CA SiteMinder®

Agent for SharePoint Guide

12.5.1 for SharePoint 2010

CA Technologies Product References

This document references the following CA Technologies products:

- SiteMinder®
- CA DLP Content classification service

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Documentation Changes

The following documentation updates have been made since the last release of this documentation:

- How to Configure WebDAV to Accomodate Microsoft Hot Fixes 2563214 and 2647954—New work-around that is based on STAR Issue 21082554:01 CQ159153, CQ161166
- How to Create Alternate Access Mappings—Revisions that are based on STAR Issue 21082554:01
- Enable SSL for IIS web application—Clarified step 5 based on STAR Issue 21082554:01
- How to Configure Multiple User Directories—New feature for this release.
- Configure Office Client Integration for the Agent for SharePoint—Revisions that are based on STAR Issue 2018554:01
- How to Configure Single Log Out—New feature for this release.
- How to Enable SSL on the Agent for SharePoint—Revisions that are based on STAR Issue 2018554:01
- How to Disable Client Loopback—Revisions that are based on STAR Issue 2018554:01
- How to Monitor Data with CA Introscope—New feature for this release.
- How to Use the SessionLinker—New feature for this release.
- Create a User Directory Connection—Added a cross-reference hyperlink to the How to Configure Multiple User Directories scenario.
- Verify the Agent for SharePoint is Functioning—Changed sequence to test default proxy rules before modifying them.
- CA DLP Content Classification Service and the Agent for SharePoint—New chapter to separate CA DLP topics.
- Attributes Appear Truncated in SharePoint—Changed the name of the configuration file from "wsfed.properties" to "EntitlementGenerator.properties"
- Configure the Agent for SharePoint for Web Applications That Use NTLM Authentication—Configuration instructions for supporting proxy connections to web applications that use NTLM.

Contents

Chapter 1: Introduction

This section contains the following topics:

Purpose and Audience

The SiteMinder Agent for SharePoint is a gateway or a proxy server-based solution that lets you protect resources in your Microsoft SharePoint environment with SiteMinder.

This guide describes how to install and configure the SiteMinder Agent for SharePoint so you can protect resources stored on SharePoint. This guide is intended for the following SiteMinder and SharePoint personnel:

- SharePoint Administrators
- SiteMinder Administrators

This guide assumes that SharePoint administrators can perform the following tasks:

- Create a SharePoint web application
- Add SharePoint web applications to site collections
- Manage SharePoint site collection administrators
- Work with web application access policies in SharePoint
- Add, modify, or remove files or other content to a SharePoint web application
- Manage SharePoint users and user profiles

This guide assumes that SiteMinder administrators can perform the following tasks:

- Install and configure SiteMinder Agent for SharePoint and Policy Servers
- Create SiteMinder policies, realms, rules, and responses to protect resources
- Manage SiteMinder user directories

New Architecture to Support SharePoint 2010

The SiteMinder Agent for SharePoint 2010 features a new architecture designed to protect your SharePoint 2010 resources. This new architecture is based on industry standards and uses a proxy model to streamline enterprise deployments of the Agent for SharePoint, while supporting future growth.

This agent also includes a new SharePoint connection wizard which simplifies the process of creating connections between your SiteMinder objects and SharePoint resources. This wizard creates the SiteMinder objects you need on the Policy Server and generates a PowerShell script that properly configures your SharePoint central administration server.

Major Differences between Agent for SharePoint Releases

The following table describes the major differences between the Agent for SharePoint releases:

Agent for SharePoint 2007	**Agent for SharePoint 2010**
Required installation of the following on each SharePoint 2007 server: ■ A SiteMinder Web Agent ■ A SiteMinder Agent for SharePoint	Deployed as a proxy-server based solution in front of SharePoint 2010 for more centralized configuration and management.
Used one of two SharePoint 2007 authentication methods: ■ Windows Impersonation ■ ASP.NET Forms-based authentication (FBA)	Uses the new SharePoint 2010 claims-based authentication option, which is based on industry-standard protocols (WS-Federation / SAML 1.1).
Used a SiteMinder Management UI, installed into SharePoint, to configure protection of SharePoint resources. Included a Role and Membership Provider to facilitate People Picker access to SiteMinder user directories.	Configuration and administration enhancements include: ■ New Connection Wizard to automate the configuration of required SiteMinder objects and simplify the creation of a Trusted Identity Provider inside SharePoint 2010. ■ Farm-wide configuration of various aspects of the SiteMinder integration using the new SharePoint 2010 PowerShell interface. ■ Improved People Picker usability through a new Claims Provider component.

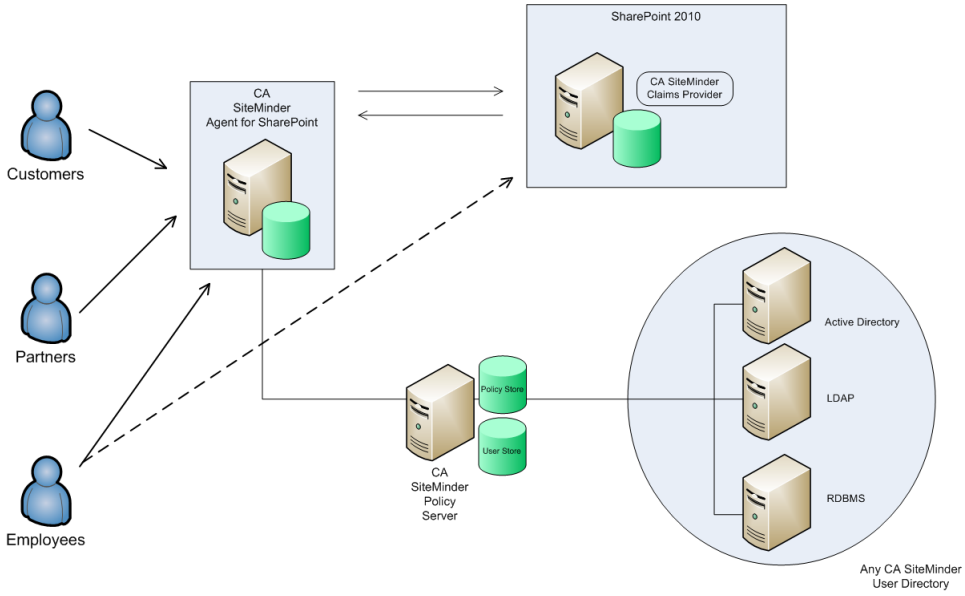
SiteMinder and Microsoft SharePoint

The SiteMinder Agent for SharePoint integrates Microsoft SharePoint 2010 into the SiteMinder web access management environment.

An access control solution uses policy decision points and policy enforcement points. The SiteMinder Agent for SharePoint uses a gateway or proxy server policy enforcement point to protect resources in a Microsoft SharePoint environment. In the network topology, these enforcement points are physically placed between the user and the resource on SharePoint server.

SiteMinder Agent for SharePoint Components and Microsoft SharePoint

The following illustration shows the relationship between the SiteMinder components and the SharePoint server.



In the previous illustration, customers, partners, and employees request resources from SharePoint. The requests must pass through the SiteMinder Agent for SharePoint. The agent provides authentication, policy enforcement, and federated single sign-on capabilities. The SiteMinder Policy Server acts as the policy decision point for authentication. The SiteMinder Policy Store which is connected to the Policy Server stores policies and other configuration objects. This solution enables external users to access protected SharePoint resources and internal users to access SharePoint resources.

SiteMinder Components used with SharePoint

The SiteMinder Agent for SharePoint solution contains the following SiteMinder components in a specific configuration designed to protect SharePoint resources.

Policy Server

The Policy Server acts as the Policy Decision Point (PDP). The Policy Server evaluates and enforces access control policies, for requests made to resources protected by agents, such as the SiteMinder Agent for SharePoint.

Agent for SharePoint

The Agent for SharePoint is a stand-alone server that provides a proxy-based solution for access control. The agent acts as the policy enforcement point (PEP), standing in the network topology physically between the user and the resource on the SharePoint server.

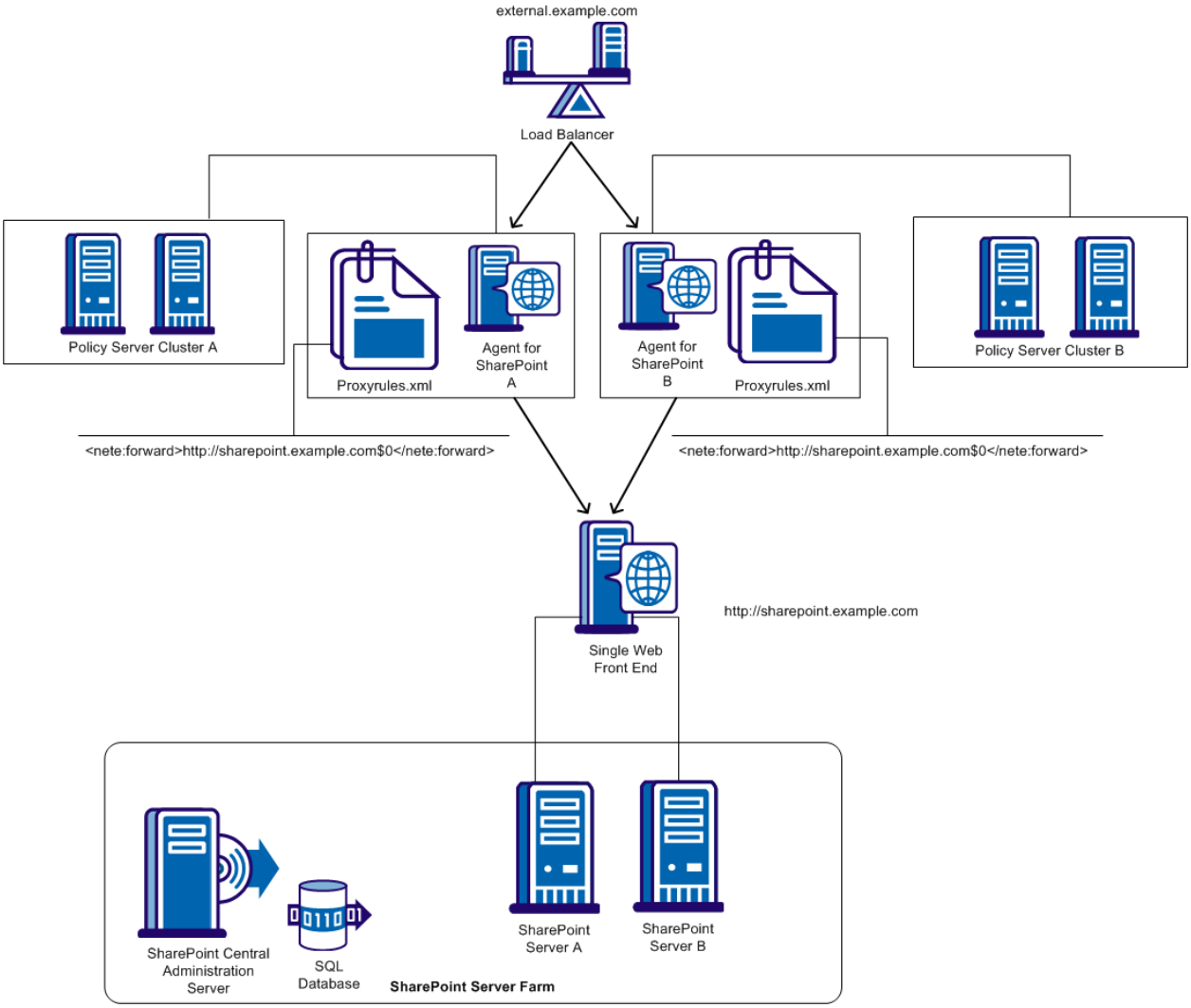
Claims Provider

The SiteMinder Claims Provider is used for configuring particular claim values to grant permissions to SharePoint resources. The Claims Provider is packaged as a SharePoint solution (WSP file) with its feature receiver.

