the following screenshot.



Certificate Error: Navigation Blocked - Windows Internet Explorer

https://oitvirtual/observeit/CalendarTableView.aspx?GroupIndex=1&TabIndex=1&lang=e

There is a problem with this website's security certificate.

The security certificate presented by this website was issued for a different website's address.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

We recommend that you close this webpage and do not continue to this website.

Click here to close this webpage.

Continue to this website (not recommended).

More information

If you click Continue to this website (not recommended), you can view the digital certificate error message (by clicking the button).

ASSIGNING A DIGITAL CERTIFICATE

This topic describes how to assign a digital certificate for the Web Console. You can use the Microsoft Management Console or Internet Information Services (IIS) Manager.

ObserveIT Recommendations:

- Always assign a certificate
- Encrypt the Web Console traffic by using HTTPS.

> Consult with your organization's security team to learn what type of digital certificate best fits your environment. When it is not possible to acquire a Certificate Authority certificate, a self-signed certificate may be used.

> In most instances, the Web Console is deployed on the only ObserveIT Application Server in a smaller deployment or one of the ObserveIT Application Servers in case of a larger deployment. It is also possible to deploy the ObserveIT Web Console on a separate server.

(The following assumes an Enterprise Certificate Authority certificate is used.)

Using Microsoft Management Console

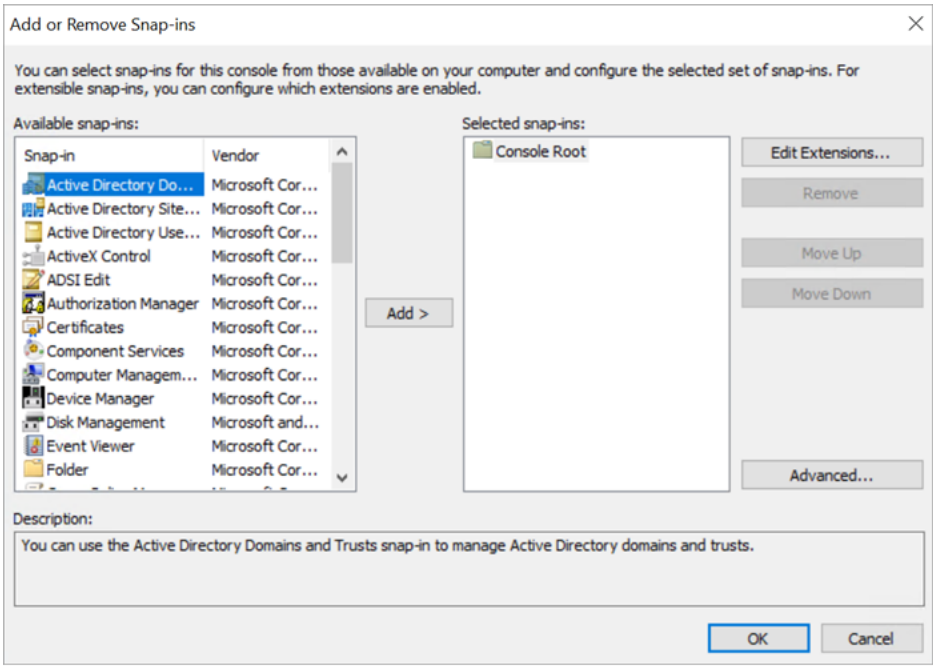
You can create an internal Enterprise Certificate Authority certificate for the Web Console using Microsoft Management Console.

1. From the **Start** menu and type **mmc** in the **Run** window. **Enter**.

   If prompted **Do you want to allow this app to make changes to your device?** click **Yes**.

   The **Microsoft Management Console** window opens.

2. From the menu, select **File** > **Add/Remove Snap-in**.

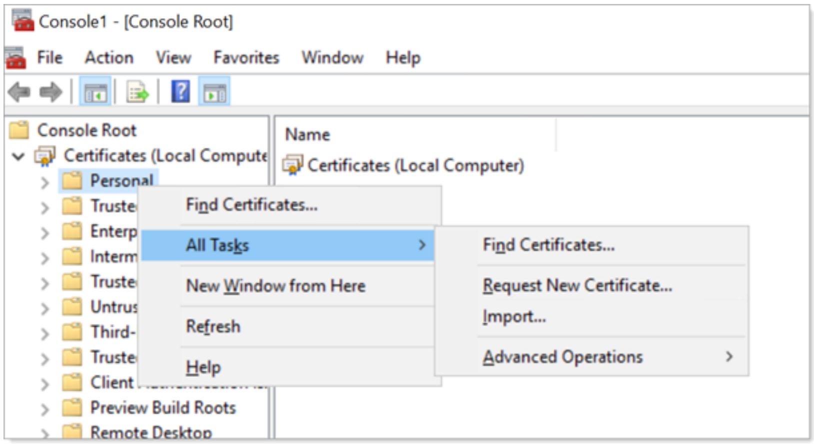


You can select snap-ins for this console from those available on your computer and configure the selected set of snap-ins. For extensible snap-ins, you can configure which extensions are enabled.

Snap-in	Vendor
Active Directory Do...	Microsoft Cor...
Active Directory Site...	Microsoft Cor...
Active Directory Use...	Microsoft Cor...
ActiveX Control	Microsoft Cor...
ADSI Edit	Microsoft Cor...
Authorization Manager	Microsoft Cor...
Certificates	Microsoft Cor...
Component Services	Microsoft Cor...
Computer Managem...	Microsoft Cor...
Device Manager	Microsoft Cor...
Disk Management	Microsoft and...
Event Viewer	Microsoft Cor...
Folder	Microsoft Cor...

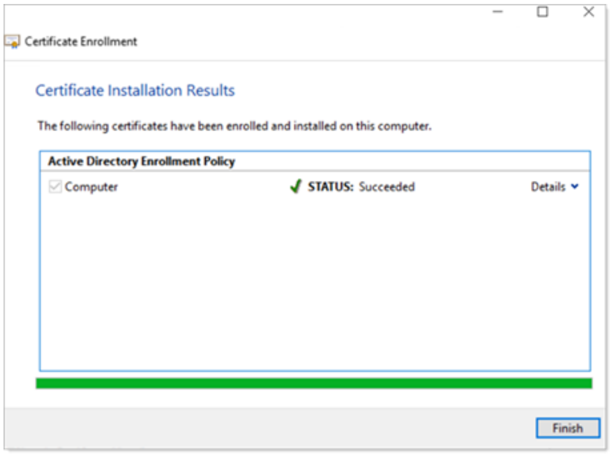
You can use the Active Directory Domains and Trusts snap-in to manage Active Directory domains and trusts.

3. From **Available snap-ins** choose **Certificates** and click **Add**.
4. In the **Certificates snap-in** window choose **Computer account** and click **Next**.
5. In the **Select Computer** window, from **Select the computer you want this snap-in to manage** options, select **Local computer** and click **Finish**.
6. Click **OK** to return to the Console window.
7. Expand **Certificates (Local Computer)**.
8. Right-click **Personal**, select **All Tasks** and then **Request New Certificate**.



9. Click **Next** to close the **Certificate Enrollment** message. The **Certificate Enrollment Policy** page opens.

10. In the **Select Certificate Enrollment Policy** page select your enrollment policy (usually – Active Directory Enrollment Policy) and click **Next**.


Certificate Enrollment

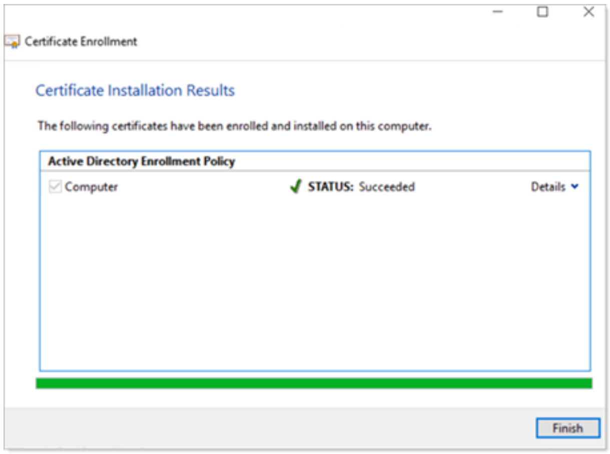
Certificate Installation Results

The following certificates have been enrolled and installed on this computer.

Active Directory Enrollment Policy

☑ Computer ✓ **STATUS:** Succeeded

11. In the **Request Certificates** page select the certificate type (usually – Computer) and click **Enroll**.



Certificate Enrollment

Certificate Installation Results

The following certificates have been enrolled and installed on this computer.

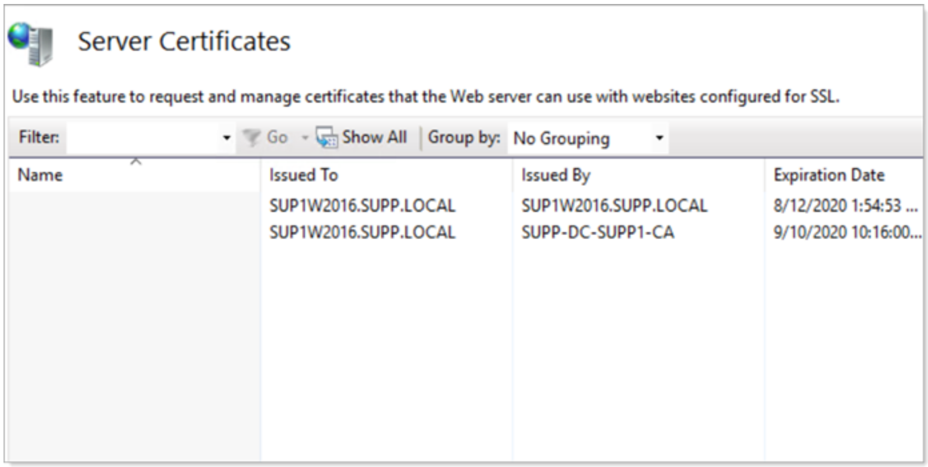
Active Directory Enrollment Policy

☑ Computer ✓ **STATUS:** Succeeded

12. Click **Finish** when the enrollment is successfully completed to close the window.

13. Confirm the newly-created certificate exists, ffrom the console, select **Personal**> **Certificates**.

    The FQDN of the current server displays in the **Issued To** column.



Server Certificates

Use this feature to request and manage certificates that the Web server can use with websites configured for SSL.

Name	Issued To	Issued By	Expiration Date
	SUP1W2016.SUPP.LOCAL	SUP1W2016.SUPP.LOCAL	8/12/2020 1:54:53 ...
	SUP1W2016.SUPP.LOCAL	SUPP-DC-SUPP1-CA	9/10/2020 10:16:00...

Using Internet Information Services (IIS) Manager

You can create a self-signed certificate for the Web Console using the IIS Manager.

1. Connect to the ObserveIT Web Console machine.

2. Open **Internet Information Services (IIS) Manager** .

3. In **Connections** area on the left, select the relevant server and double-click the **Server Certificates**

icon at the main page.

4. In the **Actions** area on the right, click **Create Self-Signed Certificate**.

5. In the **Specify a friendly name for the certificate** field, enter a descriptive name for the certificate. Click **OK**.

CREATING A NEW APPLICATION POOL IN IIS 8.X

When installing ObserveIT, the installer automatically creates a new application pool in IIS and uses it for the ObserveIT server-side component installations. If a custom installation is required, you can manually create the application pool and configure the website to use it when installing the ObserveIT server-side components.

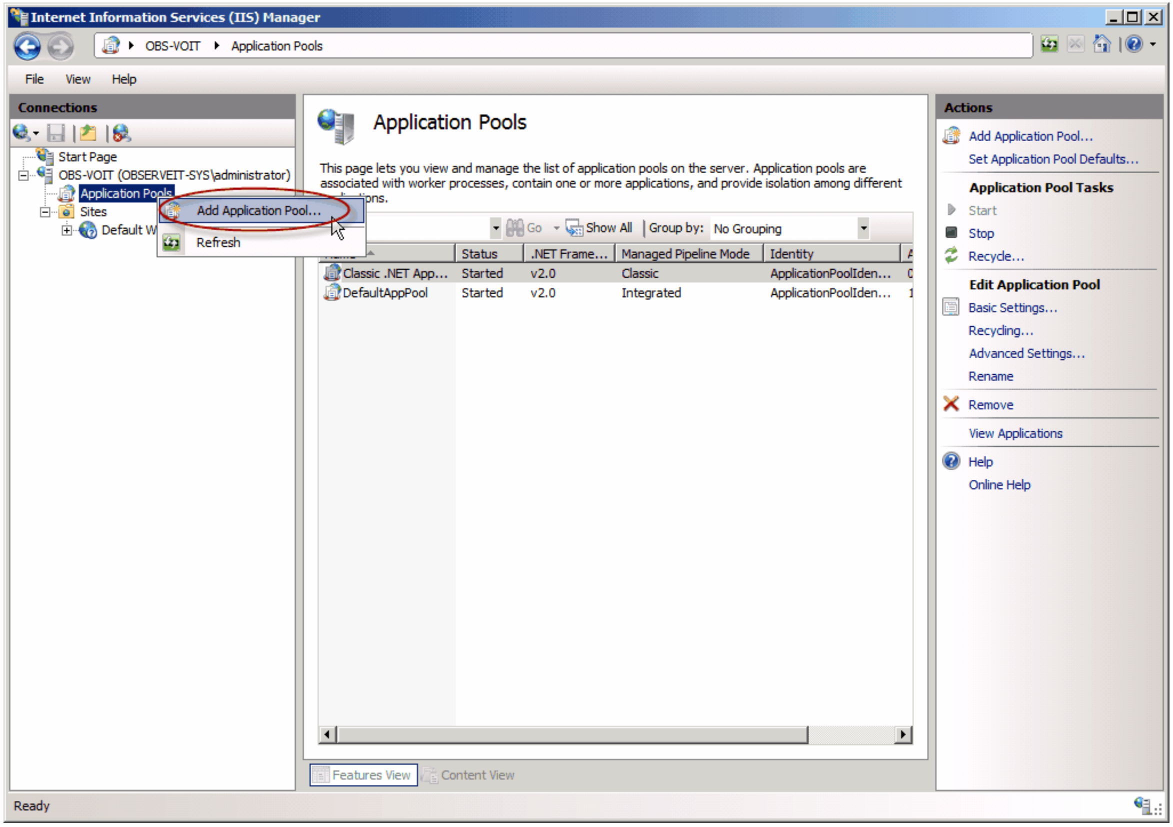
> The application pool must be configured as Integrated in order to use it for the ObserveIT server-side component.

You can create an application pool manually or use Powershell commands.

To create a new application pool in IIS 8.X for the Application server (Manual):

1. On the server running IIS, open IIS Manager from the Administrative Tools folder. Expand your server name.

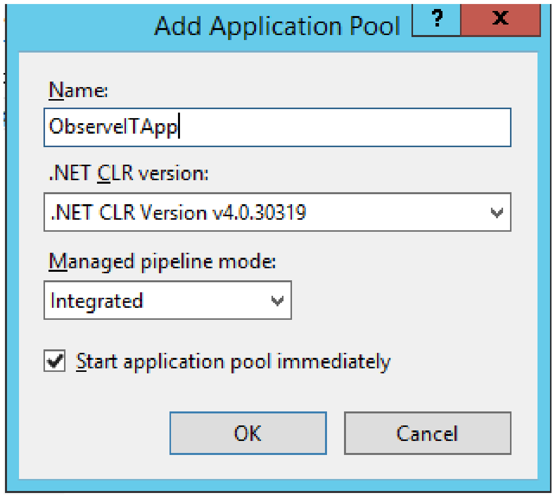
2. Right-click Application Pools and select Add Application Pool.



This page lets you view and manage the list of application pools on the server. Application pools are associated with worker processes, contain one or more applications, and provide isolation among different applications.

Name	Status	.NET Frame...	Managed Pipeline Mode	Identity	A
Classic .NET App...	Started	v2.0	Classic	ApplicationPoolIden...	0
DefaultAppPool	Started	v2.0	Integrated	ApplicationPoolIden...	1

3. In the Add Application Pool dialog box:
    1. In the Name field enter ObserveITApp. (The Application Pool name must not contain spaces.)
    2. In the Managed pipeline mode column, select Integrated from the list.
    3. Click OK.



Name: ObserveITApp

.NET CLR version: .NET CLR Version v4.0.30319

Managed pipeline mode: Integrated

☑ Start application pool immediately

The new application pool appears in the Application Pools list.

If you have multiple Application Servers and/or a separate Web Console machine, you need to repeat this process for each.

For example:

OITsrv1 – Application Server #1 – would hold a single ObserveITApplication Application Pool.

OITsrv2 – Application Server #2 – would hold a single ObserveITApplication Application Pool.

OITweb – Web Console – would hold a single ObserveITWebConsole Application Pool.

