



Hardening Guide

Logcollect 9.4 Server

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Abstract

This guide describes the procedure to create and maintain a secure environment for the server that runs the Logcollect 9.4 Manager.

Note:

The screen/ figure references are only for illustration purpose and may not match the installed product UI.

Scope

The configuration details in this guide are consistent with Logcollect 9.4.

Audience

This guide is for the Logcollect users responsible for monitoring and managing network security.

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1 Overview

Apply the Microsoft security policies (SSLF- Specialized Security Limited Functionality) to harden the Windows server. Considered the following policies for the hardening process.

1.1 Applying Group Policies on Windows Server 2019

Harden Windows Server 2019 according to the standard policy. Click the following link to download the GPO.

[Download WS2019-GPO.zip](#)

Apply the following policies:

- WS2019-Domain Security
- WS2019-Member Server
- WS2019-Defender Antivirus
- WS2019-Member Server Credential Guard
- WS2019-Internet Explorer 11 - User
- WS2019-Internet Explorer 11 – Computer

1.2 Securing IIS Web Server

In the IIS Manager, create a **Certificate request**. After receiving, install the certificate.

For IIS 7 Web Server,

- Do not place the Logcollect Manager in the DMZ network.
- Give administrative access only to Authorized users or administrators.
- Disable Directory Browsing in IIS.
- Do not install Internet printing Extension on the Logcollect Manager.

1.3 Securing SQL Server

- While installing the SQL server, install only 'Database Engine Services'. Other services are not required.
- Disable (or leave disabled) the following SQL services:
 - **SQL Server VSS Writer** service
 - **SQL Server Browser** service
 - **SQL Active Directory Helper** service
- Assign the **Sysadmin** role only to the authorized administrators and users.
- Install the recent service packs and critical fixes for the SQL Server and Windows.
- Remove the BUILTIN\Administrators group from the SQL Server Logins.

Note

Assign **sysadmin** privileges to other users before removing the built-in administrators.

1.4 Adding Windows Firewall Exceptions

Add the ports/.exe in use to the firewall exception list. Any number of VCPs can be added based on the system capacity. For Logcollect, add the following port numbers/.exe to the firewall exception list:

Port Number	Used For
14505 (TCP/UDP)	Windows Receiver, Multiple VCPs can be configured
14502, 14508 (TCP)	Change Audit
14503 (TCP)	Logcollect Certificate server
14506 (TCP)	Logcollect Agent
14507 (TCP)	Collection Master
443 (TCP)	Logcollect securely access (HTTPS), Logcollect Endpoint Security
514 (UDP/TCP)	Syslog Receiver, Multiple VCP's can be configured
14504	Logcollect Active Watchlist
9200	Elasticsearch-service-x64, Elastic Cross Cluster
9300	Elastic Cross Cluster Note: Applicable for Logcollect 9.4 version.
6514	Logcollect Endpoint Security Note: This port is configurable. In case of a change in port number, the Logcollect team will notify. Note: Applicable for Logcollect 9.4 version.

Logcollect Web console by default uses few ports for communication. These ports must be added to the firewall exception on the Logcollect Manager.

Protocol	Local Port	Remote Port	Source (Session Initiator)	Target (Listener)	Usage/Purpose
TCP	14506	All	Logcollect Agent Service	Logcollect Agent Service running on Logcollect Console	Configuration synchronization request
TCP	14503	All	Logcollect Agent Service	License Server running on Logcollect Console	License details and verification request
TCP/UDP	14505	All	Logcollect Agent Service	Logcollect Receiver running on Logcollect Console	Default port used for receiving events
TCP	14502	All	Change Audit Service	Change Audit Service running on Logcollect Console	Receiving snapshot files
TCP	14509	All	Event Correlator	Correlator	Event Correlator component
TCP/UDP	514	All	syslog devices	Logcollect Syslog Receiver running on Logcollect Console	Virtual Collection Point Syslog Port used for receiving Syslog
TCP	14507	All	Collection Point	Collection Master	Data transfer between Collection Point and Collection Master [Default port]
TCP/UDP	162	All	SNMP devices	Trap Tracker Receiver running on Logcollect Console	Port used for receiving SNMP v1, v2c and v3 Traps/Informs
TCP	14504	All	Logcollect modules requesting Active watch list lookups	Logcollect Watch list server running on Logcollect Console	Serves the Active watch list lookup requests.
TCP	9200,9300	Any	Collection Master	Collection Point	Cross-Cluster Elastic Search Collection.
TCP	All	14503	Logcollect Agent Service	License Server running on Logcollect Console	License update request
TCP	All	14506	Logcollect Agent Service	Logcollect Agent Service running on Logcollect Console	Configuration synchronization request
TCP/UDP	All	14505	Logcollect Agent Service	Logcollect Manager	Sending the logs
TCP	All	14502	Change Audit Service on	Change Audit Service on Logcollect	Configuration management

Protocol	Local Port	Remote Port	Source (Session Initiator)	Target (Listener)	Usage/Purpose
			ChangeAudit Agent	Console	
TCP	All	14508	Change Audit Service on ChangeAudit Agent	Change Audit Service on Logcollect Console	On-demand policy comparison request
TCP	All	443	Logcollect Endpoint Security Agent	IP address: 35.237.75.235	Applicable for EES sensor deployment only

1.5 Allowing Outbound Access to Public URL's

Logcollect Manager/Sensor requires access to certain public URL/IP addresses to perform various functions like IOC validation/DNS lookup, etc. Below are the URLs that must be allowed in your gateway firewall/Proxy for Logcollect to access these URLs.

URL/Domain	Port/Protocol/Direction	Purpose
*.logcollect.com	443/TCP/Outbound	Download the Logcollect updates and DSI
certificates.logcollect.com	443/TCP/Outbound	Logcollect Licensing server
ipinfo.io	443/TCP/Outbound	Load the map in Machine Learning Dashboard
geolite.maxmind.com	80/TCP/Outbound	Download the Geolocation details in the Attackers Dashboard

1.6 Checking for Vulnerability Scanner

Scan the hardened Logcollect system for vulnerabilities. This is applicable only if the Vulnerable Scanner is used.

1.7 Restricting Email/File-Sharing Website Access

- Though Internet access is required for Logcollect to perform certain functions such as Threat Intel Feeds etc., certain accesses need to be restricted to ensure security.
- Restrict access to personal emails/file sharing websites (**Gmail, Yahoo, Hotmail, FileZilla, Dropbox, External SharePoint, etc.**) under the category blocking of URL or Web content filtering service. This secures the system against Data Ex-filtration attempts of the logs stored in the Logcollect instance.
- Apart from this, it is mandatory to block the below sites on the Logcollect Manager. Popular categories to be blocked are shown below:

Abortion	Illegal / Questionable	Pornography
Adult / Mature Content	Illegal Drugs	Proxy Avoidance
Alcohol	Intimate Apparel / Swimsuit	Sex Education
Alternative Sexuality / Lifestyles	Nudity	Spyware / Malware Sources
Alternative Spirituality / Occult	Open Image / Media Search	Spyware Effects
Extreme	Peer-to-Peer (P2P)	Suspicious
Gambling	Personals / Dating	Tobacco
Hacking	Phishing	Violence / Hate / Racism

2 Harden Windows Server – Detailed View

Configure the following aspects to harden the Logcollect Manager:

- Harden Windows Server
- Secure IIS Web Server
- Secure SQL Server
- Firewall Settings
- Logcollect Settings
- Check with Vulnerability Scanner

2.1 Applying Group Policies in a Member Server on Windows Server 2019

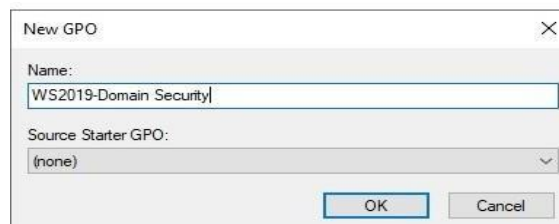
Step 1: Click the link below to download the GPO and extract the contents of the zip file to the system.

[Download WS2019-GPO.zip](#)

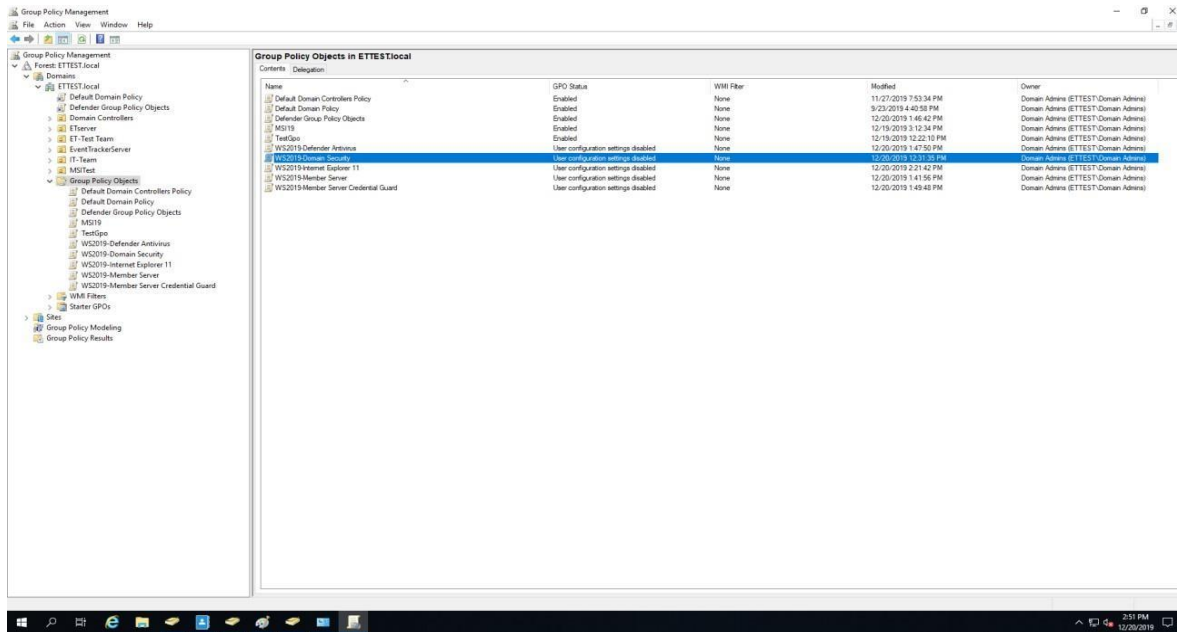
When creating a new 'Group Policy Objects', refer the GPO folder available in the extracted folder.

Step 2: Create new Group Policy Objects.

1. Click the **Start** button, select **Administrative Tools**, and then select **Group Policy Management**.
2. In the **Group Policy Management** pane, expand the **Domains** node, and then expand the 'local system' node.
3. Right-click **Group Policy Objects** and click **New**.
4. Enter the new GPO (Group Policy Object) name as **WS2019-Domain Security** and click **OK**.

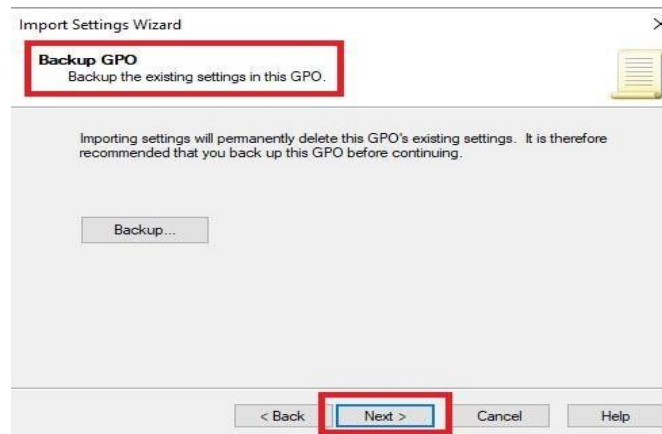


Similarly, create a new GPO for **WS2019-Member Server**, **WS2019-Defender Antivirus**, **WS2019-Member Server Credential Guard**, **WS2019-Internet Explorer 11 - User**, and **WS2019-Internet Explorer 11 - Computer** respectively.

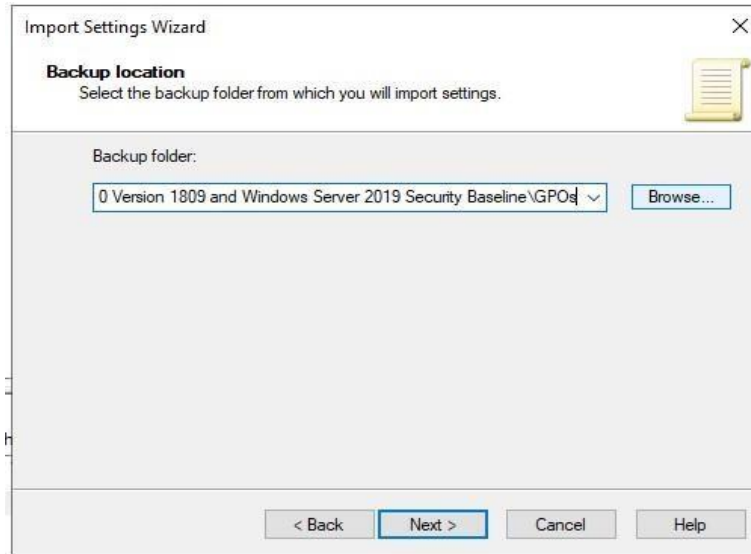


Step 3: Import Group Policy Settings.

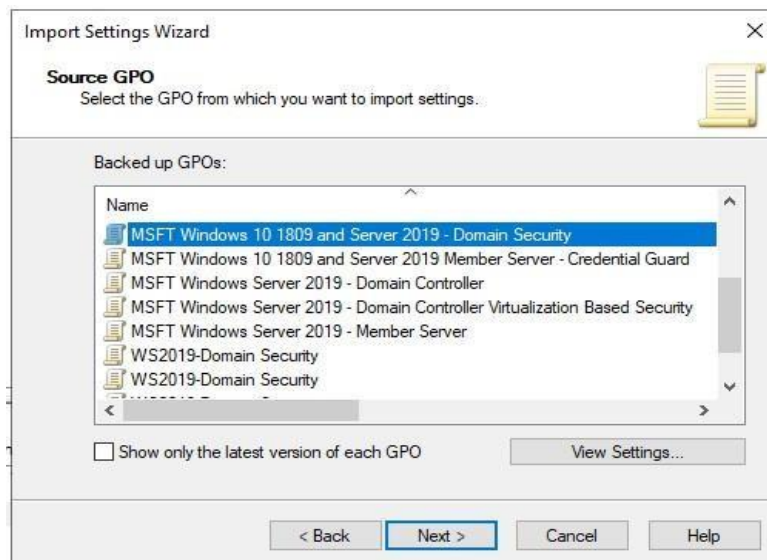
1. Right-click the newly created GPO (For example, **WS2019-Domain Security**), and click **Import settings**.
2. Click the **Next** button to start the importing process.
3. In **Backup GPO**, click the **Next >** button.



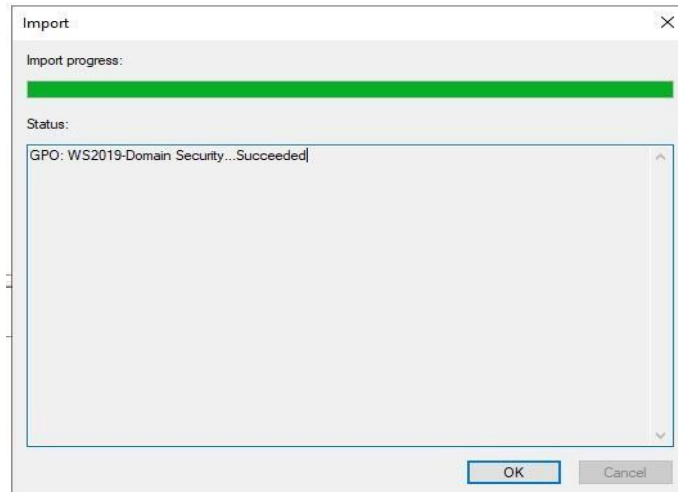
4. In the **Backup location**, browse the backup folder path where the settings are to be imported.
5. Click the **Next >** button.



6. Click the **Next** button.



7. In **Source GPO**, select the **WS2019-Domain Security** GPO and click the **Next >** button.
8. In **Scanning Backup**, after scanning settings are complete, click the **Next >** button.
9. In **Migrating References**, click the **Next >** button.
10. Click **Finish**.
11. After successfully importing, click the **OK** button.

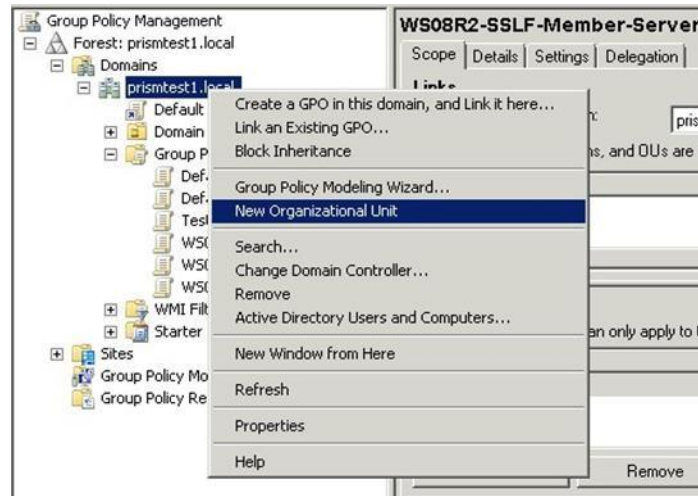


Group policy import is complete for **WS2019-Domain Security**.

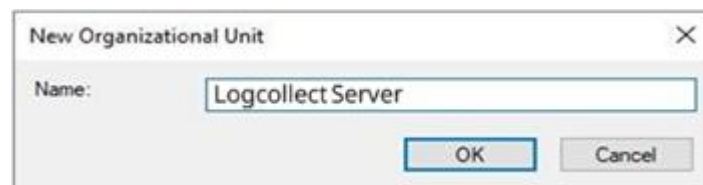
12. Repeat the steps from 1 to 11 to import Group Policy for **WS2019-Member Server**, **WS2019Defender Antivirus**, **WS2019-Member Server Credential Guard**, and **WS2019-Internet Explorer 11- User and Computer**.

Step 4: Create new 'Organizational Unit' (OU).

1. Right-click the server computer name and click **New Organizational Unit**.

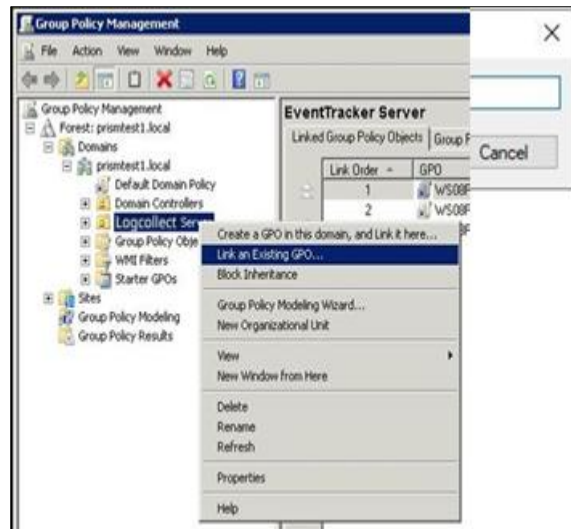


2. Enter the new organizational unit (OU) name and click **OK**. Example: Logcollect Manager

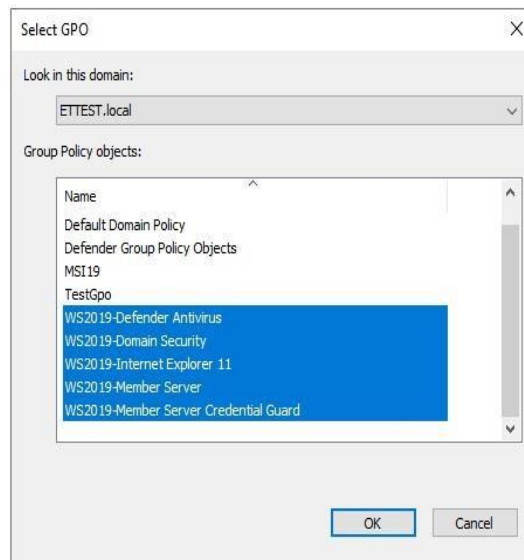


Step 5: Link the existing GPO to the newly created OU.

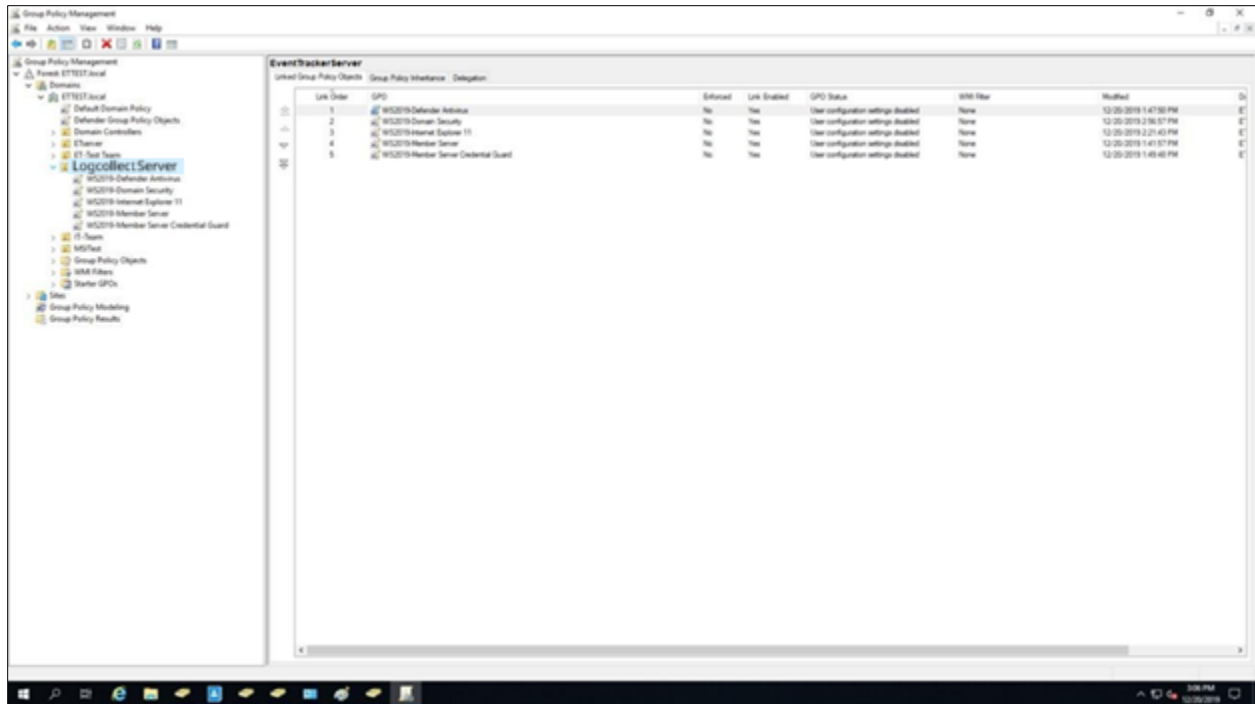
1. Right-click the newly created OU – Logcollect Manager and click **Link an existing GPO**.