Note: Upgrade any SiteMinder components in your environment that do not meet the minimum versions.

Example SharePoint Farm Deployment with Single Web Front End

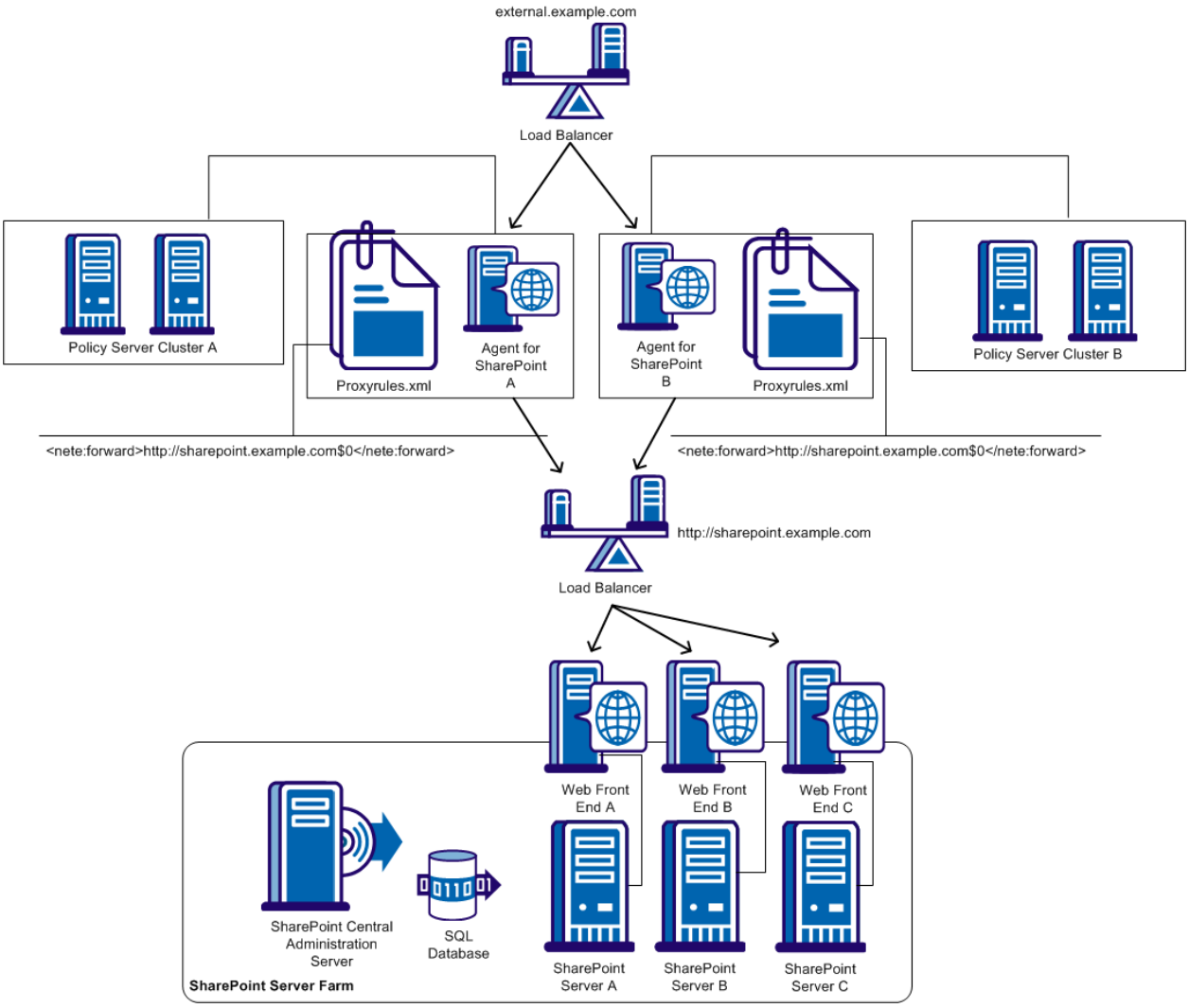
If the servers in your SharePoint farm are associated with a single web front end (WFE) server, the following illustration provides one possible deployment scenario:



In the previous example, your setting in the proxyrules.xml file is <nete:forward>http://sharepoint.example.com$0</nete:forward>

Example SharePoint Farm Deployment with Multiple Web Front Ends and Load Balancing

If your SharePoint farm has servers associated with a multiple web front end (WFE) servers, the following illustration provides one possible deployment scenario:



In the previous example, your setting in the proxyrules.xml file is <nete:forward>http://sharepoint.example.com$0</nete:forward>

Load Balancers and Session Affinity

Load balancers that use session affinity dynamically select the best-performing server to when establishing a session. The load balancers send subsequent requests for the same session back to the same server.

Configuring session affinity helps your load balancers operate more efficiently because the SiteMinder caches are used to their full potential. For example, sessions are stored in the Web Agent cache when they are created. Since the session is cached, subsequent requests for resources during the same session are validated using the information from the Web Agent cache. The Policy Server is not contacted, and efficiency is increased.

Chapter 2: Federation and Claims-based Authentication

Enterprise applications and services are increasingly distributed across organizations. They have customers and partners who reside outside of the enterprise that need access to SharePoint applications within the enterprise. As a result, the need for secure but seamless access to SharePoint resources has increased.

SiteMinder Agent for SharePoint lets you protect your SharePoint resources using SiteMinder web access management capabilities. The federation capabilities allow partnering organizations to trust and share digital identities and attributes of employees, customers, and suppliers across trust domains. These trust domains can exist within one organization or between different organizations.

These federation capabilities also provide single sign-on across partner sites. The Agent for SharePoint provides a custom SiteMinder solution which issues claims and packages claims into security tokens, used to validate and access SharePoint resources.

The following section gives an overview about federation and claims-based authentication used in this solution.

Claims-based Authentication Overview

Claims-based authentication enables applications to authenticate users with the minimum required information. Claims-based authentication allows applications to verify and validate user claims.

The following list explains the fundamental concepts of Claims-based authentication:

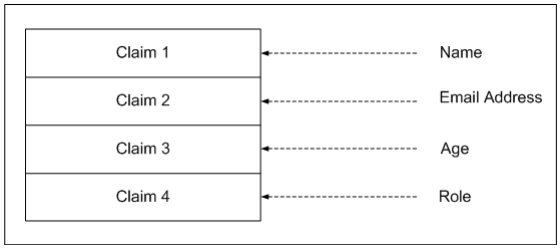
- Claims
- Tokens
- Security Token Service (STS)
- Identity Provider (IdP)
- Claims Provider

Claims

Claims represent any identity information about a user. In some instances, the user can be an application or a computer. A claim enables the user to gain access to multiple resources, such as applications and network resources, without entering credentials multiple times.

A claim is a statement about a user (for example, a name). The bits of identity information include, name, e-mail address, age, or organizational roles and responsibilities. A claim can also include the right of a user to perform something like access a file. Claims can also contain a restrictive right like the financial limit of a user.

A claim is given one or more values and then packaged in security tokens issued by a security token service (STS).



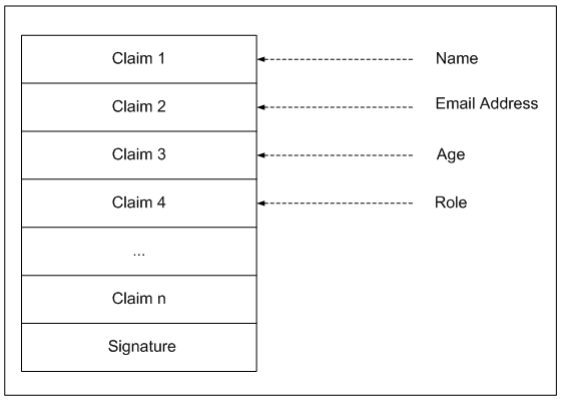
The previous illustration represents a claims token. The illustration shows claim values inside the token.

Tokens

Claims information is transferred in security tokens. Each token contains a set of one or more claims, and contains information about the user to whom this token applies. A security token service (STS) issues the token.

Tokens can be issued in different formats, such as Security Assertion Markup Language (SAML) tokens or WS-Federation (WS-FED) tokens. Security tokens can be signed with an X.509 certificate to protect the contents of the token in transit. The application that receives the token validates it before using the claims.

The Agent for SharePoint uses WS-FED tokens and X.509 certificates to protect its content.



The previous illustration represents a security token. This token contains claim values and a digital signature.

Security Token Service (STS)

The STS (Security Token Service) is a web service that issues, manages, and validates security tokens. STS makes assertions based on the evidence that it trusts, whoever trusts it.

Identity Provider (IdP)

An identity provider is a system that creates, maintains, and manages identity information and asserts identities to other service providers within a federation. For example, a user Adam, has an email address of adam@example.com and authenticated to this domain using a password mechanism.

An identity provider is also known as a SAML authority, asserting party, trusted identity provider, or source site, and is often abbreviated as IdP.

In the SiteMinder Agent for SharePoint solution, the Agent for SharePoint is the IdP STS. The identity provider owns the STS and affirms the tokens created by the STS.