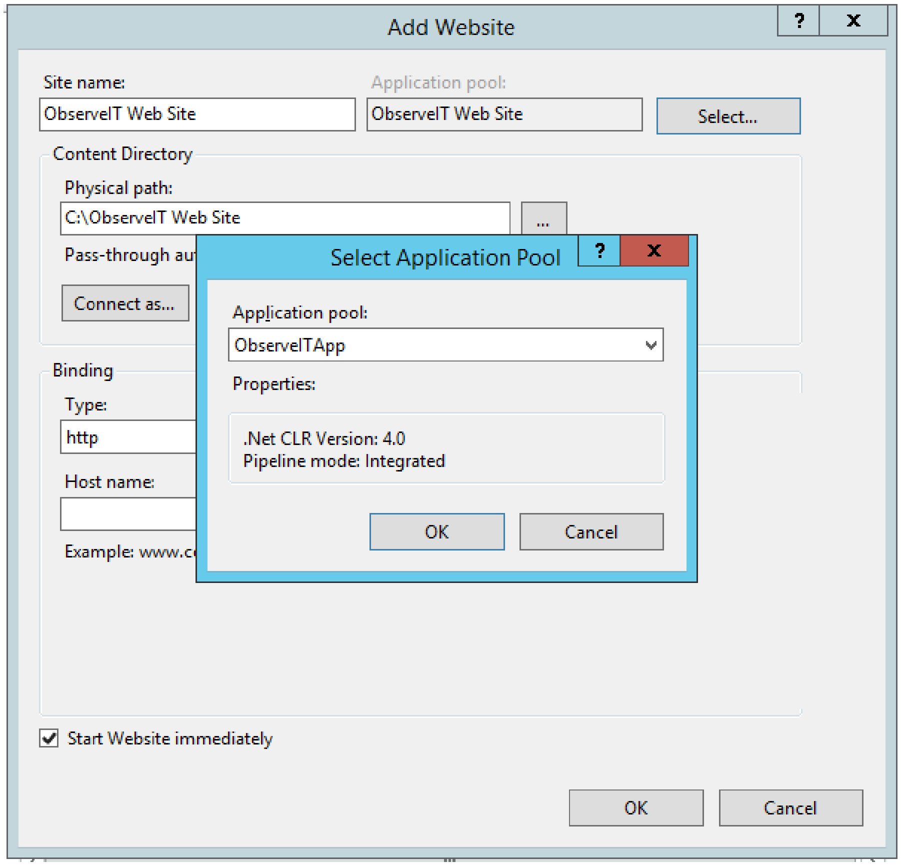
To create a new application pool in IIS 8.X for the Application server (PowerShell):
Open PowerShell as administrator and paste the following commands:

```
$WebSiteName = 'ObserveITApplication'

Import-Module WebAdministration

New-Item IIS:\Sites\$WebSiteName -PhysicalPath 'C:\Program Files\ObserveIT\Web\' -Bindings @{protocol="https";bindingInformation=":443:"}

Set-ItemProperty IIS:\Sites\$WebSiteName\ -Name applicationpool -Value $WebSiteName
```

To create a new application pool in IIS 8.X for the ObserveIT Console (manual):

1. Open Internet Information Services (IIS) Manager .

2. In **Connections** area on the left, select the relevant server and select **Sites**.
3. Right-click **Sites** and select **Add Website**.
4. In the **Site Name** field type in **ObserveITApplication**.
5. Click **Select** (next to the **Application Pool** field).
6. Select the **ObserveITApplication** Application Pool. Click **OK**.



Add Website

Site name: ObserveIT Web Site

Application pool: ObserveIT Web Site

Content Directory

Physical path: C:\ObserveIT Web Site

Pass-through au

Binding

Type: http

Host name:

Example: www.c

☑ Start Website immediately

Select Application Pool

Application pool: ObserveITApp

Properties:

.Net CLR Version: 4.0
Pipeline mode: Integrated

7. Navigate to the following path: **C:\Program Files\ObserveIT\Web**. Click the Web folder. Click **OK**.
8. Click **Select** (next to the **Application Pool** field).

> If you cannot find the “ObserveITApplication” application pool make sure you properly created the application pool before creating the website.

9. In the **Binding** area, in the **Port** field, change the port value from 80 to 443.

10. Click **OK** to save the changes and create the new website.

    If you have multiple Application Servers, you need to repeat this process for each machine.

    For example, if you plan to use the following setup:

    - OITsrv1 – Application Server #1
    - OITsrv2 – Application Server #2

    The result would be to have an identical website using the same name and application pool on the 2 machines that will act as the Application Servers.

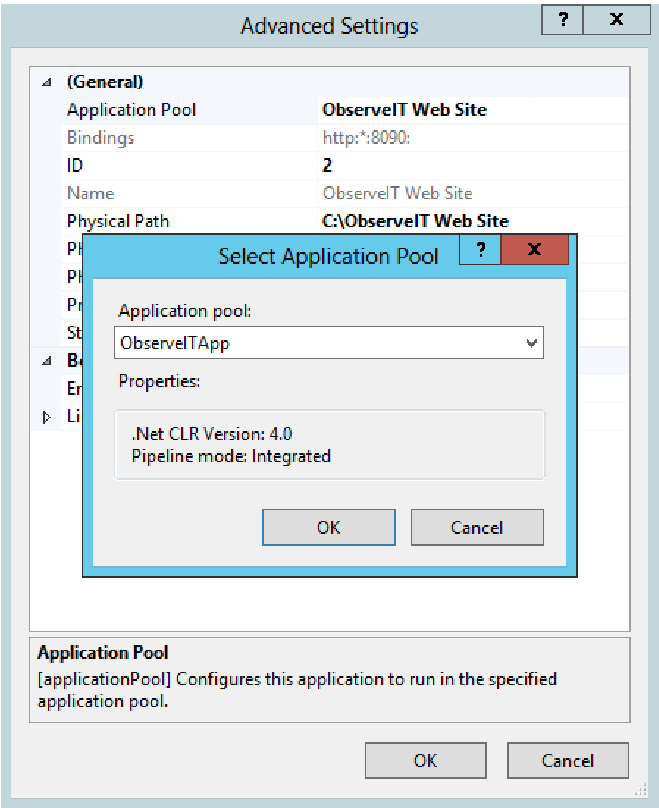
When modifying an existing website, you need to configure that website to use this new application pool, as follows:

1. Select the existing website in the Sites list, and click the Advanced Settings link for that website.

2. In the Advanced Settings window, click the Application Pool section, and then click the [...] button next to the existing application pool.

3. In the Select Application Pool window, from the Application pool list, select ObserveITApp.

4. Click OK



(General)
Application Pool: ObserveIT Web Site
Bindings: http:*:8090:
ID: 2
Name: ObserveIT Web Site
Physical Path: C:\ObserveIT Web Site

Application pool: ObserveITApp

Properties:

.Net CLR Version: 4.0
Pipeline mode: Integrated

Application Pool
[applicationPool] Configures this application to run in the specified application pool.

Click OK to close the Advanced Settings window.

To create a new application pool in IIS 8.X for the ObserveIT Console (Automatic - PowerShell):
Open PowerShell as administrator and paste the following commands:

```
$WebSiteName = 'ObserveITApplication'

Import-Module WebAdministration

New-Item IIS:\Sites\$WebSiteName -PhysicalPath 'C:\Program Files\ObserveIT\Web\' -Bindings @{protocol="https";bindingInformation=":443:"}

Set-ItemProperty IIS:\Sites\$WebSiteName\ -Name applicationpool -Value $WebSiteName
```

CREATING A NEW WEBSITE IN IIS 8.X FOR THE OBSERVEIT APPLICATION SERVER

When installing ObserveIT, the installer automatically creates a new website in IIS and uses it for the ObserveIT server-side component installations.

In a custom installation, you can create an additional website in IIS, and use this site to host the ObserveIT Application and Web Management virtual directories. However, in order to run multiple websites on the same IIS server, the listening IP address of each website, the listening TCP port of each website, and/or the Host Header of each website, must remain unique.

To create a new website for the ObserveIT Application Server (Using the Wizard - Manual):

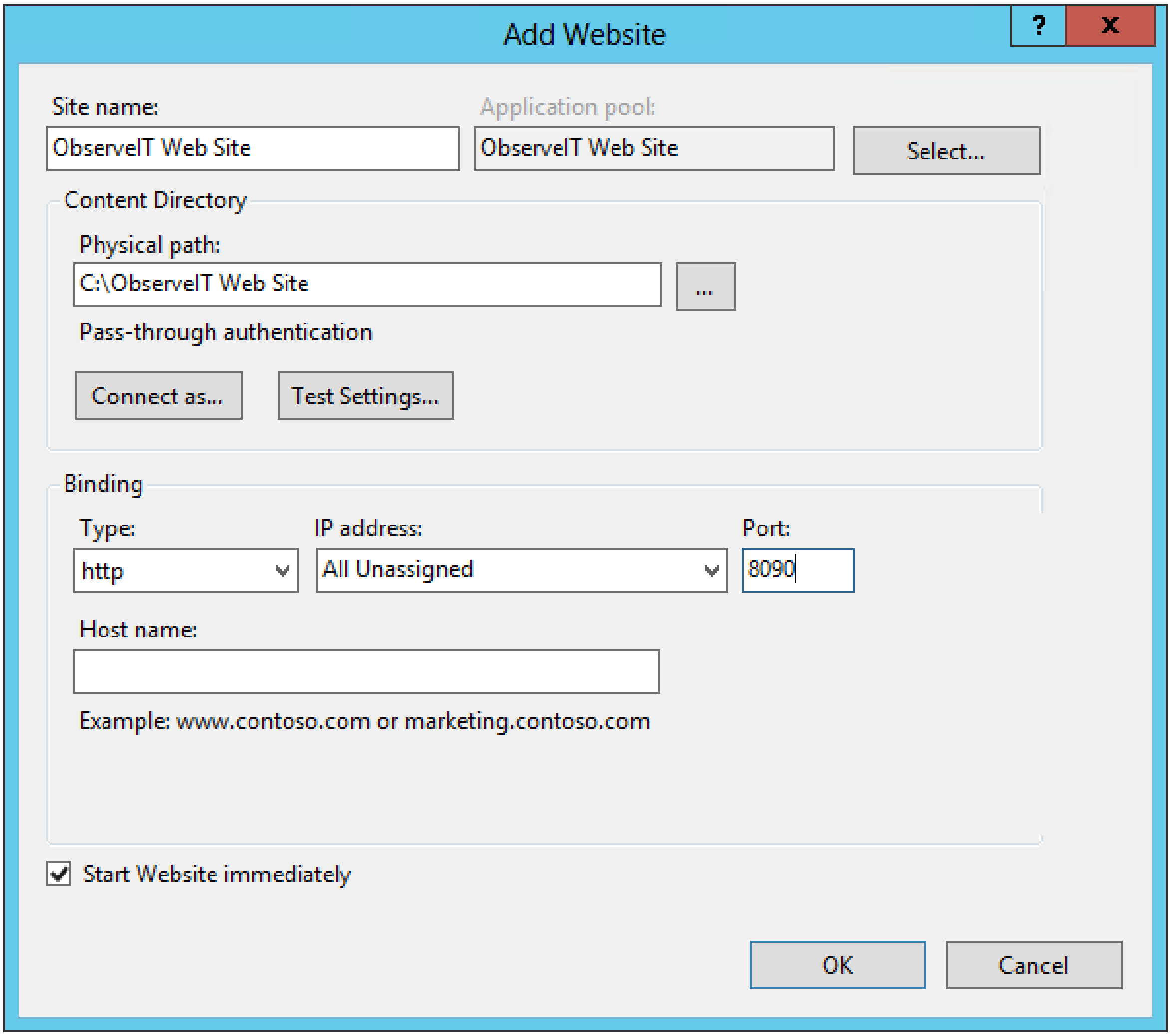
1. On the server running IIS, open IIS Manager from the Administrative Tools folder. Expand your server name, then expand Sites.

2. Right-click Sites and select Add Website.

3. Follow the steps in the Web Site Creation Wizard. Make a note of the listening IP address of the new website, the listening TCP port of the new website, and/or the Host header of the new website.

4. In the **Site Name** field type ObserveITApp. Click **Select**.

5. From the **Application pool** dropdown, select **ObserveITApp** and click **OK**.



Site name: ObserveIT Web Site

Application pool: ObserveIT Web Site

Physical path: C:\ObserveIT Web Site

Type: http

IP address: All Unassigned

Port: 8090

Host name:

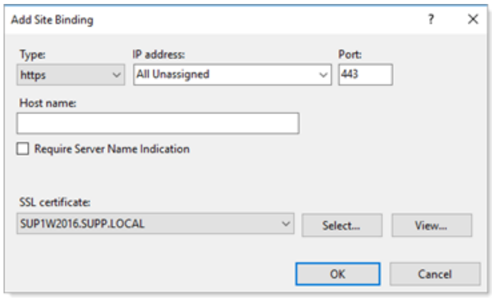
☑ Start Website immediately

6. From the **Physical path** field, navigate to the following path: C:\Program Files\ObserveIT\Web. Select the **Web** folder and click OK.

7. Click the **Select** button next to the **Application pool** field

> If you cannot find the “ObserveITApplication” application pool make sure you properly created the application pool before creating the website.

8. In the **Binding** area, in the **Port** field, change the port value from 80 to 443.


Add Site Binding

Type: https

IP address: All Unassigned

Port: 443

Host name:

☐ Require Server Name Indication

SSL certificate: SUP1W2016.SUPP.LOCAL

9. Click **OK** to save the changes and create the new website.

10. If you have multiple Application Servers, you need to repeat this process for each machine.

    For example, if you plan to use the following setup:

    OITsrv1 – Application Server #1

    OITsrv2 – Application Server #2

    The result will be to have an identical website using the same name and application pool on the 2 machines that will act as the Application Servers.

To create a new website in IIS 8.x for the Application Server (Automatic - Powershell):
Open PowerShell as administrator and paste the following commands to execute above steps automatically.

```
$WebSiteName = 'ObserveITApplication'

Import-Module WebAdministration

New-Item IIS:\Sites\$WebSiteName -PhysicalPath 'C:\Program
Files\ObserveIT\Web\' -Bindings @
{protocol="https";bindingInformation=":443:"}

Set-ItemProperty IIS:\Sites\$WebSiteName\ -Name applicationpool -
Value $WebSiteName
```

CREATING A NEW WEBSITE IN IIS 8.X FOR THE OBSERVEIT WEB CONSOLE

You can create an additional website in IIS.

To create a new website for the ObserveIT Web COnsole(Using the Wizard - Manual):

1. On the server running IIS, open IIS Manager from the Administrative Tools folder. Expand your

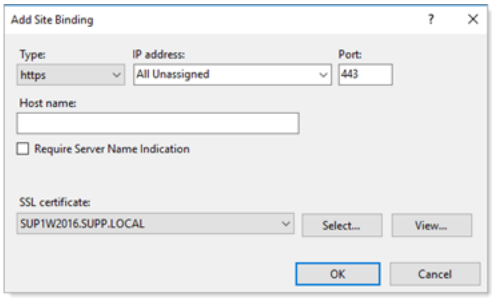
server name, then expand Sites.

2. Right-click Sites and select Add Website.
3. Follow the steps in the Web Site Creation Wizard. Make a note of the listening IP address of the new website, the listening TCP port of the new website, and/or the Host header of the new website.
4. In the **Site Name** field type ObserveITApp. Click **Select**.
5. From the **Application pool** dropdown, select **ObserveITWebConsole** and click **OK**.

6. From the **Physical path** field, navigate to the following path: C:\Program Files\ObserveIT\Web. Select the **Web** folder and click OK.
7. Click the **Select** button next to the **Application pool** field

> If you cannot find the “ObserveITWebConsole”application pool make sure you properly created the application pool before creating the website.

8. In the **Binding** area, change the value from http to https. The value of the **Port** field will be automatically changed from 80 to 443.



Add Site Binding

Type: https

IP address: All Unassigned

Port: 443

Host name:

□ Require Server Name Indication

SSL certificate: SUP1W2016.SUPP.LOCAL

9. In the **SSL certificate** field select a certificate you have previously created.
10. Click **OK** to save the changes.

    For example, if you plan to use the following setup:

To create a new website in IIS 8.x for the Application Server (Automatic - Powershell):
Open PowerShell as administrator and paste the following commands to execute above steps automatically.

```
$WebSiteName = 'ObserveITWebConsole'
```

```
Import-Module WebAdministration

New-Item IIS:\Sites\$WebSiteName -PhysicalPath 'C:\Program
Files\ObserveIT\Web\' -Bindings @
{protocol="https";bindingInformation=":443:"}

Set-ItemProperty IIS:\Sites\$WebSiteName\ -Name applicationpool -
Value $WebSiteName
```

Installing ObserveIT Components

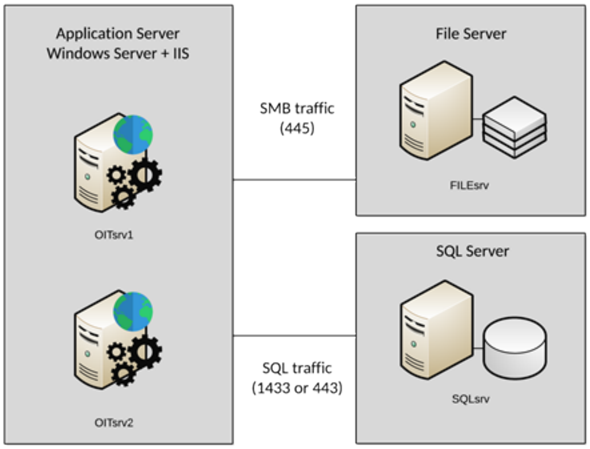
Installing ObserveIT components includes the following servers and modules:

- ObserveIT Application Server
- ObserveIT Web Management Console
- SQL Native Client
- Screenshot Storage Optimizer
- Web Categorization Module

INSTALLING OBSERVEIT APPLICATION SERVER

Depending on the sizing and architecture of the product deployment, you must install one or more ObserveIT Application Server(s).

This Application server is installed after you install the database and file server.



This topic describes how to install and verify the ObserveIT Application Server component on the first server. If you have multiple Application Servers, you need to repeat this procedure for each machine.

Do not attempt to install ObserveIT server-side components over the network. Always use a local copy of the installation files.

Installing ObserveIT Application Server (Manual)

1. Connect to the computer where you downloaded and extracted the ObserveIT setup files.
2. Open the **Start** menu and type **Command Prompt**.
3. Right-click the **Command Prompt** shortcut icon and select **Run as administrator**.

   If prompted **Do you want to allow this app to make changes to your device?** click **Yes**.
4. From the command line, as an administrator, navigate to the folder with the extracted ObserveIT installer. Navigate to the Web folder.

   For example: `cd c:\Users\OITServiceAccount\ObserveIT_Setup_ vx.x.x.xx\Web\AppServer`
5. Type ObserveIT.AppServerSetup.msi and **Enter**.
6. In the **ObserveIT Application Server** window click **Next**.
7. In the **Site** field, select n**ObserveITApplicatio**.
8. In the **Application Pool** field, select **ObserveITApplication**. Click Next.In
9. In the **Server** field, enter the details of the SQL server, in the following format:

   `<ServerFQDN>\<InstanceName>,<Port>`

   For example: `SQLsrv.test.lab\ObserveIT,1433`
10. Select the **Windows Authentication** radio button and enter the password for the current account – the ObserveIT Service Account - in the **Password** field. Click **Test Connection**.

    If the test is successful, a success message displays, and the **Next** button becomes available.
11. Click **Next**. The installation begins.
12. After successful installation, click **Close**.

Installing ObserveIT Application Server (Powershell - Automatic)

Open PowerShell as administrator and paste the following commands to execute above steps automatically.