2. In the **Select GPO** dialog box, using the Control key, select all three newly created GPOs, and click **OK**.

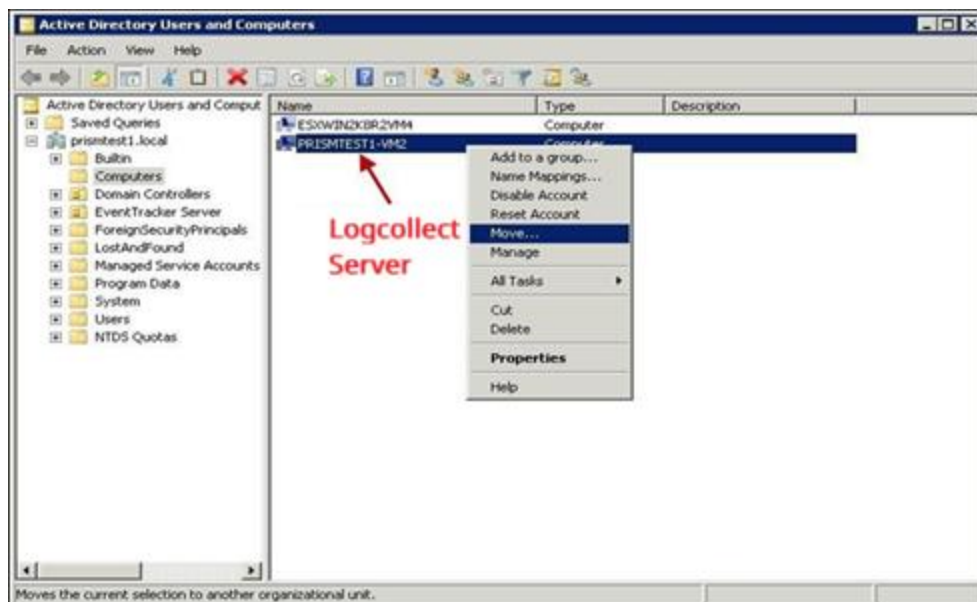


3. The Group Policy objects are now linked to the organizational unit.



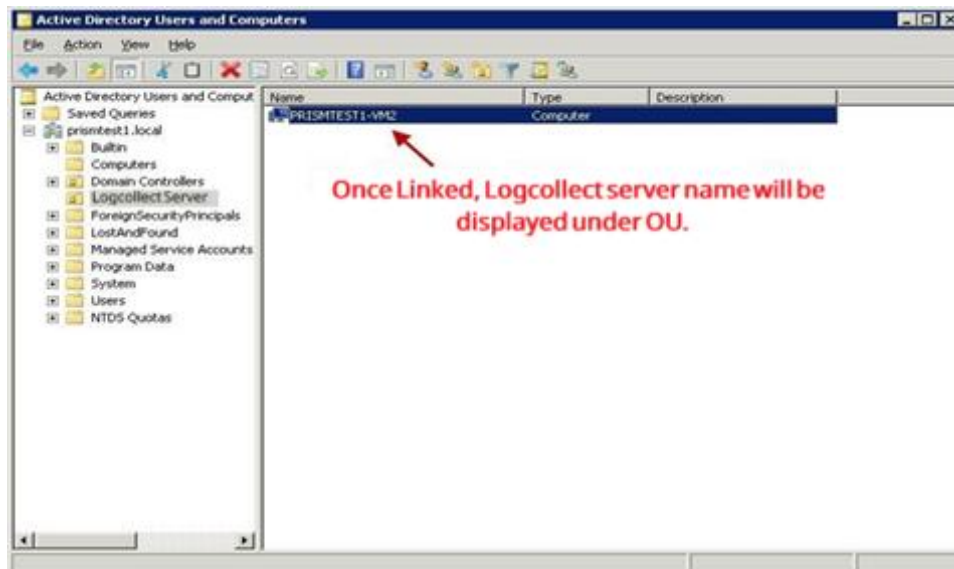
Step 6: Link Logcollect Manager to the newly created OU and reboot the Logcollect Manager system.

1. Click the **Start** button, select **All Programs**, and then select **Administrative Tools**.
2. Select **Active Directory Users and Computers**.
3. In the **Active Directory Users and Computers** pane, expand **Domain's** node, and then click the **Computers** node.
4. Right-click **Logcollect Manager system**, and then click **Move**.





5. Select the newly created OU (in this case, select **Logcollect Manager**), and click **OK**.
6. In the **Active Directory Users and Computers** pane, click 'Organizational unit' (in this case, click **Logcollect Manager**).



7. Reboot the Logcollect Manager system linked to the OU.

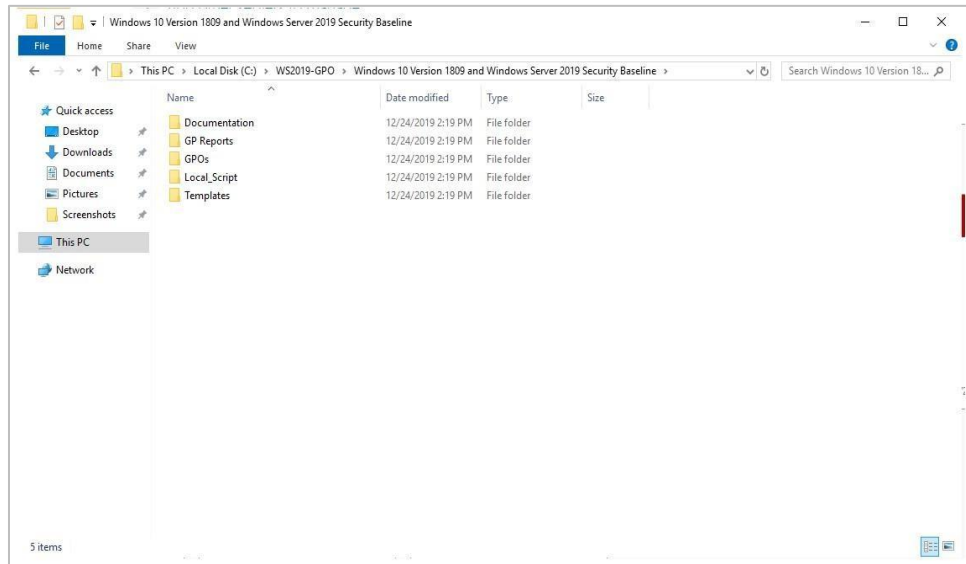
2.2 Applying Group Policies in a Workgroup on Windows Server 2019

Step 1: On the workgroup system, download the Windows server 2019 local security policy backup file.

1. Click the link below to download the GPO and extract the contents of the zip file onto the system.

[Download WS2019-GPO.zip](#)

2. Extract the downloaded file to C:\WS2019-GPO.



Step 2: On the workgroup system, install GPO by running the PowerShell script which is available in the downloaded folder.

1. Launch PowerShell and run as administrator. The PowerShell script is available in the downloaded Local_Script folder.
2. Run the command as shown in the figure. Change the work directory to the folder where the file got extracted and run the below command.

`.\BaselineLocalInstall.ps1 -WS2019NonDomainJoined`

```

PS C:\Windows Server 2019 Security Baseline\Windows 10 Version 1809 and Windows Server 2019 Security Baseline\Local_Sc
ript> .\BaselineLocalInstall.ps1 -WS2019NonDomainJoined
Logging to C:\Windows Server 2019 Security Baseline\Windows 10 Version 1809 and Windows Server 2019 Security Baseline\
Local_Script\BaselineInstall-20191219-1437-21.log ...
#-----
$G Windows Server 2019 - non-domain-joined
$G GPOs to be installed:
$G   MSFT Internet Explorer 11 - Computer
$G   MSFT Internet Explorer 11 - User
$G   MSFT Windows 10 1809 and Server 2019 - Defender Antivirus
$G   MSFT Windows 10 1809 and Server 2019 - Domain Security
$G   MSFT Windows 10 1809 and Server 2019 Member Server - Credential Guard
$G   MSFT Windows Server 2019 - Member Server
$G-----
$G Copy custom administrative templates...
$G Configuring Client Side Extensions...
Running LGPO.exe /v /e mitigation /e audit /e zone
Installing Exploit Protection settings...
Applying GPO "MSFT Internet Explorer 11 - Computer"...
Running LGPO.exe /v /g ..\GPOs\{A8FB52F2-1560-4100-9103-8C10F57DC9DE}
Applying GPO "MSFT Internet Explorer 11 - User"...
Running LGPO.exe /v /g ..\GPOs\{E913422C-4F06-4037-A739-2CD2B701978E}
Applying GPO "MSFT Windows 10 1809 and Server 2019 - Defender Antivirus"...
Running LGPO.exe /v /g ..\GPOs\{FEE76283-957E-4825-9380-2F737E13E972}
Applying GPO "MSFT Windows 10 1809 and Server 2019 - Domain Security"...
Running LGPO.exe /v /g ..\GPOs\{B9263530-926F-46F3-8382-832C31EC8185}
Applying GPO "MSFT Windows 10 1809 and Server 2019 Member Server - Credential Guard"...
Running LGPO.exe /v /g ..\GPOs\{7D41EEC9-3F30-4473-9447-E77D6EEF0E17}
Applying GPO "MSFT Windows Server 2019 - Member Server"...
Running LGPO.exe /v /g ..\GPOs\{C92CC433-A4EA-47B1-8B24-6FF732940E0E}
Non-domain-joined: back out the local-account restrictions...
Running LGPO.exe /v /s ConfigFiles\DeltaForNonDomainJoined.inf /t ConfigFiles\DeltaForNonDomainJoined.txt
#-----
To test properly, create a new non-administrative user account and reboot.

Detailed logs are in this file: C:\Windows Server 2019 Security Baseline\Windows 10 Version 1809 and Windows Server 2019 Security Baseline\Local_Scrip
t\BaselineInstall-20191219-1437-21.log

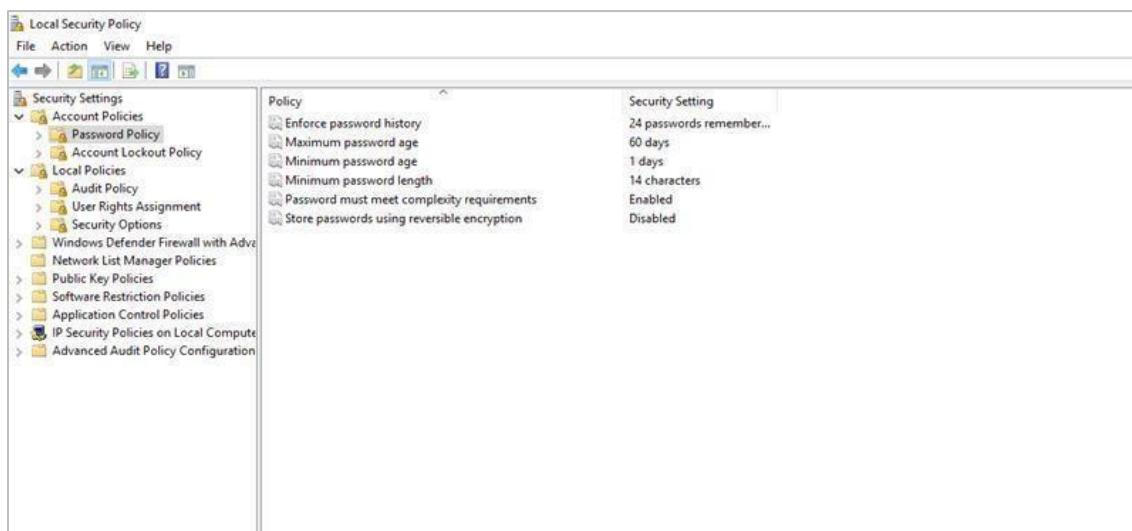
Please post feedback to the Security Guidance blog:

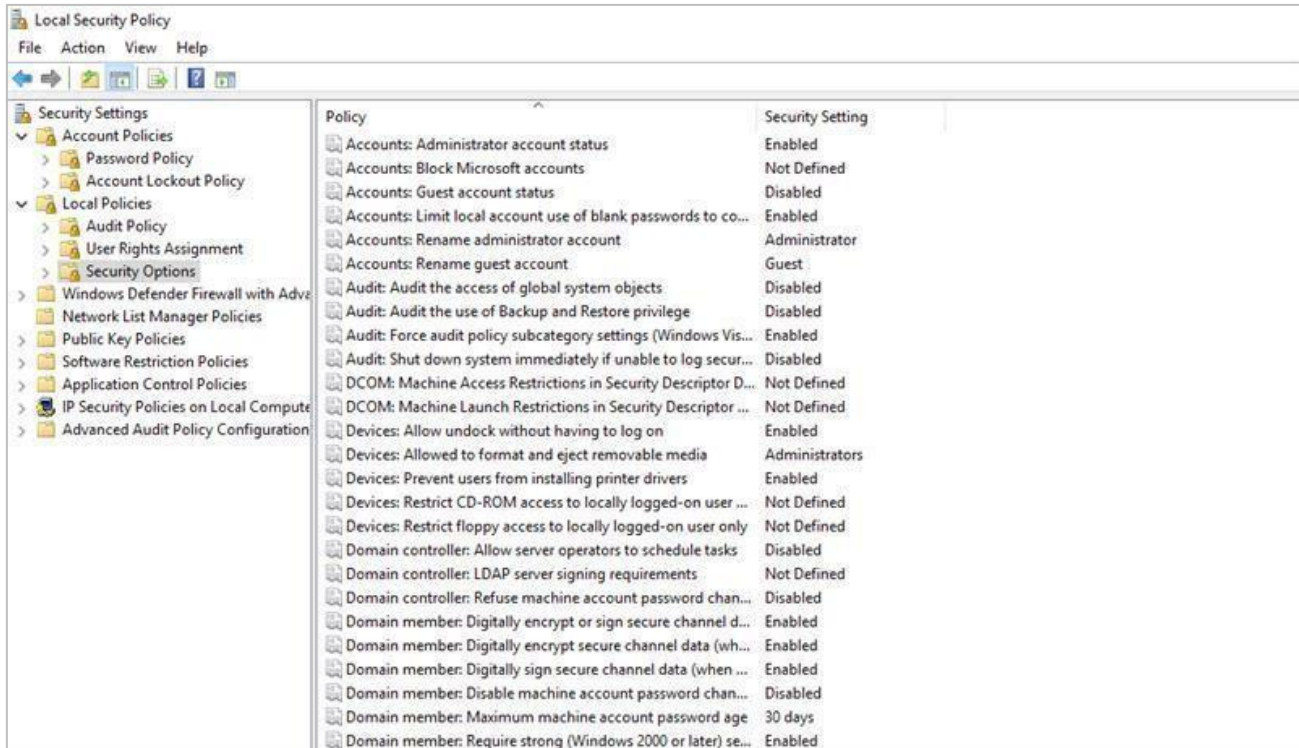
```

Step 3: Verify the applied Security Policy.

In the Workgroup System

1. Select the **Start** button, select **All Programs**, and then select-> **Administrative Tools**.
2. Click **Local Security Policy** and expand **Account Policies**.
3. Click **Password Policy** and check the **Security Settings** as shown in the below screen.





3 Securing IIS Web Server (10 and 11)

The Secure Sockets Layer (SSL) is a commonly used protocol for managing the security of a message transmission on the internet.

3.1 Mandatory Requirements

This section describes the mandatory software and component requirements to create an SSL digital certificate and secure website hosted on the IIS server with an SSL digital certificate.

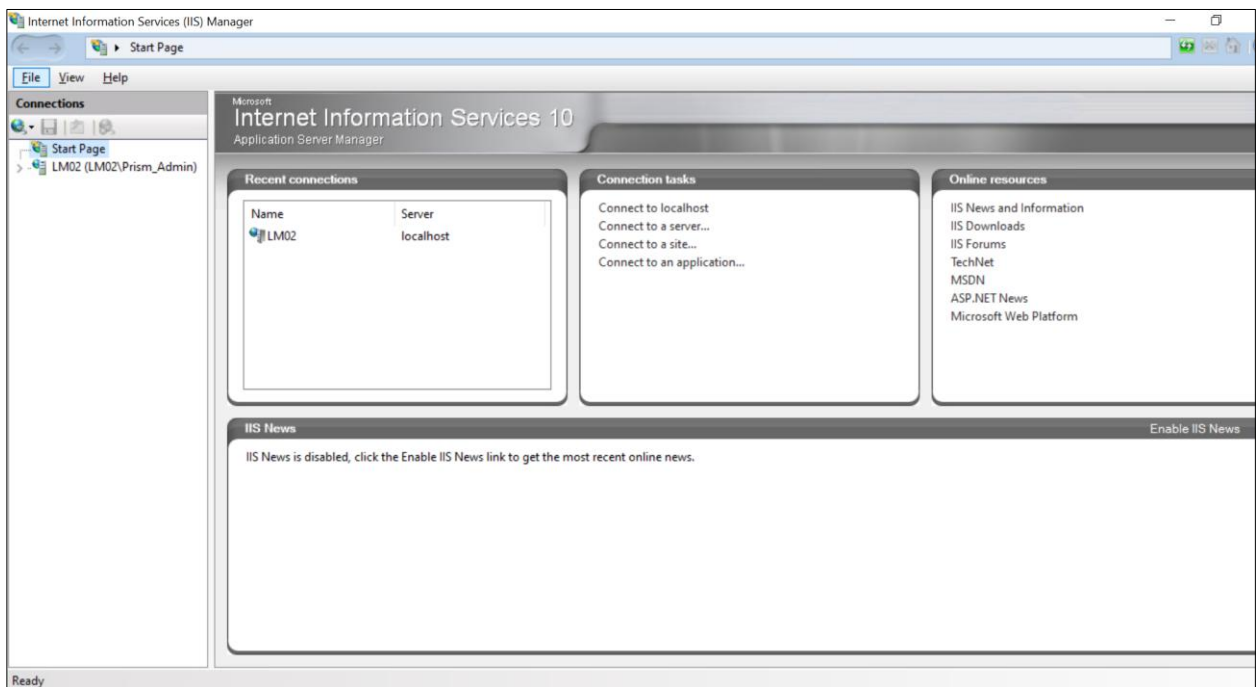
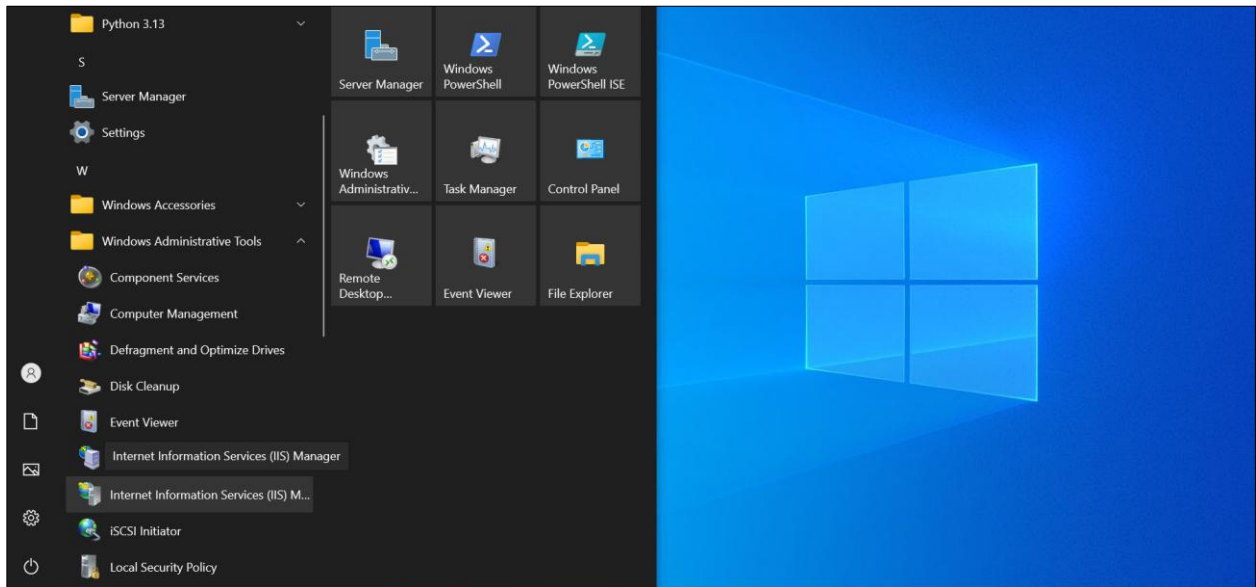
Operating System	Windows Server 2019
Software and Components	<ul style="list-style-type: none"> Internet Information Server (IIS) 10 and 11. Browser, which supports 128-bit encryption (IE 11 or above/ Firefox 3.5 or above).

3.2 IIS setup on Windows

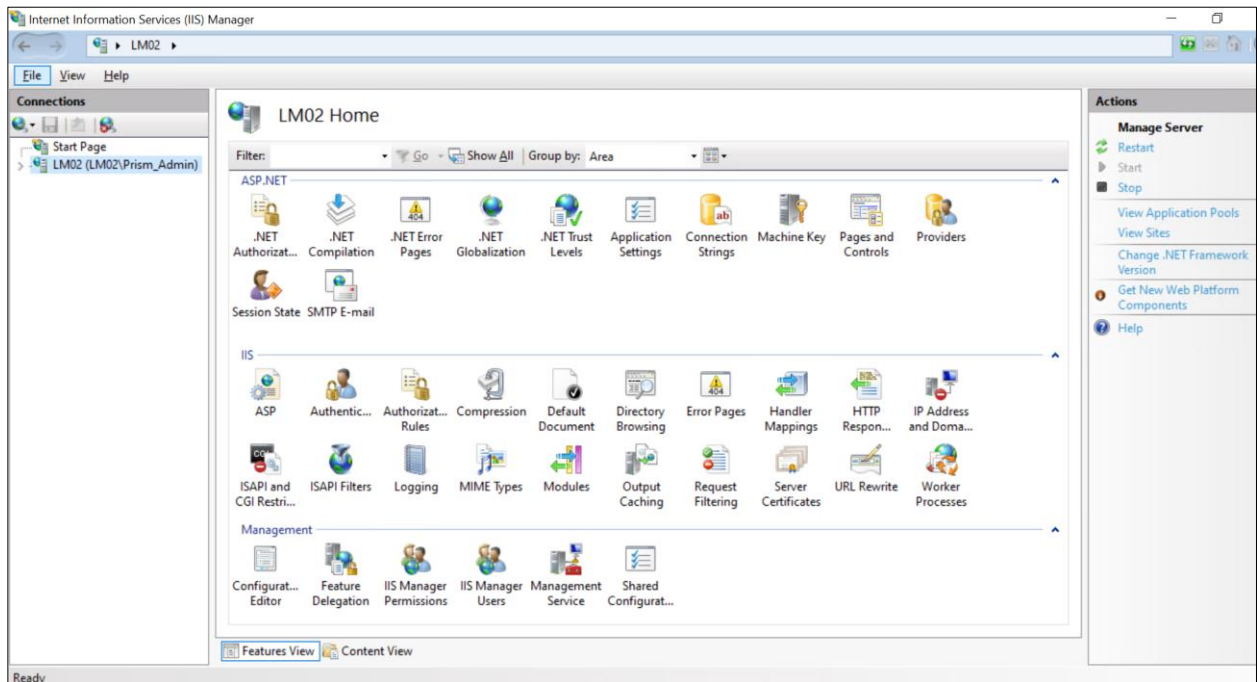
Step 1: Creating the 'Certificate Request'.

1. Click the **Start** button, select **All Programs**, and select **Administrative Tools**.

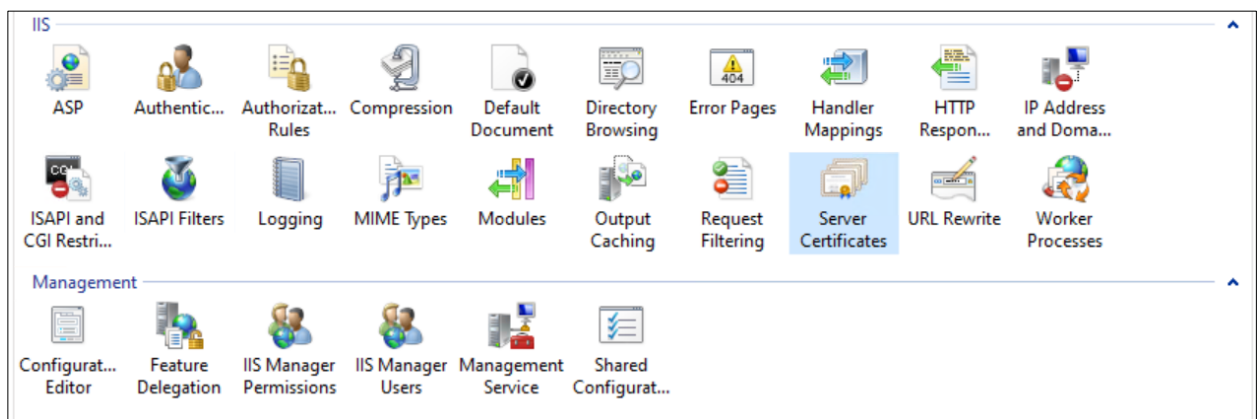
2. Select Internet Information Services (IIS) Manager.