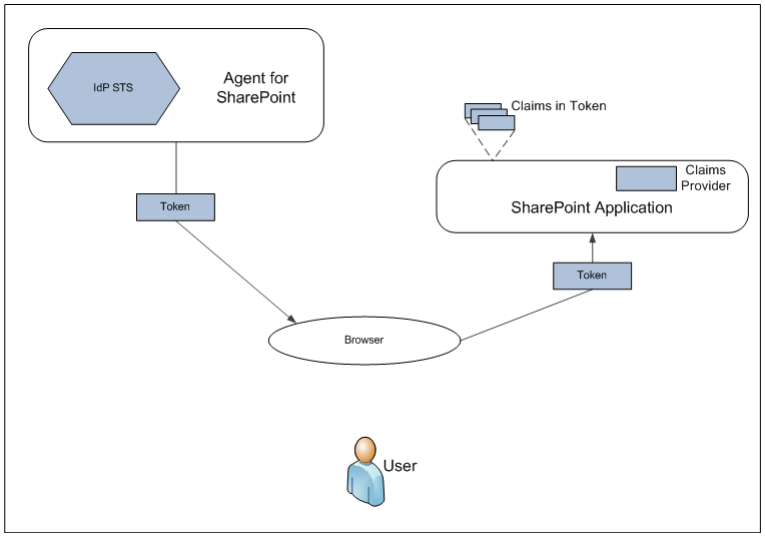
Claims Provider

A SiteMinder claims provider uses virtual attribute mappings in your SiteMinder directories to support searches of your SiteMinder users with the SharePoint people picker.

The claims provider finds and selects user, group, and role-based claim values.

Example Federation and Claims-based Authentication Scenario

The following illustration provides a possible federation and claims-based authentication scenario.



In the illustration, a SharePoint application works on behalf of a user, such as a web browser or another client. This SharePoint application asks an IdP-STS (Agent for SharePoint) for a token containing claims for this user. An HTTP protocol makes the request, the IdP-STS authenticates the user in some way, such as verifying the password of the user. Therefore, the IdP-STS can be certain that the user is authentic.

The request sent to an IdP-STS typically contains a URI identifying the SharePoint application this user wishes to access. The IdP-STS asserts the identity of the user and the application. Once the STS finds account information and other attributes about the user and the application, it generates the token and returns it to the browser.

How the SharePoint Connection Wizard Simplifies Deployment

This release of the Agent for SharePoint includes a connection wizard that automatically creates the Federation objects it requires on your CA SiteMinder Policy Server. The connection wizard also creates a PowerShell script that you modify and run on your SharePoint central administration server. This PowerShell script creates the Trusted Identity provider (IdP).

Chapter 3: Migrating from SharePoint 2007 to SharePoint 2010

This section contains the following topics:

Upgrades to the SiteMinder Agent for SharePoint

No direct upgrade path exists for moving from the SiteMinder Agent for SharePoint with SharePoint 2007 to the SiteMinder Agent for SharePoint with SharePoint 2010. As discussed in the Overview chapter, the agent used with SharePoint 2010 uses a claims-based authentication model supported by SharePoint 2010. The previous agent for use with SharePoint 2007 used different authentication models.

How to Migrate the SiteMinder Agent for SharePoint from SharePoint 2007 to SharePoint 2010

Your organization decides to move from a SharePoint 2007 environment to a SharePoint 2010 environment. You can repurpose your SharePoint 2007 hardware when you migrate to SharePoint 2010. If you decide to do so, consider the steps outlined in this topic.

To migrate the SiteMinder Agent for SharePoint from SharePoint 2007 to SharePoint 2010 complete, the following steps:

1. Uninstall the SiteMinder Agent for SharePoint running on the SharePoint 2007 system. The uninstall procedure is documented in the CA SiteMinder Agent for Microsoft SharePoint Guide r12.0.
2. Upgrade the SharePoint environment to SharePoint 2010.
3. Install the SiteMinder Agent for SharePoint 12.5.1 as described in this guide.

Note: You may be able to reuse some of the sites from your SharePoint 2007 deployment in your SharePoint 2010 deployment. See Microsoft.com and SharePoint 2010 documentation for SharePoint migration recommendations, including the migration of existing user identities to the claims format.

Chapter 4: Prerequisites

This section contains the following topics:

Policy Server Prerequisites

The SiteMinder Policy Server requires the following prerequisites to operate with the Agent for SharePoint:

- SiteMinder Policy Server 12.5, 12.0 SP3 CR05 NIN Build 443 and above.

  Important! Multiple directory connections are supported with Policy Server version 12.5 and above only.

- SiteMinder Administrative UI 12.5 (any CR), 12.0 SP3 CR05 NIN Build 443 and above.
- (For Office Client Integration) HTTP methods for WebDAV defined in the SiteMinder Agent type
- An SSL Certificate
- The following open ports:
  - Ports for accounting, authentication, and authorization requests (44441, 44442, 44443 respectively)
  - Port for Connection Wizard (44444)
  - Ports for directory server connections.

Agent for SharePoint Prerequisites

Release 12.5.1 of the Agent for SharePoint is the minimum version required.

The Agent for SharePoint also requires the following:

- A 32-bit Java Development Kit version 1.6.0_16 or higher is required on the SiteMinder Agent for SharePoint system.

  Important! The Agent for SharePoint cannot be installed on a computer that hosts any other web server. The Agent for SharePoint operates as a stand-alone proxy-based solution.

- Open the following ports on the Agent for SharePoint:
  - Port 8009 (ajp13)
  - Port 8005 (Tomcat shutdown)
  - Port for HTTP requests on the embedded Apache web server
  - Port for HTTPS requests on the embedded Apache web server
  - Port for HTTP requests by the Claims search service
  - Port for HTTPS requests by the Claims search service

Agent for SharePoint Prerequisites for Linux Operating Environments

If you want to install your Agent for SharePoint on a Linux operating environment, verify that your computer meets the following prerequisites:

- Required Linux patches (see page 31).
- Required Linux libraries (see page 31).
- Required Linux tools (see page 31).

More information:

Registration Failed with Unknown Error 127 (see page 293)

Required Linux Patches

The following Linux patches are required:

For Linux release 2.1

glibc-2.4.2-32.20 for Linux Application Server 2.1

For Web Agents running on 64-bit Linux systems

- Binutils 2.17
- GCC 4.1.0

Required Linux Libraries

If you are installing or upgrading a Linux version of this component, the following is required on the host system:

`compat–libstdc++–33.3.2.3–`*`patch_version`*`.i386.rpm`

Install this rpm to be sure that you have the appropriate 32-bit C run–time library for your operating system.

Linux Tools Required

Before installing a SiteMinder Web Agent on a Red Hat Apache 2.2 web server running on the Red Hat Enterprise Linux operating environment, install all the items included in the Red Hat Legacy Software Development tools package.

Microsoft Prerequisites

The SiteMinder Agent for SharePoint is designed for Microsoft SharePoint 2010.

Verify that your SharePoint servers have the following prerequisites:

- (For Office Client Integration) use Office 2007 SP2 or higher.
- Open Ports for your SharePoint resources (set during SharePoint installation or configuration)

Note: For more information about specific patches or service packs, and the latest version information, see the Platform Support Matrix.

More information:

Locate the SiteMinder Agent for SharePoint Platform Support Matrix (see page 325)

Verify SharePoint Installation

Use the following process to verify that SharePoint is installed correctly before configuring SharePoint with the SiteMinder Agent for SharePoint.

Follow these steps:

1. Log on to SharePoint 2010 Central Administration and create a SharePoint site with any template.

   Note: Verify that the Windows user has administrator privileges.

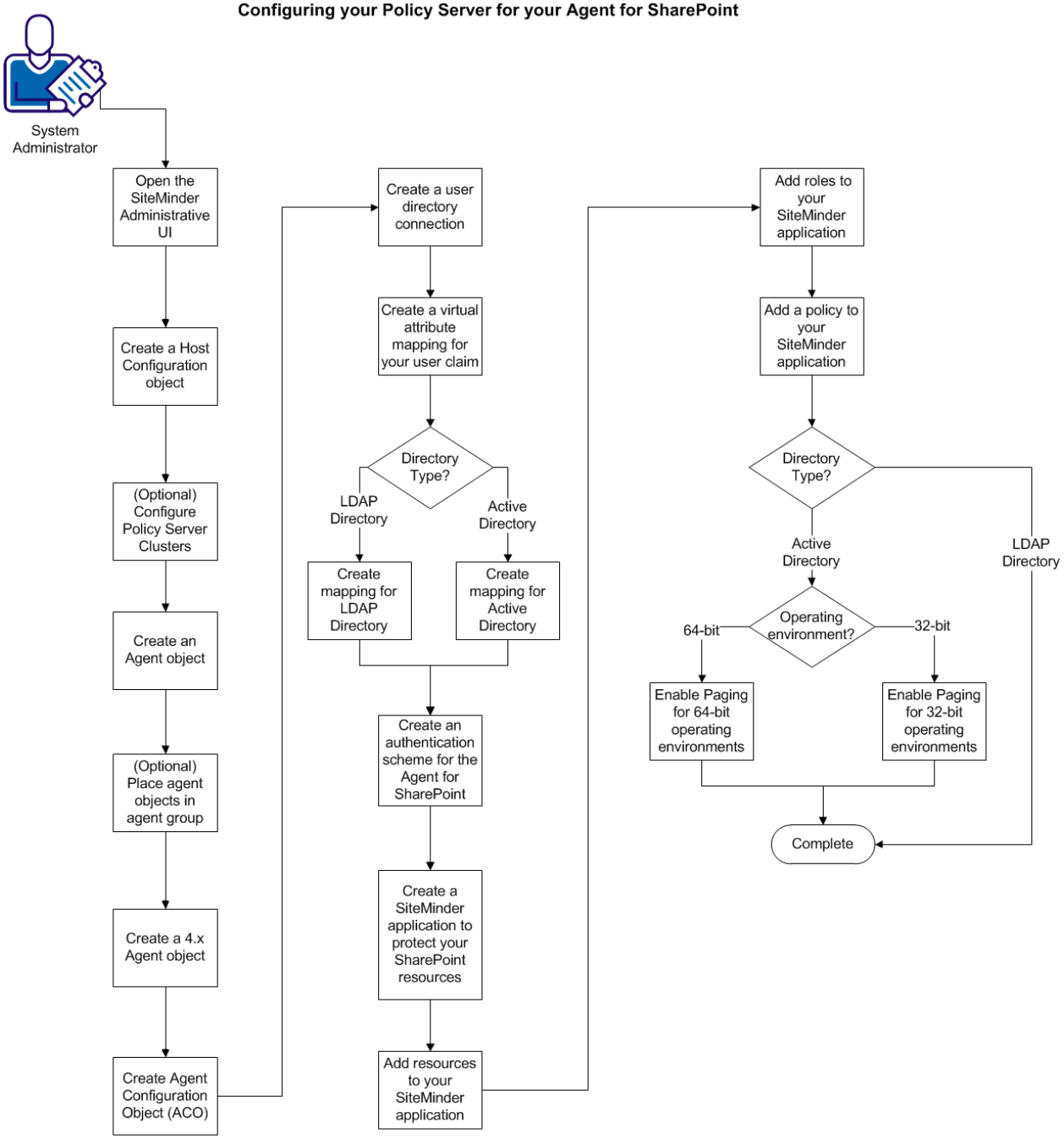
2. Log on to the newly created SharePoint site.
3. Perform various actions like uploading documents and adding contacts.