The following command assumes the ObserveIT installer is located under the C:\Temp\ObserveIT-_Setup_v7.8.2.270 path. After the execution of the command, the installation will starts – just follow the prompts.

```
iisreset /stop

Get-Service WAS | Start-Service

Start-Process msiexec -ArgumentList '/i', "C:\Temp\ObserveIT-_Setup_
v7.8.2.270\Web\AppServer\ObserveIT.AppServerSetup.msi", '/norestart',
'/l*v ObserveITWebConsole_setup.txt' -Wait

iisreset /start
```

Verifying Application Server Installation

1. Connect to the ObserveIT Web Console machine.
2. Open the **Start** menu and type **Run**. **Enter**.
3. Type `%userprofile%\AppData\Local\Temp`. **Enter**.
4. Locate `AppServer_CA_Log.txt` file. Double-click the file to open it.
5. Open the Find dialog. (Press CTRL+F on the keyboard.) Find **RegisterApplicationServer**
6. Locate the following line: **RegisterApplicationServer: Done**.

> If the line does not exist or the word **Done** does not exist – the installation failed. Re-check the installation requirements, particularly the permissions for the SQL logins.

Installing Additional ObserveIT Application Servers

Depending on your deployment design and the number of concurrent recorded sessions, you may need to deploy additional ObserveIT Application Servers.

> Before installing an additional Application Server, you must obtain a valid license from the ObserveIT Sales team.

When deploying more than one Application Server, you need to load balance the Agent connections with the multiple Application Servers. You may use software-based load balancing solutions, such as Microsoft Network Load Balancing (NLB), or hardware-based solutions, such as F5, Citrix NetScaler, or others. Configuring steps for these solutions is a task that is beyond the scope of this document.

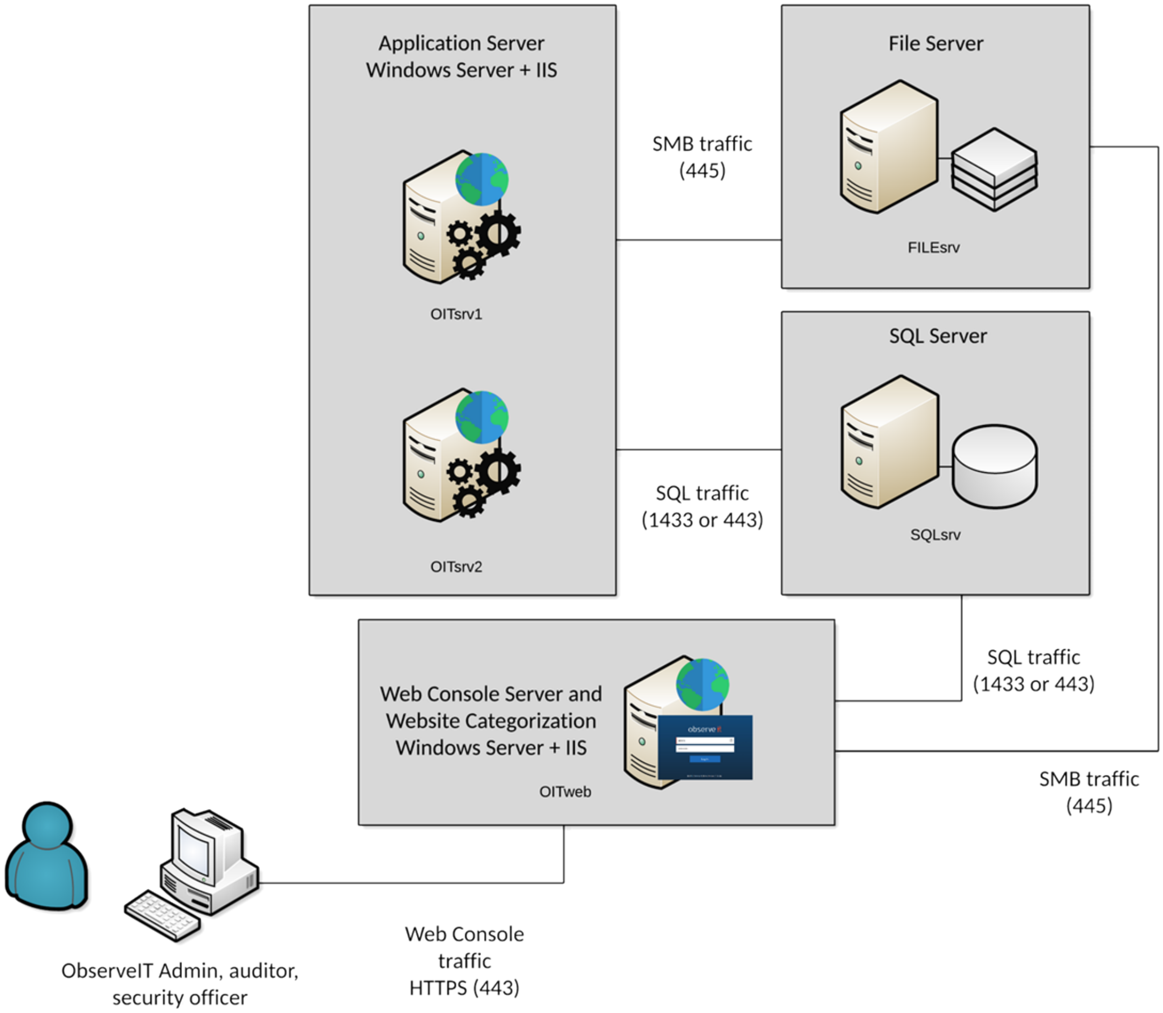
The steps required to install additional Application Server(s) and verify its successful installation are identical to the steps required for installing and verifying the first Application Server.

INSTALLING OBSERVEIT WEB MANAGEMENT CONSOLE

The ObserveIT Web Console is the component that is used to configure, administer and use the product. Only one Web Console can be installed per environment.

In most cases, the Web Console is installed on the same machine as the Application Server (the first one, in case of multiple Application Servers). However, it’s also possible to configure a dedicated machine for this.

Before you can verify the Web Console installation you must install the SQL Native client. This lets you work with ObserveIT REST APIs.



Installing the Web Management Console (Manual)

1. Connect to the computer where you downloaded and extracted the ObserveIT setup files.

> If unable to log in as the ObserveIT Service Account interactively, see **Running elevated Windows PowerShell prompt as a different user**.

2. Open the **Start** menu and type in **Command Prompt**.

3. Right-click the **Command Prompt** shortcut found and choose **Run as administrator**.

4. If prompted **Do you want to allow this app to make changes to your device?** click **Yes**.

5. Navigate to the folder with the extracted ObserveIT installer. Navigate to the **Web** folder.

   For example:

   `c:\Users\OITServiceAccount\Desktop\ObserveIT_Setup_vx.x.x.xx\Web"`

6. Run **PreRequisite_nodeServices.exe**.

7. Check the check box with the message **I agree to install the following products** and click **Install**.

8. Wait for the installation to finish. Click **Close** when it does.

9. Navigate to the folder with the extracted ObserveIT installer. Navigate to the **Web\WebConsole** folder.

   For example: `c:\Users\OITServiceAccount\Desktop\ObserveIT_Setup_vx.x.x.xx\Web\WebConsole`

10. Type in **ObserveIT.WebConsoleSetup.msi** and **Enter**.

11. In the ObserveIT Console window click **Next**.

12. In the **Site** field select **ObserveITWebConsole**.

13. In the **Application Pool** select **ObserveITWebConsole**. Click **Next**.

14. Opt-out of the anonymous data usage submission if required.

    Choose whether you opt-out of ObserveIT collecting anonymous usage data of the Web Console use.

15. In the **Server** field enter the details of the SQL server, in the following format:

    `<ServerFQDN>\<InstanceName>,<Port>`

    For example: `SQLsrv.test.lab\ObserveIT,1433`

16. Click the **Windows Authentication** radio button and enter the password for the current account – the ObserveIT Service Account - in the **Password** field. Click **Test Connection**.

    If the test is successful, a success message displays, and the **Next** button becomes available.

17. Click **Next**. The installation begins.

18. After successful installation, click **Close**.

Installing the Web Management Console (Automatic)
To work with ObserveIT RESTful APIs, SQL Native Client is required.

1. To install the SQL Native Client, download

   https://download.microsoft.com/download/F/E/D/FEDB200F-DE2A-46D8-B661-D019DFE9D470/ENU/x64/sqlncli.msi.

2. After downloading, execute **sqlncli.msi** , and follow the Wizard to complete the installation.

Installing the Web Console

Open PowerShell as administrator and paste the following commands, substituting the relevant location.

The example below assumes the ObserveIT installer is located under the C:\Temp\ObserveIT-_Setup_ v7.8.2.270 path.

After executing the commands bwlow, the installation wizard will start – just follow the prompts.

```
Start-Process "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\PreRequisite_nodeServices.exe" -Wait

Start-Process "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\sqlncli-2012-64-QFE.msi" -Wait

iisreset /stop

Get-Service WAS | Start-Service

Start-Process msiexec -ArgumentList '/i', "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\WebConsole\ObserveIT.WebConsoleSetup.msi", '/norestart', 'EXTRACTMICROSERVICES=True', '/l*v ObserveITWebConsole_setup.txt' -Wait

iisreset /start
```

Installing the SQL Native Client

(Manual)

1. Download the file: https://download.microsoft.com/download/F/E/D/FEDB200F-DE2A-46D8-B661-D019DFE9D470/ENU/x64/sqlncli.msi.

2. After downloading, execute the **sqlncli.msi** file, and follow the wizard to complete the installation.

(Powershell - Automatic)

Open PowerShell as administrator and paste the following commands to execute above steps automatically.

The below command assumes the ObserveIT installer is located under the `C:\Temp\ObserveIT_Setup_v7.8.2.270` path. After the execution of below command, the installation wizard starts – just follow the prompts.

```
Start-Process "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\PreRequisite_nodeServices.exe" -Wait

Start-Process "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\sqlncli-2012-64-QFE.msi" -Wait

iisreset /stop

Get-Service WAS | Start-Service

Start-Process msiexec -ArgumentList '/i', "C:\Temp\ObserveIT_Setup_v7.8.2.270\Web\WebConsole\ObserveIT.WebConsoleSetup.msi", '/norestart', 'EXTRACTMICROSERVICES=True', '/l*v ObserveITWebConsole_setup.txt' -Wait

iisreset /start
```

Verifying the Web Management Console installation

1. Connect to the ObserveIT Web Console machine.
2. Open the **Start** menu and type **Run**. **Enter**.
3. Type **`%userprofile%\AppData\Local\Temp`**. Enter.
4. Locate `WebConsole_CA_Log.txt` file. Double-click the file to open it.
5. Open the Find dialog. (Press CTRL+F on the keyboard.) Find **RegisterWebConsole**.
6. Locate the following line: **RegisterWebConsole: Done**.

If the line does not exist or the word Done does not exist – the installation failed. Re-check the installation requirements, particularly the permissions for the SQL logins created previously in this guide.

INSTALLING THE SCREENSHOTS STORAGE OPTIMIZER

ObserveIT can store sessions with full video recording in the file system or in the SQL database. Archiving full sessions with many screenshots takes up processor time and bandwidth. If configured, ObserveIT will store sessions on "Hot" SSD-based devices to provide faster session archiving. After sessions stored in the SSD-based Hot storage are closed and signed, the Screenshots Storage Optimizer packs and zips session video on an SSD-based "Warm" storage device. This speeds the archiving process and uses less processor time.After sessions stored in the SSD-based Hot storage are closed and signed, the Screenshots Storage Optimizer packs and zips session video on a "Warm" storage device. This speeds the archiving process and uses less processor time."

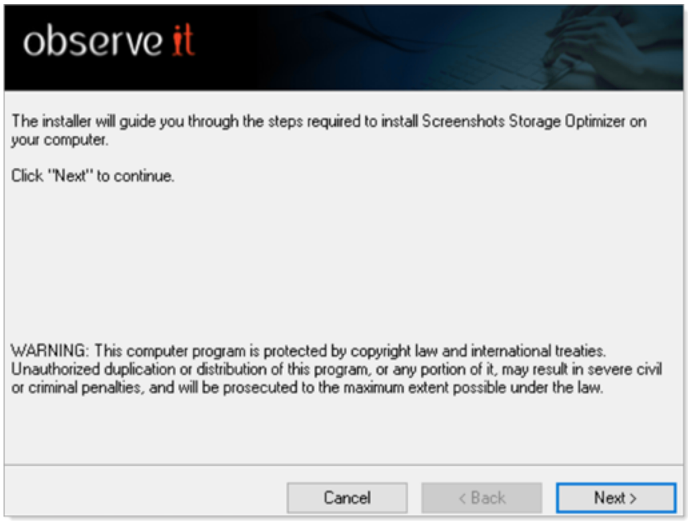
The Screenshots Storage Optimizer can be installed anywhere on the same domain as the ObserveIT Application server and Web Console. It must have access to the “Hot” and “Warm” storage folders. More specifically, we recommended installing it directly to the SSD-based "Hot" storage drive where the "Hot" storage folder is configured.

Installing the Screenshot Storage Optimizer (Manual)

1. Connect to the Web Console machine, where you downloaded and extracted the ObserveIT Installer.
2. Make sure to **Run as administrator**.
3. Navigate to ObserveIT_Setupv.xx > Screenshots Storage Optimizer folder and click ScreenshotsStorageOptimizer installer. Follow the Wizard.

Screenshot Storage Optimizer Wizard

1. Open the wizard using manual or automatic installation.

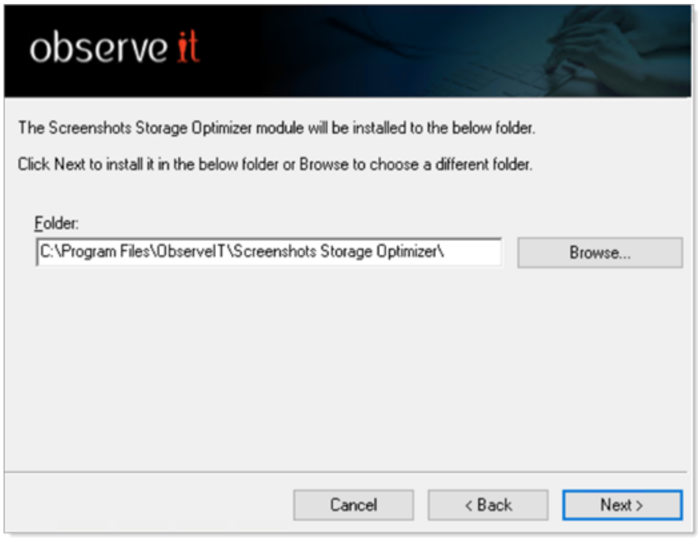


The installer will guide you through the steps required to install Screenshots Storage Optimizer on your computer.

Click "Next" to continue.

WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.

2. Click **Next**.

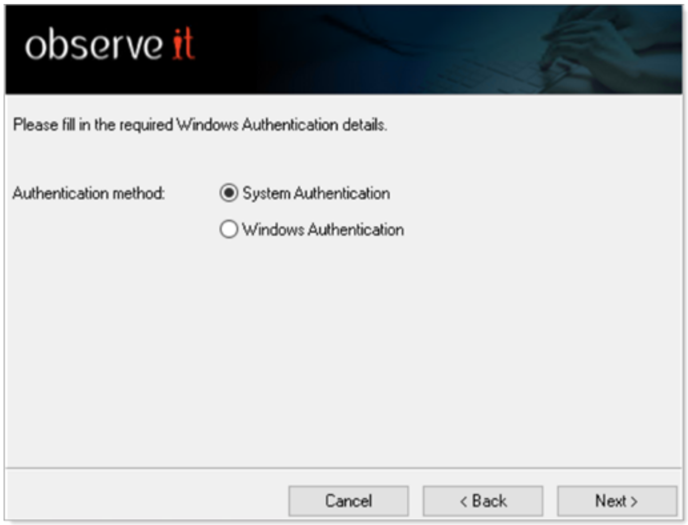


The Screenshots Storage Optimizer module will be installed to the below folder.

Click Next to install it in the below folder or Browse to choose a different folder.

Folder: C:\Program Files\ObserveIT\Screenshots Storage Optimizer\

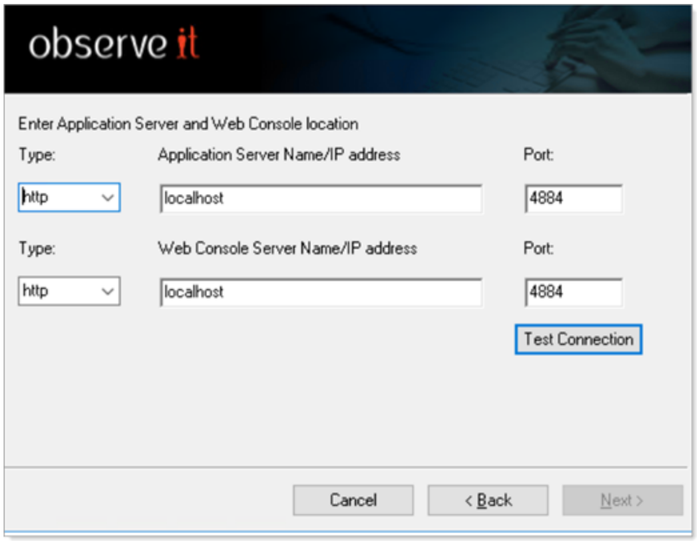
3. Install in the default folder or browse to the folder you want. Click **Next**.



Please fill in the required Windows Authentication details.

Authentication method: ● System Authentication ○ Windows Authentication

4. Select the authentication method. Click **Next**.



Enter Application Server and Web Console location

Type: http — Application Server Name/IP address: localhost — Port: 4884

Type: http — Web Console Server Name/IP address: localhost — Port: 4884

5. Enter the locations. Click **Test Connection**.

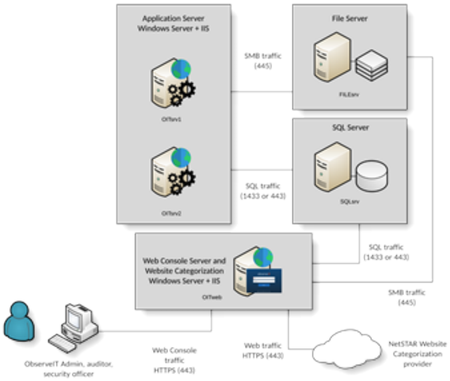
6. If the test is successful, click **Next**. The installation starts.