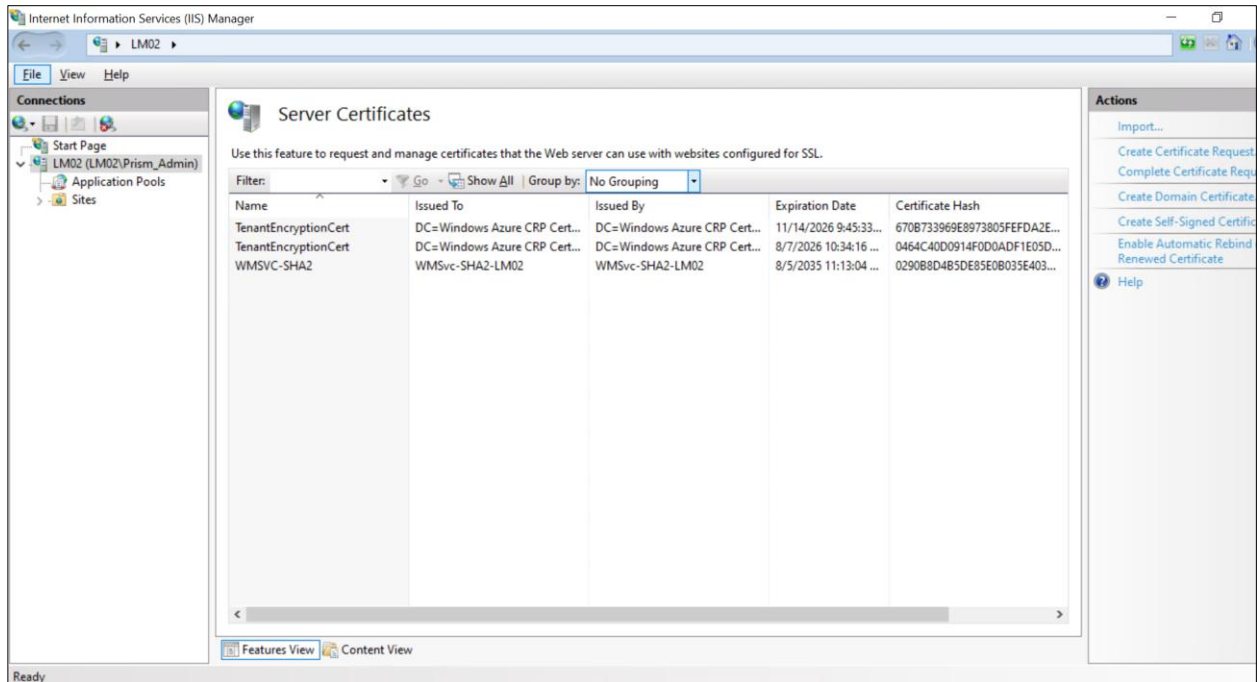
3. Click the server node.



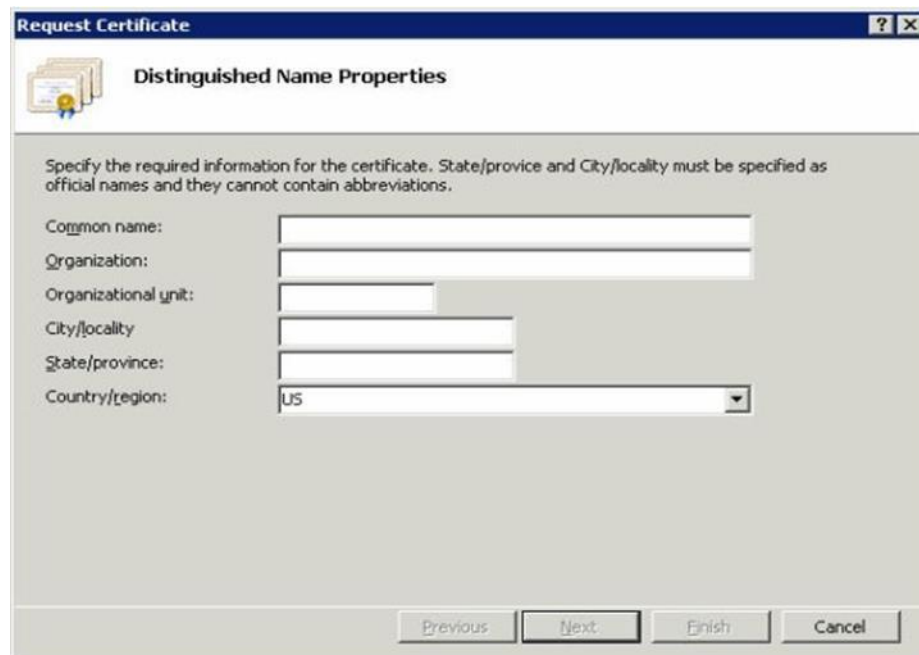
4. Double-click the **Server Certificates** icon in the IIS pane.



5. The Server Certificates panel will be displayed as shown below:



- In the **Actions** pane, click the **Create Certificate Request** link. The dialog box will be displayed as shown below:



Request Certificate

Distinguished Name Properties

Specify the required information for the certificate. State/province and City/locality must be specified as official names and they cannot contain abbreviations.

Common name:

Organization:

Organizational unit:

City/locality:

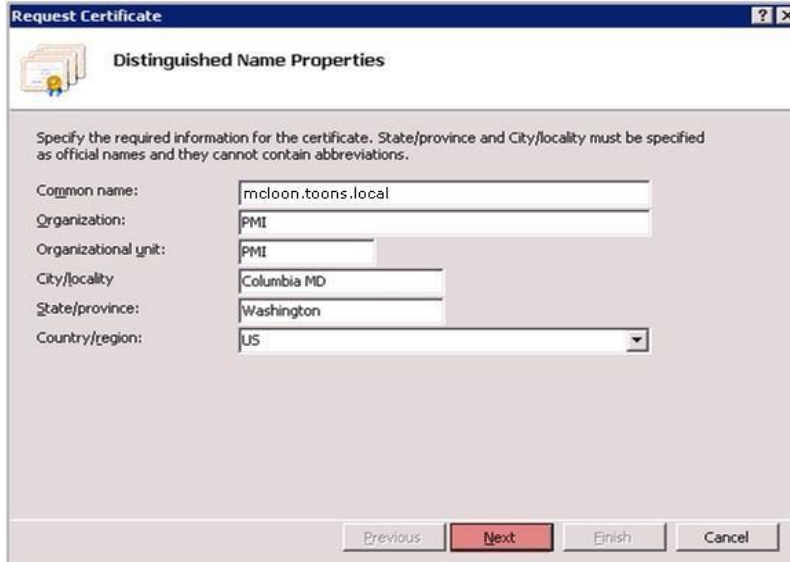
State/province:

Country/region:

Previous Next Finish Cancel

- Type the system name (FQDN- Fully qualified domain name) as a common name in the **Common name** text box.

Example: mcloon.toons.local



Request Certificate

Distinguished Name Properties

Specify the required information for the certificate. State/province and City/locality must be specified as official names and they cannot contain abbreviations.

Common name: mcloon.toons.local

Organization: PMI

Organizational unit: PMI

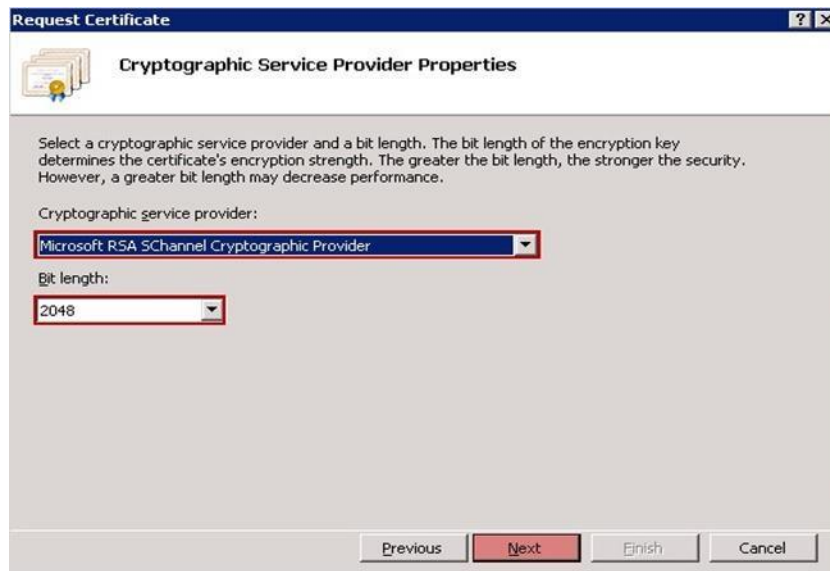
City/locality: Columbia MD

State/province: Washington

Country/region: US

Previous Next Finish Cancel

8. Enter the organization and geographical details and click **Next**. Do not change the default selection in the **Cryptographic Service Provider Properties** pane.
9. Set the bit length to 2048 from the **Bit length** dropdown and click the **Next** button.



Request Certificate

Cryptographic Service Provider Properties

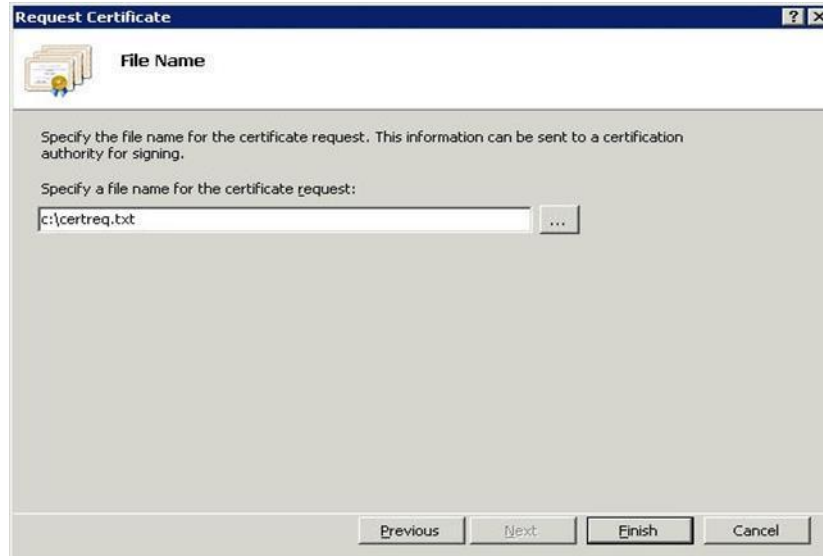
Select a cryptographic service provider and a bit length. The bit length of the encryption key determines the certificate's encryption strength. The greater the bit length, the stronger the security. However, a greater bit length may decrease performance.

Cryptographic service provider: Microsoft RSA SChannel Cryptographic Provider

Bit length: 2048

Previous Next Finish Cancel

10. Type the name and path of the file to save the CSR (Certificate Server Request).

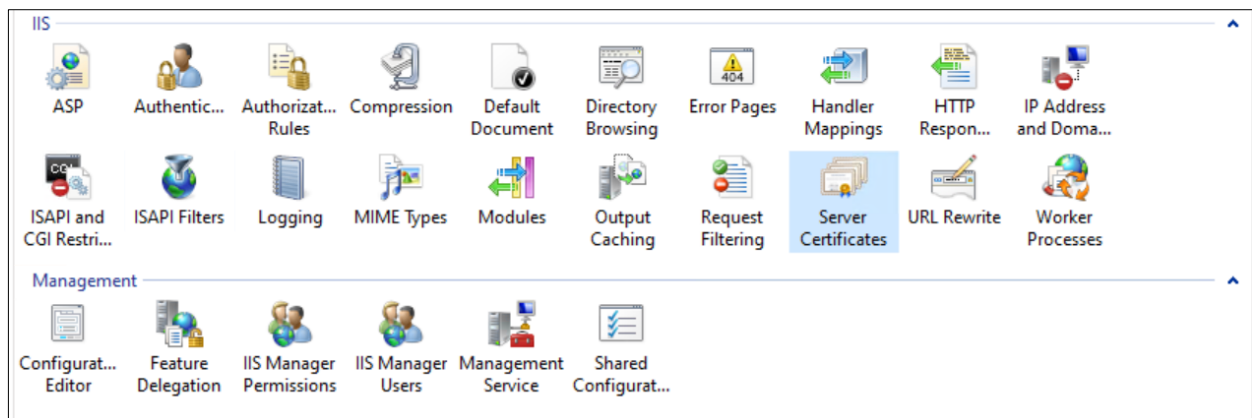


11. Click **Finish**.
12. Send this request file to the certificate vendor.

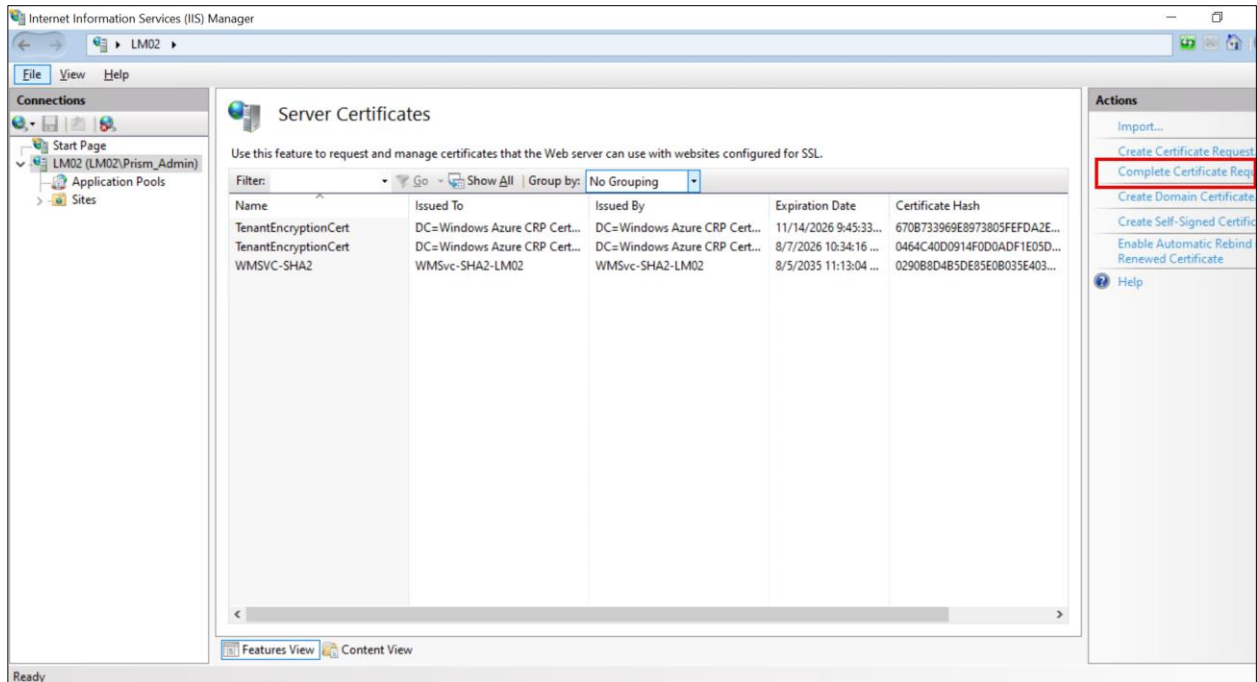
Step 2: Installing the Certificate.

The certificate received from the vendor needs to be copied to the system.

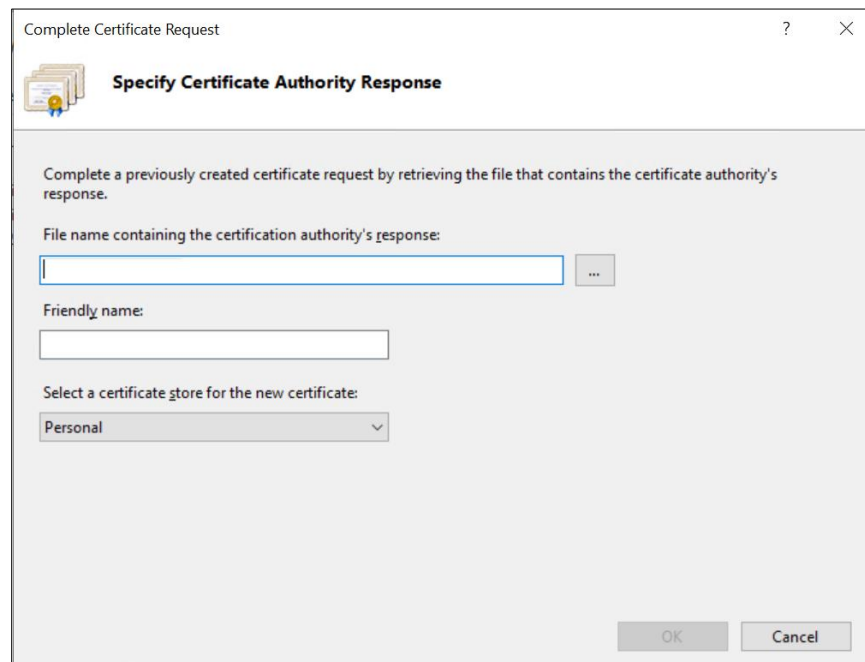
1. Click the **Start** button, select **All Programs**, and then select **Administrative Tools**.
2. Select **Internet Information Services (IIS) Manager**.
3. Click the server node, and then double-click the **Server Certificates** icon in the IIS pane.



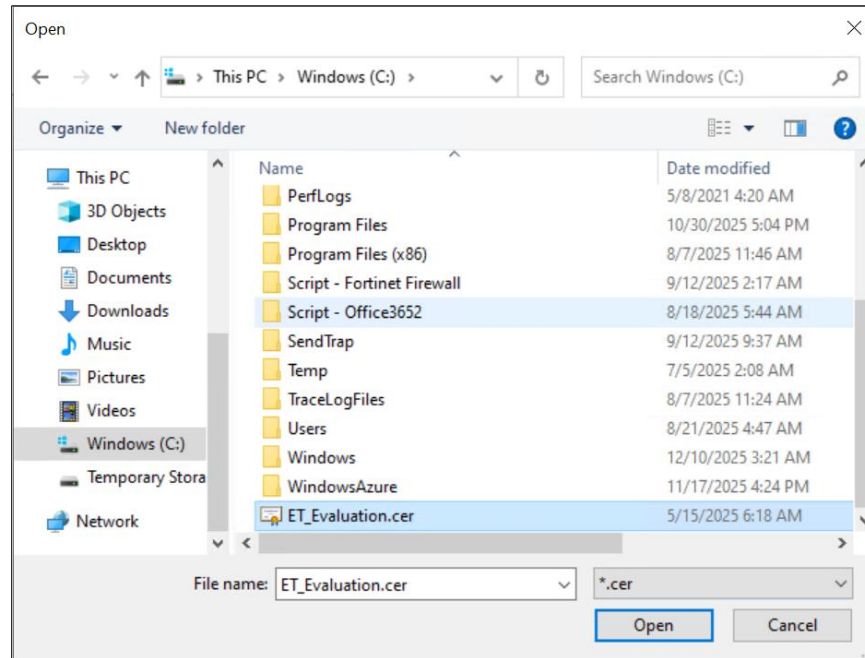
4. In the Actions pane, click the **Complete Certificate Request** hyperlink.



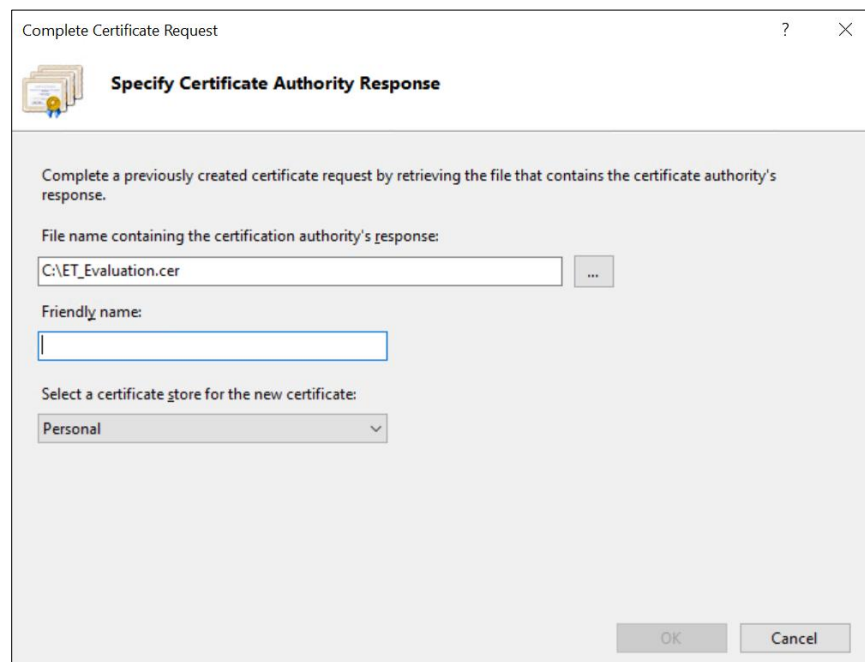
5. In the **Complete Certificate Request** dialog box, click the **browse** button.



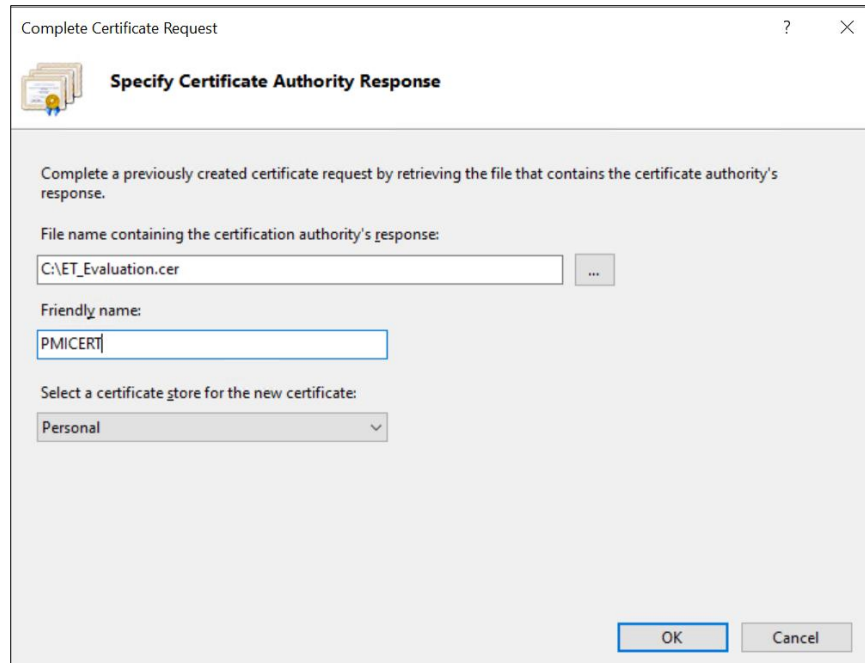
6. Locate the server certificate received from the certificate authority.