Chapter 5: How to Configure your SiteMinder Policy Server

The Policy Server authenticates and authorizes users who request access to the resources in your SharePoint environment. The Policy Server stores items that you create to define the users in your SharePoint environment and the resources that you want to protect with SiteMinder.

The following illustration describes the configuration process that prepares your Policy Server for use with the Agent for SharePoint:

Configuring your Policy Server for your Agent for SharePoint



To configure your Policy Server, follow these steps:

1. Open the SiteMinder Administrative UI (see page 36).
2. Create a host configuration object (see page 36).
3. (Optional) Configure Policy Server clusters (see page 37).
4. Create an Agent Object (see page 38).
5. (Optional) Create agent groups for multiple agent objects (see page 39).
6. Create a 4.x agent object for the SharePoint Connection wizard (see page 40).
7. Create an Agent Configuration Object (see page 41).
8. Create a user directory connection (see page 45).
9. Create a virtual attribute mapping for your user claim (see page 46).
10. Create an authentication scheme for the Agent for SharePoint (see page 49).
11. Create a SiteMinder application to protect your SharePoint resources (see page 50).
12. Add resources to your SiteMinder application (see page 53).
13. Add roles to your SiteMinder application (see page 55).
14. Add a policy to your SiteMinder application (see page 56).
15. For Active Directory user directories only, enable paging on the system hosting your Policy Server. Use the appropriate procedure for your operating environment:
    - Enable paging on 32-bit operating environments (see page 57).
    - Enable paging on 64-bit operating environments (see page 58).

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   `https://host_name:8443/iam/siteminder/adminui`

   host_name

   Specifies the fully qualified Administrative UI host system name.

2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

   Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Create a Host Configuration Object

You can create a new Host Configuration object or duplicate an existing object.

To create a host configuration object

1. Click Infrastructure, Hosts.
2. Click Host Configuration Objects.

   The Host Configuration Objects page appears.

3. Click Create Host Configuration.

4. Do one of the following:
   - (Recommended) Create a copy of an existing Host Configuration object and modify its properties. You can copy the DefaultHostSettings object and use its settings as a template for the new object. The Policy Server installation program installs the DefaultHostSettings object.

     Important! Do not directly modify and use the DefaultHostSettings object. Always copy this object and then modify it.
   - Create a new object.
5. Click OK.

   The Create Host Configuration page appears.

   Note: Click Help for descriptions of settings and controls, including their respective requirements and limits.
6. Type the name and a description.
7. In Configuration Values, specify the Host Configuration settings.
8. Click Submit.

   The Host Configuration Object is created.

Configure Clusters

Policy Server clusters are defined as part of a Host Configuration Object. When a SiteMinder agent initializes, the settings from the Host Configuration Object are used to setup communication with Policy Servers.

Note: For more information about Host Configuration Objects, see the *Web Agent Configuration Guide* and the *Policy Server Configuration Guide.*

Follow these steps:

1. Select the Infrastructure, Hosts. Host Configuration Objects.
2. Click Create Host Configuration.
3. In the Clusters section, click Add.

   The Cluster Setup section opens.

   Note: You can click Help for a description of fields, controls, and their respective requirements.
4. Enter the IP address and the port number of the Policy Server in the Host and Port fields respectively.
5. Click Add to Cluster.

   The Policy Server appears in the servers list in the Current Setup section.

6. Repeat these steps to add other Policy Servers to the cluster.
7. Click OK to save your changes.

   Your return to the Host Configuration dialog The Policy Server cluster is listed in a table.
8. In the Failover Threshold Percent field, enter a percentage of the number of Policy Servers that must be active and click Apply.

   If the percentage of active servers in the cluster falls below the percentage you specify, the cluster fails over to the next available cluster in the list of clusters. This setting applies to all clusters that use the Host Configuration Object.

   Important! The Policy Server specified in the Configuration Values section is overwritten by the Policy Servers specified in a cluster. This Policy Server is no longer used because a cluster is configured. For the value of the Policy Server parameter in the Configuration Values section to apply, do not specify any Policy Servers in a cluster. If clusters are configured, and you decide to remove the clusters in favor of a simple failover configuration delete all Policy Server information from the cluster.
9. Click Submit to save your changes.

Create an Agent Object

Agent act as policy-enforcement points (PEPs), by intercepting user requests for SharePoint resources and communicating with the Policy Server. Agent objects associate the protected resources on your SharePoint servers with the SiteMinder policies that protect those resources.

Follow these steps:

1. Click Infrastructure, Agent, Agents.
2. Click Create Agent.

   The Create Agent screen appears.
3. Click OK.

   The Create Agent: screen appears.
4. Enter a distinctive name and description.
5. Verify that the SiteMinder option button is selected and that Web Agent appears in the Agent Type drop-down list.
6. Click Submit.

   The agent object is created and a confirmation screen appears.

(Optional) Create an Agent Group for Multiple Agent Objects

If you have multiple Agent Objects in your SiteMinder environment, you can place them in agent groups. Agent groups make managing large numbers of agent objects easier.

Follow these steps:

Note: If you are an experienced SiteMinder user, you can add your agent objects to an existing agent group instead of creating a group.

1. Click Infrastructure, Agent.
2. Click Agent Groups.

   The Agent Groups page appears.
3. Click Create an agent group.

   The Create agent group screen appears.
4. Click Create a new object of type Agent Group, and then click OK.

   The Create Agent Group: screen appears.
5. Enter a distinctive name and description.
6. Verify that the SiteMinder option button is selected and that Web Agent appears in the Agent Type drop-down list.
7. Click Add/Remove.

   The Agent Group members screen appears.
8. Click the arrows to move the agent objects you want into the selected members column, and then click OK.

   The Create Agent Group screen reappears. The agent objects in the group appear in the Group Members list.
9. Click Submit.

   The agent group is created and a confirmation screen appears.

Create a 4.x Agent Object for the SharePoint Connection Wizard

The SharePoint connection wizard requires an Agent Object that supports SiteMinder 4.x functionality. Define this agent object on your Policy Servers.

Important: Do not add the 4.x agent object to any agent group, realm, or policy. This agent object exists only to support the internal operations of the Agent for SharePoint.

Follow these steps:

1. Click Infrastructure, Agent, Agents.
2. Click Create Agent.

   The Create Agent screen appears.
3. Click OK.

   The Create Agent: screen appears.
4. Enter a distinctive name and description.
5. Verify that the SiteMinder option button is selected and that Web Agent appears in the Agent Type drop-down list.
6. Click the Supports 4.x agents check box.

   The trust settings fields appear.
7. Complete the following fields:

   IP Address

   Specifies the IP Address of the Policy Server.

   Shared Secret

   Specifies a password that is associated with the 4.x Agent object. The SharePoint Connection Wizard also requires this password.

   Confirm Secret

   Confirms a password that is associated with the 4.x Agent object. The SharePoint Connection Wizard also requires confirmation of this password.
8. Click Submit.

   The agent object is created and a confirmation screen appears.

Create an Agent Configuration Object

An embedded Apache web server is part of the Agent for SharePoint. An Agent Configuration Object (ACO) on the Policy Server contains configuration parameters that control the behavior of the agent running on the embedded web server.

Agents need values in certain parameters to start. For example, all agents need one value in either of the following parameters:

- AgentName
- DefaultAgentName

Other parameters control optional functions that you can set anytime. For example, if you decide to store agent logs on your web server, you can set those parameters later. Agents do not need values in logging parameters to start.

Note: For more information about other parameters in your ACO that are not listed here, see the SiteMinder *Web Agent Configuration Guide*.

Follow these steps:

1. Click Infrastructure, Agent Configuration, Create Agent Configuration.

   The Create Agent Configuration: Search pane opens.

2. Click the following buttons:

   - Create a copy of an object of type Agent Configuration.
   - SharePoint2010DefaultSettings.

   Important! Only copy the SharePoint2010DefaultSettings ACO object. Do not copy any other object in the list.

3. Click OK.

4. Type the name and a description for the agent configuration object.
5. If you have multiple virtual hosts and plan to assign different Agent identities to each virtual host, use the AgentName parameter. Use the DefaultAgentName parameter, if different Agent identities for virtual hosts are not required. Remove any # character in front of the parameter name, and then change the value of *one* of the following parameters (*not* both):

   AgentName

   Defines the identity of the web agent. This identity links the name and the IP address or FQDN of each web server instance hosting an Agent.

   The value of the DefaultAgentName is used instead of the AgentName parameter if any of the following events occur:

   - The AgentName parameter is disabled.
   - The value of AgentName parameter is empty.
   - The values of the AgentName parameter do *not* match any existing agent object.

   Note: This parameter can have more than one value. Use the multivalue option when setting this parameter in an Agent Configuration Object. For local configuration files, add each value to a separate line in the file.

   Default: No default

   Limit: Multiple values are allowed.

   Limits: Must contain 7-bit ASCII characters in the range of 32-127, and include one or more printable characters. Cannot contain the ampersand (&) and asterisk (*) characters. The value is not case-sensitive. For example, the names MyAgent and myagent are treated the same.

   Example: myagent1,192.168.0.0 (IPV4)

   Example: myagent2, 2001:DB8::/32 (IPV6)

   Example: myagent,www.example.com

DefaultAgentName

Defines a name that the agent uses to process requests. The value for DefaultAgentName is used for requests on an IP address or interface when no agent name value exists in the AgentName parameter.

If you are using virtual servers, you can set up your SiteMinder environment quickly by using a DefaultAgentName. Using DefaultAgentName means that you do not need to define a separate agent for each virtual server.

Important! If you do not specify a value for the DefaultAgentName parameter, then the value of the AgentName parameter requires every agent identity in its list. Otherwise, the Policy Server cannot tie policies to the agent.

Default: No default.

Limit: Multiple values are allowed.

Limits: Must contain 7-bit ASCII characters in the range of 32-127, and include one or more printable characters. Cannot contain the ampersand (&) and asterisk (*) characters. The value is not case-sensitive. For example, the names MyAgent and myagent are treated the same.

6. Change the value of the following parameter:

   LogOffUri

   Enables full logoff and displays a confirmation page after users are successfully logged off. Configure this page so that it *cannot* be stored in a browser cache. If no logoff occurs because a cached page is used, session hijacking by unauthorized users is possible.

   When SharePoint users click the Sign out link, the following URI is used:

   - /_layouts/SignOut.aspx

   When SharePoint users click the Sign in as another user link, the following URI is used:

   - /_layouts/accessdenied.aspx?loginasanotheruser=true

   If you have multiple SharePoint web sites below a top-level SharePoint website, add the URIs of the lower-level sites to the LogOffURI parameter.