7. When complete, click **Close**.

INSTALLING THE WEBSITE CATEGORIZATION MODULE

The ObserveIT Website Categorization module automatically detects categories of Websites that end users are browsing, enabling alerts to be generated on browsing categories such as Gaming, Adults, Infected or Malicious Websites, Phishing Websites, and more.

The diagram below shows the configuration including the Web Categorization module.



WEBSITE CATEGORIZATION PREREQUISITES

In order to trigger alerts on Internet browsing, the Website Categorization module must be installed. The Website Categorization module can be installed on the same machine as the Web Console or on a separate dedicated machine (recommended).

Prerequisites for installing the Website Categorization module

- To download the initial data and receive updates directly from NetSTAR cloud service, your machine (that is, the server on which the Website Categorization module is installed), you must have Internet access.

  > If you don’t have Internet access you can use an HTTP proxy that will provide Internet access and allow the data download.

- Make sure that port number 443 is open, and that the URL https://nsv10.netstar-inc.com/gcfus/get.cgi (that the module needs to access NETSTAR for initial data download and daily database updates) is not blocked by the Firewall.

- Enable TLS 1.0 to allow for web categoriztion updates.

Make sure that the URL https://nsv10.netstar-inc.com/gcfus/get.cgi and http://dss.netstar-inc.com/ (that the module needs to access NETSTAR for initial data download and daily database updates) are not blocked by the Firewall.

- 16 GB minimum memory requirement.
- Open port 8000 between the Application server and the Website Categorization.

Installing the Website Categorization Module

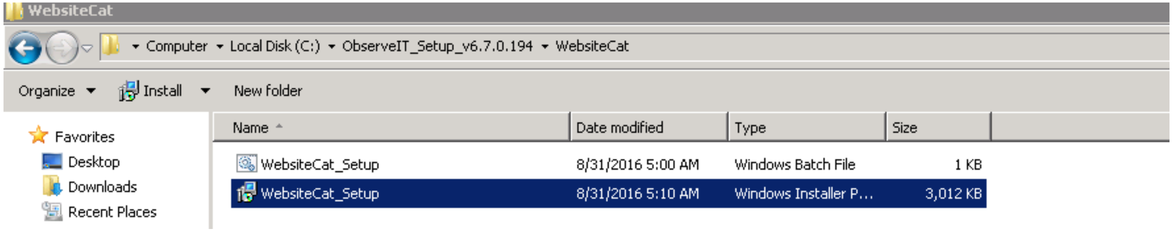
The following procedures describe the steps required to install the Website Categorization module for a Custom installation and One-Click Installation. The module can be installed on a separate dedicated machine or executed from the One-Click installation.

Custom installation installs the Website Categorization module via a separate installation file.

> System events related to installation of the Website Categorization module and download of the web categories database are generated by the system. For details, see Event Types.

Installing the module using a Custom installation

1. On the ObserveIT Application Server, open Windows Explorer and browse to the ObserveIT Installation folder.
2. Open the WebsiteCat folder and double-click the WebsiteCat_Setup Installer package.



Name	Date modified	Type	Size
WebsiteCat_Setup	8/31/2016 5:00 AM	Windows Batch File	1 KB
WebsiteCat_Setup	8/31/2016 5:10 AM	Windows Installer P...	3,012 KB

The installation process searches for the installed ObserveIT SQL Server database. The following message is displayed:

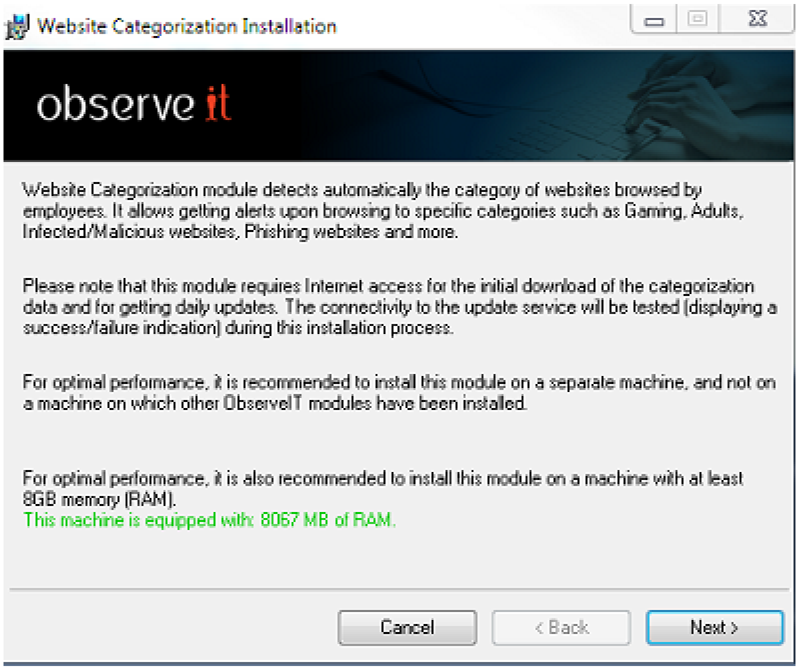
Gathering information for installing the Website Categorization module.
Please wait...

If after gathering information, the ObserveIT database was not found, the following message is displayed:
SQL Server with ObserveIT databases was not found.

Please install ObserveIT databases before running the installation of the Website Categorization module.

The installation checks whether the module is already installed on this machine; if it is, you can repair or remove it.

If the module is not already installed, the Website Categorization Installation wizard opens, displaying the following information.



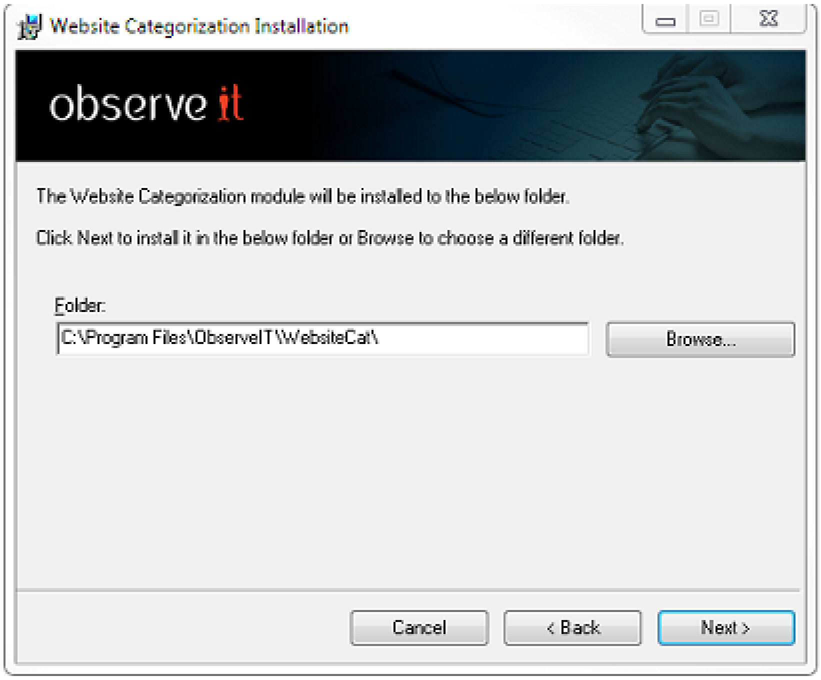
Website Categorization module detects automatically the category of websites browsed by employees. It allows getting alerts upon browsing to specific categories such as Gaming, Adults, Infected/Malicious websites, Phishing websites and more.

Please note that this module requires Internet access for the initial download of the categorization data and for getting daily updates. The connectivity to the update service will be tested (displaying a success/failure indication) during this installation process.

For optimal performance, it is recommended to install this module on a separate machine, and not on a machine on which other ObserveIT modules have been installed.

For optimal performance, it is also recommended to install this module on a machine with at least 8GB memory (RAM).
This machine is equipped with: 8067 MB of RAM.

3. To continue, click Next.
   The default installation folder is displayed. If you want to change the default installation folder, click the Browse button and select the required folder.

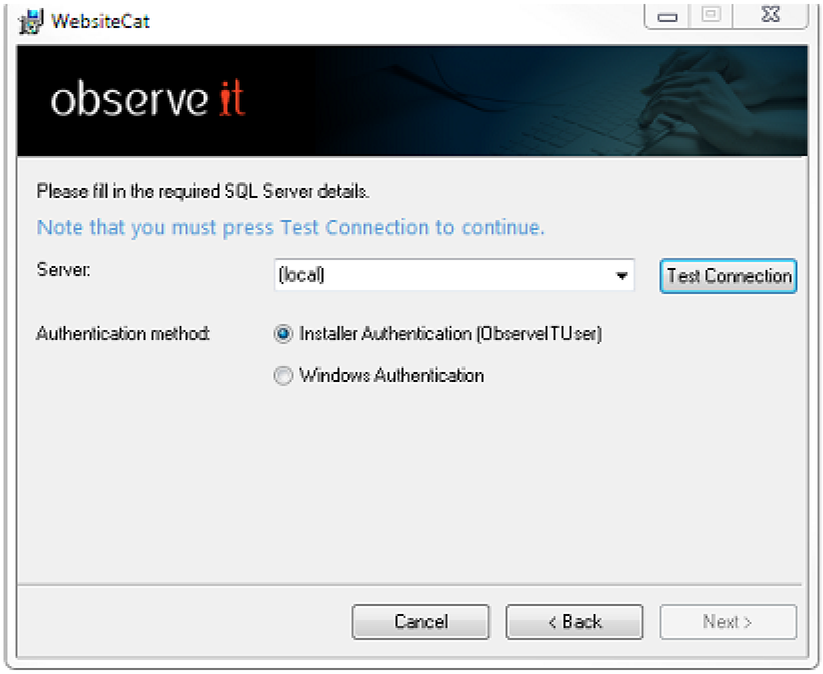


The Website Categorization module will be installed to the below folder.

Click Next to install it in the below folder or Browse to choose a different folder.

Folder: C:\Program Files\ObserveIT\WebsiteCat\

4. Click Next.
5. Select the SQL Server with which the module will interact (the drop-down list includes SQL Servers which are already installed).



Please fill in the required SQL Server details.

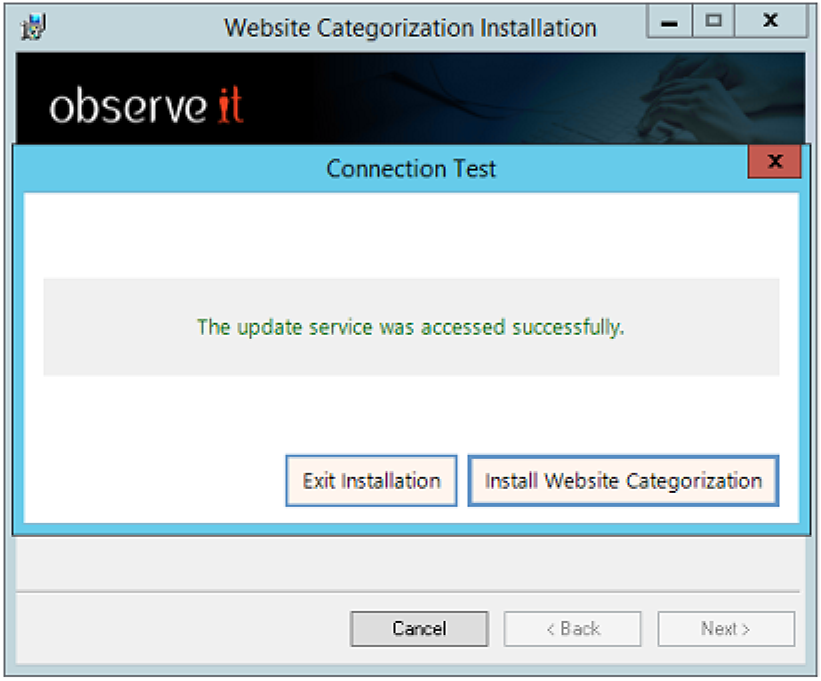
Note that you must press Test Connection to continue.

Server: (local)

Authentication method: ● Installer Authentication (ObserveITUser)

○ Windows Authentication

6. Click Test Connection to check the status of connectivity to the server.



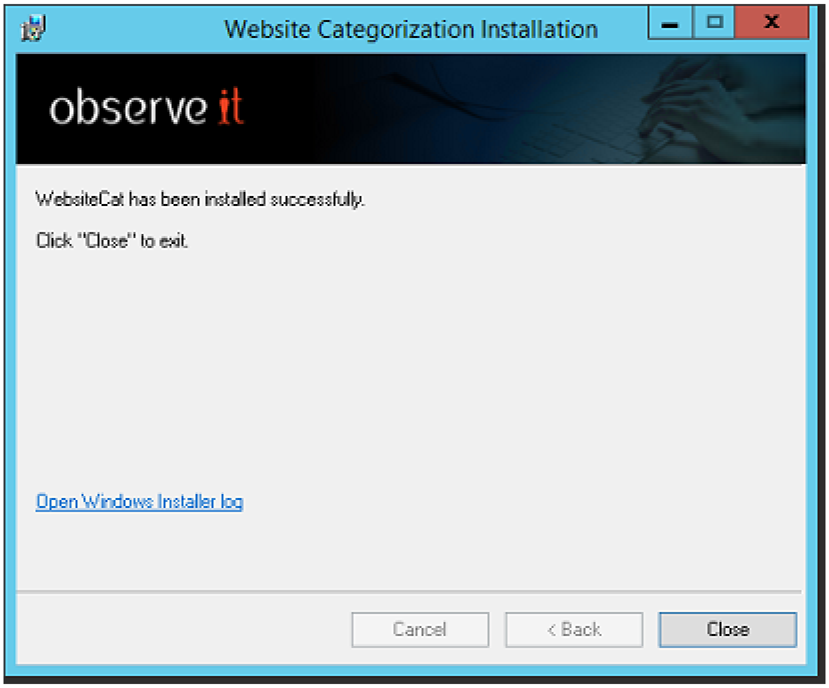
The update service was accessed successfully.

Website Categorization Installation
observe it
Connection Test
Exit Installation
Install Website Categorization
Cancel
< Back
Next >

7. Click Install Website Categorization to install the module (regardless of success or failure of the connectivity test).
   -Or-

   Click Exit Installation to abort the installation.

   Upon successful installation of the module, the last screen of the wizard displays:


Website Categorization Installation
observe it

WebsiteCat has been installed successfully.

Click "Close" to exit.

Open Windows Installer log
Cancel
< Back
Close

8. Click Close to exit the installation wizard.

Installing the module using PowerShell
Open PowerShell as administrator and paste the following commands to execute automatically.

The below command assumes the ObserveIT installer is located under the `C:\Temp\ObserveIT-_Setup_v7.8.2.270` path. Replace the location with the location of ObserveIT installer you are using.

After the execution of below command, the installation Wizard opens.

```
Start-Process msiexec -ArgumentList '/i', "C:\Temp\ObserveIT-NL_
Setup_v7.8.2.270\WebsiteCat\Websitecat_Setup.msi", '/norestart',
'/l*v ObserveITWebConsole_setup.txt'
```

Related Topics:

CONFIGURING INTERNET PROXY SETTINGS FOR WEBSITE CATEGORIZATION MODULE

This section describes configuration of the Internet proxy for the Website Categorization module, allowing the Website Categorization module component to access the Internet and automatically update the internal website list.

> Website Categorization module does not support proxy authentication.

1. Connect to the ObserveIT Website Categorization module machine.
2. Open the **Start** menu and type **Run**. **Enter**.
3. Right-click the **Notepad** shortcut icon and click **Run as administrator**.

   If prompted **Do you want to allow this app to make changes to your device?**, click **Yes**. Select **File** > **Open**.
4. Navigate to the following folder: `C:\Program Files\ObserveIT\WebsiteCat\Adapters\NetStar\db\etc\`.
5. In Notepad, change the file type from **Text Documents (*.txt)** to **All Files (*.*)**.
6. Locate the **gcf1.conf** file, click it, and click **Open**.
7. In the **# Proxy Settings** section, locate the **PROXY_HOST=** string. Enter the IP address or the FQDN of the proxy server after the = sign.
8. Locate the **PROXY_PORT=** string. Enter the port of the HTTP or HTTPS proxy after the = sign.
9. From the **File** menu, select **Save**.
10. Close Notepad.
11. Open the **Start** menu and type**PowerShell.**.
12. If prompted **Do you want to allow this app to make changes to your device?**, click **Yes**. Select **File** > **Open**.
13. Paste the following command into the PowerShell window and press the Enter key:

```
Get-Service WebsiteCat.Manager,GCF1Service | Restart-Service -
Force
```

```
&"C:\Program Files\ObserveIT\WebsiteCat\WebsiteCat.Manager.exe"
-dw
```

14. It is safe to close the PowerShell window now. A download window may appear. Do not close the new window until the operation is complete.

VERIFYING THE OBSERVEIT SERVICES IDENTITY

The ObserveIT installation creates four services. When running the ObserveIT installer as the ObserveIT Service Account, the services will be automatically configured to use the ObserveIT Service Account identity.

On the ObserveIT Application Server machine(s) the following service is present:

- ObserveIT Activity Alerts Service

On the Web Console machine, the following services are present:

- ObserveITNotificationService
- ObserveIT Health Monitoring Service
- ObserveIT Analytics Service
- Screenshots Storage Optimizer
- GCF1Service
- WebsiteCat.Manager

Verifying the ObserveIT Alerts Services Identity (Manual)

1. Connect to the ObserveIT Application Server machine.
2. Open the **Start** menu and type **Run**. **Enter**.
3. Type **services.msc**. **Enter**.
4. Find the **ObserveIT Activity Alerts Service** in the list.
5. Verify the **Log On As** column reflects the ObserveIT Service Account identity. If it does not, follow the rest of this procedure. Otherwise, verify the ObserveIT Service Account identity for other ObserveIT services.
6. Right-click the service and click **Properties**.
7. Click the **Log On** tab.