7. Click **Open**.

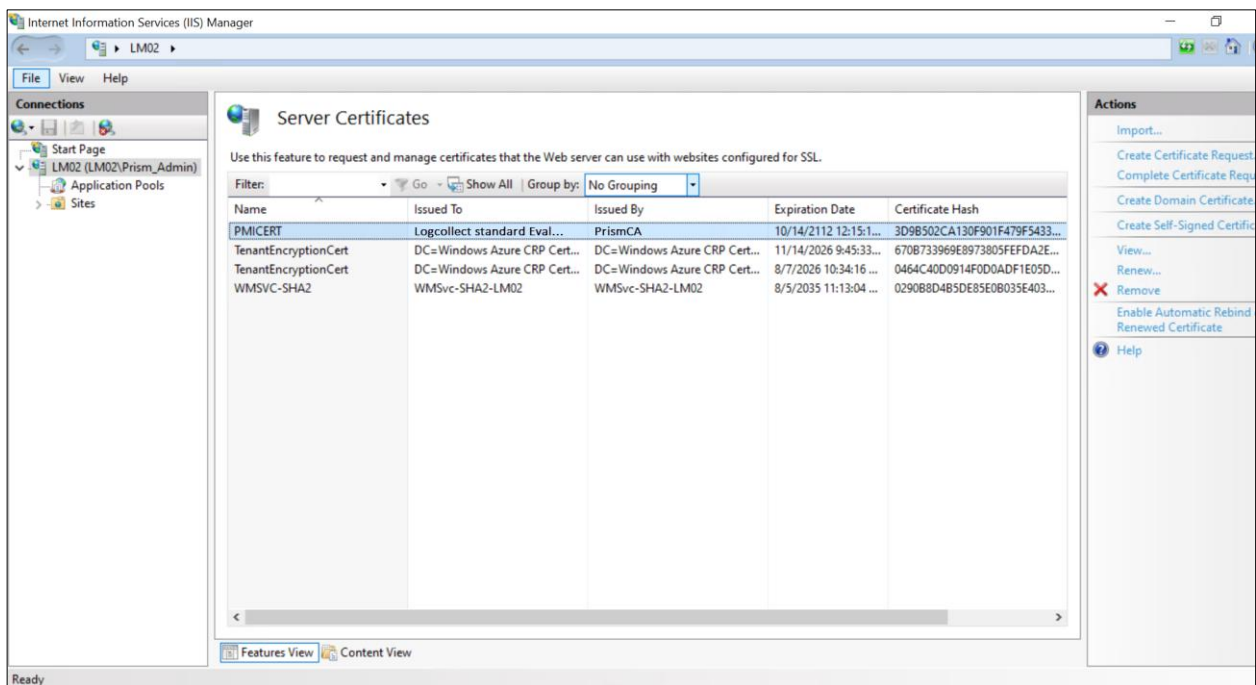


8. Type a relevant name in the **Friendly name** field to keep track of the certificate on this server.



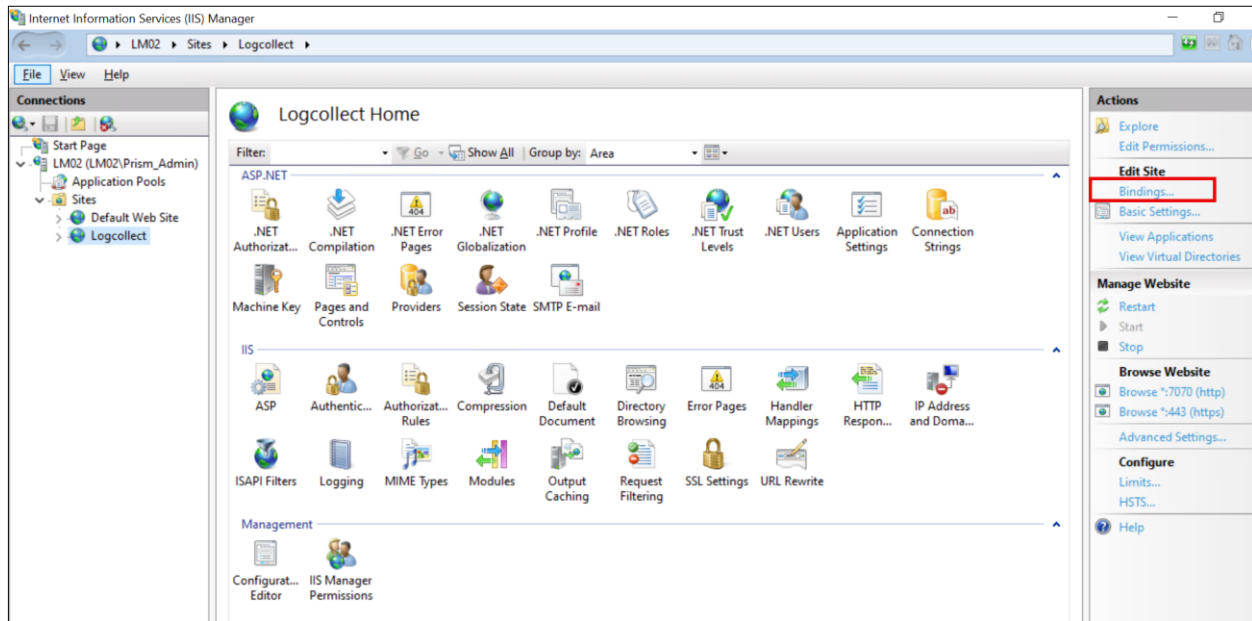
9. Click **OK**.

If successful, the newly installed certificate will be shown in the list. If the error 'the request or private key cannot be found' occurs, then ensure that the correct certificate is used and is installed on the same server where the CSR (Certificate Server Request) is generated. If these two things are in place, then proceed to create a new **Certificate Request** and reissue/replace the certificate.

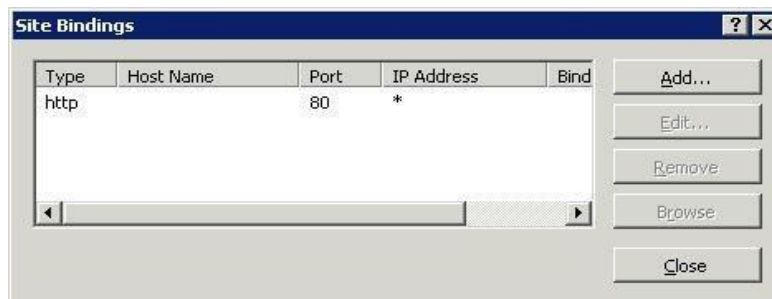


Step 3: Binding the certificate to Logcollect.

1. Expand the **Server** node.
2. Expand the **Sites** node.
3. Click **Logcollect**.
4. In the **Actions** pane, click **Bindings**.



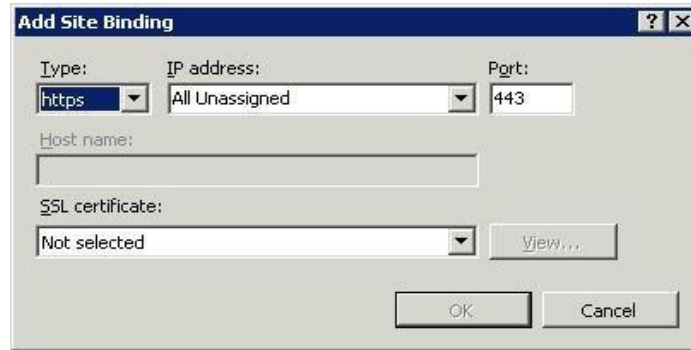
5. The **Site Bindings** dialog box appears as shown below:



6. Click **Add**.



7. Change the **Type** to **https**. By default, the system will select the port number as 443. The default port number can be changed if required.

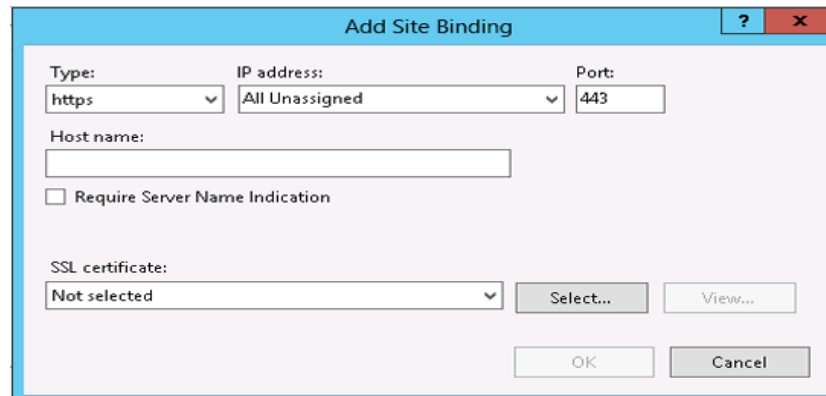


Add Site Binding

Type: **https** IP address: **All Unassigned** Port: **443**

Host name:

SSL certificate: **Not selected**



Add Site Binding

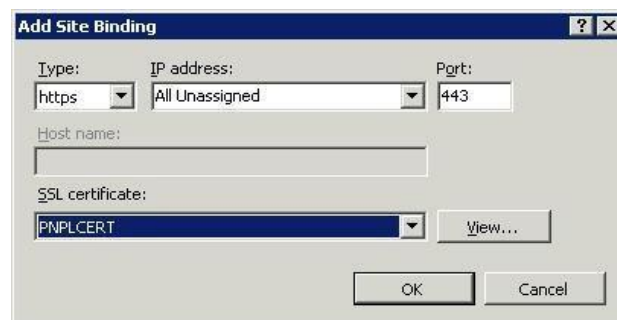
Type: **https** IP address: **All Unassigned** Port: **443**

Host name:

☐ Require Server Name Indication

SSL certificate: **Not selected**

8. Select the recently installed **SSL certificate**.

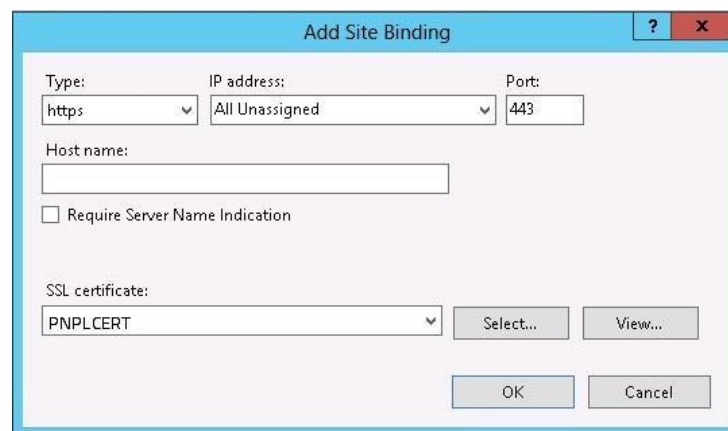


Add Site Binding

Type: **https** IP address: **All Unassigned** Port: **443**

Host name:

SSL certificate: **PNPLCERT**



Add Site Binding

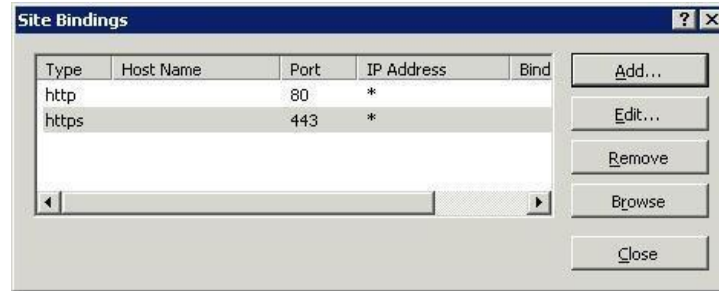
Type: **https** IP address: **All Unassigned** Port: **443**

Host name:

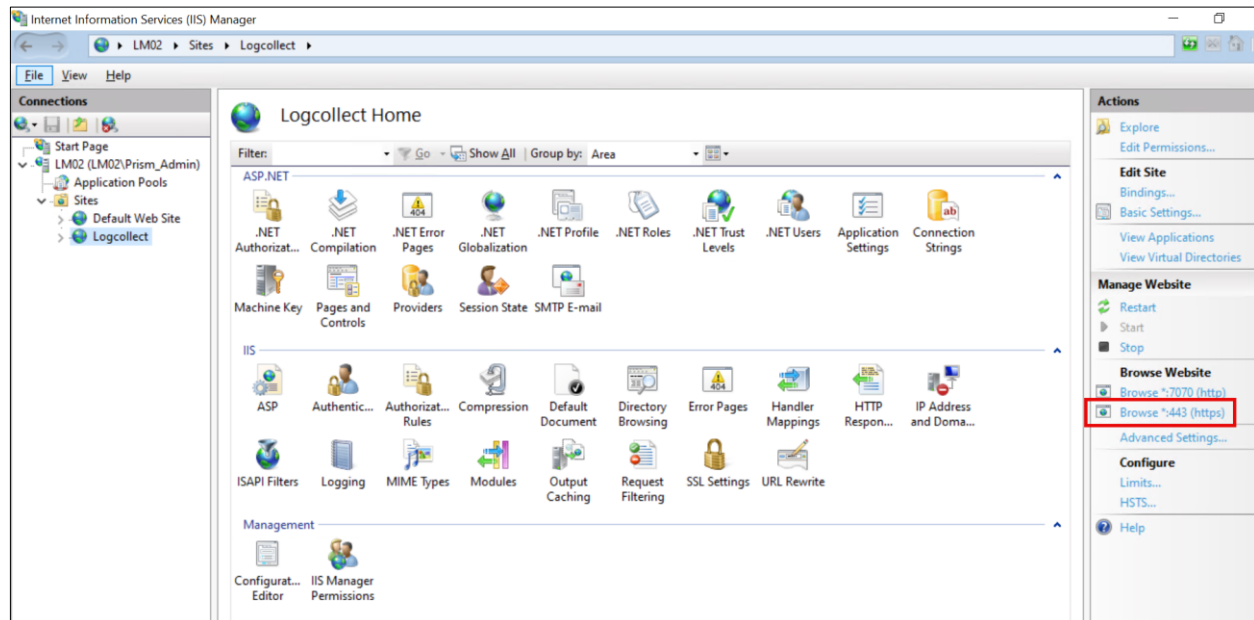
☐ Require Server Name Indication

SSL certificate: **PNPLCERT**

9. Click **OK**. The binding for port 443 will be listed.



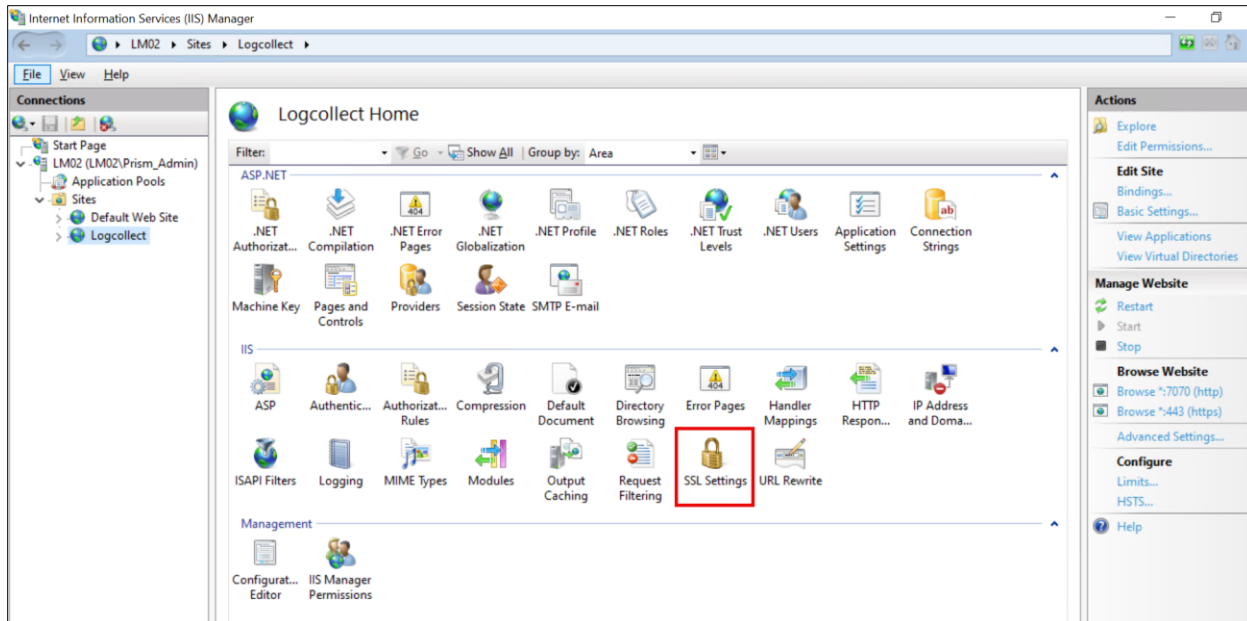
10. Click **Close**. The newly added https website will be listed under **Browse Web Site**.



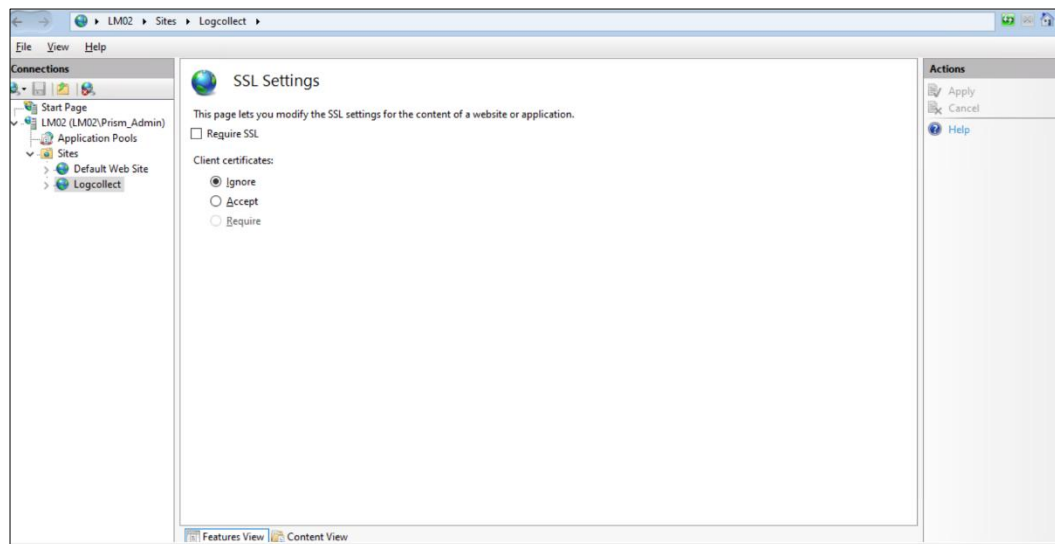
Step 4: Configure SSL Settings.

Configure **SSL Settings** to interact in a specific way with client certificates.

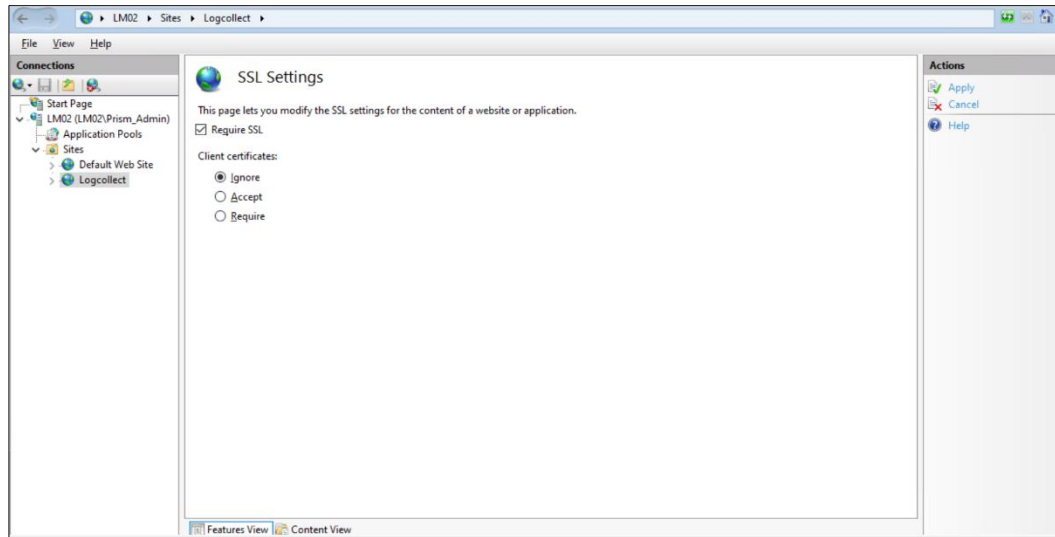
1. Expand the **Sites** node.
2. Click **Logcollect**.
3. Double-click the **SSL Settings** icon.



4. The SSL Settings page will be displayed as shown below.



5. Select the **Require SSL** option.
6. In the **Actions** pane, click **Apply**. After successful SSL settings modification, a message will be displayed in the **Alerts** pane.



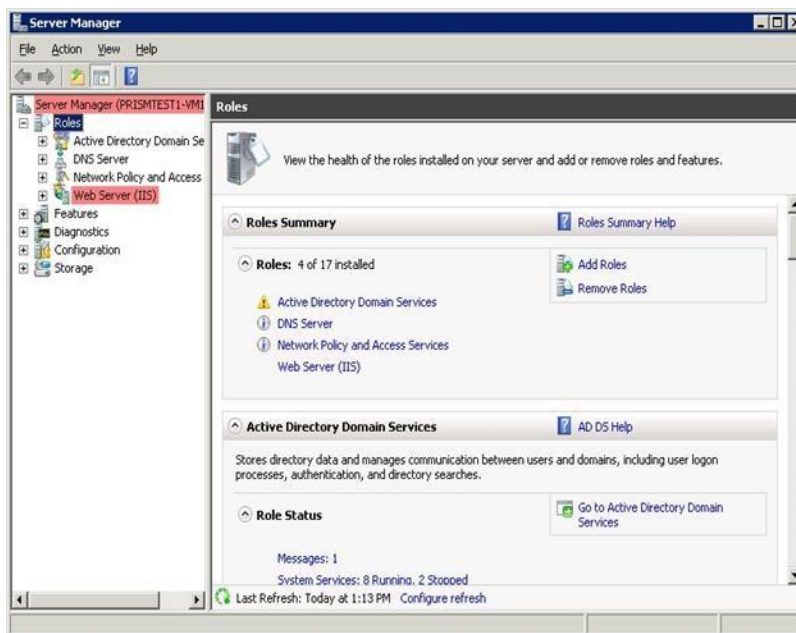
7. Close the **IIS Manager**.

Step 5: Create FTP Service.

Note

Follow steps 5 and step 6 only to transfer the custom logs from the remote server to the Logcollect Manager.

1. Click the **Start** button, select **All Programs**, and then select **Administrative Tools**.
2. Select **Server Manager**.

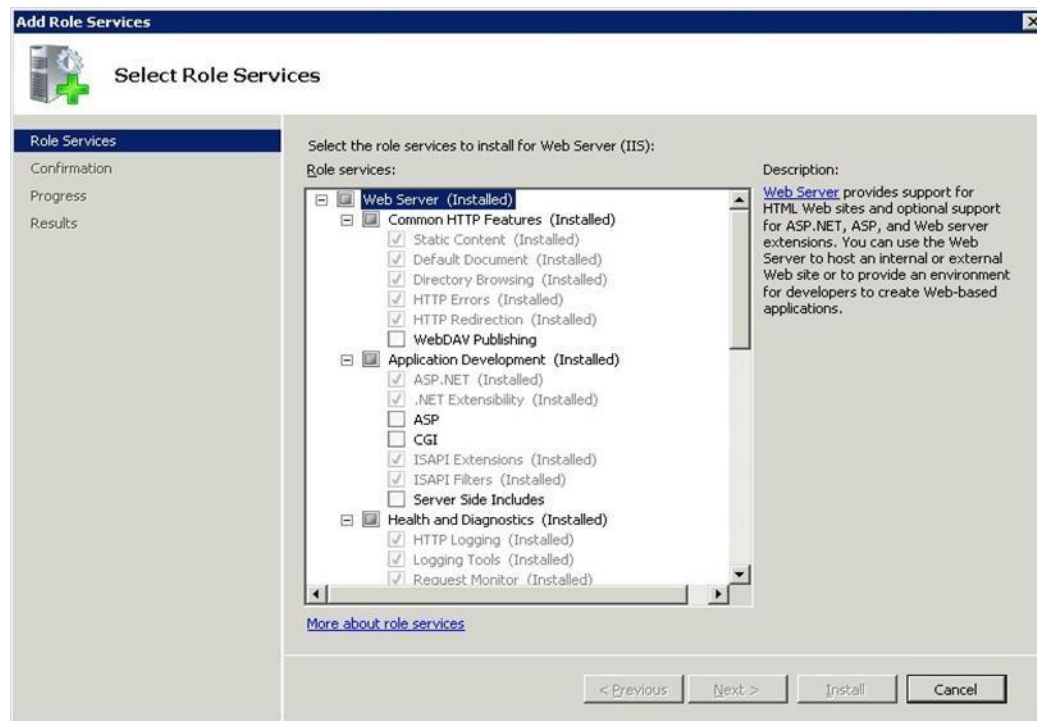


3. In the **Server Manager** pane, expand **Roles**.

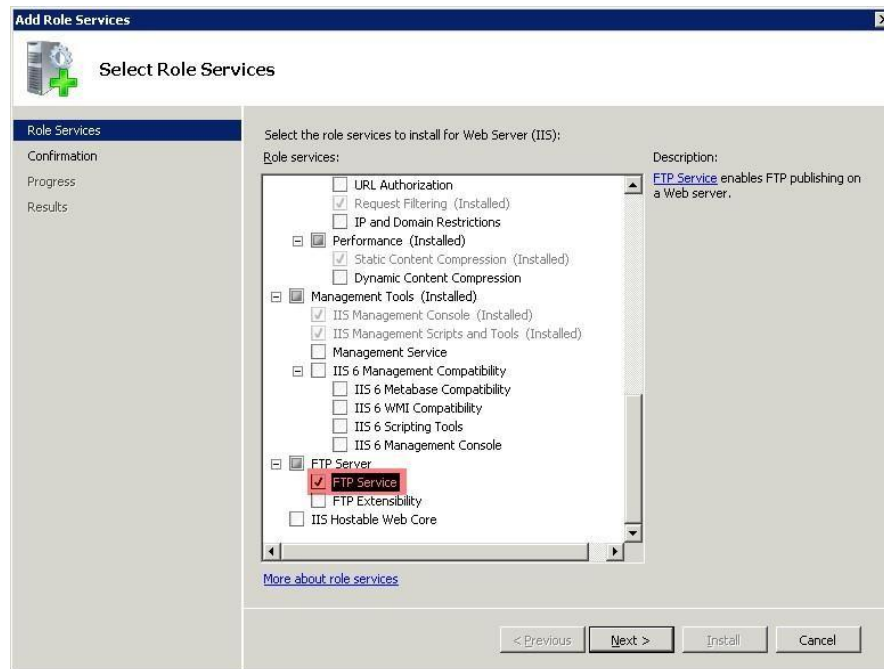
4. Right-click **Web Server (IIS)** and select **Add Role Services**.