   Note: When the CookiePath parameter is set, the value of the LogOffUri parameter must point to the same cookie path. For example, if the value of your CookiePath parameter is set to example.com, then your LogOffUri must point to example.com/logoff.html

   Default: /_layouts/SignOut.aspx, /_layouts/accessdenied.aspx?loginasanotheruser=true

   Limits: Multiple URI values permitted. Do *not* use a fully qualified URL. Use a relative URI.

   Example: (for a parent site of www.example.com with two lower-level sites named finance and hr respectively) /finance/_layouts/SignOut.aspx, finance/_layouts/accessdenied.aspx?loginasanotheruser=true /hr/_layouts/SignOut.aspx, /hr/_layouts/accessdenied.aspx?loginasanotheruser=true

7. Click OK.

   The new values appear next to the parameters in the list.

8. Click Submit.

   The Create Agent Configuration Task is submitted for processing and the confirmation message appears.

Create A User Directory Connection

The Policy Server communicates with a user directory to authenticate users. The user directory needs a connection defined in the SiteMinder Administrative UI. Create a connection for your directory that contains users who require access to SharePoint resources.

Note: Only the directory vendors that SiteMinder supports operate with the Agent for SharePoint. For more information, see the Platform Support Matrix at www.support.ca.com.

Follow these steps:

1. Click Infrastructure, Directory, User Directory, Create User Directory.

   The Create User Directory pane appears.

2. Enter the Name and an optional description.
3. Select the Directory type from the Namespace list and complete the required connection information under the Directory Setup.
4. If your directory server requires credentials for searches, do the following steps:

   a. Click the Require Credentials check box.

   b. Type the user name and password of an authorized account.

   Note: The Require Credentials setting is required for LDAP directories which support anonymous search. This setting supports queries that the SiteMinder Claims Provider makes to the user directory to support the SharePoint People Picker. For more information about these credentials, see the administrator of your directory server.

5. (Optional) In the User Attributes fields, specify the user directory profile attributes that are reserved for SiteMinder.
6. Click Submit.

   The Create User Directory task is submitted for processing, and the confirmation message appears.

More information:

How to Configure Multiple User Directories (see page 204)

Create a Virtual Attribute Mapping for your User Claim

Integration with SharePoint requires at least one claim that contains an identifier that uniquely identifies the user. These claims often appear in the people picker as cryptic values, such as the following example:

```
uid=e123456
```

Such claims are difficult to associate with the intended user. The Agent for SharePoint uses a special attribute mapping which retrieves the display name of the user. This user name appears next to the related identifier claim in the people picker. After this user mapping is configured, the previous example appears in the people picker like the following one:

uid=e123456 *associated_user_name*

To create a virtual attribute mapping for your user claim, select the procedure corresponding to your type of directory server from the following list:

- Create an attribute mapping for user claims in LDAP directories (see page 47).
- Create an attribute mapping for user claims in Active Directory servers (see page 48).

Create an Attribute Mapping for User Claims in an LDAP Directory

The Agent for SharePoint requires an attribute mapping that is based on an attribute with a unique value for each user. Use the Administrative UI to create a pair of attribute mappings that defines how SiteMinder searches for user claims through the SharePoint people picker.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `useridentifier`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `uid`
9. Click OK.

   The Modify User directory page appears.
10. To create the second mapping, repeat Steps 4 through 5.
11. Click the name field, and then enter the following name:

    `smuserdisplayname`
12. Verify that the Alias option button is selected, and then click the Definition field.
13. Enter the following definition:

    `displayName`
14. Click OK.

    The Modify User directory page appears.
15. Click Submit.

    The attribute mappings are created.

Create an Attribute Mapping for User Claims in a Microsoft Active Directory Server

The Agent for SharePoint requires an attribute mapping that is based on an attribute with a unique value for each user. Use the Administrative UI to create a pair of attribute mappings that defines how SiteMinder searches for user claims through the SharePoint people picker.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `useridentifier`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `sAMAccountName`
9. Click OK.

   The Modify User directory page appears.
10. To create the second mapping, repeat Steps 4 through 5.
11. Click the name field, and then enter the following name:

    `smuserdisplayname`
12. Verify that the Alias option button is selected, and then click the Definition field.
13. Enter the following definition:

    `displayName`
14. Click OK.

    The Modify User directory page appears.
15. Click Submit.

The attribute mappings are created.

Create an Authentication Scheme for the Agent for SharePoint

SiteMinder uses authentication schemes to collect credentials and determine the identity of a user. During authentication, the agent communicates with the Policy Server to determine the proper credentials to retrieve from a user who is requesting resources.

If you are an experienced SiteMinder user, you can use an existing authentication scheme instead of creating one.

Follow these steps:

1. Click Infrastructure, Authentication, Authentication Schemes, Create Authentication Scheme.

   The Create Authentication Scheme pane appears.

2. Select Create a new object of type Authentication Scheme option, and then click OK.

   The Create Authentication Scheme: Pane appears.

3. Enter a distinctive name, and (optional) description.

4. Select the type of Authentication Scheme from the Authentication Scheme Type list.

   The options for your chosen Authentication Scheme appear.

5. Complete the fields for your Authentication Scheme.

6. Click Submit.

   The Create Authentication Scheme task is submitted for processing and the confirmation screen appears.

Create a SiteMinder Application to Protect SharePoint Resources

SiteMinder applications protect resources by combining access privileges with specific conditions. Users who have the privileges and meet the conditions are granted access to the resources they request.

This section describes creating an application with the following components:

- A resource filter to protect the authentication URL.
- A resource filter to leave the claims web service (ClaimsWS) unprotected by SiteMinder.
- A connection to the user directory that contains your SharePoint users.

These components meet the minimum requirements of the Agent for SharePoint. We recommend creating few applications and components during evaluation, testing, or initial-deployment environments. You can add more applications and components at any time.

Note: If you want to use the CA DLP classification service with your Agent for SharePoint, the application model described here is required. Do *not* use the Domain/realm model from previous SiteMinder releases. The Agent for SharePoint r12.0 SP3 did not support the CA DLP classification service.

Follow these steps:

1. Click Policies, Applications.

   The applications screen appears.

2. Click Create Application.

   The Create Application: screen appears, with the General tab selected.

3. Enter a distinctive name and optional description.

4. Create the component for the authentication URL by doing the following steps:

   a. Click the Component Name field, and type a distinctive name to describe the SharePoint resources you want to protect, such as, "Protected SharePoint Resources."

   b. Verify that Web Agent appears in the Agent Type drop-down list.

   c. Click Lookup Agent/Agent Group.

      The Select Agent or Agent Group screen appears.

   d. Click the option button that corresponds to your Agent Object, and then click OK.

Important: Do not add the 4.x agent object to any agent group, application, or component. This agent object exists only to support the internal operations of the Agent for SharePoint.

e. Click the Resource Filter field, and then enter the following value:

```
affwebservices/redirectjsp/redirect.jsp
```

Verify that the field begins with *one* forward slash as shown in the following example:

```
/affwebservices/redirectjsp/redirect.jsp
```

f. Click the Authentication Scheme drop-down list, and then select the authentication scheme that you want.

g. Click OK.

5. Create the component for the ClaimsWS by doing the following steps:

a. Click Create Component.

The Create Component screen appears, with the cursor in the Component Name field.

b. Type a distinctive name to describe the SharePoint resources you want to protect, such as, "Claims Web Service."

c. Verify that Web Agent appears in the Agent Type drop-down list.

d. Click Lookup Agent/Agent Group.

The Select Agent or Agent Group screen appears.

e. Click the option button that corresponds to your Agent Object, and then click OK.

Important: Do not add the 4.x agent object to any agent group, application, or component. This agent object exists only to support the internal operations of the Agent for SharePoint.

f. Click the Resource Filter field, and then enter the following value:

```
ClaimsWS/services/WSSharePointClaimsServiceImpl
```

g. Verify that the field begins with *one* forward slash as shown in the following example:

```
/ClaimsWS/services/WSSharePointClaimsServiceImpl
```

h. Click the Unprotected option button.

i. Click the Authentication Scheme drop-down list, and then select the authentication scheme that you want.

j. Click OK.

6. Add your user directory connection by doing the following steps:

a. Click Add/Remove.

The Choose user directories screen appears.

b. Under the Available Members, click the directory connections that you want, and then click the arrow icon between the lists.

Your directory connections move to the Selected Members list.

c. Click OK.

The Choose user directories screen closes, and the Create Application: screen appears.

Note: The components in Steps 5 and 6 are the basic components the Agent for SharePoint requires to operate. For testing or production environments, create additional components for the other SharePoint URLs resources you want to protect. Possible examples of components include the following items:

- http://intranet.example.com
- http://intranet.example.com/finance
- http://intranet.example.com/investors

7. Click Submit.

The application is created and a confirmation message appears.

Add Resources to your Application

SiteMinder applications use resources to protect items in your SharePoint environment. These resources for SiteMinder applications consist of the following parts:

- Rules.
- Authentication or authorization actions which occur when a rule fires.

Note: In the previous context, resources refers only to the rules and actions that are associated with SiteMinder applications. Generally, resources indicate the items on a SharePoint server that you wish to protect, such as URLs.

Follow these steps:

1. Click Policies, Applications.

   The applications screen appears, showing a list of applications.

2. Locate the application that you created to protect your SharePoint sites, and then click the Edit icon.

   The Modify Application: screen appears.

3. Click the Resources tab.

   The Resources screen appears.

4. Click the Select a context root drop-down list, and then select the resource filter that you previously created for your SharePoint authorization URL. See the following example:

   ```
   /affwebservices/redirectjsp/redirect.jsp
   ```

5. Click Create.

   The General screen appears.

6. Enter a distinctive name, and an optional description.

7. Verify that the Web Agent actions option button is selected, and then Ctrl-click the following items in the Action list:

   - Get
   - Head
   - Options
   - Post
   - Put

8. Click OK.

   The General screen closes and the Resources screen appears.

9. Click the Select a context root drop-down list, and then select the resource filter that you previously created for the claims web service. See the following example:

```
/ClaimsWS/services/WSSharePointClaimsServiceImpl
```

10. Click Create.

    The General screen appears.

11. Enter a distinctive name, and an optional description.

12. Verify that the Web Agent actions option button is selected, and then Ctrl-click the following items in the Action list:

    - Get
    - Head
    - Options
    - Post
    - Put

    Note: The resources in Steps 4 through 12 are the basic resources that the Agent for SharePoint requires to operate. For testing or production environments, create additional resources for the other SharePoint URLs resources you want to protect. Possible examples of these resources include the following items:

    - http://intranet.example.com
    - http://intranet.example.com/finance
    - http://intranet.example.com/investors

13. Click OK.

    The General screen closes and the Resources screen appears.

14. Click Submit.

    The application resources are created and a confirmation message appears.

Add Roles to your Application

SiteMinder applications use roles to define the users or groups or organizations to which you wish to grant access to your SharePoint resources.