8. Select **This account**. Click **Browse**.
9. Click **Locations** and ensure your Active Directory domain is selected.
10. In the **Enter the object name to select** field, type **OITServiceAccount**. Click **OK**.
11. In the **Password** and **Confirm password** fields enter the password for the ObserveIT Service Account user.
12. Click **OK**. If a message pops up that the user OITServiceAccount has been granted the Log on as a service rights, click **OK**.
13. Right-click the ObserveIT Activity Alerts Service and click **Restart**.
14. Perform steps 5-12 on the remaining 3 ObserveIT services – 4 total – named ObserveIT Health Monitoring Service, ObserveIT Notification Service and ObserveIT User Analytics Service.

Verifying the ObserveIT Alerts Services Identity (Powershell - Automatic)
Open PowerShell as administrator and paste the following commands to execute above steps automatically. After the execution of below command, you will be prompted to supply the ObserveIT Service Account credentials. Enter the credentials and press the OK key to continue. All the ObserveIT components will be configured to use the new credentials.

```
function Set-OITAccount ($Credentials){

if (!$Credentials) {

$Credentials = Get-Credential

}

$UserName = $Credentials.GetNetworkCredential().Domain + '\' +
$Credentials.GetNetworkCredential().UserName

$Password = $Credentials.GetNetworkCredential().Password


$OITServices = Get-Service observeit*, screenshot*, websitecat*,
gcf1*

foreach ($Service in $OITServices) {

$Service = $Service.Name

Write-Output "Working service $Service"

$svc_Obj = Get-WmiObject Win32_Service -filter "name='$service'"
$ChangeStatus = $svc_Obj.change($null, $null, $null, $null, $null,
$null, $UserName, $Password, $null, $null, $null)
If ($ChangeStatus.ReturnValue -eq "0")
{Write-host "User Name sucessfully for the service '$Service'"}
If ($ChangeStatus.ReturnValue -eq "0")
{Write-host "The service '$Service' Started successfully"}
}

foreach ($service in $OITServices) {
Get-Service $Service.Name | Restart-Service
}
Write-Output "Setting credentials for the ObserveIT Application Pool"
Import-Module WebAdministration
Get-Item IIS:\AppPools\ObserveIT* | Set-ItemProperty -name
processModel -value @{userName = "$UserName"; password = "$Password";
identitytype = 3}
Start-Process iisreset -NoNewWindow
}

Set-OITAccount
```

Configuring ObserveIT Installation

To configure ObserveIT installation, complete the following tasks.

- Configuring Your Admin Password
- Obtaining a Commercial License
- Configuring LDAP Settings

- Configuring SMTPSettings
- Configuring Screenshot Data Storage

CONFIGURING THE ADMIN PASSWORD

The first time you access the ObserveIT Web Console, you are prompted to configure the password for the default ObserveIT Admin user account.

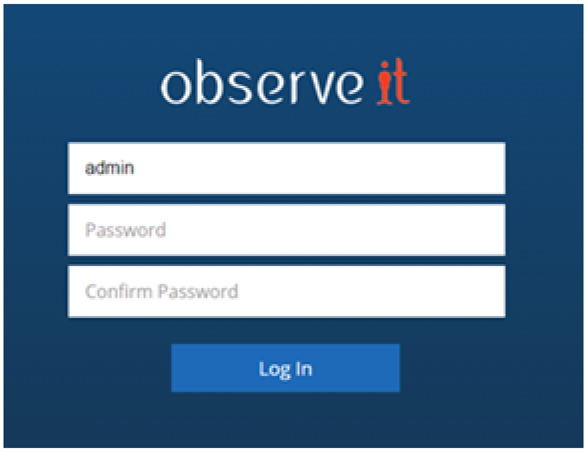
1. Open your preferred Web browser. In the address bar type the URL address of your ObserveIT Web Console in the format:

   https://<WebConsoleServerAddressFQDN>/ObserveIT

   For example:

   https://oitsrv1.oit-demo.local/ObserveIT

2. The browser window opens and you are prompted to set the password for the admin user.



3. In the **Password** and **Confirm Password** fields enter the password for the ObserveIT Admin user account.

4. Click **Log In**. Your password is now set.

OBTAINING A COMMERCIAL LICENSE

When you install the ObserveIT server-side components using the ObserveIT Custom Installation, your product will not be licensed. The first time that you access the Web Management Console, you will need to install a license to be able to use the product.

Using a Full Paid License (Enterprise version)

This license is generated at the customer's request by ObserveIT's support staff, and represents the number of Agents (monitored servers) that were purchased by the client.

If you are installing ObserveIT for a client that has not yet received the full paid license, you can temporarily use the free time-limited license, and later upgrade the license to the paid one.

> Some full paid licenses have a time limit. If a license has a time limit, a notification is displayed at the top of the screen in the Web Console showing the number of days left till the expiration date, and a hyperlink to contact the ObserveIT website at: http://www.observeit.com/request-pricing in order to request a license extension. If a time-limited license is due to expire in less than 30 days, the message will appear highlighted in the Web Console.

To obtain and activate a Commercial License

1. Go to the ObserveIT website: http://www.observeit.com/request-pricing.
2. Fill in the customer details and click Submit.

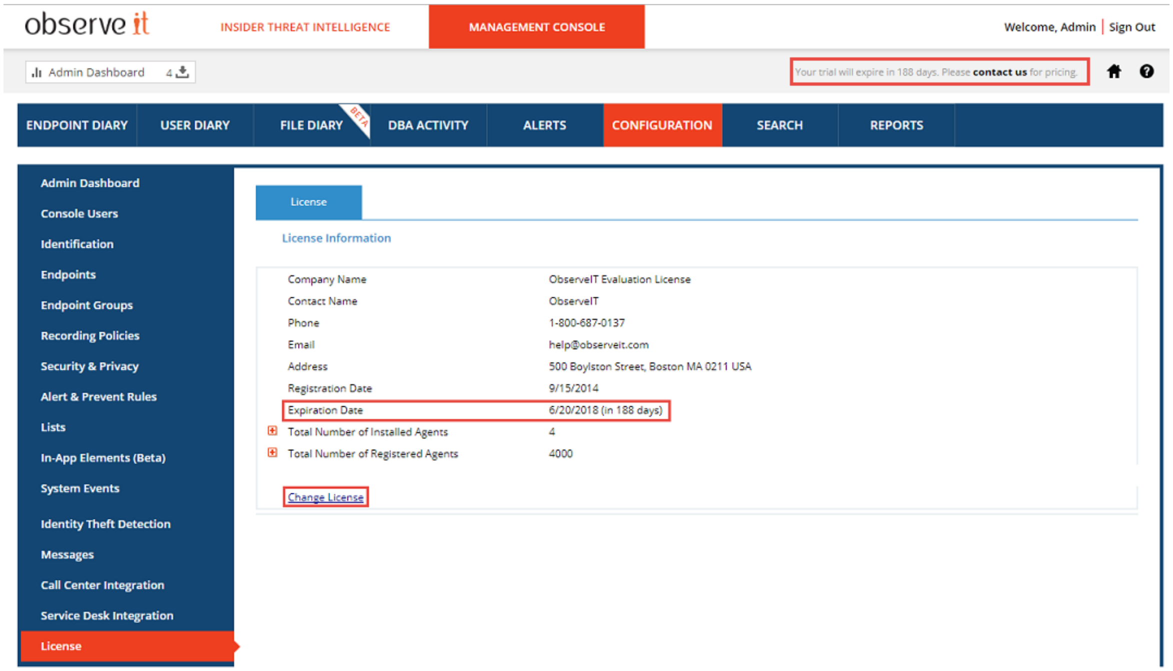
   > Make sure that you use a corporate valid email address. Free email hosting addresses, such as Hotmail or Gmail, will not be accepted.

3. Obtain a valid serial number which is generated at the customer's request by ObserveIT's sales staff, and represents the number of Agents (or monitored servers) that were purchased by the client.
4. Insert the serial number using the ObserveIT Web Console.

   When using the default TCP port 4884, use the following URL to connect to the ObserveIT Web Console: http://servername:4884/ObserveIT, where servername is the name or IP of the server on which the ObserveIT Web Console is installed.

5. In the Web Console, open the License page by selecting Configuration > License.

   > Note If the current license has a time limitation, the expiration date and number of days left until the expiration date are included in the License information, as shown below. In addition, a notification appears at the top of the screen with a hyperlink to contact the ObserveIT website at: http://www.observeit.com/request-pricing for details about extending the license.



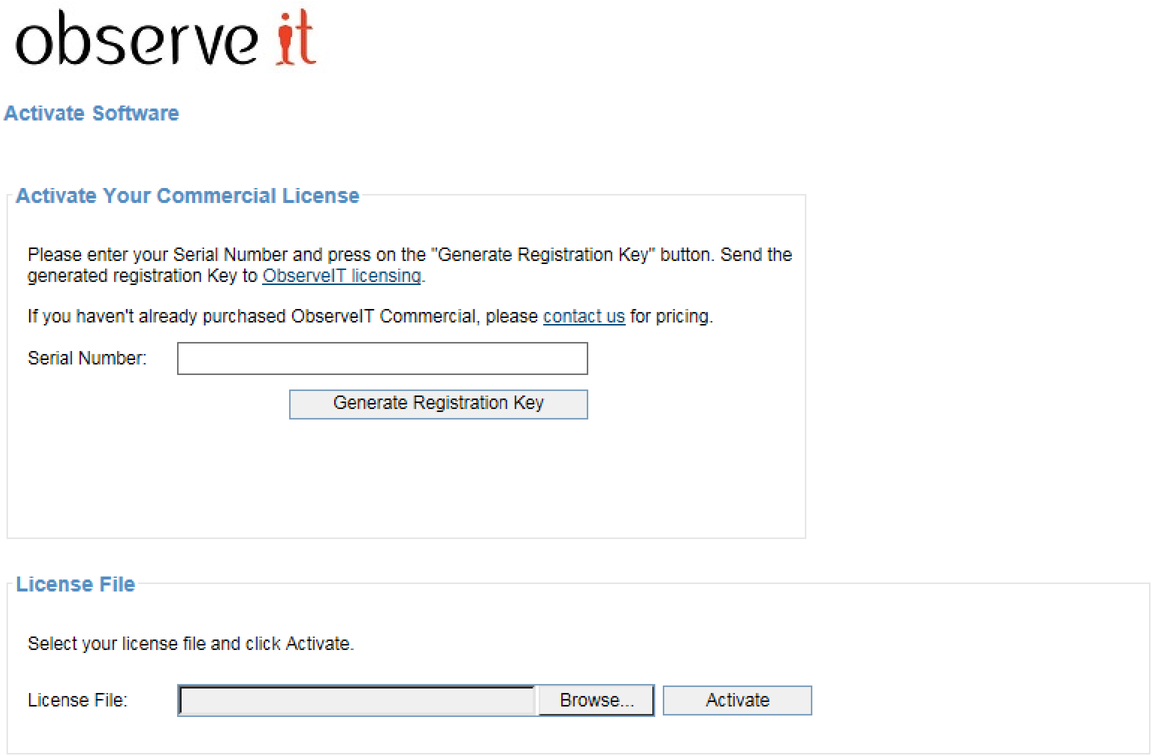
License Information

Company Name	ObserveIT Evaluation License
Contact Name	ObserveIT
Phone	1-800-687-0137
Email	help@observeit.com
Address	500 Boylston Street, Boston MA 0211 USA
Registration Date	9/15/2014
Expiration Date	6/20/2018 (in 188 days)
⊞ Total Number of Installed Agents	4
⊞ Total Number of Registered Agents	4000

Change License

6. Click the Change License link.

   The Activate Software page opens.



observe it

Activate Software

Activate Your Commercial License

Please enter your Serial Number and press on the "Generate Registration Key" button. Send the generated registration Key to ObserveIT licensing.

If you haven't already purchased ObserveIT Commercial, please contact us for pricing.

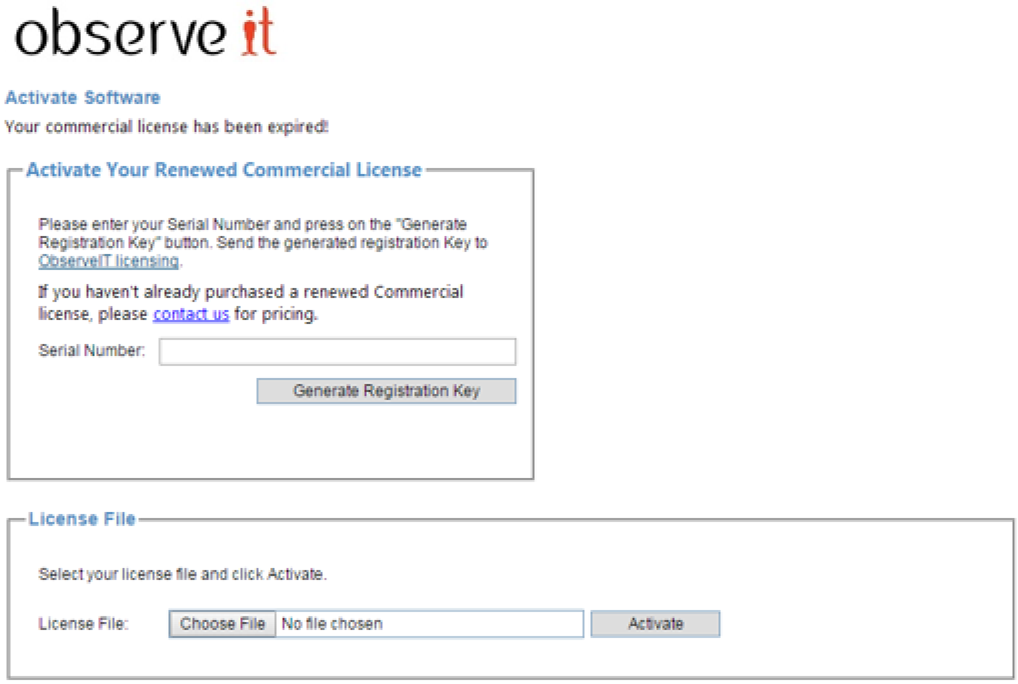
Serial Number:

License File

Select your license file and click Activate.

License File:

Note: If a time-limited license has expired, the Activate Software page will open after you log in to the Web Console warning you that your commercial license has expired and enabling you to activate your renewed commercial license. For example:



observe it

Activate Software

Your commercial license has been expired!

Activate Your Renewed Commercial License

Please enter your Serial Number and press on the "Generate Registration Key" button. Send the generated registration Key to ObserveIT licensing.

If you haven't already purchased a renewed Commercial license, please contact us for pricing.

Serial Number:

License File

Select your license file and click Activate.

License File: No file chosen

7. Paste the Serial Number and click the Generate Registration Key button.

8. Copy the registration key, paste it into a new email message, and send it back to sales@observeit.com.

   You will receive an automated email containing a license file in the format of a .lic file.

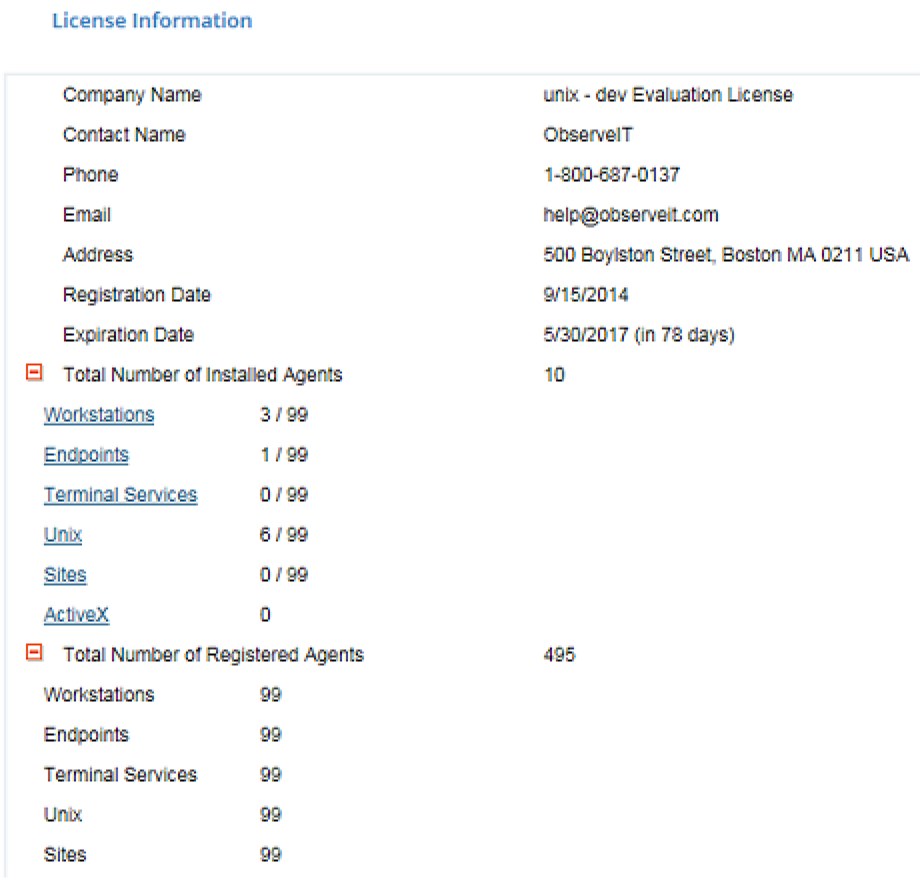
9. In the License File section of the Activate Software page, click Browse to find the license file that was provided to you by the ObserveIT sales team.

10. Click the Activate button to use the specified license file.

    After your product has been activated, the Web Console Login screen will immediately open.

ObserveIT License Types

The License page displays the number of licensed computers.



License Information

Company Name		unix - dev Evaluation License
Contact Name		ObserveIT
Phone		1-800-687-0137
Email		help@observeit.com
Address		500 Boylston Street, Boston MA 0211 USA
Registration Date		9/15/2014
Expiration Date		5/30/2017 (in 78 days)
⊟ Total Number of Installed Agents		10
Workstations	3 / 99	
Endpoints	1 / 99	
Terminal Services	0 / 99	
Unix	6 / 99	
Sites	0 / 99	
ActiveX	0	
⊟ Total Number of Registered Agents		495
Workstations	99	
Endpoints	99	
Terminal Services	99	
Unix	99	
Sites	99	

- Total Number of Installed Agents shows the number of Agents that were actually installed and used.

- Total Number of RegisteredAgents shows the number of licenses that were purchased by the client.

There are several license types:

- Workstations: Licensed computers running the Workstation type license. This license is for computers running Windows Vista/7/8/10 and Mac operating systems.