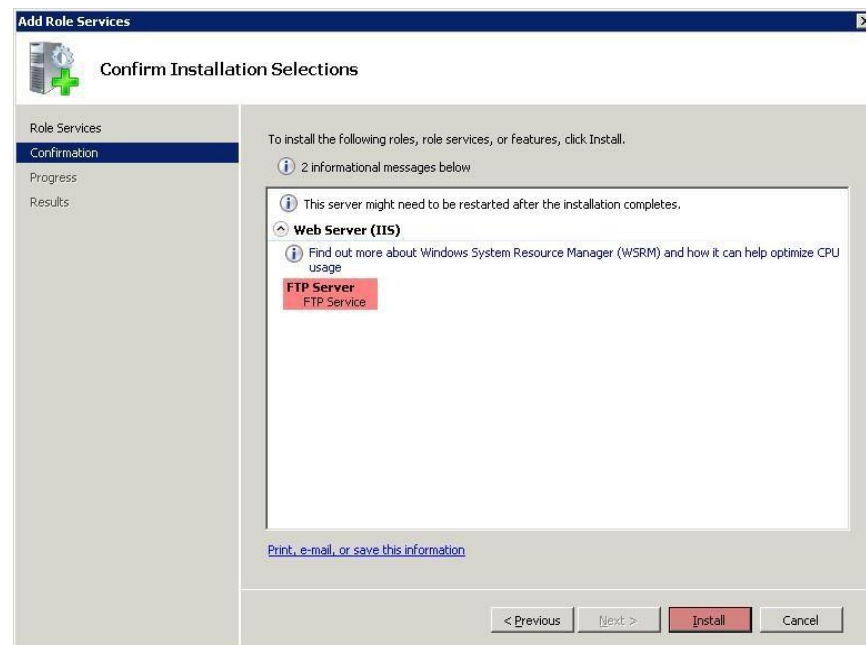
5. The **Server Manager** page displays the **Add Role Services** wizard.



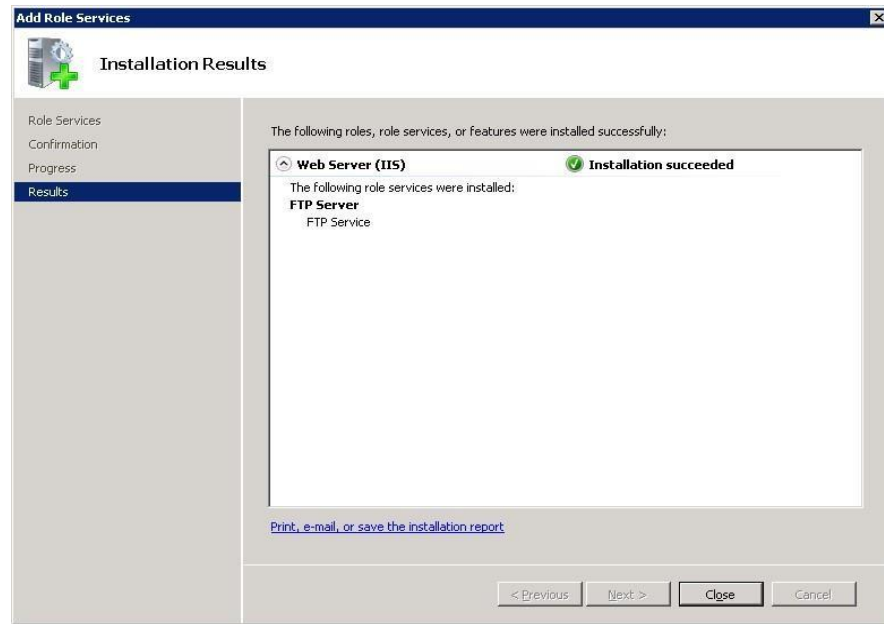
- In the **Roles Services** pane, select the **FTP service** option, and then click **Next**.



- In the **Confirmation** window, click the **Install** button.

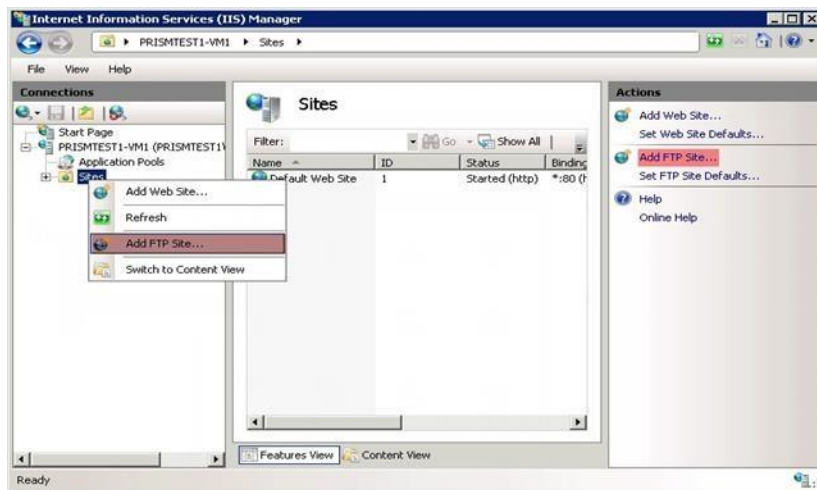


- Click the **Close** button after the 'Installation Succeeded' message appears on the **Results** window.

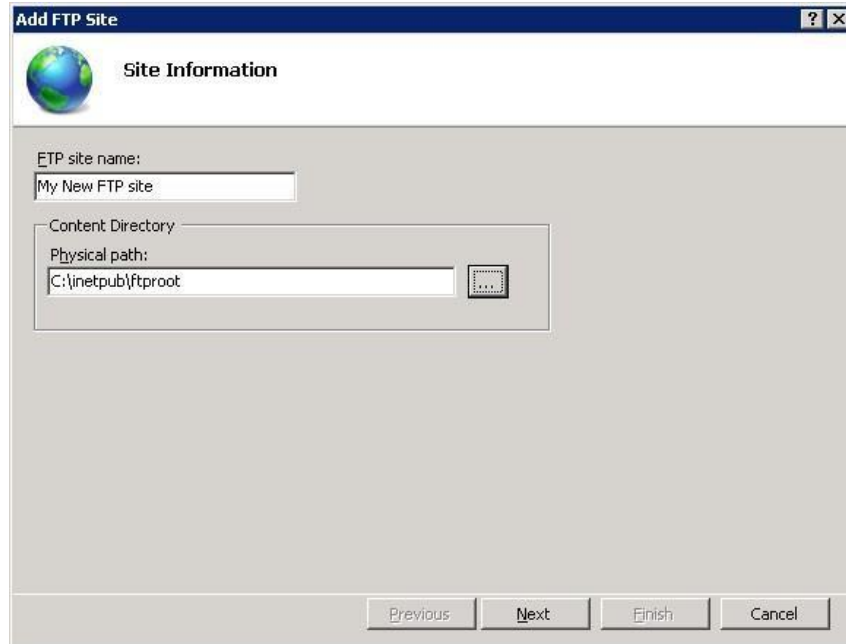


Step 6: Create an SSL-enabled FTP Site.

1. Click the **Start** button, select **Programs**, and then select **Administrative Tools**.
 2. Select **Internet Information Services (IIS) Manager**.
 3. In the **Connections** pane, select **Sites** node.
 4. Right-click the **Sites** node, and then click **Add FTP Site**.
- (OR)
- Click **Add FTP Site** in the **Actions** pane.



5. The **Add FTP Site** dialog box appears on the screen. In the **FTP site name**, type the site name as 'My New FTP Site', and then locate the physical path of the FTP root folder.



Add FTP Site

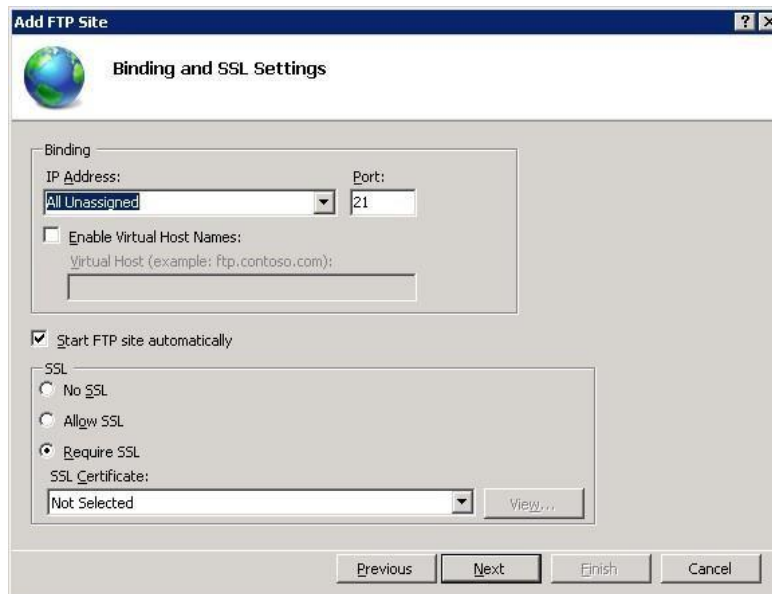
Site Information

FTP site name:
My New FTP site

Content Directory
Physical path:
C:\inetpub\ftproot

Previous Next Finish Cancel

- Click the **Next** button.



Add FTP Site

Binding and SSL Settings

Binding

IP Address: All Unassigned Port: 21

☐ Enable Virtual Host Names:
Virtual Host (example: ftp.contoso.com):

☒ Start FTP site automatically

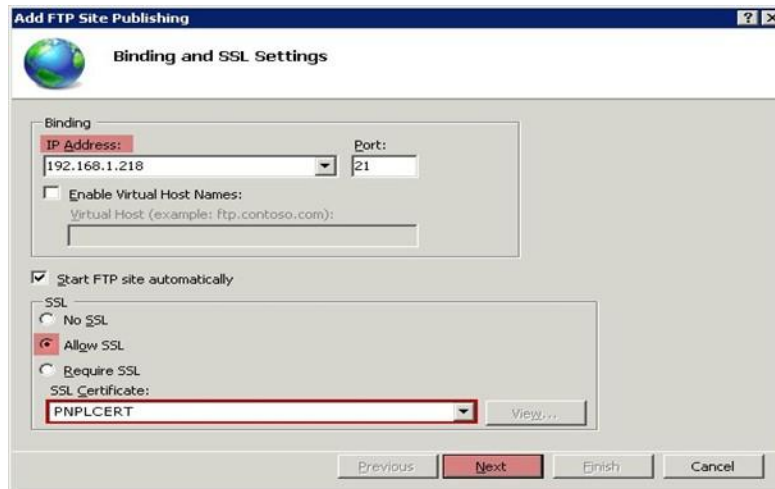
SSL

☐ No SSL
☐ Allow SSL
☒ Require SSL

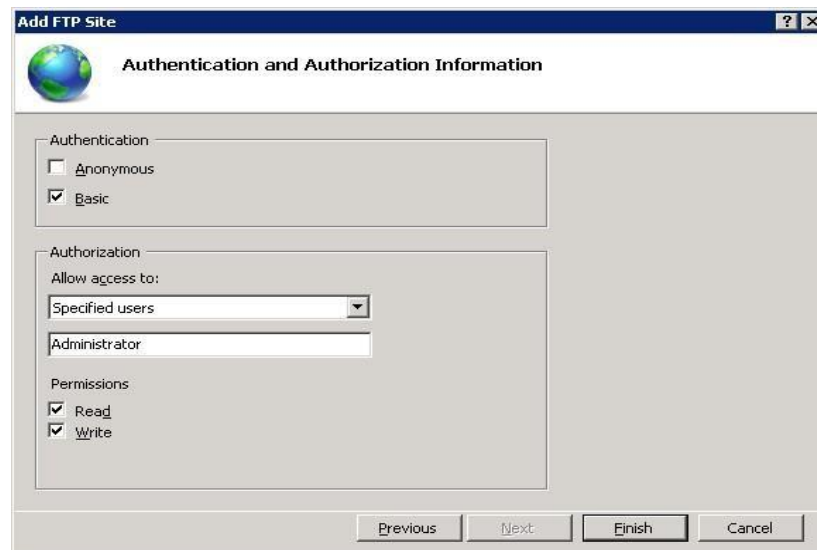
SSL Certificate: Not Selected View...

Previous Next Finish Cancel

- Select the local IP address for the FTP site from the **IP Address** drop-down or type the local loopback IP address for the computer by typing "127.0.0.1" in the **IP Address** box.
- Keep the default port selection as 21, or the port number can be changed if required.
- In the SSL pane, select the **Allow SSL** option, and then click the **View** button to locate the SSL certificate received by the vendor.



10. Click the **Next** button. The **Authentication and Authorization Information** page appears.
11. In the **Authentication** pane, check the **Basic** option.
12. In the **Authorization** pane, select **Specified users** from the **Allow access to** drop-down.
13. Type the username that is authorized to do FTP access.
Example: Administrator.
14. Select the **Read** and **Write** as the **Permissions** option.



15. Click the **Finish** button.

3.3 Restricting Logcollect Web Console Access

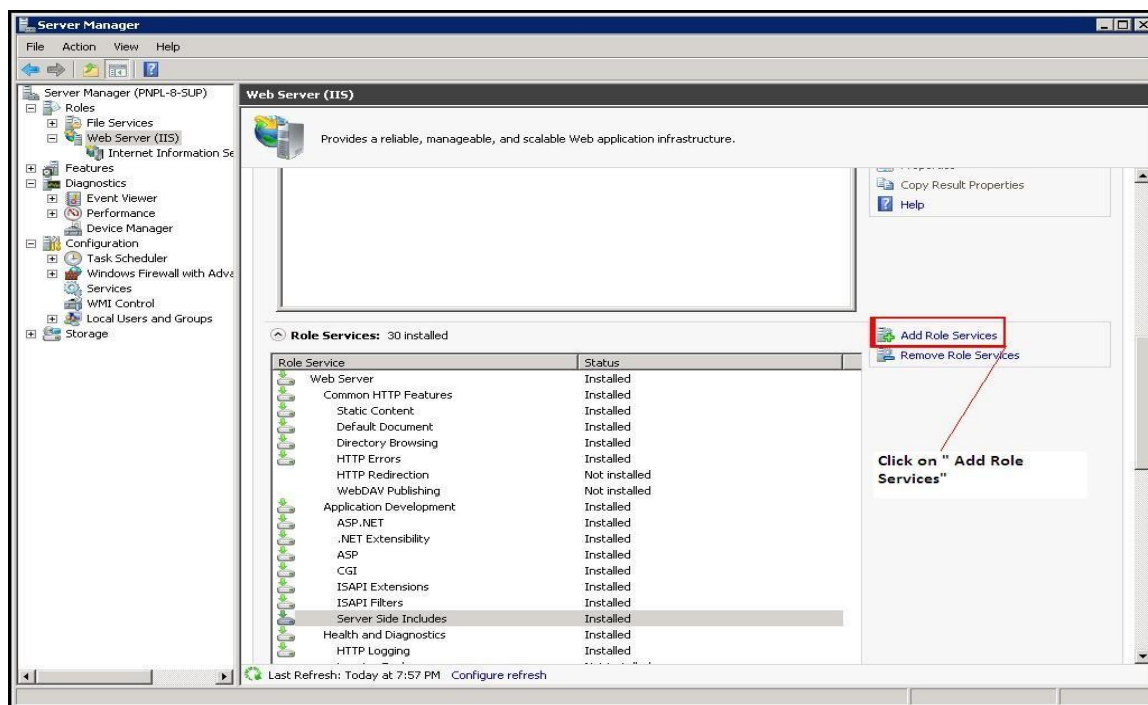
Configuring IP address and domain name restrictions in Internet Information Services (IIS) allows you to permit or deny access to the web server, websites, folders, or files. The rules can be configured for remote IP addresses or based on the Domain name.

When a remote client that is not permitted access requests a resource i.e. a 403.6 ("Forbidden: IP address of the client has been rejected") or 403.8 ("DNS name of the client is rejected"), HTTP status will be logged by Internet Information Services (IIS).

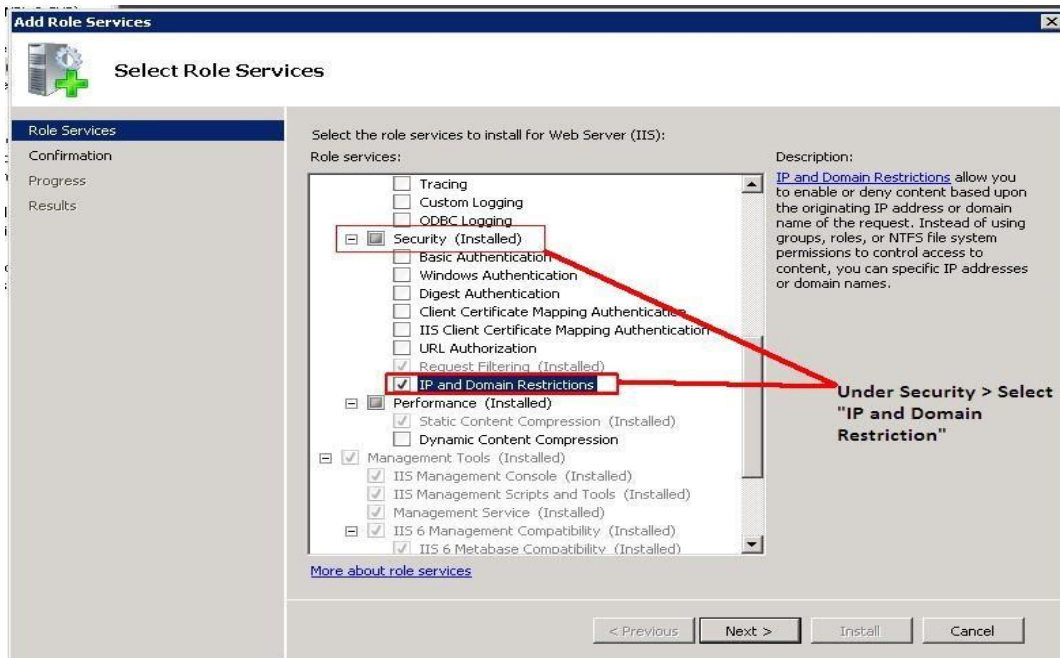
IP and Domain Restrictions option is not enabled by default when you install Internet Information Services (IIS). You can enable the IP and Domain Restrictions option by adding the above Role Service as mentioned below.

3.4 Installing IP and Domain Restriction in Windows

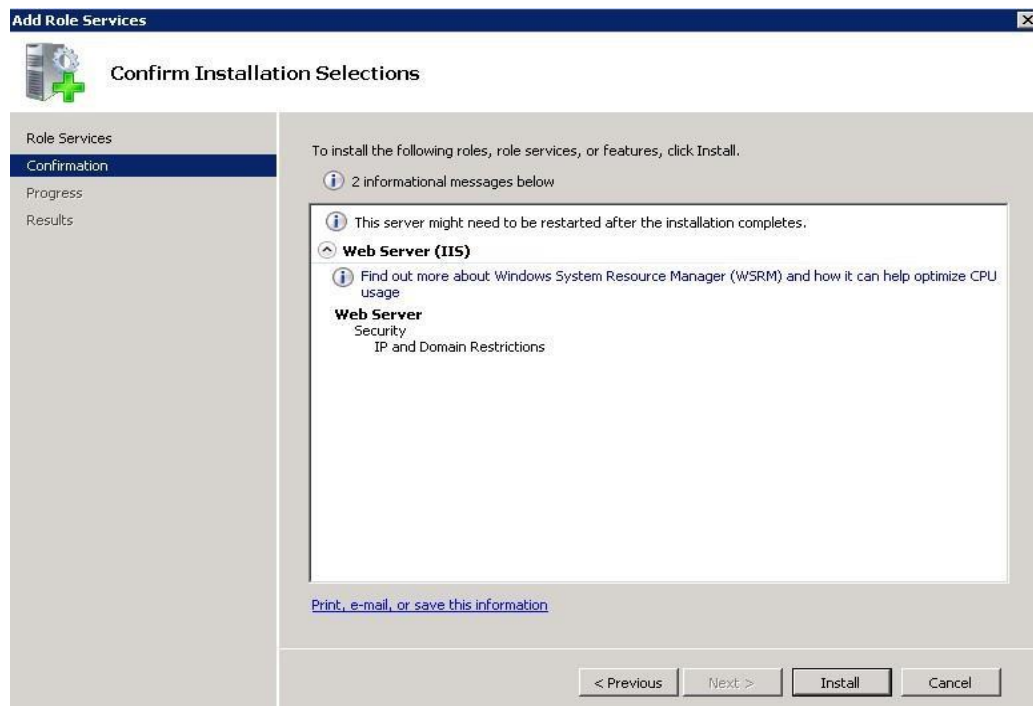
1. Click the **Start** button.
2. Select **Administrative Tools**, and then select **Server Manager**.
3. Select **Add Role Services**.