Follow these steps:

1. Click Policies, Applications.

   The applications screen appears, showing a list of applications.

2. Locate the application that you created to protect your SharePoint sites, and then click the Edit icon.

   The Modify Application: screen appears.

3. Click the Roles tab.

   The Roles screen appears.

4. Click Create Role.

5. Verify that the Create a new object of type Role option button is selected, and then click OK.

   The Create Role: screen appears.

6. Enter a distinctive name and optional description.

7. Create any of the following roles:

   - Roles that are based on membership in a group (member groups).
   - Roles that are based on membership in an organization (member organizations).
   - Roles that are based on user attributes (Member attributes, such as users who match a particular attribute in your user directory).

8. Click OK.

   The Create Role: screen closes, and the Modify Application: screen appears.

9. Click Submit.

   The Role is created and a confirmation message appears.

Add a Policy to your Application

Polices combine application resources and roles to protect your SharePoint environment.

Follow these steps:

1. Click Policies, Applications.

   The applications screen appears, showing a list of applications.

2. Locate the application that you created to protect your SharePoint sites, and then click the Edit icon.

   The Modify Application: screen appears.

3. Click the Policies tab.

   The Policies screen appears.

4. Click the Select a context root drop-down list, and then select the resource filter that you previously created for your SharePoint authorization URL. See the following example:

   ```
   /affwebservices/redirectjsp/redirect.jsp
   ```

5. Click the check boxes of the roles that you want to associate with your rules for the resource from Step 4.

6. Click the check boxes of the responses that you want to associate with your rules for the resource from Step 4.

7. Click the Select a context root drop-down list, and then select the resource filter that you previously created for your claims web service. See the following example:

   ```
   /ClaimsWS/services/WSSharePointClaimsServiceImpl
   ```

8. Click the check boxes of the roles that you want to associate with your rules for the resource from Step 7.

9. Click the check boxes of the responses that you want to associate with your rules for the resource from Step 7.

   Note: The policy settings in Steps 4 thorough 9 are the basic policy settings the Agent for SharePoint requires to operate. For testing or production environments, create additional policy settings for the other SharePoint URLs resources you want to protect. Possible examples of these policy settings include the following items:

   - http://intranet.example.com
   - http://intranet.example.com/finance
   - http://intranet.example.com/investors

10. Click Submit.

    The Policies screen closes. The Modify Application screen appears with a confirmation message.

Enable Paging for Searches of Active Directory User Stores (32-bit systems)

Valid for Policy Servers that are installed on Windows 32-bit operating environments that are connected to Active Directory servers.

Symptom:

I cannot use the SharePoint people picker to search my Active Directory user store.

Solution:

The Active Directory namespace does not support paging, causing searches of more than 1000 users to fail. To support searches of large numbers of users in the Active Directory namespace, set the EnablePagingADNameSpace registry key to one.

To enable paging for searches on your Windows Policy Server:

1. Open the Windows registry editor.
2. Locate the following registry key:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace`
3. Set the value of the key to 1.

To enable paging for searches on your UNIX Policy Server:

1. Navigate to *policy_server_installation_directory*/siteminder/registry
2. Open sm.registry in a text editor.
3. Locate the following text in the file:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace`
4. Set the value of the key to 1.

Enable Paging for Searches of Active Directory User Stores (64-bit systems)

Valid for Policy Servers that are installed on Windows 64-bit operating environments (using WoW64 mode) that are connected to Active Directory servers.

Symptom:

I cannot use the SharePoint people picker to search my Active Directory user store.

Solution:

The Active Directory namespace does not support paging, causing searches of more than 1000 users to fail. To support searches of large numbers of users in the Active Directory namespace, set the EnablePagingADNameSpace registry key to one.

To enable paging for searches on your Windows Policy Server:

1. Open the Windows registry editor.
2. Locate the following registry key:

   ```
   HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace
   ```

3. Set the value of the key to 1.

Chapter 6: Install and Configure the SiteMinder Agent for SharePoint

This section contains the following topics:

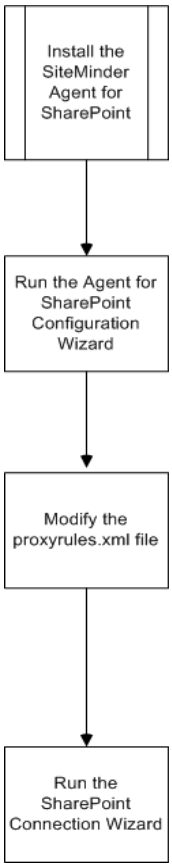
SiteMinder Agent for SharePoint Configuration Overview

The SiteMinder Agent for SharePoint authenticates the identities of users who request access to SharePoint resources using SiteMinder. After SiteMinder authenticates the user, the Agent for SharePoint creates a token, which is forwarded to the SharePoint server. SharePoint then receives and validates the token, it maps the assertions in it to internal SharePoint variables that are used for authorization.

The SiteMinder Claims Provider module lets you search your SiteMinder directories using the SharePoint people picker.

Installing and configuring the Agent for SharePoint involves several separate procedures.

The following illustration describes the tasks you perform when configuring the SiteMinder Agent for SharePoint:



More information:

Install the SiteMinder Agent for SharePoint (see page 61)
Run the Configuration Wizard (see page 66)

FIPS Support Overview

The Agent for SharePoint supports the requirements for cryptographic modules specified in the Federal Information Processing Standards (FIPS) 140-2 standard. When you install the agent, a dialog appears that prompts you to select the level of FIPS support your operating configuration requires.

During a new installation, you can select one of these three FIPS modes:

- COMPAT — Specifies that the installation is not FIPS-compliant. Select this mode when interacting with clients running earlier versions of the Agent for SharePoint.
- MIGRATE — Specifies that the Agent for SharePoint operates both with FIPS-compliant algorithms and algorithms used in earlier version of the agent simultaneously while the data is migrated.
- ONLY — Specifies that the Agent for SharePoint only uses or accepts FIPS-compliant algorithms. When you install in this mode, additional manual configuration is required.

The FIPS mode you select during installation usually is the same as the FIPS mode configured on the Policy Server. When the Policy Server is in Migrate mode, it can operate with the Agent for SharePoint in any mode.

Note: For more information about FIPS, refer the *SiteMinder Policy Server Installation Guide*.

Install the SiteMinder Agent for SharePoint

To use the Agent for SharePoint, the system where you plan to install it must have at least 256 MB of RAM. Other prerequisites differ based on the server system.

For detailed information, see the SiteMinder Agent for SharePoint Support Matrix at http://ca.com/support.

Note: Installation prerequisites pertain to the system on which you run the Agent for SharePoint, not the destination servers to which the Agent for SharePoint routes incoming requests.

The Agent for SharePoint installation consists of two tasks:

1. Install the software.
2. Run the configuration tool.

Note: Throughout the installation instructions, there are references to *Agent-for-SharePoint_home* in directory paths. This variable represents the installation directory of the Agent for SharePoint.

Install the SiteMinder Agent for SharePoint on Windows

The default installation location for the Agent for SharePoint on 32-bit Windows operating environments is: C:\Program Files\CA\Agent-for-SharePoint. On 64-bit Windows operating environments, the default installation location is C:\CA\Agent-for-SharePoint.

Important! The Agent for SharePoint cannot be installed on a computer that hosts any other web server. The Agent for SharePoint operates as a stand-alone proxy-based solution.

To run the Agent for SharePoint Windows installation, the user must be the local Administrator.

Note: We recommend installing the Agent for SharePoint on an NTFS file-system partition system.

Follow these steps:

1. Copy the installation program from the Download location on the CA Support site.
2. Right-click the following executable and select Run as administrator:

   ca-sp2010agent-*version*-win32.exe

   The installation program starts.

   Follow the instructions from the installation wizard.

   Note: The installer displays all java executables installed in the system. Select 32-bit Java Development Kit, Java Runtime Environment, or Java version 1.6.0_16 or higher from the Choose Java Virtual Machine list. If the installer does not detect java executables by default, then browse and select the appropriate path.
3. Restart your system after the installation finishes.

To view the record of the installation, go to the directory *Agent-for-SharePoint_home*\install_config_info and look at this log file:

```
CA_SiteMinder_Agent_for_SharePoint_InstallLog.log
```

Install the SiteMinder Agent for SharePoint on UNIX

This version of the Agent for SharePoint supports installations on Linux and Solaris. For more information about the specific versions supported and any additional patches or RPM updates required, see the SiteMinder platform support matrix.

The default installation location is *user_home*/CA/Agent-for-SharePoint. The folder where you install the Agent for SharePoint requires sufficient permissions (755). Do not install the Agent for SharePoint under the /root folder, because its default permissions (750) are insufficient.

Important! The Agent for SharePoint cannot be installed on a computer that hosts any other web server. The Agent for SharePoint operates as a stand-alone proxy-based solution.

On the Solaris or Linux operating environments, Agent for SharePoint runs as the "nobody" user. If you prefer not to run Agent for SharePoint as this user, create an alternate user and assign the necessary permissions.

Follow these steps:

1. Copy one of the following programs from the download location on the CA Support site to a temporary directory:
   - Solaris: ca-sp2010agent-*version*-sol.bin
   - Linux: ca-sp2010agent-*version*-linux.exe
2. Enter one of the following commands:
   - Solaris: sh ./ca-sp2010agent-*version*-sol.bin
   - Linux: sh ./ca-sp2010agent-*version*-linux.exe
3. Follow the screen prompts provided by the installation wizard.

   Note: The installer displays all java executables installed in the system. Select 32-bit Java Development Kit, Java Runtime Environment, or Java version 1.6.0_16 or higher from the Choose Java Virtual Machine list. If the installer does not detect java executables by default, then browse and select the appropriate path.

To determine whether the installation was successful, go to the directory *Agent-for-SharePoint_home*\install_config_info and look at the following log file:
`CA_SiteMinder_Agent_for_SharePoint_InstallLog.log`

How to Configure the SiteMinder Agent for SharePoint

After you install the Agent for SharePoint, configure the agent for the requirements of your SharePoint environment. Configuring the agent requires several separate procedures, which are described in the following process:

1. Gather the information for your configuration wizard (see page 64).
2. Run the Agent for SharePoint Configuration Wizard (see page 66).
3. Confirm that the Agent for SharePoint is functioning (see page 68).
4. Review the following example deployment diagrams:
   - Deployment with a single web front end (farms or stand-alone SharePoint servers) (see page 17).
   - Deployment with multiple web front ends (farms only) (see page 18).
5. Set your proxy rule according to the deployment model you want (see page 69).

   Note: To operate the Agent for SharePoint with the CA DLP content classification service (CCS), configure different proxy rules instead (see page 278).
6. (Optional) Enable support for dynamic Policy Server clusters (see page 70).
7. Run the SharePoint connection wizard.