- Endpoints: Licensed computers running the Server type license. This license is for computers running Windows Server 2008/2008 R2/2012/2012 R2.

- Terminal Services: Licensed computers running the Terminal Server type license. This license is for computers running Windows Server 2008/2012 with the Terminal Services role installed, or for

Windows Server 2008 R2 with the Remote Desktop Services role installed (note that on Windows Server 2008 R2, the Terminal Server role name was changed to Remote Desktop Services).

- Sites: Licensed computers running the Site type license. This license is for computers running any version of Windows operating system.

In this context, "Servers" relates to the operating system type that is installed on the monitored endpoint.

The client can install additional Agents for the type of license that they have, providing that they have available licenses.

For example: If the client bought 50 Workstation licenses and 25 Server licenses, they can install up to 50 Agents running on Windows Vista/7/8/10, and up to 25 Agents running on Windows Server 2008/2008 R2/2012. If the client wants to install an additional Workstation Agent or an additional Server Agent, they cannot do so, because no free Agents remain. However, if the client bought 75 Site licenses, they can install these 75 Agents on any type of operating system (Windows or Unix), as long as the total number of Agents does not exceed the 75 licenses. If the client has already used up all the available licenses for that type of Agent, to install an additional Agent the client must uninstall and unregister one existing Agent (which will free up one license, making it available for a new machine), or purchase at least one additional license based upon the required installation type.

CONFIGURING LDAP SETTINGS

In a Custom Installation, you must manually configure the LDAP connector settings.

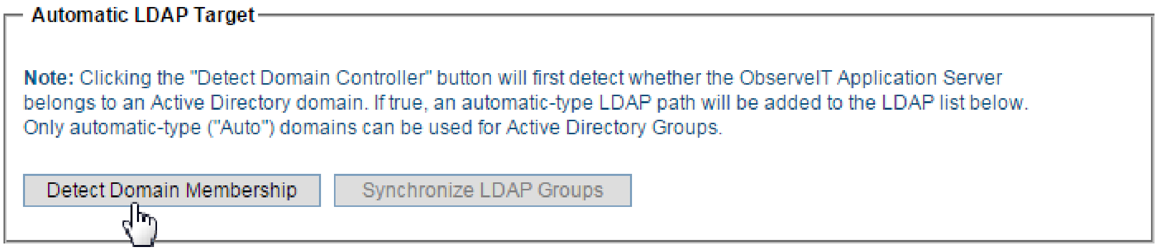
The LDAP connector enables usage of Active Directory-based users and groups for various system settings, such as:

- Using Active Directory with Console groups
- Integrating Active Directory users with Secondary Authentication
- Filtering Active Directory groups by Secondary Authentication
- Displaying logon messages to specific Active Directory users
- Recording/no recording Active Directory users and groups
- Integrating DNS for Agent auto-configuration
- Using Active Directory users when detecting Identity Theft

1. From the the ObserveIT Web Console, select **Management Console**. Then select **Configuration**> **LDAP Settings**.

2. From the **LDAP Settings** tab, in the **Automatic LDAP Target** area, select **Detect Domain**

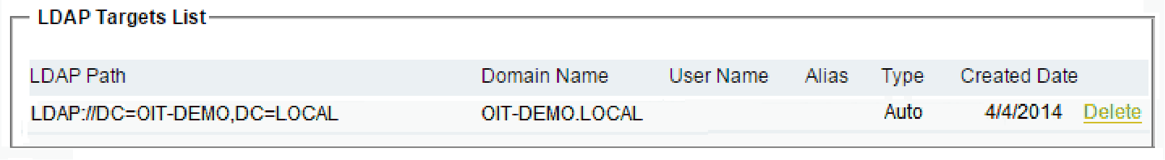
Membership.



Automatic LDAP Target

Note: Clicking the "Detect Domain Controller" button will first detect whether the ObserveIT Application Server belongs to an Active Directory domain. If true, an automatic-type LDAP path will be added to the LDAP list below. Only automatic-type ("Auto") domains can be used for Active Directory Groups.

If the Domain path and credentials are valid, the connection will be added to the LDAP Target List. The LDAP Target type will be set to **Auto**.



LDAP Targets List

LDAP Path	Domain Name	User Name	Alias	Type	Created Date	
LDAP://DC=OIT-DEMO,DC=LOCAL	OIT-DEMO.LOCAL			Auto	4/4/2014	Delete

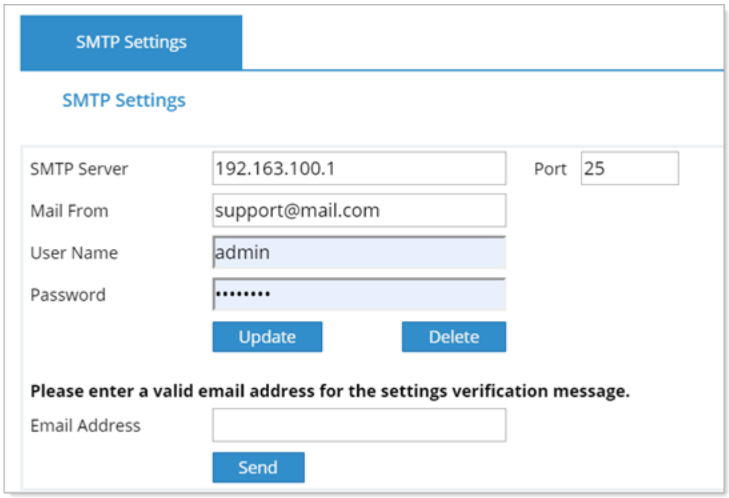
The Detect Domain Membership button is grayed out and cannot be used again, because the endpoint can be a member of only one domain.

CONFIGURING SMTP SETTINGS

If you would like to receive email notifications from your ObserveIT installation, such as notifications, reports and alerts, configure SMTP settings.

The Web Console is responsible for sending emails from ObserveIT. Allow the Web Console to send email via your email server.

1. Log into the ObserveIT Web Console.
2. Select **Management Console** at the top of the screen, select **Configuration** > **SMTP Settings**.



SMTP Server: 192.163.100.1 Port: 25

Mail From: support@mail.com

User Name: admin

Password: ••••••••

Please enter a valid email address for the settings verification message.

Email Address:

3. In the **SMTP Server** field, enter the FQDN of your email server. Adjust the **Port** field value if necessary.

4. In the **Mail From** field, enter the email address which will identify the sender of ObserveIT notifications.

5. Optional: In the **User Name** and **Password** fields enter credentials for the account authorized to send emails using the specified email server.

6. Click **Update** to save the details.

7. To verify ObserveIT can successfully send emails, enter a working email address in the **Email Address** field and click **Send**.

   If the verification is successful, a **Successfully Verified** message appears and you should receive an email from an email address specified in the **Mail From** field.

CONFIGURING SCREEN CAPTURE DATA STORAGE

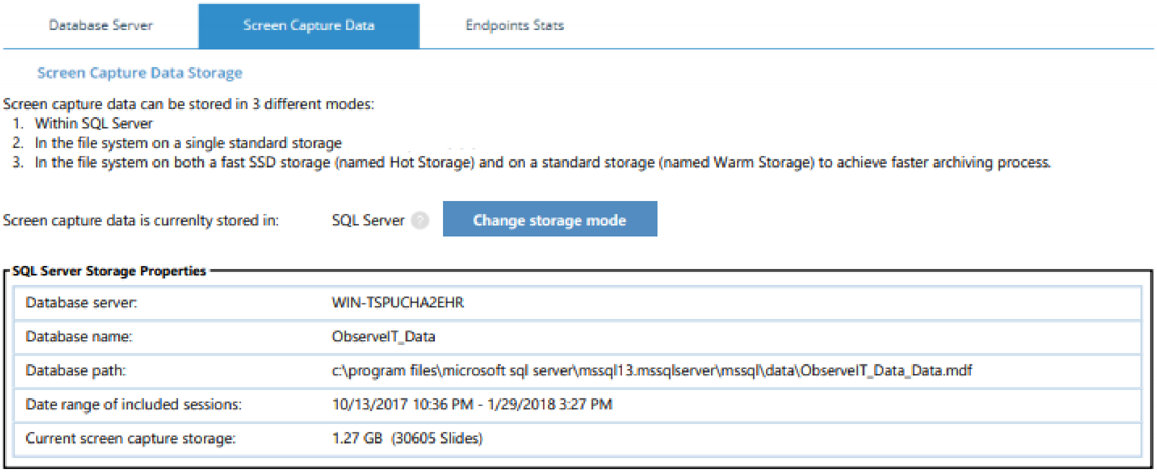
Screen capture data takes up more storage space than metadata and is configured separately.

For most deployments, it is essential to store the screenshot data directly on a file system (such as NTFS).

This procedure describes how to move the default storage location to the file system.

1. From the ObserveIT Web Console, navigate to Configuration > Storage.

2. Select the Screen Capture Data tab.



Screen Capture Data Storage

Screen capture data can be stored in 3 different modes:

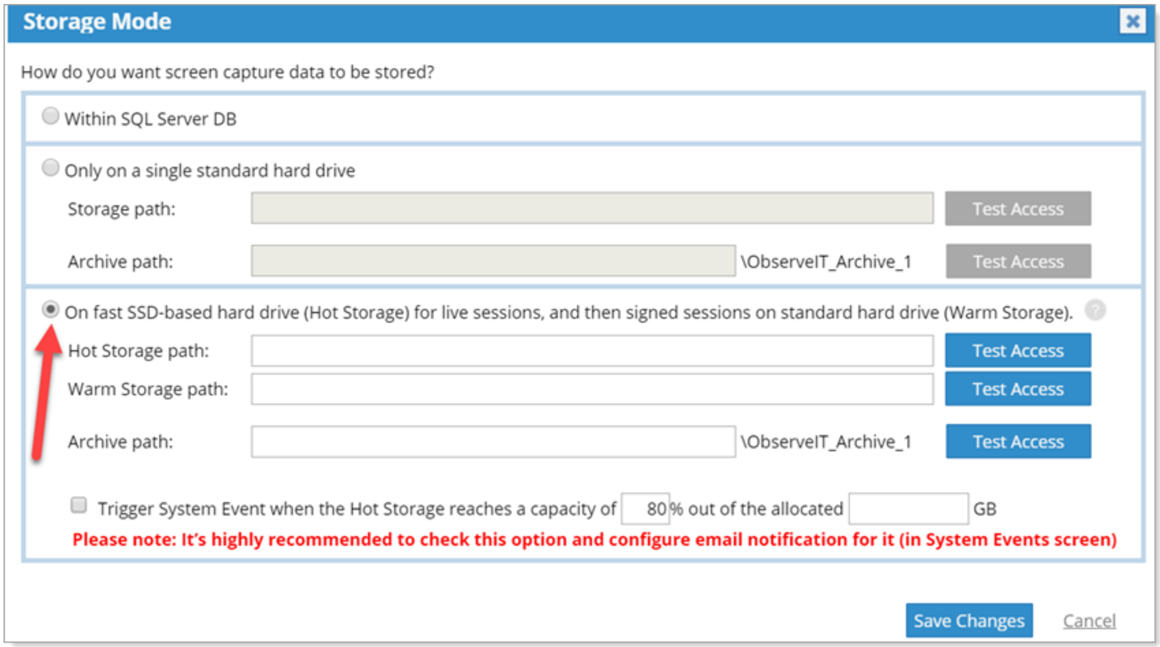
1. Within SQL Server
2. In the file system on a single standard storage
3. In the file system on both a fast SSD storage (named Hot Storage) and on a standard storage (named Warm Storage) to achieve faster archiving process.

Screen capture data is currenlty stored in: SQL Server

SQL Server Storage Properties

Database server:	WIN-TSPUCHA2EHR
Database name:	ObserveIT_Data
Database path:	c:\program files\microsoft sql server\mssql13.mssqlserver\mssql\data\ObserveIT_Data_Data.mdf
Date range of included sessions:	10/13/2017 10:36 PM - 1/29/2018 3:27 PM
Current screen capture storage:	1.27 GB (30605 Slides)

3. Select Change storage mode. When prompted about changes, click **Yes**.



Storage Mode

How do you want screen capture data to be stored?

○ Within SQL Server DB

○ Only on a single standard hard drive

Storage path:

Archive path: \ObserveIT_Archive_1

● On fast SSD-based hard drive (Hot Storage) for live sessions, and then signed sessions on standard hard drive (Warm Storage).

Hot Storage path:

Warm Storage path:

Archive path: \ObserveIT_Archive_1

□ Trigger System Event when the Hot Storage reaches a capacity of 80% out of the allocated GB

Please note: It's highly recommended to check this option and configure email notification for it (in System Events screen)

4. Select **On fast SSD-based hard drive (Hot Storage) for live sessions, and then signed sessions on standard hard drive (Warm Storage)**.

5. Specify the Hot Storage path, the Warm Storage path, and the Archive path.

6. Click **Test Access** for each path to verify ObserveIT can successfully access each path.

7. Click **Save Changes**.

Configuring Traffic Security

This topic describes how to encrypt data in transit.

By default, ObserveIT Agents communicate with the ObserveIT Application Server by using the HTTP protocol.

As a built-in security mechanism, the ObserveIT Agents and Application Server use a token exchange mechanism to prevent session hijacking and replay, and to encrypt the data communication. The security mechanisms for this communication include encryption (Rijndael), digital signing, and token exchange.

Encryption can be enabled to further secure the communications:

- Between the Agents and the Application Server (HTTPS)
- Between the Application Server and the Database Server (HTTPS)
- Between the Application Server and the file share holding the graphic images (IPsec)

> If you are deploying more than one Application Server, you must use a network load balancing product. This can be a software-based load balancing solution such as Microsoft Network Load Balancing (NLB), or hardware-based solutions such as F5, Citrix NetScaler, or others. In that case, the digital certificate used for this traffic must be identical for all Application Servers, which can be achieved by creating it on the first Application Server, exporting it (including the private key), and importing it to the other Application Servers.

REQUIREMENTS

HTTPS can be used on the ObserveIT website (either optional or mandatory) to protect the data transferred by the Agents to the ObserveIT Application Server.

If you plan to deploy more than one Application Server, you must use a network load balancing product. This can be a software-based load balancing solution such as Microsoft Network Load Balancing (NLB), or hardware-based solutions such as F5, Citrix NetScaler, or others. In that case, the digital certificate used for this traffic must be identical for all Application Servers, which can be achieved by creating it on the first Application Server, exporting it (including the private key), and importing it to the other Application Servers.

Required steps to enable traffic encryption between the ObserveIT Agents and the Application Server:

- Obtain a digital certificate.
- Encrypt the traffic from ObserveIT Agents to ObserveIT Application Server.
- Configure ObserveIT Agent for Windows to use SSL.
- Configure the ObserveIT Agent for Mac to use SSL.
- Configure the ObserveIT Agent for Unix/Linux to use SSL.

CONFIGURING OBSERVEIT APPLICATION SERVER FOR DATA TRANSIT ENCRYPTION

To configure ObserveIT Application server for data in transit encryption, you need to set the protocol to HTTPS, not HTTP. In addition, you need SSL certification.

1. Connect to the ObserveIT Web Console machine and if you need, request or create a digital certificate.
2. From the **Start** menu and type **Run**. **Enter**.
3. Type IIS, select the I**nternet Information Services (IIS) Manager**. **Enter**.
4. From the menus, expand **Sites**.
5. Right-click the ObserveITApplication website, and select **Edit Bindings.**
6. Click **Add**.
7. Change the value in the **Type** field from **http** to **https**.
8. Make sure the value for **Port** field is set at **443**.
9. Under SSL certificate select the certificate you have created or acquired.
10. Click **OK** to create the bindings. Click **Close** to close the window.

When enabling HTTPS encryption on an existing ObserveIT installation, with existing ObserveIT Agents, remember that removing an existing, non-encrypted binding, will cause existing ObserveIT Agents to cease communications with the ObserveIT Application Server. It is recommended to leave as-is the previous, non-encrypted binding at this point.

CONFIGURING WINDOWS AGENTS TO USE SSL

After configuring the ObserveIT Application Server to require usage of HTTPS, configure the ObserveIT Agent to use HTTPS when communicating with the ObserveIT Application Server.

New ObserveIT Agent Deployment

When configuring HTTPS during deployment of new Agents, remember the following:

- During the ObserveIT Agent deployment, in the **Enter Application Server Location** screen, set the value for **Type** field to **https**. Specify the server's FQDN in the **Server Name** field.

  If a non-default HTTPS port is used, specify it in the Port field.

- If using self-signed certificates, ensure the certificates are trusted by both parties. You can skip this step if certificates from Enterprise Certificate Authority are used.

- If a firewall is enabled on the ObserveIT Application Server, ensure the correct incoming port is allowed in the firewall settings.

Existing ObserveIT Agent Deployment

In existing ObserveIT Agent deployments, when configuring HTTPS traffic between the ObserveIT Application Server and ObserveIT Agents, you must make changes in the ObserveIT Database, which will propagate to the existing ObserveIT Agents, and will configure them to use SSL when communicating with the ObserveIT Application Server.

To make changes to the ObserveIT Database for enabling HTTPS on the Agents:

1. Connect to the SQL server or to a computer with **SQL Management Studio** installed.

2. Open **SQL Management Studio**.

3. Type the SQL server's FQDN or IP address into the **Server name** field.

4. Select **Windows Authentication** if your account has sysadmin permissions on the SQL server. Otherwise, select **SQL Server Authentication** and log in with a sysadmin-level account.

5. Click **OK** to connect.

6. From the **File** menu, click **New** and **Query with Current Connection**.

7. To Check the current connection URL, copy and paste the following code into the Query window:

   ```
   Use ObserveIT
   ```

```
select * from  dbo.ServerConfiguration

WHERE PropertyId = 4
```

8. Click **Execute** to run the query.

9. Paste the following code into the query window, where **NEW_APP_SERVER_URL** is the new address, with the HTTPS connectivity specified, and **OLD_APP_SERVER_URL** is the address currently in use.