4. Under **Security**, select **IP and Domain Restrictions**, and then select **Next**.

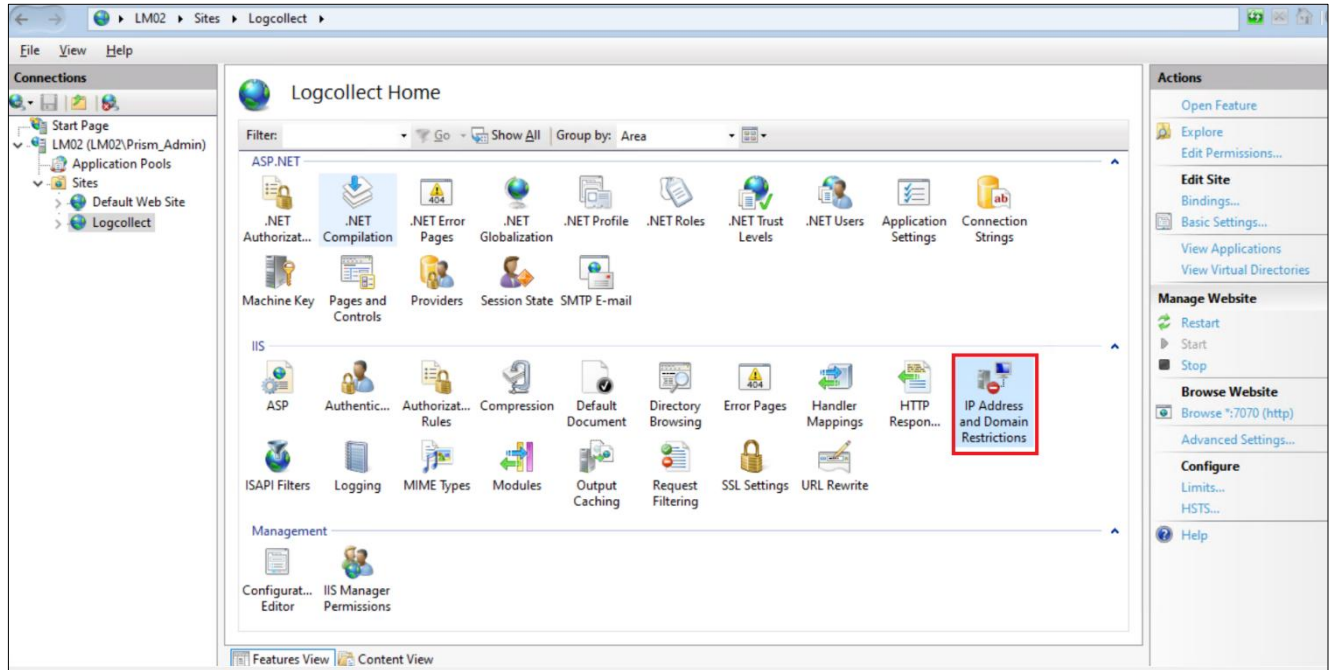


5. Click the **Install** button.

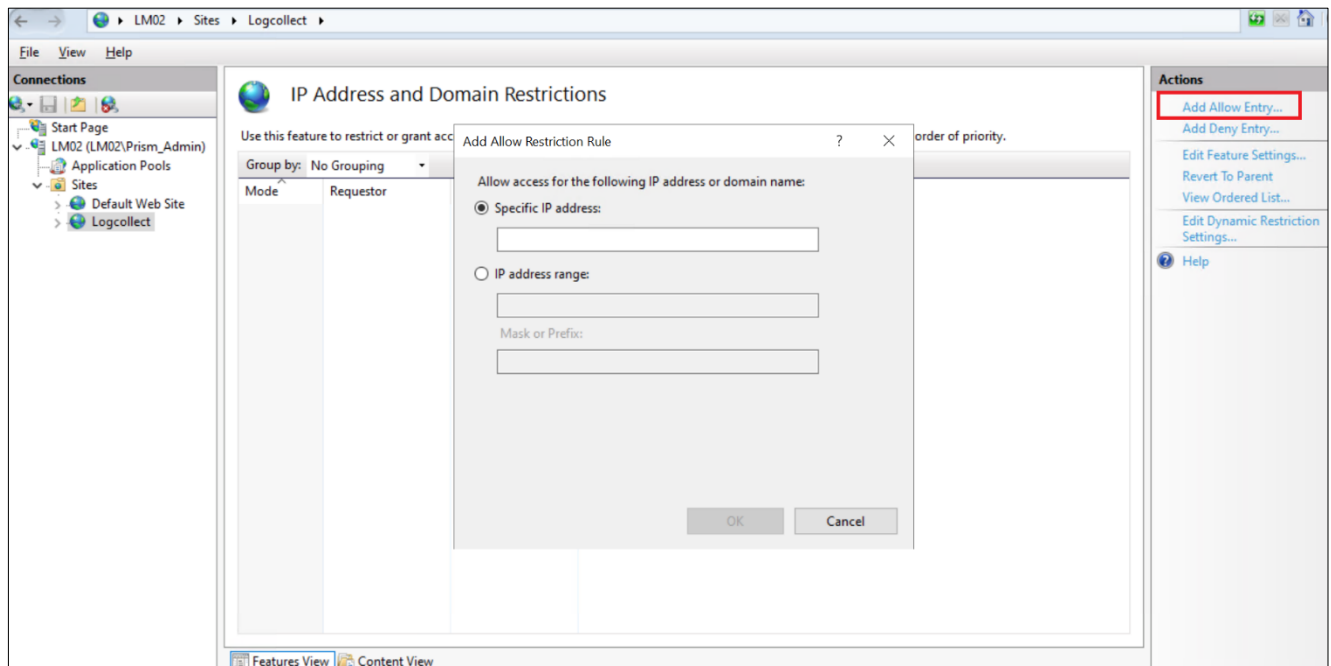


3.5 Configuring IP Address and Domain Restrictions in Windows

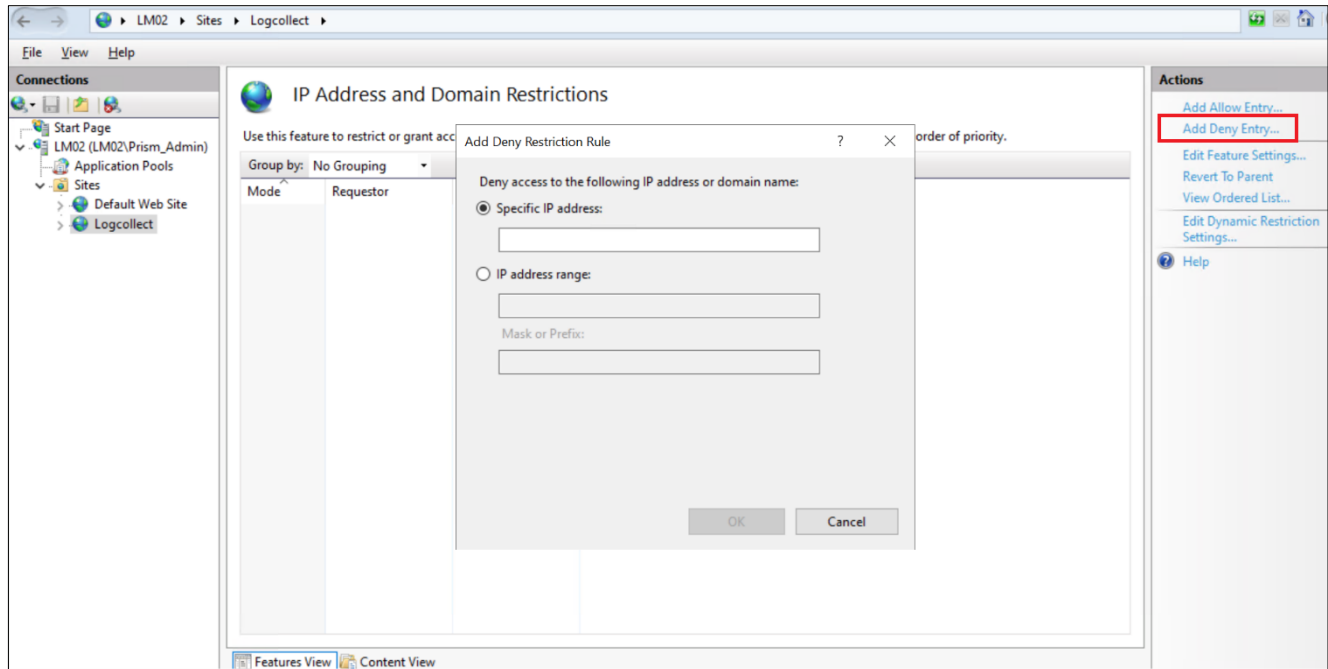
1. Open **IIS Manager**.
2. Select the **Logcollect** site.



3. In **Features View**, double-click **IP Address and Domain Restrictions**.
4. In the **Actions** pane, select **Add Allow Entry** or **Add Deny Entry** to allow or deny entries.



(OR)

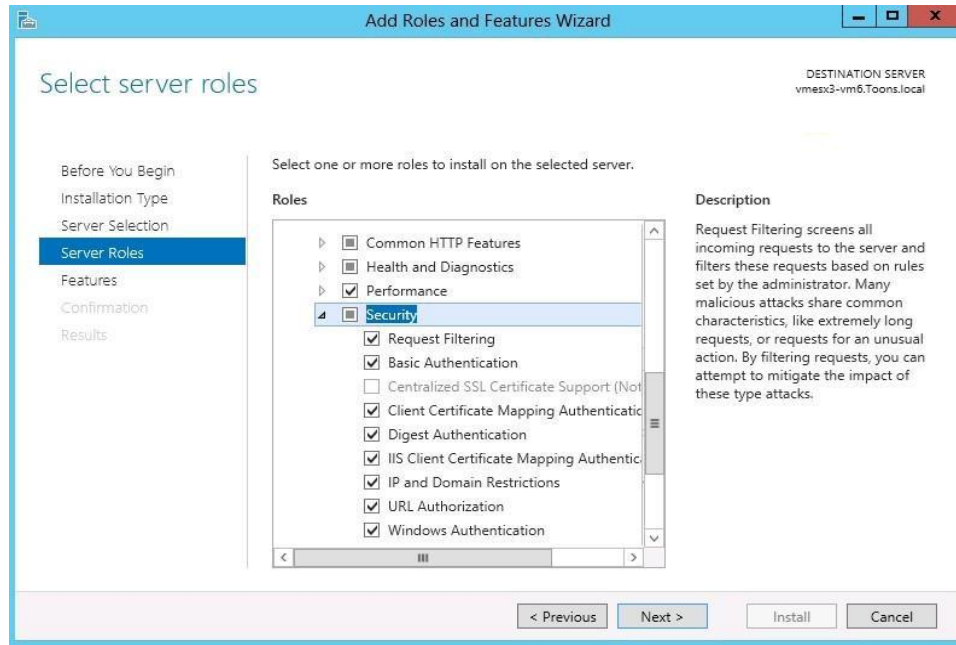


You can specify an IP address, an IP address range, or a Domain Name in the above dialog boxes. Configuring Allow or Deny restrictions using a Domain name requires reverse DNS look-up every time a request arrives from the server. Performing reverse DNS lookups is a potentially expensive operation that can severely degrade the performance of your IIS server.

3.6 Request Filtering in IIS 10 and 11

3.6.1 Installing Request Filtering in Windows

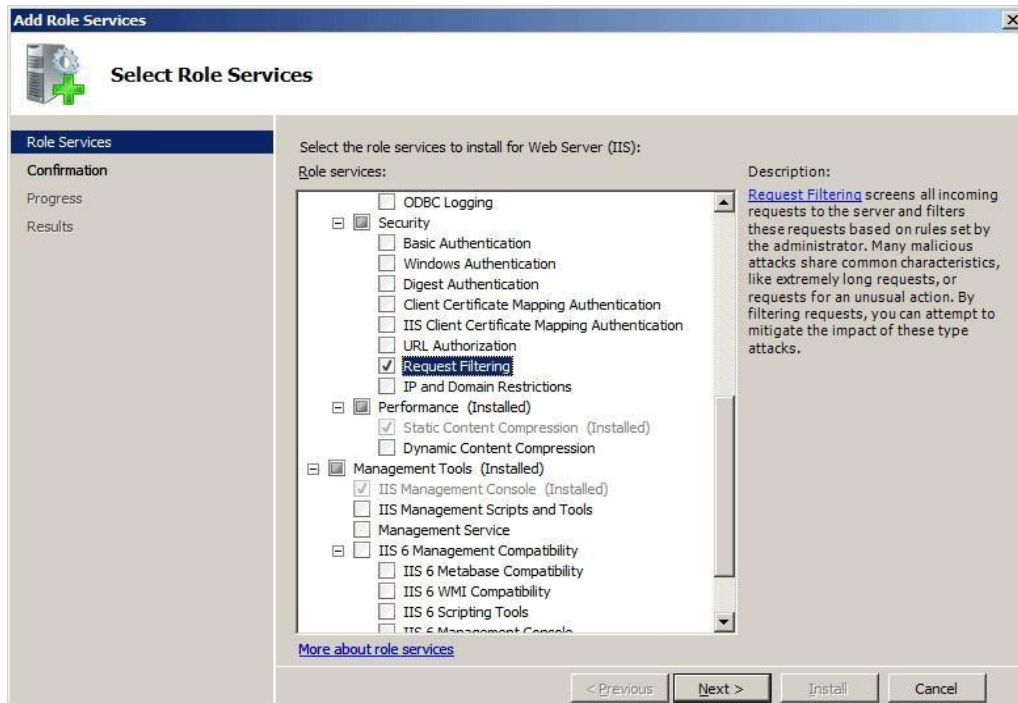
1. Click the **Start** button and select **Administrative Tools**.
2. Select **Server Manager**, select **Dashboard**, and select **Add Role and Features Wizard**. In the **Add Roles and Features** wizard, the **Before You Begin** page displays.
3. Click the **Next** button.
4. On the **Select Installation type** page, select **Role-based or Feature-based Installation**, and then click the **Next** button.
5. On the **Select Destination Server** page, choose **Select a server from the server pool**, select your server from the **Server Pool** list, and then choose the **Next** button.
6. In the **Select Server Roles** window, expand and select **Web Server**.
7. Expand and select **the Security** node, and then select **Request Filtering**, and then click **Next**.



8. On the **Confirm Installation Selections** page, click **Install**.
9. On the **Results** page, click **Close**.

3.6.2 Installing Request Filtering in Windows

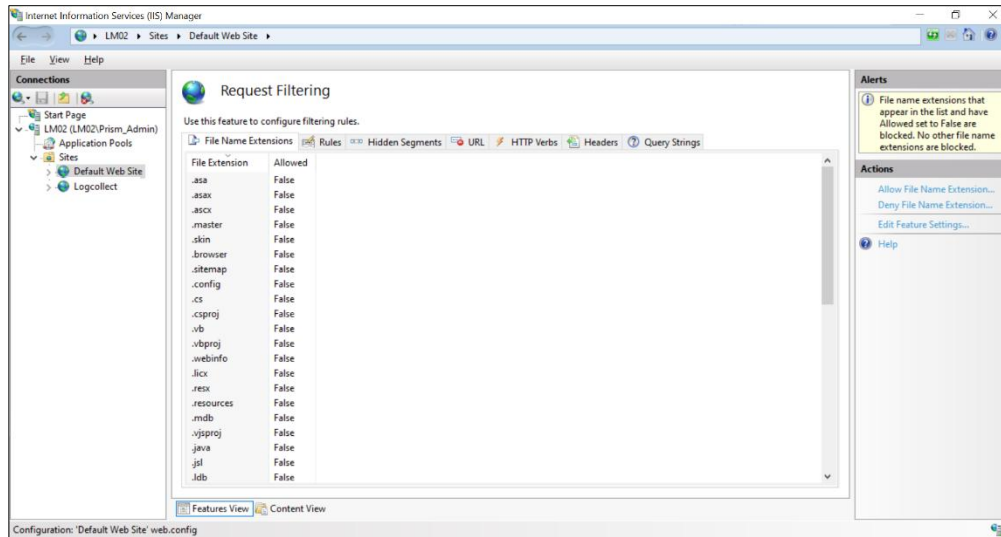
1. On the taskbar, click **Start**, point to **Administrative Tools**, and click **Server Manager**.
2. In the **Server Manager** hierarchy pane, expand **Roles**, and click **Web Server (IIS)**.
3. In the **Web Server (IIS)** pane, scroll to the **Role Services** section, and click **Add Role Services**.
4. On the **Select Role Services** page of the **Add Role Services Wizard**, select **Request Filtering**, and click **Next >**.



5. On the **Confirm Installation Selections** page, click **Install**.
6. On the **Results** page, click **Close**.

3.6.3 Allowing/Denying Access to a Specific File Name Extension

1. Open **Internet Information Services (IIS) Manager**. On the taskbar, click **Start**, point to **Administrative Tools**, and then click **Internet Information Services (IIS) Manager**.
2. In the **Connections** pane, go to the connection, site, application, or directory for which you want to modify your request filtering settings.
3. In the **Home** pane, double-click **Request Filtering**.
4. In the **Request Filtering** pane, click the **File Name Extensions** tab.
5. To deny file name extensions in the **Actions** pane, click **Deny File Name Extension**.



6. The **Deny File Name Extension** dialog box will be displayed as shown below. Enter the file name extension that you want to block and click **OK**.



For example, to prevent access to files with a file name extension of .inc, you would enter "inc" in the dialog box.

7. To allow file name extensions in the **Actions** pane, click **Allow File Name Extension**.



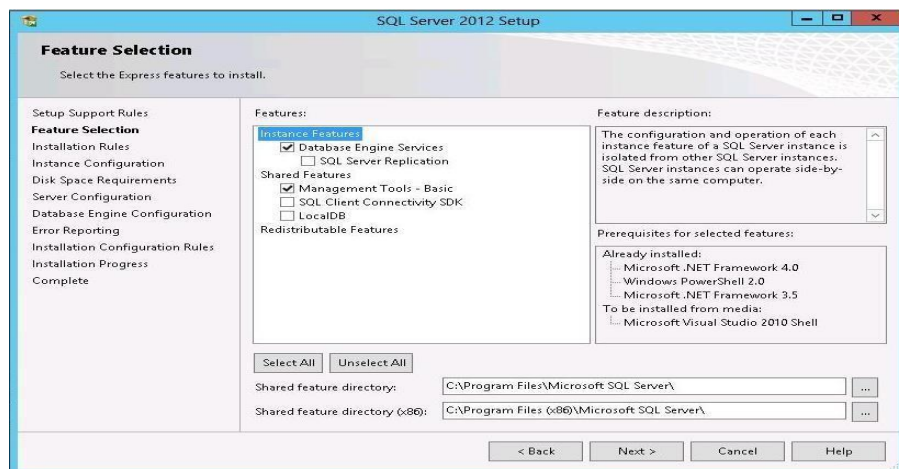
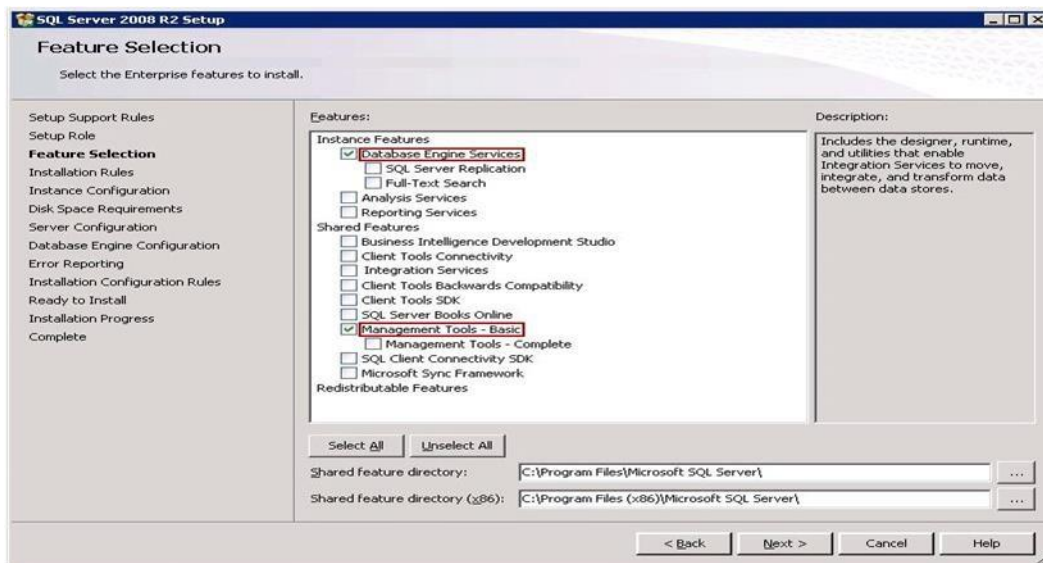
8. Enter the file name extension that you want to allow and click **OK**.

4 Securing SQL Database Server

4.1 Reducing the Surface Area for SQL Server Components

To reduce the surface area of SQL Server components, apply the following best practices.

1. Install only the required SQL Server components.
2. While installing the SQL Server, do not include Analysis Services, Integration Services, and Full-Text engine.
3. Do not install SQL Server Reporting Services (SSRS) on the same server as the Database engine. Installing SSRS on the same server as the database engine, and web services opens a hole in the security layer.
4. Install only two features namely Database Engine Services and Management Tools – Basic.



5. Disable the following SQL Server services.

- **SQL Server VSS Writer service**

- **SQL Server Browser**
 - **SQL Active Directory Helper** service
6. Ensure the latest antivirus version is configured correctly.
 7. Install the latest critical fixes and service packs for both Windows and SQL Server.

4.2 Reducing the Surface Area for SQL Server Services

To reduce the surface area of SQL Server services, apply the following best practices.

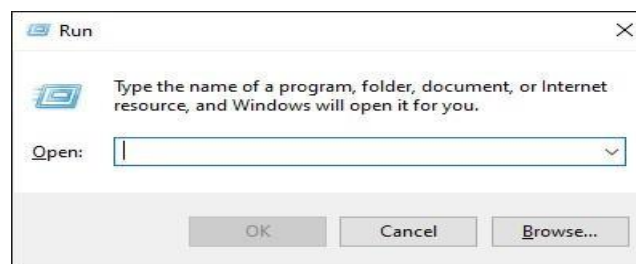
1. Install only Database Engine Services. Do not include **Analysis, Reporting, Notification, and Integration** services. Do not opt for **Workstation components, Books Online, and development tools** option.



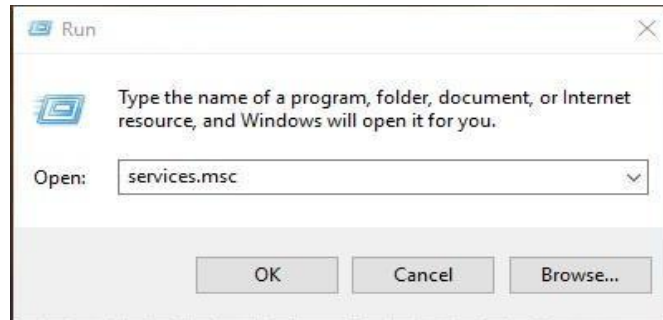
2. Disable the following SQL Server services.
 - **SQL Server VSS Writer** service
 - **SQL Active Directory Helper** service
 - **SQL Server Browser** service

Follow the steps given below to disable the services.

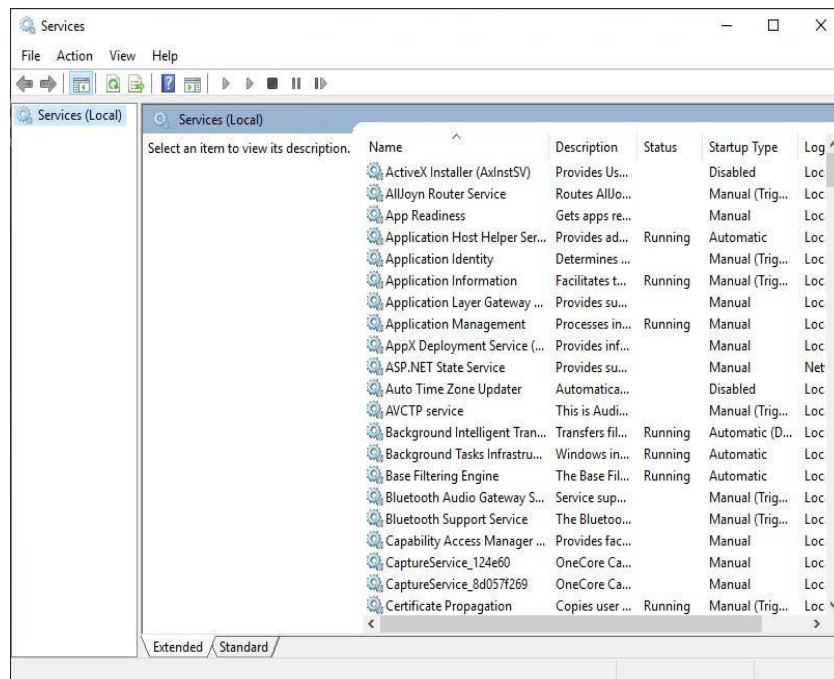
1. Click the **Start** button and click **Run**.