More information:

Agent for SharePoint Configuration Wizard Information Worksheet (see page 321)
SharePoint Connection Wizard Information Worksheet (see page 322)

Gather SiteMinder Agent for SharePoint Configuration Wizard Information

The Agent for SharePoint configuration wizard helps you register a trusted host, configure the embedded Apache web server

To establish a connection between the Agent for SharePoint and the Policy Server, register a trusted host with the Policy Server. After registration is complete, the registration tool creates the SmHost.conf file. When this file is created successfully, the Agent for SharePoint is allowed to communicate with the Policy Server.

The following lists the required host registration information:

SiteMinder administrator name

Name of a SiteMinder administrator who has privileges to create a trusted host.

SiteMinder administrator password

Password of the SiteMinder administrator.

Trusted host name

Name of the trusted host assigned during configuration.

Note: The name you enter for the trusted host must be unique.

Host Configuration Object

Name of a host configuration object already defined in the Policy Server administrative UI.

Agent Configuration Object

Name of an existing Agent Configuration Object defined in the Policy Server administrative UI.

IP address of the Policy Server where the host is registered

Note: Include a port number for the Policy Server. For example, 121.111.12.11:44442.

Host Configuration File name and location

Identifies the SmHost.conf file, which Web Agents and custom Agents use to act on behalf of the trusted host. Using this file, the host can find a Policy Server and establish a connection. The wizard lists the default location.

Email address of the Agent for SharePoint administrator

The email address for the administrator Default: admin@example.com.

Fully qualified host name of the server

Specifies the hostname of the Agent for SharePoint, this hostname is the address users enter in their web browser:

```
spagent.example.com
```

Port number for HTTP requests

The port listening for HTTP requests Default: 80.

Port number for SSL requests

The port listening for SSL requests Default: 443.

Port number for HTTP Claims web service

The HTTP port used for Claims web service.

Port number for SSL Claims web service

The SSL port used for Claims web service.

Note: No default values are provided for the Claims WS HTTP and SSL Ports. However, use a port that is free, which Tomcat can use to host the web application. For UNIX and Linux, the ports must be greater than 1024. Nobody account works with ports above 1024.

Webagent Enable option

Indicates if the configuration wizard enables (starts) the agent automatically. This setting produces the same results as editing the EnableWebAgent parameter value in the WebAgent.conf file with a text editor.

Default: No (clear check box)

More information:

Agent for SharePoint Configuration Wizard Information Worksheet (see page 321)

Run the Configuration Wizard

After you install the Agent for SharePoint, run the configuration wizard. The configuration wizard registers the Agent for SharePoint with the Policy Server and performs some administrative tasks for the embedded Apache web server.

Before you run the wizard, verify that the required Policy Server objects exist.

Note: Tomcat uses the nobody user by default because it is the least privileged user.

Important! If you have previously run the configuration wizard on your Agent for SharePoint, create a backup copy of your proxyrules.xml file. The configuration wizard creates a default proxyrules.xml file each time it runs on a computer.

Follow these steps:

1. Open a console window and navigate to the directory *Agent-for-SharePoint_home*/
2. Enter one of the following commands:
   - Windows: ca-spagent-config.cmd
   - UNIX or Linux: ca-spagent-config.sh

   The wizard starts. The Host Registration screen appears.

   Note: In Windows, you can alternatively navigate to *Agent-for-SharePoint_home*/install_config_info and double-click ca-spagent-config.exe.
3. Select Yes option to perform host registration if the computer is not registered as a trusted host.

4. As part of the trusted host registration process, respond to the prompts as follows:

   a. Specify the name and password of the SiteMinder administrator and click Next.

      The information you enter must be defined at the Policy Server where the trusted host registers. This screen also includes an optional check box for enabling shared secret rollover.

   b. Specify the name of the Trusted Host and the Host Configuration Object and click Next.

      The name you enter for the trusted host must be unique. The name for the Host Configuration Object must already be defined at the Policy Server where the trusted host is registered.

   c. Enter the IP address of the Policy Server where you want to register the trusted host and click Add. Click Next.

      Note: Include a port number for the Policy Server. For example, 121.111.12.11:44442.

   d. Specify the name and location of the host configuration file, SmHost.conf. The wizard lists the default location. Click Next.

   e. Specify the name of the Agent Configuration Object and click Next. The Agent Configuration Object that you enter must already be defined at the Policy Server where the trusted host is registered.

      Enter the name of the ACO built from the SharePoint2010DefaultSettings ACO template defined in the Policy Server.

   f. Specify the name and location of the Agent Configuration file. The wizard lists the default location. Click Next.

5. Enter the following information for the Apache web server:

   - Server name, in the form *server_name*.example.com.
   - Web server administrator email address, in the form admin@example.com.
   - HTTP port number. The default is 80.
   - HTTPS (SSL) port number. The default is 443.

   Note: On Solaris or Linux, an additional screen prompts for the name of the user under which Tomcat and Apache run. This user cannot be root.

6. Enter the following configuration information for the Claims Search Web Service:Claims WS HTTP Port.

   - Claims WS SSL Port.

   Note: No default values are provided for the Claims WS HTTP and SSL Ports. However, use a port that is free, which Tomcat can use to host the web application. For UNIX and Linux, the ports must be greater than 1024. Nobody account works with ports above 1024.

7. (Optional) Select the check box if you want to enable the Agent for SharePoint.
8. Review the Configuration Summary.
9. Click Install.

   The files are installed.

10. Click Done to exit the wizard.

Note: If you run the Configuration Wizard again for any reason, SSL must be reinitialized. The installer contacts the Policy Server and attempts to register the Trusted Host to create the host configuration file. If trusted host registration does not succeed, the Agent for SharePoint cannot contact the Policy Server and operate properly.

More information:

Gather SiteMinder Agent for SharePoint Configuration Wizard Information (see page 64)
Agent for SharePoint Configuration Wizard Information Worksheet (see page 321)

Confirm that the Agent for SharePoint Is Functioning

After you install the Agent for SharePoint, but before changing the proxy rules, you can verify that the server is functioning. You can request index.html file by using the server and port number you specified during installation. For example, if you installed the Agent for SharePoint on server1.example.com and selected port 88 for HTTP communication, you can request the following URL with a browser:

http://server1.example:com:88

If the Agent for SharePoint is working properly, the request redirects to the main CA website (www.ca.com). The default proxy rules file specifies this URL for all redirects.

Set a Basic Proxy Rule for the Agent for SharePoint

The Agent for SharePoint operates as a proxy-based solution. To protect your SharePoint resources, edit the default proxy rules file so that the Agent for SharePoint points to one of the following locations:

- A hardware load balancer that redirects incoming requests to multiple web front ends associated with multiple SharePoint servers in a SharePoint server farm (see page 18).
- A single web front end associated with multiple SharePoint servers in a SharePoint server farm (see page 17).

Follow these steps:

1. Open the following file on your Agent for SharePoint with a text editor:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

   Important: Do not modify any other configuration files or settings unless explicitly told to do so by CA support personnel.

2. Locate the following line:

   ```
   <nete:forward>http://www.ca.com$0</nete:forward>
   ```

3. Edit the previous line with one of the following values:

   - The URL of your hardware load balancer. This hardware load balancer operates between your Agent for SharePoint server and the SharePoint servers.
   - The URL of your single web front end. In this context, this web front end (WFE) refers a web server that operates in front of your "back end" SharePoint servers.

   If the URL is sharepoint.example.com, edit the line to match the following example:

   ```
   <nete:forward>http://www.sharepoint.example.com$0</nete:forward>
   ```

   Note: The proxyrules.xml file used by the Agent for SharePoint supports redirection to one URL. The Agent for SharePoint does *not* provide any built-in load-balancing functions.

4. Save the file and close your text editor.

   The proxy rule is set.

More information:

Virtual Host Configurations Supported by the Agent for SharePoint (see page 257)

Enable Support for Dynamic Policy Server Clusters for your Agent for SharePoint

The Agent for SharePoint supports dynamic Policy Server clusters. These dynamic Policy Server clusters automatically report when individual Policy Servers are added to or removed from a cluster. A restart of the Agent for SharePoint is not required.

Follow these steps:

1. Use a text editor to open the following file:

   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\SmHost.conf

2. Locate the following line:

   enabledynamichco="NO"

3. Change the previous line to match the following example:

   enabledynamichco="YES"

4. Save the file and close the text editor.

5. Restart the Agent for SharePoint.

   Support for dynamic policy servers is enabled. The Agent for SharePoint automatically detects changes to Policy Server clusters.

More information:

How to Start and Stop the Agent for SharePoint (see page 79)

Assign Permissions for Log Files and Directories on UNIX/Linux

On the UNIX or Linux operating environments, the user account under which the Agent for SharePoint runs requires permissions to create log files.

After running the Agent for SharePoint configuration wizard on a UNIX or Linux operating environment, grant the user account the permissions shown in the following table:

Grant these permissions:	To these directories:
Read, Execute	*Agent-for-SharePoint_home* directory and all subdirectories
Write	*Agent-for-SharePoint_home*/proxy-engine/logs

Manage SharePoint Connections Using the SharePoint Connection Wizard

The SharePoint connection wizard takes you through the process of configuring and managing SharePoint connections with SiteMinder.

Before running the wizard, gather the following information:

Policy Server Name

Specifies the Policy Server name or IP address.

Example: *host_name*:*port_number*

Note: Specify the Administration port number if the port number is different from the default port number 44444.

Username

Specifies the Policy Server administrator username.

Password

Specifies the Policy Server administrator password.

Agent Name

Specifies the name of the 4.x-compatible Agent object on your Policy Server. The connection with the Policy Server is established using the details given in the Agent Name.

Shared Secret Key

Specifies the shared secret key that is associated with the 4.x-compatible Agent object on your Policy Server.

Select a domain

Specifies the name of the policy domain you created in the Policy Server to protect your SharePoint resources.

Name

Specifies a name for the SharePoint connection. This name is also used as the file name of the PowerShell script that the wizard creates.

Note: Use a unique name across all Resource Partners and SharePoint connections.

Authentication URL

Specifies the *port number* that is associated with the predefined protected URL which the SharePoint connection wizard adds automatically. When users try accessing a protected SharePoint resource without a SiteMinder session, they are redirected to the Authentication URL.

If you are using a default port number (such as 80 for HTTP or 443 for HTTPS), delete the <port> setting from this field.

Note: We recommend using HTTPS on production environments and pages which handle user credentials, such as login pages.

SharePoint Realm

Specifies a name for a SharePoint realm that uniquely identifies this connection between SiteMinder and SharePoint. This name is used to create the trusted identity provider.

Limits: Unique value across all SharePoint servers, farms and within the SiteMinder environment. This value cannot be used with any other identity providers.

Skew Time

Specifies the number of seconds used as a time difference between the Policy Server (token producer) and the SharePoint server (token consumer). This skew time accommodates for SharePoint connections using clocks that are acting as an account partner but are not synchronized with the Policy Server.