   ```
   Use ObserveIT

   UPDATE dbo.ServerConfiguration

   SET PropertyValue = '<NEW_APP_SERVER_URL>'

   WHERE PropertyId = 4

   AND PropertyValue = '<OLD_APP_SERVER_URL>'
   ```

   For example:

   ```
   Use ObserveIT

   UPDATE dbo.ServerConfiguration

   SET PropertyValue = 'https://oitsrv1.oit-
   demo.local:10443/ObserveITApplication'

   WHERE PropertyId = 4

   AND PropertyValue = 'http://oit-srv1.oit-
   demo.local:4884/ObserveITApplication'
   ```

10. Click **Execute** to run the query

CONFIGURING A MAC AGENT TO USE SSL

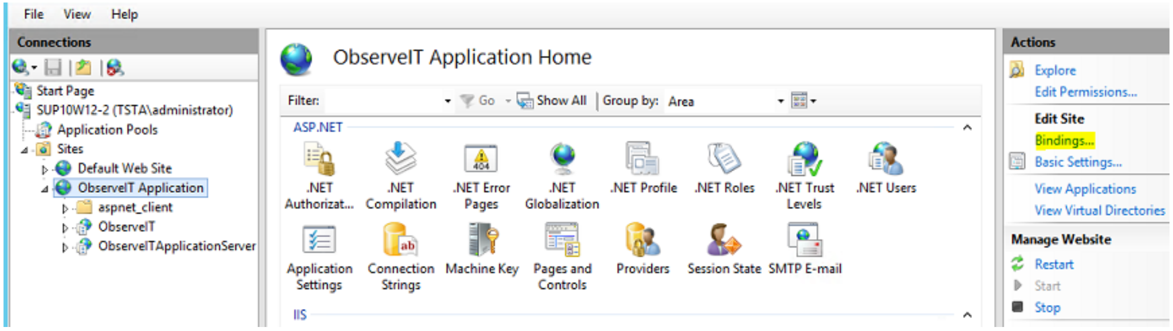
This procedure describes how to install a trusted internal CA certificate on a Mac.

OBTAINING AND IMPORTING A CERTIFICATE

If you do not already have a trusted internal CA certificate, perform the following procedure to obtain and import the certificate.

To obtain and import certificates

1. Go to Start > run and enter inetmgr.

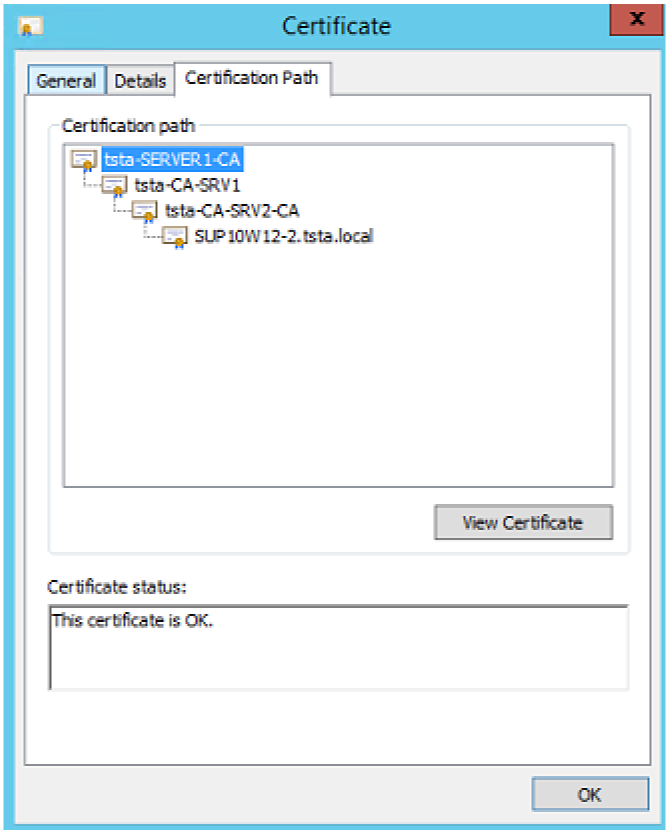


2. Go to ObserveIT Application, and select Bindings.

3. In the Site Bindings dialog box, select the https protocol and click Edit.

4. In the Edit Site Bindings dialog box, click View.

5. In the Certificate dialog box, select the Certification Path tab, select the root CA certificate, and click View Certificate.



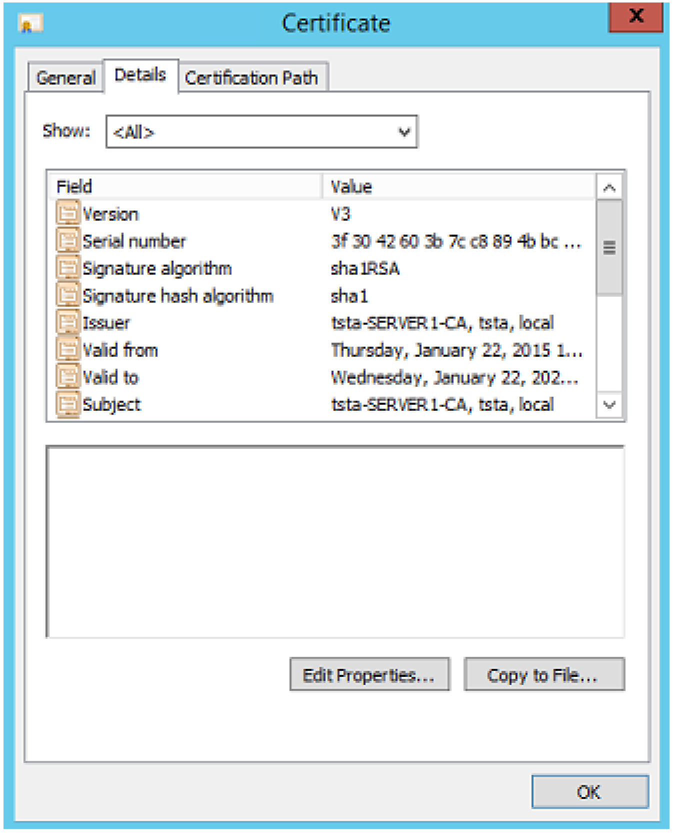
Certification path

- tsta-SERVER1-CA
  - tsta-CA-SRV1
    - tsta-CA-SRV2-CA
      - SUP10W12-2.tsta.local

Certificate status:

This certificate is OK.

6. Select the certificate's Details tab, and click Copy to File.

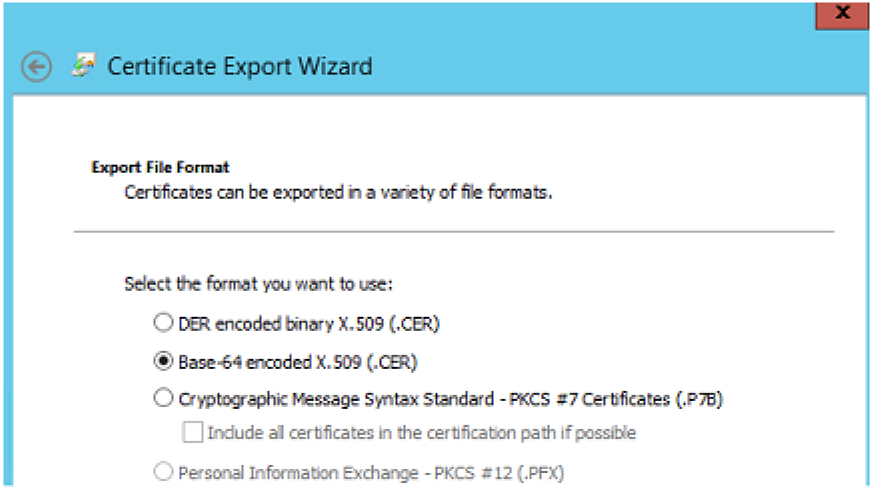


Show: <All>

Field	Value
Version	V3
Serial number	3f 30 42 60 3b 7c c8 89 4b bc ...
Signature algorithm	sha1RSA
Signature hash algorithm	sha1
Issuer	tsta-SERVER1-CA, tsta, local
Valid from	Thursday, January 22, 2015 1...
Valid to	Wednesday, January 22, 202...
Subject	tsta-SERVER1-CA, tsta, local

7. In the Certificate Export Wizard that opens, click Next.

8. Select the Base-64 encoded X.509 (.CER) format option, and click Next.



Export File Format
Certificates can be exported in a variety of file formats.

Select the format you want to use:

○ DER encoded binary X.509 (.CER)

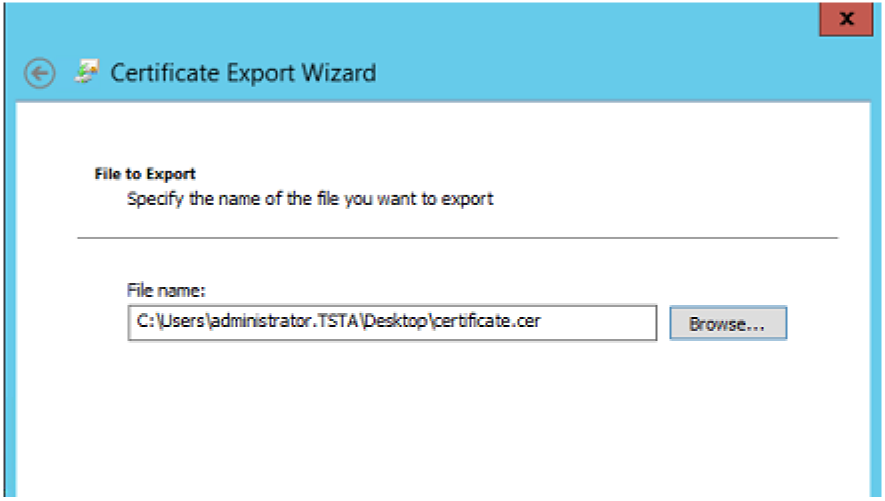
● Base-64 encoded X.509 (.CER)

○ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)

□ Include all certificates in the certification path if possible

○ Personal Information Exchange - PKCS #12 (.PFX)

9. Click Browse, and specify the name of the file to which you want to export the certificate.

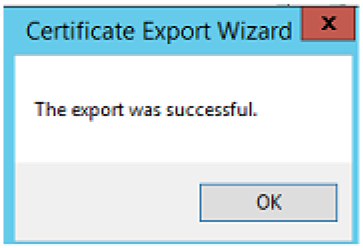


File to Export
Specify the name of the file you want to export

File name:
C:\Users\administrator.TSTA\Desktop\certificate.cer

10. Click Next, and then click Finish to close the Certificate Export Wizard.

11. In the message box stating that the export was successful, click OK.



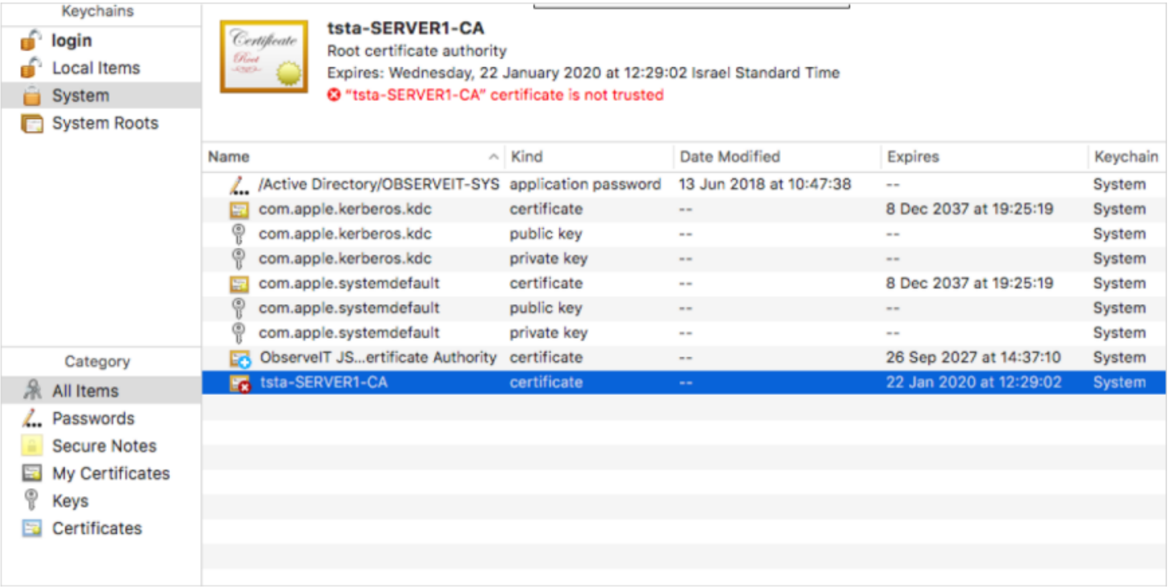
The export was successful.

COPY THE CERTIFICATE TO YOUR MAC

1. Copy the Certificate to your Mac target server.

2. Select **Keychain** Access .

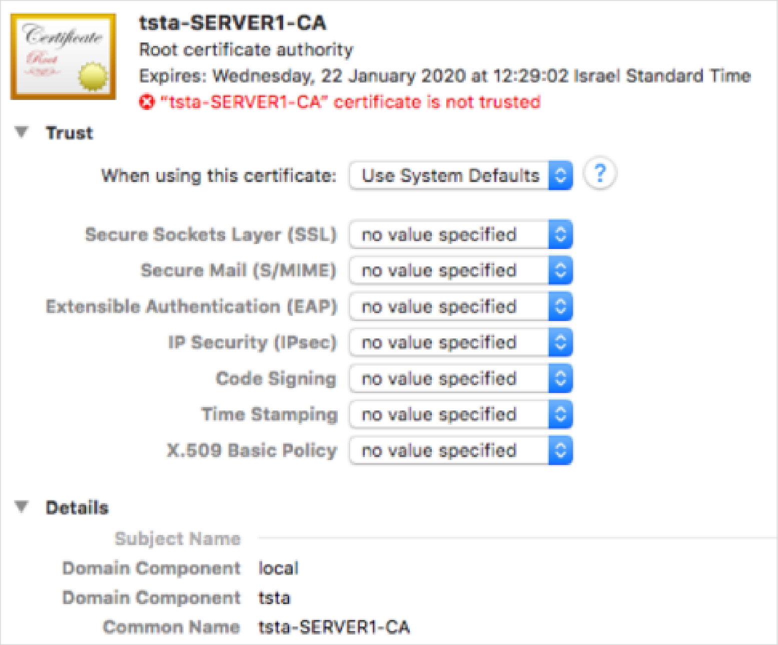
   The list of certificates displays. A red X indicates that the certificate is not trusted, for example, *tsta-SERVER1-CA* in the list below.



tsta-SERVER1-CA
Root certificate authority
Expires: Wednesday, 22 January 2020 at 12:29:02 Israel Standard Time
"tsta-SERVER1-CA" certificate is not trusted

Name	Kind	Date Modified	Expires	Keychain
/Active Directory/OBSERVEIT-SYS	application password	13 Jun 2018 at 10:47:38	--	System
com.apple.kerberos.kdc	certificate	--	8 Dec 2037 at 19:25:19	System
com.apple.kerberos.kdc	public key	--	--	System
com.apple.kerberos.kdc	private key	--	--	System
com.apple.systemdefault	certificate	--	8 Dec 2037 at 19:25:19	System
com.apple.systemdefault	public key	--	--	System
com.apple.systemdefault	private key	--	--	System
ObserveIT JS...ertificate Authority	certificate	--	26 Sep 2027 at 14:37:10	System
tsta-SERVER1-CA	certificate	--	22 Jan 2020 at 12:29:02	System

3. Select the certificate you want to make Trusted.


tsta-SERVER1-CA
Root certificate authority
Expires: Wednesday, 22 January 2020 at 12:29:02 Israel Standard Time
"tsta-SERVER1-CA" certificate is not trusted

▼ Trust

When using this certificate:	Use System Defaults
Secure Sockets Layer (SSL)	no value specified
Secure Mail (S/MIME)	no value specified
Extensible Authentication (EAP)	no value specified
IP Security (IPsec)	no value specified
Code Signing	no value specified
Time Stamping	no value specified
X.509 Basic Policy	no value specified

▼ Details

Subject Name	
Domain Component	local
Domain Component	tsta
Common Name	tsta-SERVER1-CA

4. Set the Trust level according to your company's requirements. At a minimum, you must select **Always Trust** for the **When using this certificate** option.

CONFIGURING A UNIX LINUX AGENT TO USE SSL

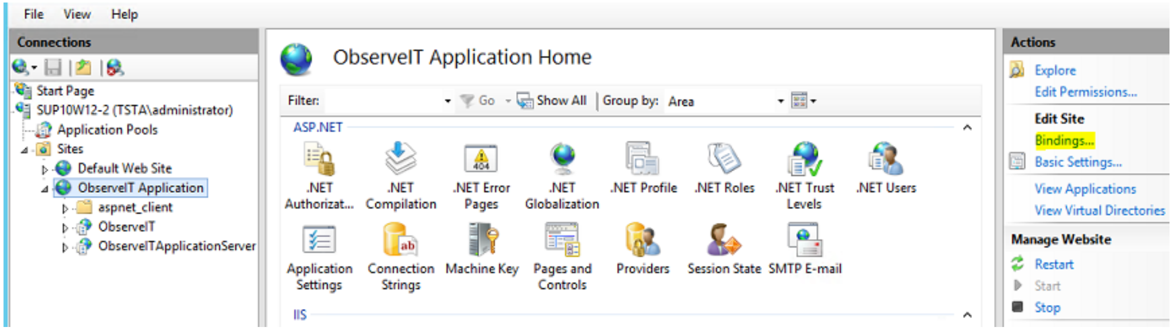
This procedure describes how to install a trusted internal CA certificate on a Unix/Linux server.

OBTAIN AND IMPORT A TRUSTED INTERNAL CA CERTIFICATE

If you do not already have a trusted internal CA certificate, perform the following procedure to obtain and import the certificate.