2. In the **Run** window, type '**Services.msc**', and click the **OK** button.



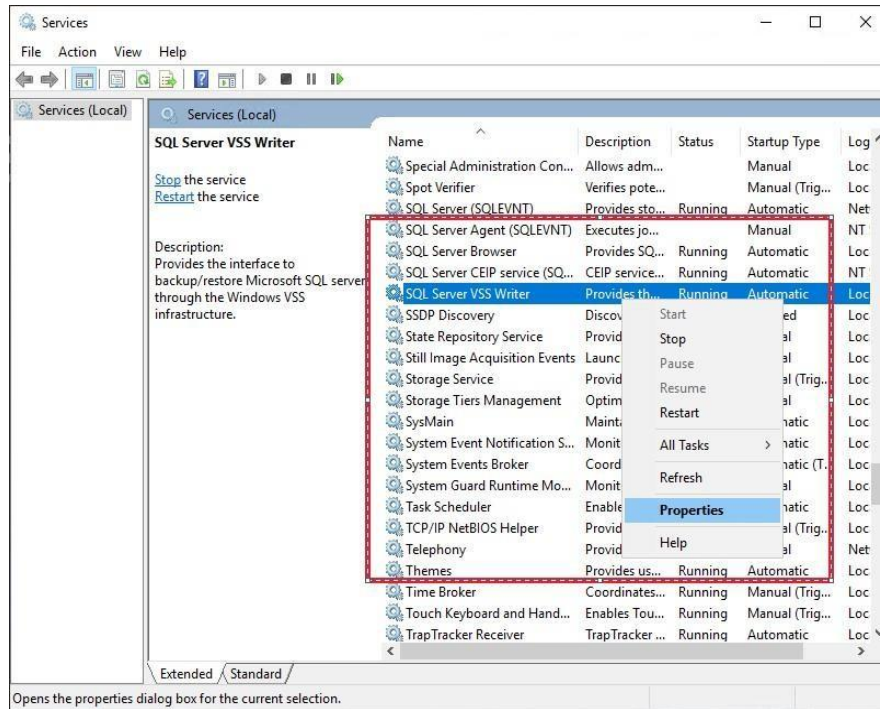
3. The **Services** window will be displayed as shown below:



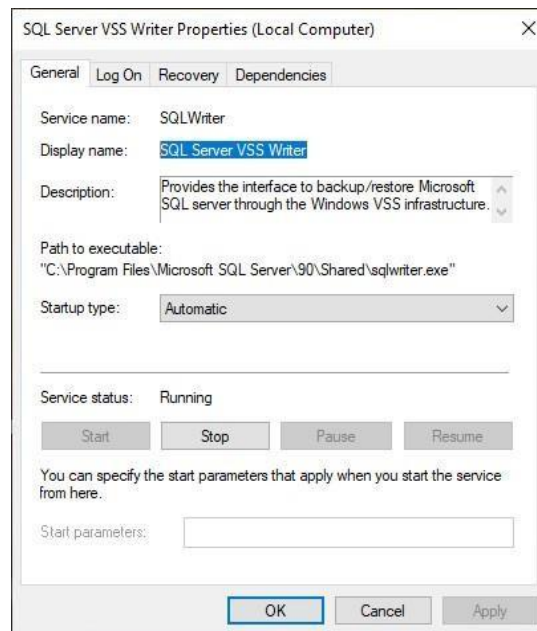
4. Locate the required service(s) name in the **Name** column.

Example: SQL Server VSS Writer service.

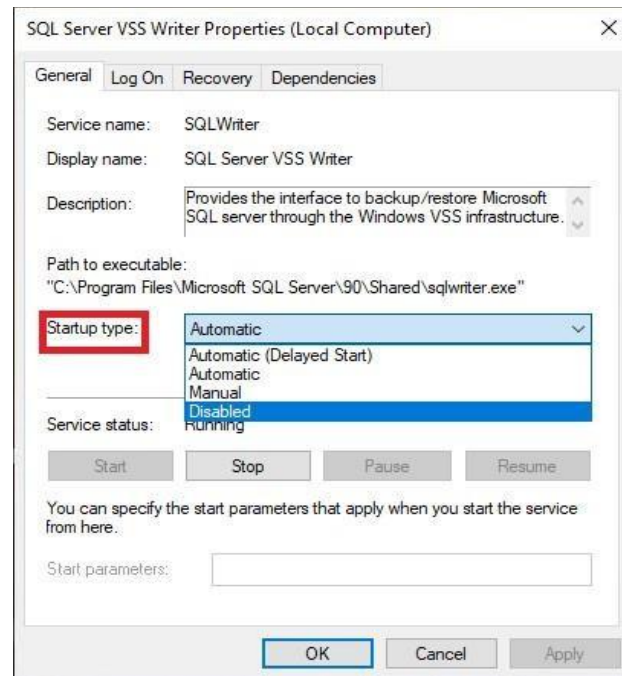
5. Right-click the service to be disabled and click **Properties**.



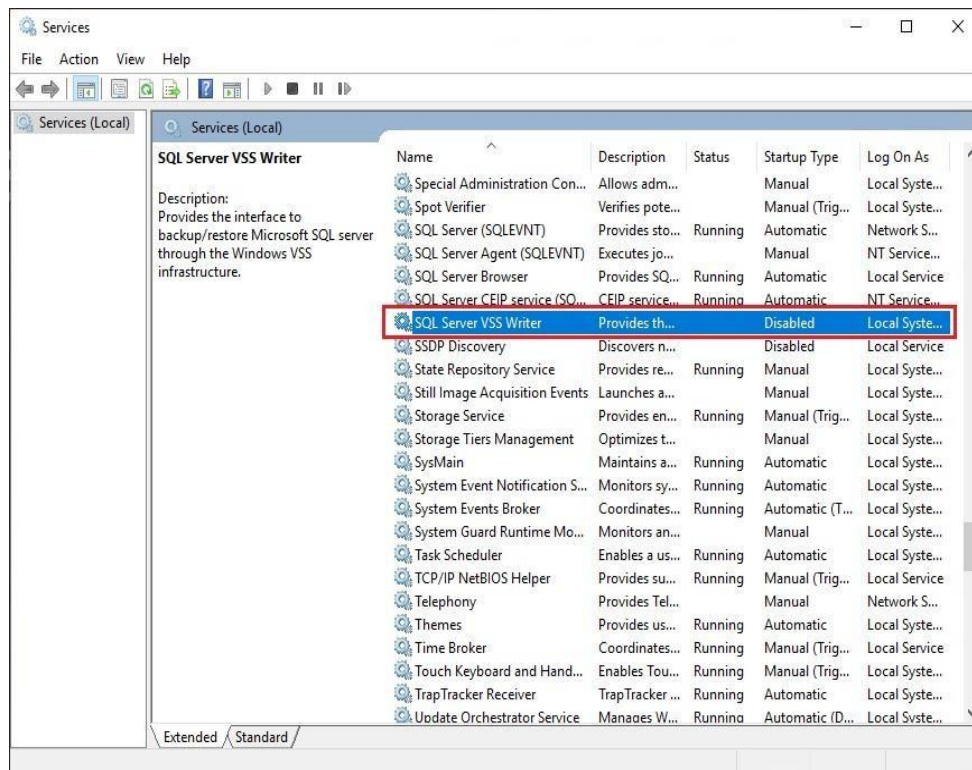
6. The **SQL Server VSS Writer Properties (Local Computer)** dialog box appears as shown below:



7. Click the **Startup type** dropdown and select **Disabled**.



8. Click the **Stop** button to stop the service.
9. Click **Apply**, and then **OK**.



Note

If the remote indexer is enabled in the Logcollect Manager then,

- 'SQL server browser' service should be enabled.
- 'sqlbrowser.exe' and 'sqlservr.exe' must be added to the firewall exception list.

4.2.1 SQL Server SA Account

- The Windows Authentication mode is more secure than SQL Authentication. Hence, configure the SQL Server to use Windows authentication only.
- If the Windows Authentication mode is selected during installation, the SA login is disabled by default. If the authentication mode is switched to SQL Server mixed mode after the installation, the SA account is still disabled and must be manually enabled if required.
- Enabling mixed-mode authentication will
 - Disable or rename the SA Account. Do not use this account for SQL server management.
 - Enforce a strong password policy, while using SQL Authentication.

5 Logcollect Settings

5.1 Securing Agent Configuration and Saving it as a Template

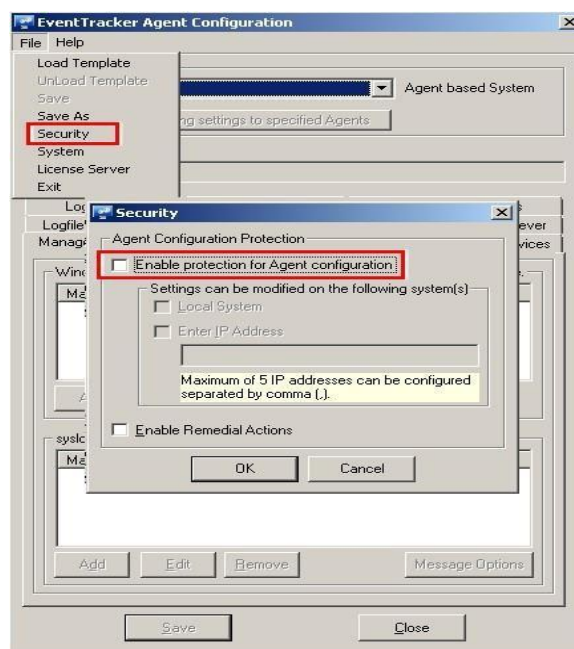
The current Agent configuration settings on the local system can be protected from being modified by any unauthorized remote system. This option allows only the local system to modify the agent settings or configure up to five IP addresses of remote systems where the modification of agent configuration is possible.

It is recommended to save the agent configuration settings as a **Template** and apply it to multiple agent systems at once instead of applying them individually.

To use the same configuration settings for agent systems, the agent configuration on the local system needs to be saved as a **Template** first. The template is saved as a **.ini** file in the default path, which would be ProgramFiles\PrismMicrosystems\EventTracker\RemoteInstaller.

5.2 Protecting the Current Configuration Settings for Local System

1. Go to the **Logcollect** Control Panel.
2. Double-click the **Logcollect Agent Configuration**, and then click the **File** dropdown.
3. Click the **Security** option.



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Field	Description
Agent Configuration Protection	
Enable Protection for Agent Configuration	Select this option to protect the configuration settings from being modified by a remote agent system.
Settings can be modified on the following system(s)	
Local System	Select this checkbox to protect the current configuration settings of the local system. Other users cannot modify the settings from their machines.
Enter IP Address	Select this checkbox to allow the specified remote systems to do the configuration changes in the local system. Type the IP address in the IP Address field. Up to five IP addresses can be configured, separated by commas (,).
Remedial Action	Remedial actions are scripts or EXEs that can be launched at either the agent or Manager side, in response to events.

4. Select the **Enable Protection for Agent Configuration** option.
5. Click the **OK** button.

Note

To apply this configuration to the agent systems in the enterprise, click the **Apply this configuration to agents** button.

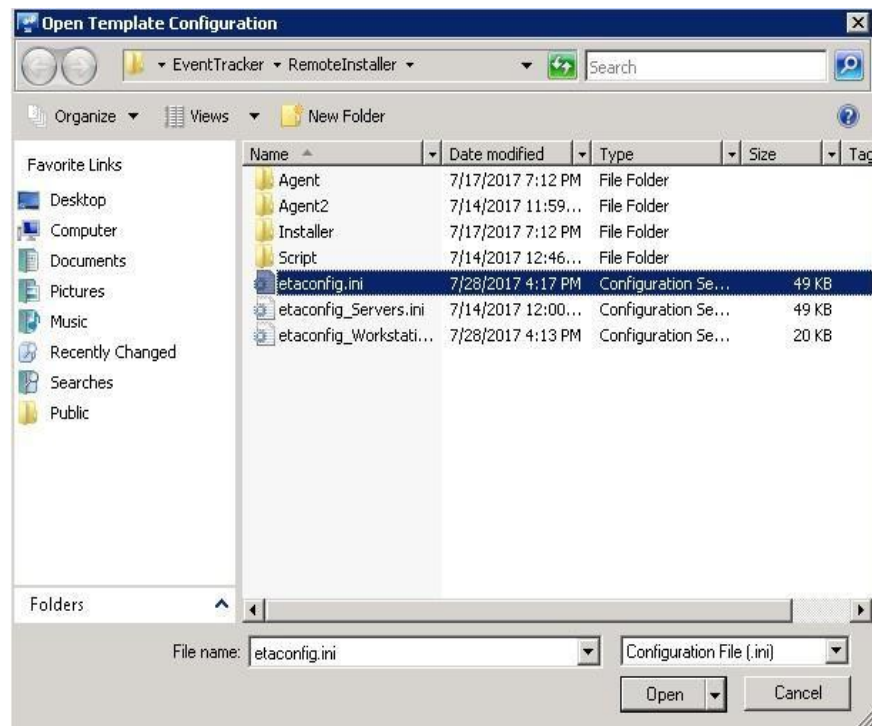
5.2.1 Applying Configuration to Agent System(s)

1. Go to the **Logcollect** Control Panel.
2. Double-click the **Logcollect Agent Configuration** and click the **File** dropdown.
3. Click the **Load Template** button.

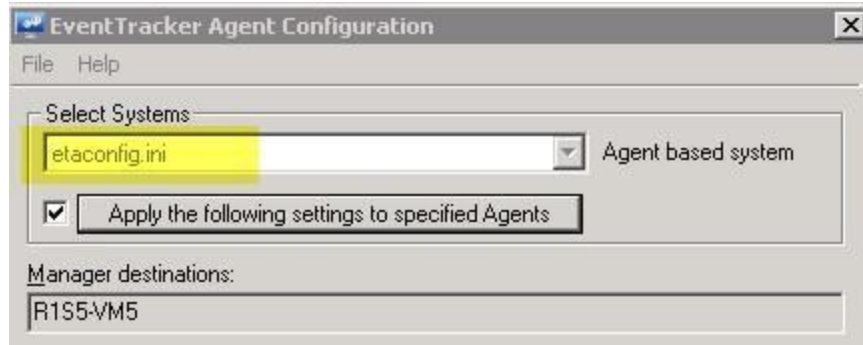
Need to change the below image



4. Select the **File name** from the file location and click the **open** button.

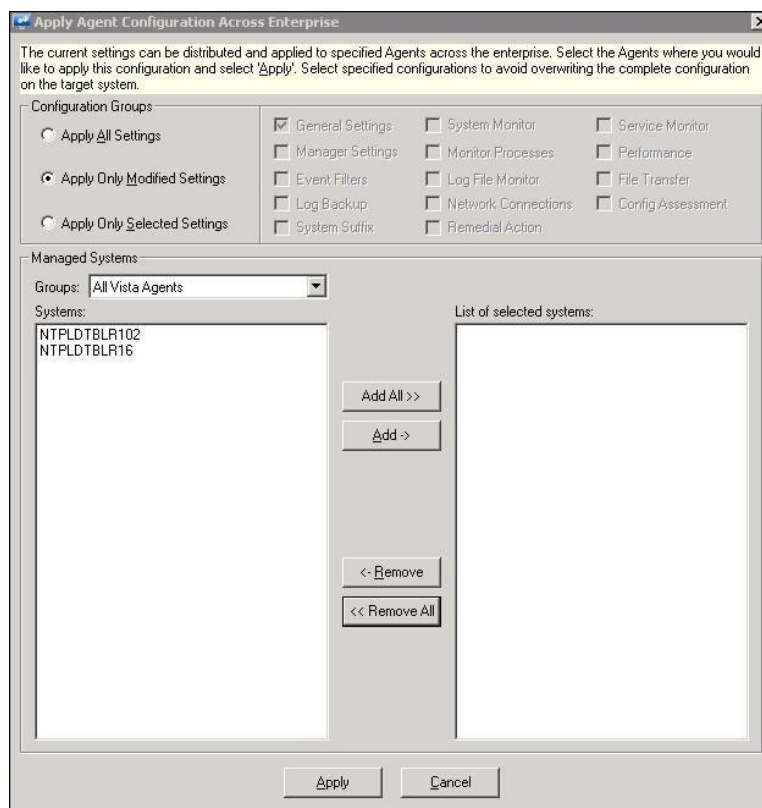


5. Logcollect loads the selected template configuration.



Need to change

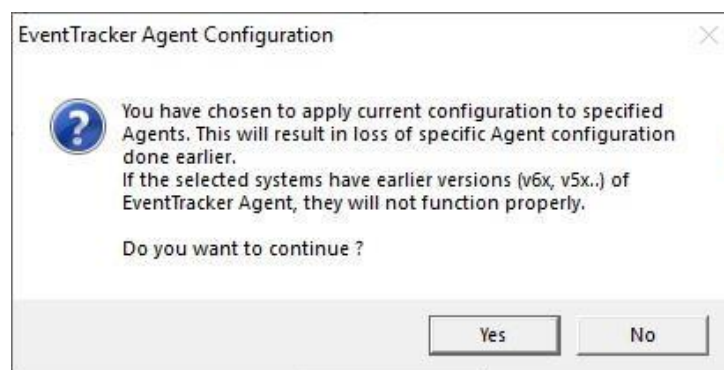
6. To apply this configuration to the agent systems in the enterprise, click the **Apply the following settings to specified Agents** button.
7. The **Apply client configuration across the enterprise** dialog box appears as shown below:



8. Select a system group from the **Select a group** dropdown. Logcollect displays the managed systems associated with the selected group.
9. Check the required system options for which the configuration needs to be applied.
10. Select the **Configuration Groups** option as required.

Field	Description
Apply Only Modified Settings	Logcollect selects this option by default. Leave the default selection to apply only modified settings.
Apply All Settings	Select this option to apply all the settings including the default and modified settings.
Apply Only Selected Settings	Select this option to apply only the selected settings made under respective tabs. Logcollect enables the checkboxes. Select appropriately and then click Apply .

11. Click the **Apply** button. Logcollect displays a warning message as shown below: **Need to change the image**



12. Click the **Yes** button. The template configuration is loaded successfully on the selected systems.

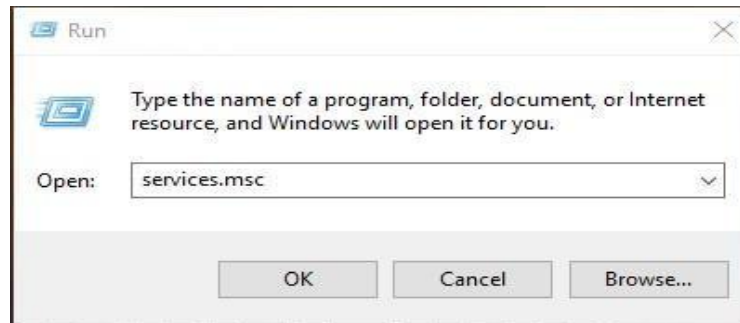
5.3 Securing EventVault Storage

Provide EventVault storage access only to the required Logcollect administrators/users.

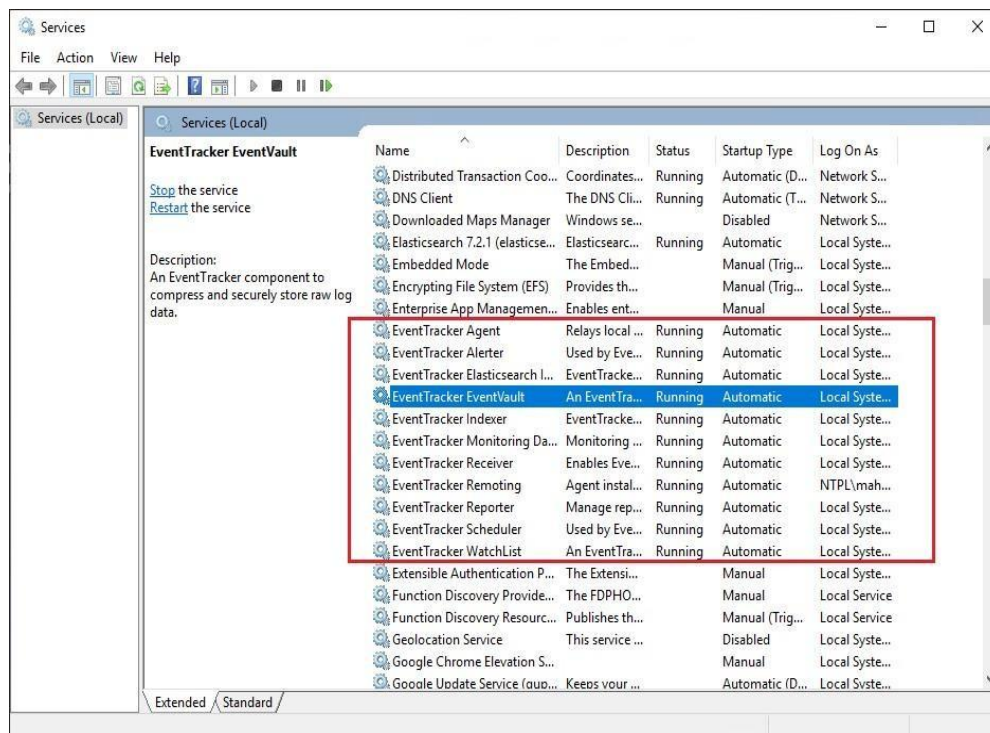
1. **Backup purpose:** Provide full permission to the user responsible to take periodic backup of the data.
2. **Archives stored in UNC (Uniform Naming Convention) path:**
 - a. Create a service account.
 - b. Provide full permission to the created service account.
 - c. Change the following services to run under the created service account.
 - Logcollect Scheduler
 - Logcollect EventVault
 - Logcollect Reporter
 - Logcollect Indexer
 - Event Correlator (if available)

5.3.1 Changing the Service Account

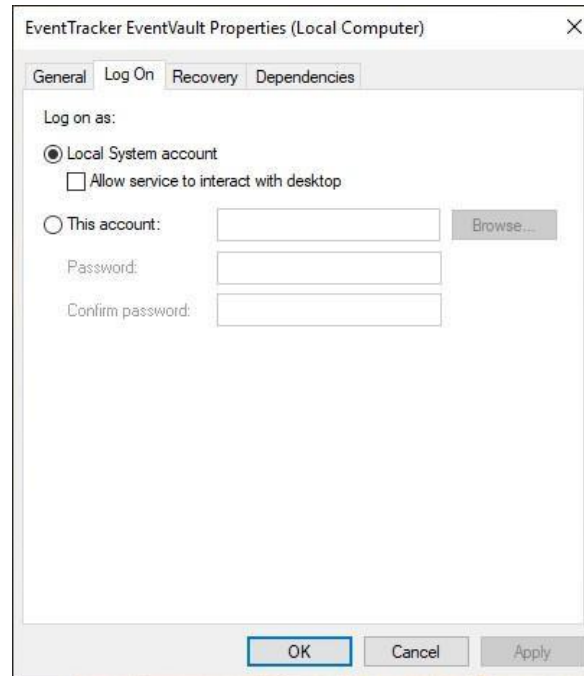
1. Click the **Start** button and select **Run**.
2. Type **services.msc**, and then click the **OK** button.



3. In the **Services** window, search for Logcollect services. **Need to change when we change the service name**

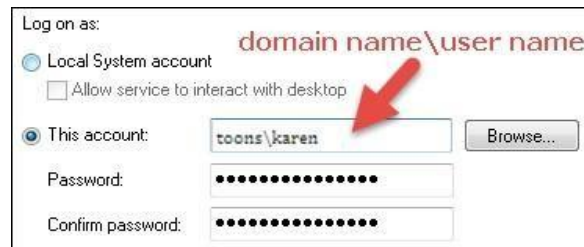


4. Right-click the service name and click **Properties**.
For example, right-click **Logcollect EventVault** service
5. The Logcollect EventVault Properties (Local Computer)' window will be displayed as shown below.

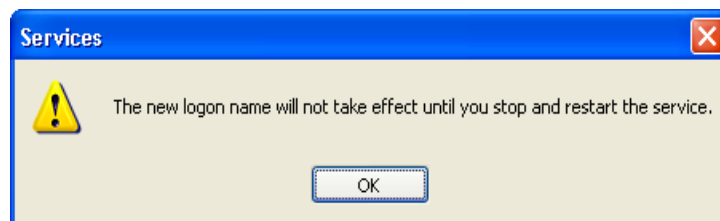


Need to change the image

6. Click the **Log On** tab and select **This account** option.



7. Enter the user credentials and correct password. The username should be in the 'domain name\username' format.
8. Click the **Apply** button. An alert window will be displayed as shown below:



9. Click the **OK** button.
10. To run the service with a new login name, stop and start the service.
11. Likewise, for the rest of the services, repeat steps 4 to 10 to change the service account. The **Log On As** column will display the changed service account name.
