To obtain and import certificates

1. Go to Start > run and enter inetmgr.

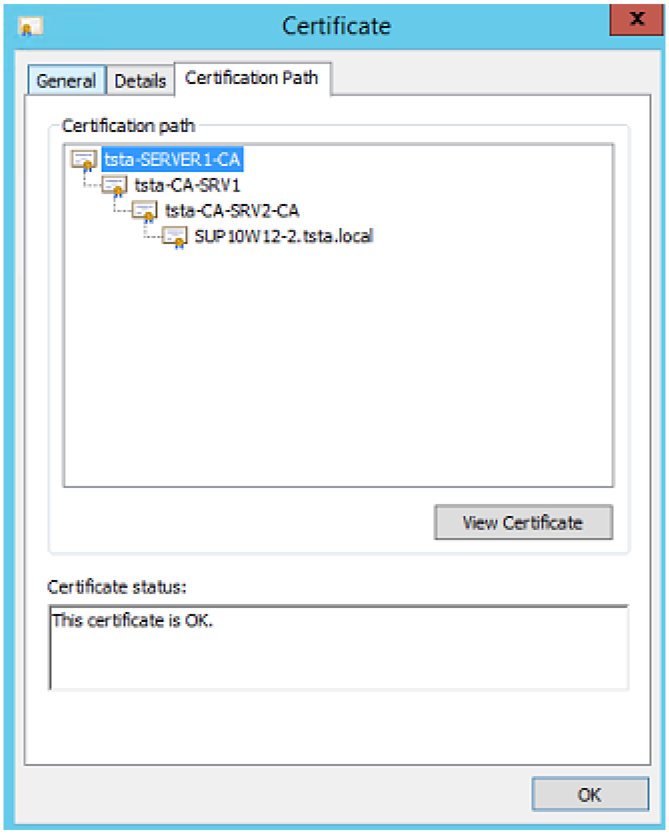


2. Go to ObserveIT Application, and select Bindings.

3. In the Site Bindings dialog box, select the https protocol and click Edit.

4. In the Edit Site Bindings dialog box, click View.

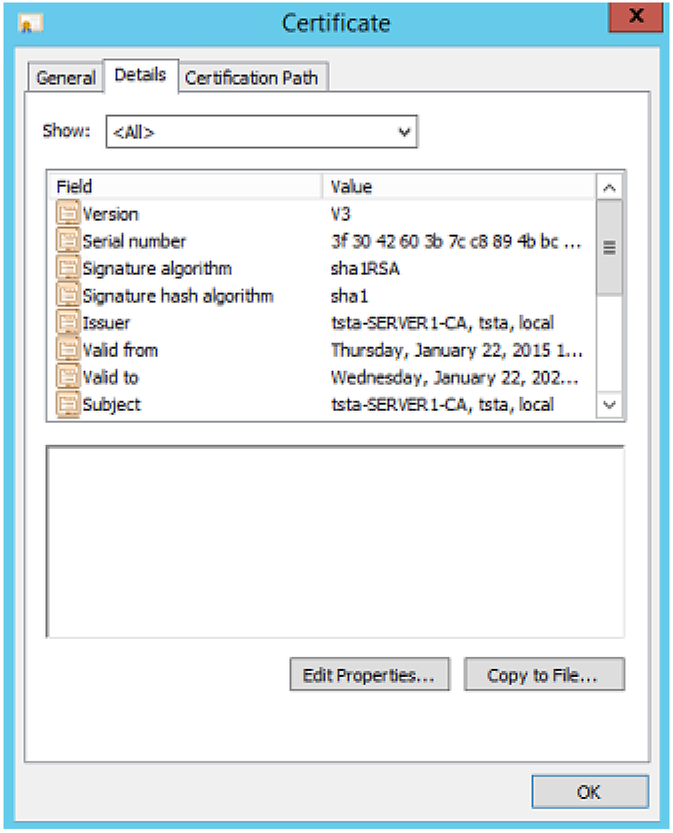
5. In the Certificate dialog box, select the Certification Path tab, select the root CA certificate, and click View Certificate.



Certificate status:

This certificate is OK.

6. Select the certificate's Details tab and click Copy to File.

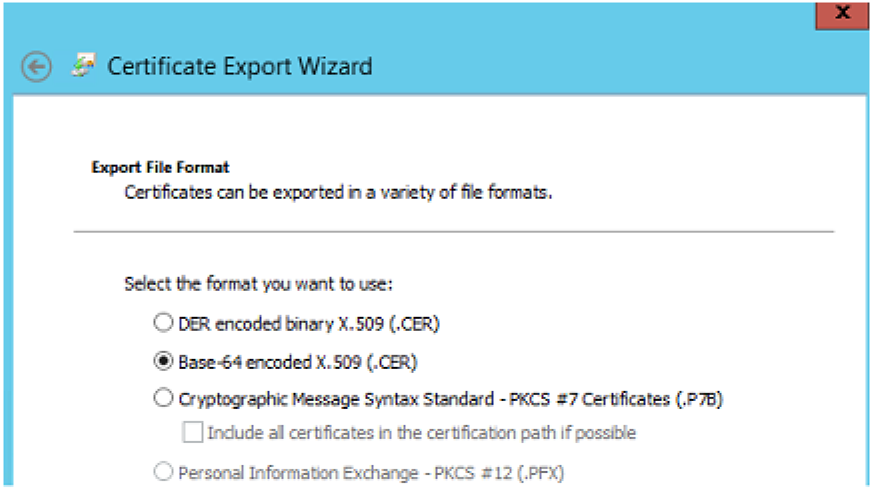


Show: <All>

Field	Value
Version	V3
Serial number	3f 30 42 60 3b 7c c8 89 4b bc ...
Signature algorithm	sha1RSA
Signature hash algorithm	sha1
Issuer	tsta-SERVER1-CA, tsta, local
Valid from	Thursday, January 22, 2015 1...
Valid to	Wednesday, January 22, 202...
Subject	tsta-SERVER1-CA, tsta, local

7. In the Certificate Export Wizard that opens, click Next.

8. Select the Base-64 encoded X.509 (.CER) format option, and click Next.



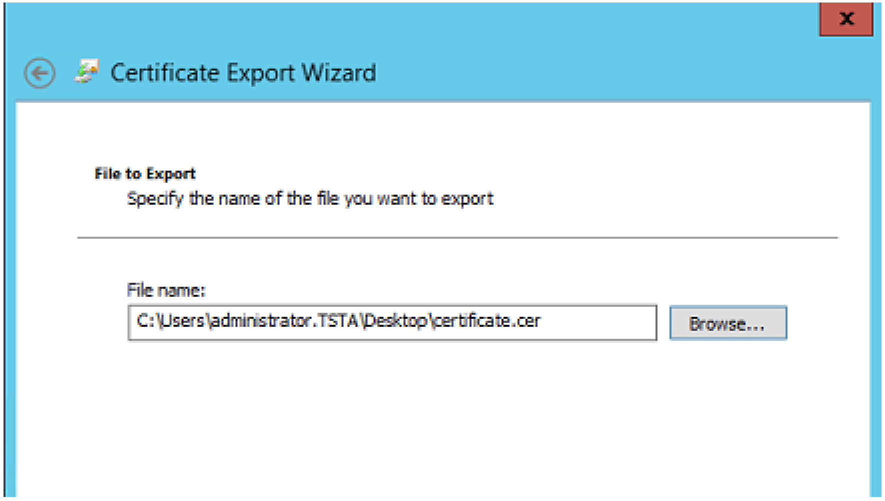
Certificate Export Wizard

Export File Format
Certificates can be exported in a variety of file formats.

Select the format you want to use:

○ DER encoded binary X.509 (.CER)
● Base-64 encoded X.509 (.CER)
○ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
□ Include all certificates in the certification path if possible
○ Personal Information Exchange - PKCS #12 (.PFX)

9. Click Browse and specify the name of the file to which you want to export the certificate.



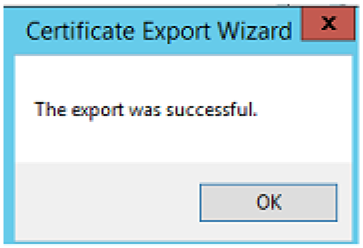
Certificate Export Wizard

File to Export
Specify the name of the file you want to export

File name:
C:\Users\administrator.TSTA\Desktop\certificate.cer

10. Click Next and then click Finish to close the Certificate Export Wizard.

11. In the message box stating that the export was successful, click OK.



The export was successful.

COPY THE CERTIFICATES TO A LINUX SERVER

Prerequisite: See Locating the Certificates for information about verifying and locating a certificate and how to locate the /certs directory.

1. You must transfer the exported certificates to the /certs directory of the appliance, using SCP/FTP or any other protocol.
2. If you are transferring the files using WinSCP, the file permissions might have changed. To verify the file permissions, run the command: ls -la
   The output should look like: -rw-r--r--.

   If the output looks different, change the file permissions so that "user", "group", and "other" will have read permissions. Run the following command to make the changes: chmod w+r or chmod o+r.

To enable OpenSSL to identify the certificates, link them as follows

1. Extract the certificate's hash, and use it as a symbolic link to the certificate:
   ln -s certificate.pem 'openssl x509 -in certificate.pem -noout -hash'.0

   Or

   ln -s certificate.cer `openssl x509 -in certificate.cer -noout -hash`.0
2. Verify the certificate installation by running the command:
   openssl verify certificate.pem

   openssl verify 3ee7e181.0

Configuring Simple Recovery Mode

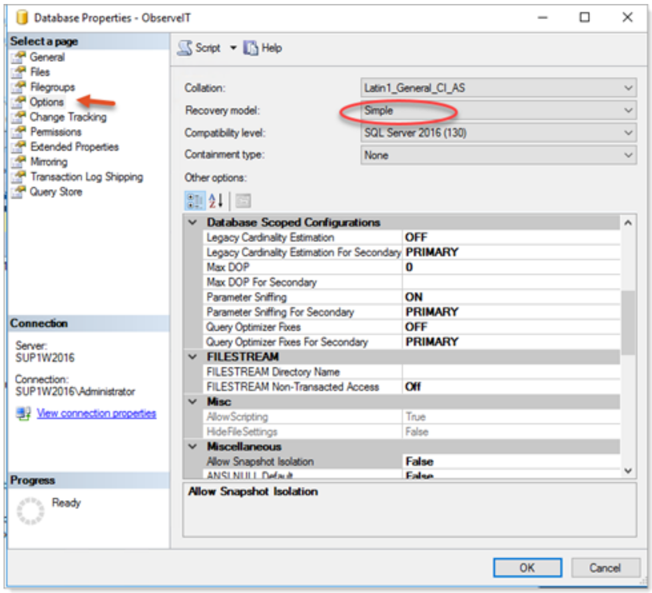
Simple recovery mode is the recommended ObserveIT database mode for a stand-alone, non-clustered SQL server. Simple recovery mode may be configured manuallyor may be configured automatically via a query

CONFIGURING SIMPLE RECOVERY MODEL FOR THE OBSERVEIT DATABASES ON THE SQL SERVER

A recovery model is a database property that controls how transactions are logged, whether the transaction log requires (and allows) backing up, and what kinds of restore operations are available. It automatically reclaims log space to keep space requirements small, essentially eliminating the need to manage the transaction log space.

> If you need to use a point in time recovery option – use Full recovery model instead, which is the default configuration option. No changes need to be made. For more information, see Full Database Backups (SQL Server) MSDN article: https://msdn.microsoft.com/en-AU/library/ms186289.aspx.

1. Connect to the SQL server or to a computer with **SQL Server Management Studio** installed.
2. Open **SQL Server Management Studio**.
3. Type in the SQL server's FQDN or IP address into the **Server name** field.
4. Choose **Windows Authentication** if your account has sysadmin permissions on the SQL server. Otherwise, choose **SQL Server Authentication** and log in with a sysadmin-level account.
5. Click **Connect**.
6. From the menus on the left, expand **Database**s.
7. Right-click the ObserveIT database and select **Properties**.
8. From **Select a page**, select **Options**.
9. From **Recovery model** options. select **Simple**.



Server: SUP1W2016

Connection: SUP1W2016\Administrator

Collation: Latin1_General_CI_AS

Recovery model: Simple

Compatibility level: SQL Server 2016 (130)

Containment type: None

Other options:

Database Scoped Configurations	
Legacy Cardinality Estimation	OFF
Legacy Cardinality Estimation For Secondary	PRIMARY
Max DOP	0
Max DOP For Secondary	
Parameter Sniffing	ON
Parameter Sniffing For Secondary	PRIMARY
Query Optimizer Fixes	OFF
Query Optimizer Fixes For Secondary	PRIMARY
FILESTREAM	
FILESTREAM Directory Name	
FILESTREAM Non-Transacted Access	Off
Misc	
AllowScripting	True
HideFileSettings	False
Miscellaneous	
Allow Snapshot Isolation	False
ANSI NULL Default	False

Allow Snapshot Isolation

10. Click **OK**.

Repeat these steps for each ObserveIT database.

CONFIGURING SIMPLE RECOVERY MODEL FOR THE OBSERVEIT DATABASES VIA SQL QUERY

1. Connect to the SQL server or to a computer with **SQL Server Management Studio** installed.
2. Open **SQL Server Management Studio**.
3. Type in the SQL server's FQDN or IP address into the **Server name** field.
4. Choose **Windows Authentication** if your account has sysadmin permissions on the SQL server. Otherwise, choose **SQL Server Authentication** and log in with a sysadmin-level account.
5. Click **Connect**.
6. Select **File** > **New** > **Query with Current Connection**.
7. Paste the following code into the New query window:

```
USE master ;

ALTER DATABASE ObserveIT SET RECOVERY SIMPLE ;
ALTER DATABASE ObserveIT_Analytics SET RECOVERY SIMPLE ;

ALTER DATABASE ObserveIT_Archive_1 SET RECOVERY SIMPLE ;

ALTER DATABASE ObserveIT_Archive_Template SET RECOVERY SIMPLE ;

ALTER DATABASE ObserveIT_Data SET RECOVERY SIMPLE ;
```

8. Click **Execute** to run the query.

Formatting NTFS

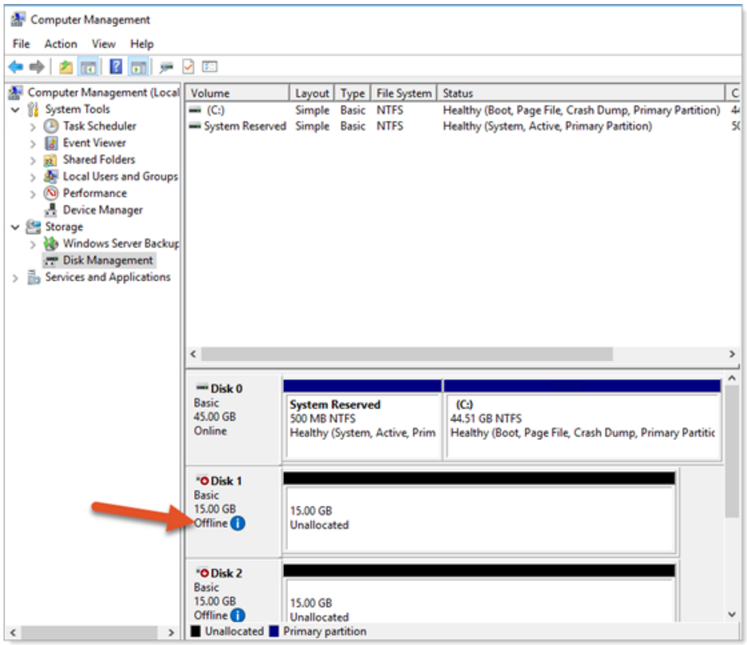
When using an NTFS volume for ObserveIT image store, the drive containing the images may become fragmented and reach a limit where no further file operation will be available. To avoid this condition, format the drive with support for large file size records.

1. Connect to the computer acting as the ObserveIT file share.

2. Open the **Start** menu and type in **COMPMGMT.MSC**. Press the **Enter**.

3. In the **Computer Management** window, expand **Storage** , and click **Disk Management**.

4. Find the new disk in the list. Usually, it is the only one with the status **Offline**.



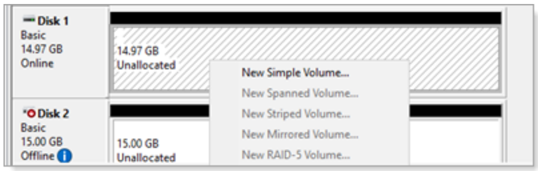
Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	4
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	5

5. Right-click the disk and select **Online**.

6. Right-click the disk again and select **Initialize Disk**.

7. Click the **GPT (GUID Partition Table)** radio button and click **OK**.

8. Right-click the partition and select.



9. Click **Next**.Make sure maximum the values specified in the Maximum disk space in MB and Simple volume size in MB are equal. Click **Next**.

10. Assign an appropriate drive letter. Click **Next**.

11. Click the **Format this volume with the following settings** radio button and select **NTFS**.

12. Set the Allocation unit size:

    - 4096 for image storage.
    - 64KB for SQL database.

13. Assign an appropriate volume label at the Volume label field.

14. Make sure **Perform a quick format** checkbox is checked.

15. Click **Next** and review the settings. Click Finish.

16. Click the **Start** menu and type in **RUN**.

17. Type in CMD. Right-click the Command Prompt shortcut and click Run as administrator.

18. If prompted ***Do you want to allow this app to make changes to your device?*** click **Yes**.

19. Type in the following command:

    ```
    format <driveletter>: /FS:NTFS /Q /X /L /A:4096
    ```

    where <driveletter> is the letter of the volume you specified

20. If asked to specify current volume name, enter it and press **Enter**.

21. At the **Proceed with format** prompt type in **Y** and press **Enter**.
22. At the **Volume** label prompt enter a volume label, if required, and press **Enter**.
23. At this point the volume is formatted correctly.
24. Type **EXIT** and press **Enter** to exit the command prompt.

Using PowerShell

Windows PowerShell is a command-line shell for system administrators. You can use it for many of the installation procedures. It allows you to automate processes that might take more time manually.

To start PowerShell, from the **Start** menu, type **powershell** and **Enter**.

RUNNING ELEVATED WINDOWS POWERSHELL PROMPT AS A DIFFERENT USER

In situations when logging in interactively as the ObserveIT Service Account is impossible, use the following procedure to start an elevated Windows PowerShell prompt as the ObserveIT Service Account.

This will allow you to run ObserveIT installers as the ObserveIT Service Account.

1. In the PowerShell window, type in the following command, replacing Domain\Account with the NETBIOS name of your Active Directory domain and the account name for the ObserveIT Service Account:

   ```
   Start-Process powershell.exe -Credential "DOMAIN\account" -
   NoNewWindow -ArgumentList "Start-Process powershell.exe -Verb
   runAs"
   ```

   Enter.
2. In the Windows Security window enter the credentials of the ObserveIT Service Account.
3. Click **OK**.

   If prompted Do you want to allow this app to make changes to your device? click Yes.

   A new elevated PowerShell window will start running as the ObserveIT Service Account.