Name	Description	Status	Startup Type	Log On As
Event Log	Enables ev...	Started	Automatic	Local System
EventTracker Agent	Relays loca...	Started	Automatic	Local System
EventTracker Alerter	Used by Ev...		Automatic	Local System
EventTracker EventVault	An EventTr...	Started	Automatic	toons\sonal
EventTracker Indexer	EventTrack...	Started	Automatic	toons\sonal
EventTracker Receiver	Enables Ev...	Started	Automatic	Local System
EventTracker Remoting	Agent inst...	Started	Automatic	Local System
EventTracker Reporter	Manage re...	Started	Automatic	toons\sonal
EventTracker Scheduler	Used by Ev...	Started	Automatic	Toons\sonal
Extensible Authentication Protocol Service	Provides wi...		Manual	Local System

Need to change

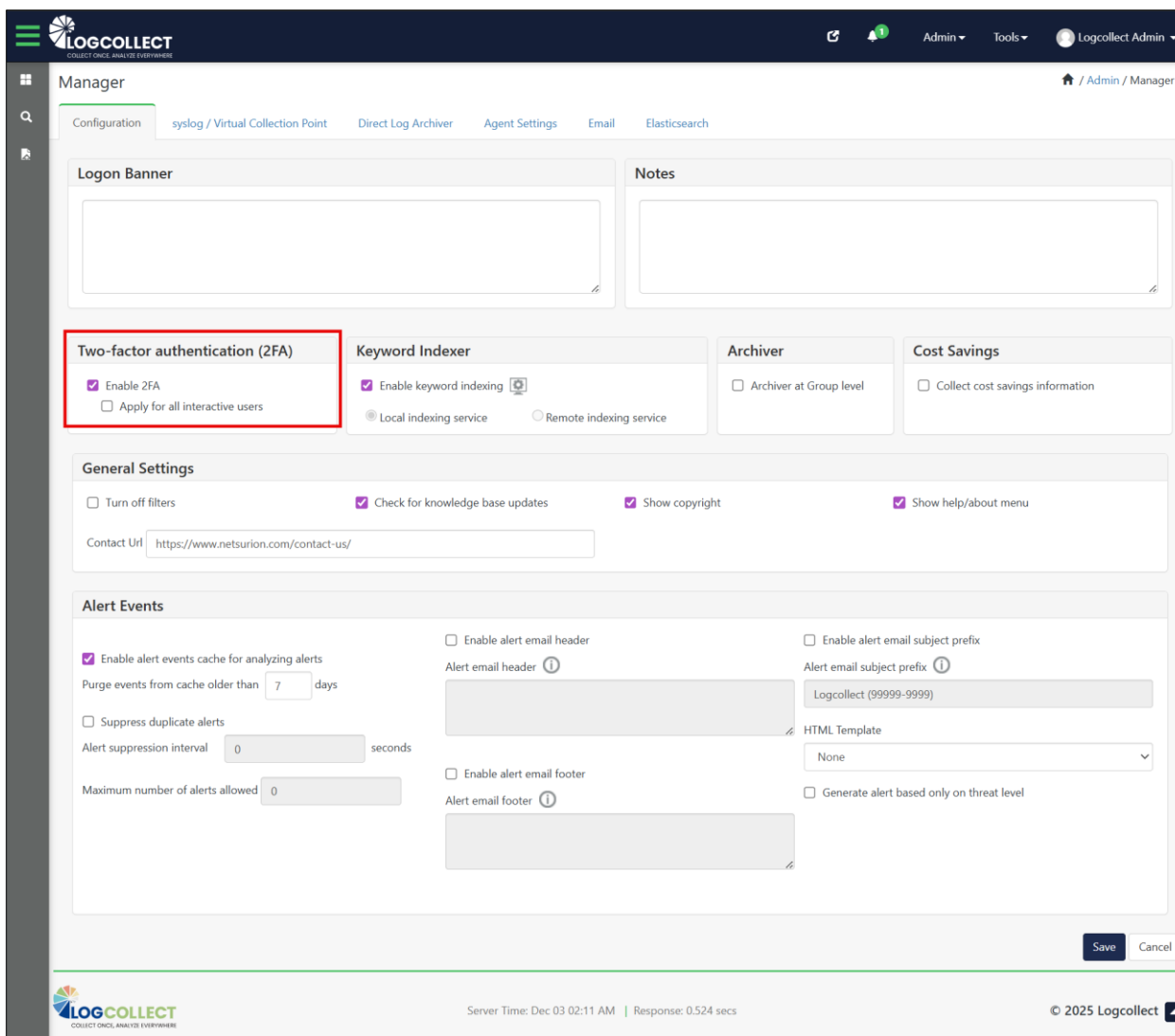
6 Enabling Two-Factor Authentication in Logcollect Web Console

To enable Two-Factor Authentication in Logcollect Web Console, perform the following steps:

1. Log into the Logcollect Web Console.
2. Click **Admin > Manager**.

 Alerts	 FAQ Tile Configuration	 Parsing Rules
 Category	 Group Management	 Report Settings
 Diagnostics	 Knowledge Objects	 Systems
 Event Filters	 Manager	 Users
 Eventvault	 MITRE ATT&CK Rules	 Weights

3. In the 2FA authentication section, select the **Enable 2FA** option, and click **Save**.



Manager

Configuration | syslog / Virtual Collection Point | Direct Log Archiver | Agent Settings | Email | Elasticsearch


Logon Banner

Notes

Two-factor authentication (2FA)

☒ Enable 2FA
☐ Apply for all interactive users

Keyword Indexer

☒ Enable keyword indexing 
☒ Local indexing service ☐ Remote indexing service

Archiver

☐ Archiver at Group level

Cost Savings

☐ Collect cost savings information

General Settings

☐ Turn off filters ☒ Check for knowledge base updates ☒ Show copyright ☒ Show help/about menu

Contact Url

Alert Events

☒ Enable alert events cache for analyzing alerts
 Purge events from cache older than days

☐ Suppress duplicate alerts
 Alert suppression interval seconds

Maximum number of alerts allowed

☐ Enable alert email header
 Alert email header

☐ Enable alert email footer
 Alert email footer

☐ Enable alert email subject prefix
 Alert email subject prefix

HTML Template

☐ Generate alert based only on threat level

Save **Cancel**
















Server Time: Dec 03 02:11 AM | Response: 0.524 secs

© 2025 Logcollect

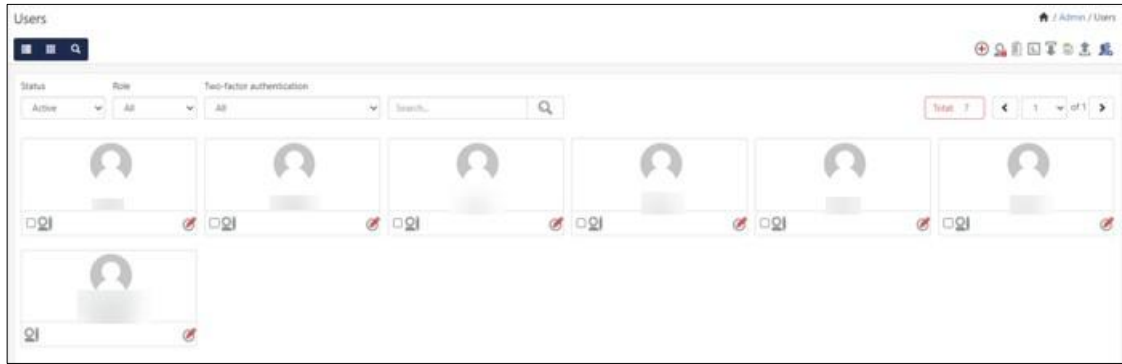
- Now the 2FA option will be enabled by default while creating new users.

6.1 Adding New Users

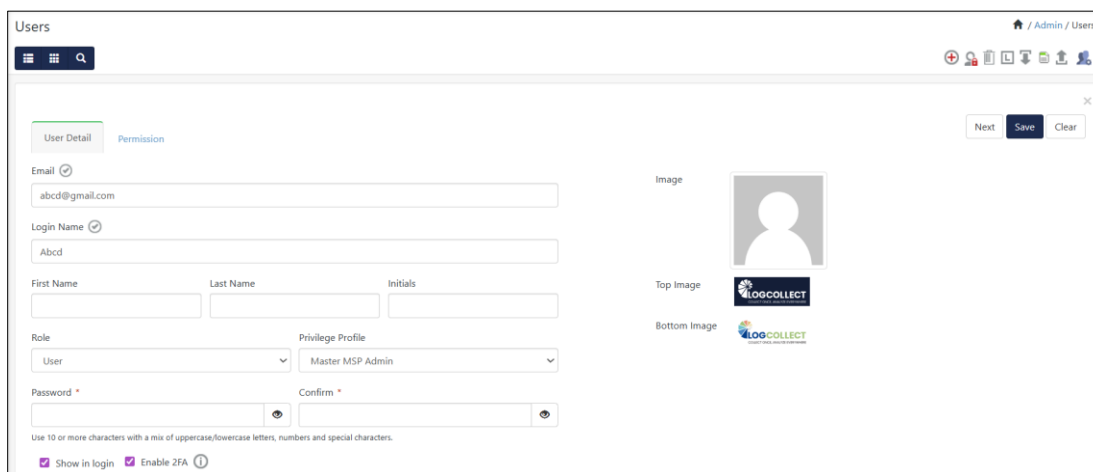
- Click **Admin > Users**.

 Alerts	 FAQ Tile Configuration	 Parsing Rules
 Category	 Group Management	 Report Settings
 Diagnostics	 Knowledge Objects	 Systems
 Event Filters	 Manager	 Users
 Eventvault	 MITRE ATT&CK Rules	 Weights

- Click the + icon to add a new user.



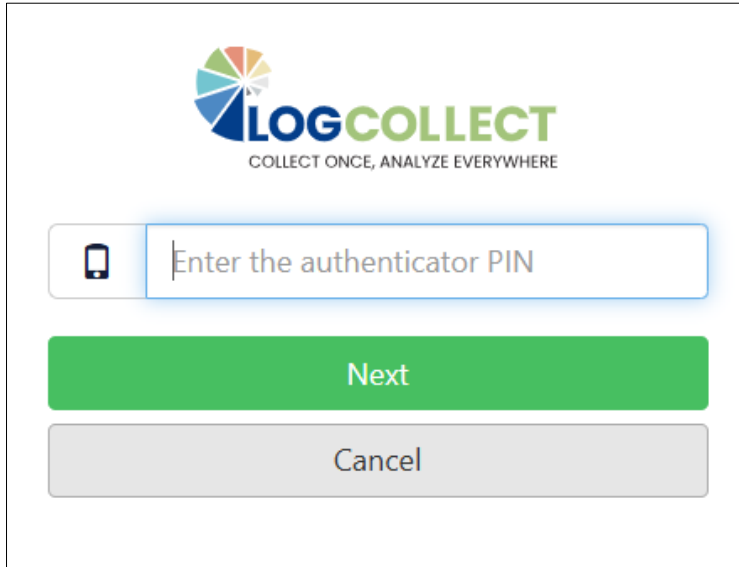
- The **User Detail** page will be displayed as shown below. The 2FA option is enabled by default for the users.



- Enter the required details and click **Save**. Next time, if the user logs into the Logcollect Web console, the user will be asked to provide their authentication to log in.

Note

You may also choose to unselect the **Enable 2FA** option to disable the feature.



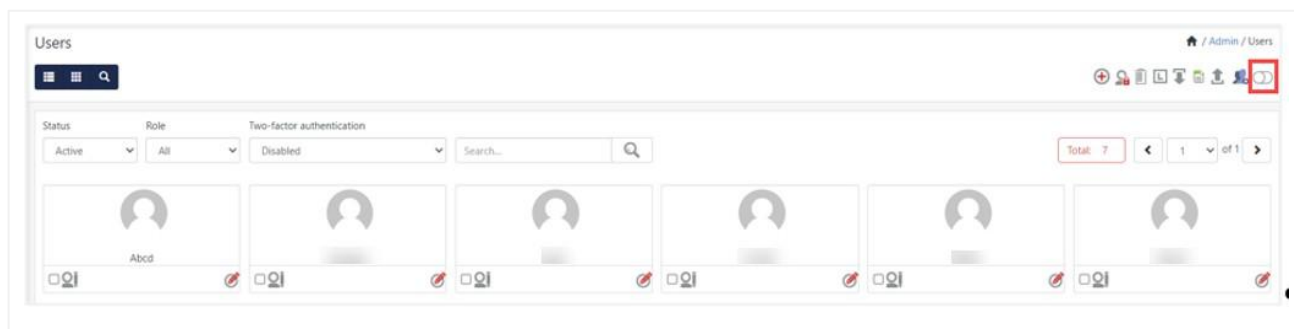
The image shows a mobile app interface for LogCollect. At the top is the LogCollect logo with the tagline 'COLLECT ONCE, ANALYZE EVERYWHERE'. Below the logo is a text input field with a mobile phone icon on the left and the placeholder text 'Enter the authenticator PIN'. Underneath the input field are two buttons: a green 'Next' button and a grey 'Cancel' button.

Refer to the following link to configure the Authenticator App.

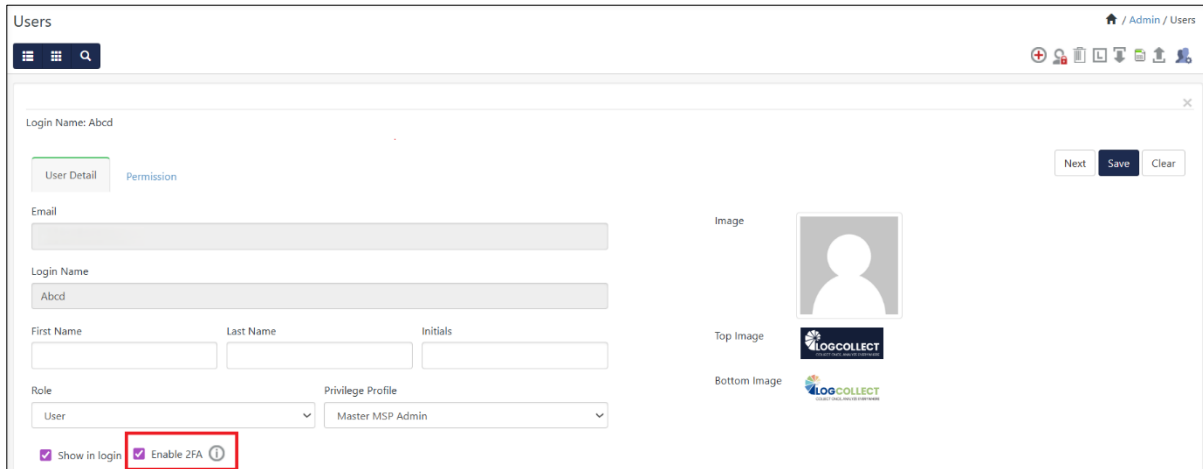
<https://logcollect.com/wp-content/uploads/support-docs/How-To-Configure-Two-Factor-Authentication-using-Authenticator-App-Logcollect.pdf>

6.2 Enabling 2FA Option for Existing Users

1. Click **Admin > Users**.
2. In the **Two-Factor Authentication** dropdown, select the **Disabled** option. All the user accounts with disabled 2FA will be displayed as shown below:



3. Click the **Edit** icon on the corresponding user account for which you want to enable 2FA and then click **Save**. Two-factor authentication will be enabled for the selected user.



Users

Admin / Users

Login Name: Abcd

User Detail | Permission

Next Save Clear

Email

Login Name

Abcd

First Name Last Name Initials

Role Privilege Profile

User Master MSP Admin

☒ Show in login ☒ Enable 2FA ⓘ

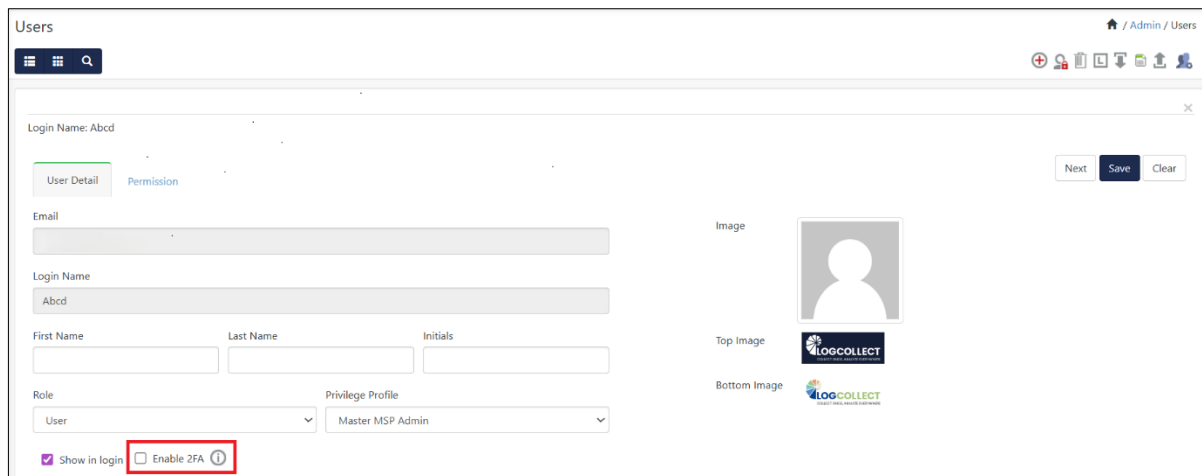
Image

Top Image

Bottom Image

6.3 Disabling 2FA

1. Click **Admin > Users**.
2. Click **Add User**, and then unselect the 2FA option to disable the feature, and then click **Save**.



Users

Admin / Users

Login Name: Abcd

User Detail | Permission

Next Save Clear

Email

Login Name

Abcd

First Name Last Name Initials

Role Privilege Profile

User Master MSP Admin

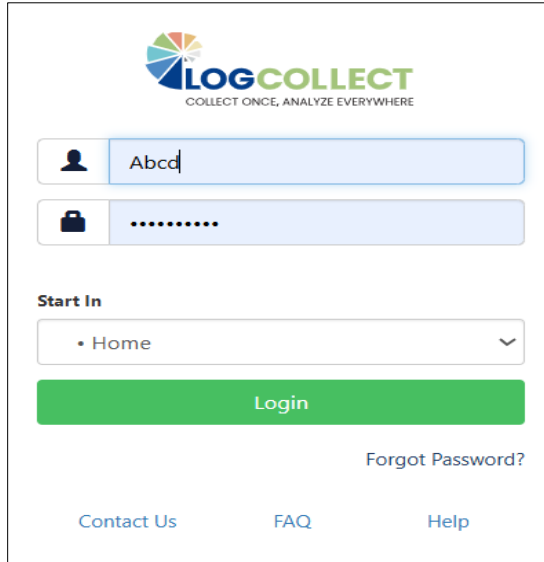
☒ Show in login ☐ Enable 2FA ⓘ

Image

Top Image

Bottom Image

3. Next time, when the user logs into the Logcollect Web console, the user will be prompted to reset the password.



LOGCOLLECT
COLLECT ONCE, ANALYZE EVERYWHERE

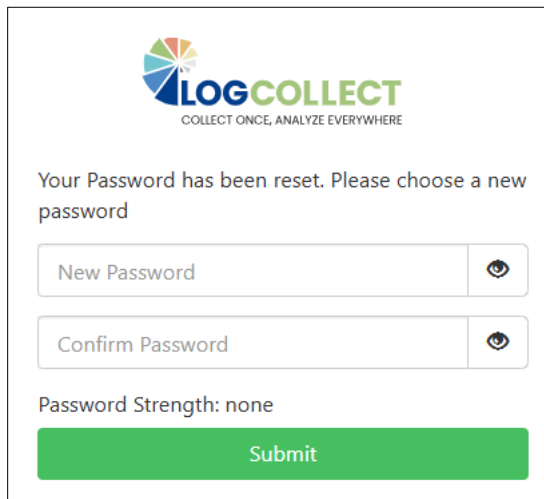
Start In

• Home

Login

[Forgot Password?](#)

[Contact Us](#)
[FAQ](#)
[Help](#)



LOGCOLLECT
COLLECT ONCE, ANALYZE EVERYWHERE

Your Password has been reset. Please choose a new password

Password Strength: none

Submit

7 Checking for Vulnerability Scanner

It is a standard practice to scan critical machines for vulnerabilities. Scan the hardened Logcollect system for vulnerabilities. Some of the following vulnerabilities may be reported.

Note

The possibilities and their solutions/configuration changes are shown in the below table.

Vulnerability	Impact	Recommended actions
'rsh' Remote Shell Service Enabled (service-rsh) (CVE1999-0651)	<p>This is a legacy service often configured to blindly trust some hosts and IPs.</p> <p>The protocol does not support encryption or any sort of strong authentication mechanism.</p>	<p>Logcollect uses default port 514 for receiving syslog messages.</p> <p>Configure the firewall to allow incoming connections on port 514 from trusted hosts or use another port for receiving syslog in Logcollect Manager Configuration.</p>
The FTP server does not support the AUTH command (ftpgeneric-0007)	<p>By default, FTP clients send user credentials (user ID and password) in clear text to the FTP server. This allows malicious users to intercept the credentials if they can eavesdrop on the connection.</p>	<p>FTP server is installed on the Logcollect Manager to transfer custom logs from remote sources.</p> <p>In the case of IIS 6, FTP does not support the AUTH command. Use a third-party FTP that supports the AUTH command and configure FTP over SSL.</p>
Untrusted TLS/SSL server X.509 certificate (tlsuntrusted-ca)	<p>The server's TLS/SSL certificate is signed by a Certification Authority (CA) whose publisher is not known or a trusted one. It could indicate that a TLS/SSL man-in-the-middle is taking place and is eavesdropping on TLS/SSL connections.</p>	<p>Obtain a new certificate signed by trusted certificate authorities, such as Thawte or Verisign.</p>
Guest access allowed to Windows event logs	<p>Windows event logs have been configured to allow guest access.</p> <p>They contain information about application, security, and system events taking place on the local machine. These logs can contain sensitive information, therefore only administrators should be allowed to access/read them.</p>	<p>For each event log listed, find the following registry key:</p> <p>HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Eventlog\[logname]</p> <p>Under this key, add a DWORD value named "RestrictGuestAccess" and set it to 1.</p>
TCP timestamp response (generictcp-timestamp)	<p>The remote host responded with a TCP timestamp. The TCP timestamp response can be used to approximate the remote host's uptime, potentially aiding in further attacks. Additionally, some operating systems can be fingerprinted based on the behavior of their TCP timestamps.</p>	<p>Disable the TCP timestamp responses on Windows.</p> <p>For each event log listed, find the following registry key:</p> <p>HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters</p> <p>Under this key, add a DWORD value named "Tcp1323Opts" and set it to 1.</p>

Vulnerability	Impact	Recommended actions
Microsoft IIS default installation/welcome page installed (http-iis-defaultinstall-page)	The IIS default installation or "Welcome" page is installed on this server. This usually indicates a newly installed server that has not yet been configured properly and is not known about.	Replace the default page with a relevant content page.
General Security Issue Clear text authentication	FTP specification primarily provides a means for authenticating User IDs and passwords stored in clear text, though there are secure mechanisms to authenticate. User IDs and passwords can be stolen by a malicious user if he can monitor FTP traffic.	FTP server is installed on the Logcollect Manager to transfer custom logs from remote sources. In case of IIS 6, FTP does not support the AUTH command. Either use a third-party FTP that supports the AUTH command and configure FTP over SSL or configure the FTP server to allow connection from a trusted host.

About Logcollect

Logcollect is a software-only telemetry pipeline which supports the collection, enrichment, transformation and routing of security data from sources to multiple destinations. It is targeted to security operations that are struggling with distributing large volumes of disparate data, high operational costs, alert fatigue and missed threats. It is available as a software license or hosted in AWS. It is backed by a team that has extensive experience with security logging, SIEM and regulatory compliance. Collect once, analyze everywhere.

Headquartered in Ft. Lauderdale, FL, Logcollect is a leader in Log Collection. Learn more at www.Logcollect.com.

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