Note: This setting also affects the frequency of the SAML autopost operation (see page 75).

Limits: Positive integers.

Validity Duration

Specifies the number of seconds for which a session remains valid. If the validity duration expires, a logout message is generated. The user that is associated with the invalid session is logged out.

Note: This setting also affects the frequency of the SAML autopost operation (see page 75).

Signing Alias

Specifies the alias that the key store uses to identify the private key that is associated with the certificate your Policy Server uses to sign the tokens.

Note: We recommended verifying that the private key exists in the central key store before you specify its associated alias in this field. Open the Administrative UI, and then click Infrastructure, X.509 Certificate Management, Trusted Certificates and Private Keys for a list of certificates and their aliases.

Protection Level

Specifies the protection level that is assigned to the resource partner object the connection wizard creates. This protection level setting must be equal to or lower than the protection level assigned to the authentication scheme that protects your SharePoint resources.

Limits: 1-1000 (higher numbers indicate a higher protection level).

Identifier Claim Name

Specifies name of the attribute mapping in your user directory which identifies the unique value that is associated with each user.

Example: useridentifier

Directory Attribute

Specifies the directory attribute in your directory that is associated with the specified Identifier Claim name.

Example: (LDAP directory) uid

Example: (Active directory) sAMAccountName

Attribute

Specifies an attribute name for one of the following claim types:

- Group based
- Role based

For multi–valued attributes, prefix *FMATTR:*

Example: (group–based claim) smusergroups

Example: (role-based claim) userrole

Example: (multiv–alued attributes) FMATTR:LastName

Claim Type

Specifies an attribute value that is associated with the specified attribute name.

For group-based claims, use the friendly role of your groups. The people picker in SharePoint displays the description and distinguished name (DN) of the group. Permissions are tied to the DN of the group, not the friendly name.

Example: (LDAP directory group-based claim) description

Example: (LDAP directory role-based claim) employeeType

Example: (Active Directory group-based claim) name

Example: (Active Directory role-based claim) countryCode

Enabled SignOut

Indicates if the single log out feature is enabled for the associated cleanup URLs and the associated confirm URLs.

CleanUp URL

Specifies the URLs of the cleanup pages for the single log out feature.

Limits: Separate multiple URLs with a semicolon (;)

Confirm URL

Specifies the URLs of the confirmation pages for the single log out feature.

Limits: Separate multiple URLs with a semicolon (;)

Prerequisites for Using the SharePoint Connection Wizard

Before you run the SharePoint Connection Wizard, perform the following steps:

- Verify that you are using a version of the Policy Server that supports the SiteMinder Agent for SharePoint.
- Create a 4.x Agent in the Policy Server Administration UI to enable the Connection Wizard to communicate with the Policy Server.
- The default port number that the SharePoint Connection Wizard uses to contact the Policy Server is 44444. Specify the Administration Service Port number in the Policy Server Management Console if different from the default port number.
- Verify that a policy domain exists on your Policy for the SharePoint resources you want to protect. Verify that the directory containing your SharePoint users is associated with the same policy domain. The SharePoint connection wizard requires the name of the policy domain.
- Identify the required inputs for the SharePoint Connection Wizard by using the Information worksheet.
- Verify that the certificate you want to use for the SharePoint Claims provider is installed on your Agent for SharePoint.

More information:

SharePoint Connection Wizard Information Worksheet (see page 322)
Locate the SiteMinder Agent for SharePoint Platform Support Matrix (see page 325)

Alternate Connection Wizard Method to Help Resolve Firewall Issues

If you experience firewall issues when you try to run the connection wizard, verify that port 44444 is open on your Policy Server.

If your Policy Server uses the *same operating environment* as your Agent for SharePoint, you can copy the SharePoint connection wizard executable file to your Policy Server. Then execute the connection wizard on your Policy Server instead.

Copy the appropriate connection wizard executable file for the operating environment of your Policy Server from the following list:

- (Windows) ca-spconnect-12.0-*version*-win32.exe
- (Solaris) ca-spconnect-*version*-sol.bin
- (Linux) ca-spconnect-*version*-rhel30.bin

More information:

Edit a SharePoint Connection using the SharePoint Connection Wizard (see page 78)
Delete a SharePoint Connection (see page 314)

SAML Autopost Frequency

The following settings determine the frequency at which a SAML autopost operation occurs in your SiteMinder and SharePoint environments:

- Skew time (set in the SharePoint Connection wizard)
- Validity duration (set in the SharePoint Connection wizard)
- Logon Token Cache Expiration window (set in SharePoint)

If these settings create a short interval, pop-up windows related to the autopost operation appear. If these settings create a longer interval, inactive users remain logged in for longer periods than the security policies of your organization prefer.

The following illustration describes the relationships among components that affect how often the SAML autopost occurs:

The following table provides some examples of how changes in the Login Cache Token value on SharePoint change how often the SAML autopost occurs:

SiteMinder				SharePoint	Approximate Time Between SAML Auto Post Operations
Realm Idle Timeout	**Realm Max Timeout**	**Validity Period**	**Skew Time**	**Logon Token Cache Expiration Window**	
1 hour	1 hour	4400 seconds (1 hour 13 minutes)	10 seconds	10 minutes	63 minutes
1 hour	1 hour	4400 seconds (1 hour 13 minutes)	10 seconds	5 minutes	68 minutes

When the Logon Token Cache Expriation Window setting in SharePoint is lower, the SAML autopost operation occurs less often. However, inactive users could possibly remain logged in.

Note: For more information about how to disable FedAuth cookies in SharePoint 2010, go to the technet blogs website, and then search for the following phrase:

"Setting the Login Token Expiration Correctly for SharePoint 2010 SAML Claims Users"

Create a SharePoint Connection

The Agent for SharePoint uses a connection wizard to define the connection parameters that are used when SiteMinder communicates with your SharePoint server. The connection wizard does following tasks:

- Configures the connection between your Agent for SharePoint and the Policy Server.
- Creates a Windows PowerShell script that you modify and run on your SharePoint central administration server to create a trusted identity provider.

Follow these steps:

1. Perform the following:
   - (Windows)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Right-click the executable and select Run as administrator.

      The SharePoint Connection wizard starts.
   - (Unix)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Enter one of the following commands:
      - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
      - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

      The SharePoint Connection wizard starts.
2. Complete the wizard using the information you gathered.
3. Click Install.

   The Save Complete screen appears and shows location of your PowerShell script. The PowerShell script is created in the following directory:

   Agent-for-SharePoint_home/sharepoint_connection_wizard/

   The connection wizard uses the connection name that you specified (in Step 8) as the name of the PowerShell script. For example, if you specify my_sharepoint_connnection for a connection name in the connection wizard, then name of the PowerShell script is my_sharepoint_connection.ps1.
4. Click Done.

   The connection wizard closes.

More information:

SAML Autopost Frequency (see page 75)
Alternate Connection Wizard Method to Help Resolve Firewall Issues (see page 75)

Edit a SharePoint Connection using the SharePoint Connection Wizard

Follow these steps:

1. Perform the following:
   - (Windows)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Right-click the executable and select Run as administrator.

      The SharePoint Connection wizard starts.
   - (Unix)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Enter one of the following commands:
      - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
      - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

      The SharePoint Connection wizard starts.
2. Click Next.

   The Login Details screen appears.
3. Enter the following login details to connect to the Policy Server.

   Policy Server Name

   Specifies the Policy Server name or IP address.

   Username

   Specifies the Policy Server administrator username.

   Password

   Specifies the Policy Server administrator password.

   Agent Name

   Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

Shared Secret Key

Specifies the shared secret key associated with the Agent.

4. Click Next

   The Select Action screen appears.

5. Select Edit a SharePoint Connection option.

6. Click Next.

   The SharePoint Connection Properties screen appears.

7. Make the required changes in SharePoint Connection Properties, Name IDs, and Add Attributes screen.

8. Click Install in the Commit Details screen.

   The Save Complete screen appears.

9. Click Done.

   The partnership details are saved, the SharePoint Connection is modified, and the wizard closes.

More information:

SharePoint Connection Wizard Information Worksheet (see page 322)
Alternate Connection Wizard Method to Help Resolve Firewall Issues (see page 75)

How to Start and Stop the Agent for SharePoint

Starting or stopping the Agent for SharePoint involves the following separate procedures:

1. Changing the value of EnableWebAgent in the WebAgent.conf file (see page 80).
2. Changing the state of the related services on the computer running the Agent for SharePoint (see page 81).

Change the Value of the EnableWebAgent Parameter

Change the value of the EnableWebAgent parameter to accomplish either of the following tasks:

- Start the Agent for SharePoint when the related services start.
- Stop the Agent for SharePoint when the related services start.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\WebAgent.conf
   ```

2. Locate the following line:

   ```
   EnableWebAgent="NO"
   ```

3. Change the value inside the quotation marks to *one* of the following values:

   - YES to start the Agent for SharePoint after the services start. Your resources are protected.
   - NO to stop the Agent for SharePoint after the services start. Your resources are *not* protected.

4. Change the state of the related services on your Agent for SharePoint (see page 81).

Change the States of the Services on your Agent for SharePoint

You can change the states of the related services on your Agent for SharePoint.

Note: To start or stop your Agent for SharePoint, change the value of the EnableWebAgent parameter first (see page 80).

Follow these steps:

1. To change the states of the related services, select *one* of the following procedures:
   - For Windows operating environments, go to Step 2.
   - To *start* the Agent for SharePoint on UNIX operating environments, go to Step 3.
   - To *stop* the Agent for SharePoint on UNIX operating environments, go to Step 4.
2. For Windows operating environments, do the following steps:
   a. From the Windows Start menu navigate to Administrative Tools, Services.

      The Services dialog appears.

   b. Scroll down the list of services and select SiteMinder Agent for SharePoint.

   c. From the Action menu, select All Tasks and select the command that you want.

   d. Repeat Step b for SiteMinder Agent for SharePoint Proxy Engine.

      The states of the services and Agent for SharePoint are changed.
3. To start the Agent for SharePoint on UNIX operating environments, do the following steps.
   a. Log in as a root user.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   c. Run the following command:

      ```
      ./sps-ctl start
      ```

      The service and the Agent for SharePoint start. The Agent for SharePoint stops or starts according to the value you set in the EnableWebAgent parameter (see page 80).
4. To stop the Agent for SharePoint on a system running UNIX, do the following steps:
   a. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   b. Run the following command:

      ```
      ./sps-ctl stop
      ```

      The service and the Agent for SharePoint stop.

Chapter 7: Configure SharePoint

This section contains the following topics:

How to Configure SharePoint for the Agent for SharePoint

Configuring your SharePoint servers for the Agent for SharePoint involves several separate procedures.

Follow these steps:

1. Configure Alternate Access Mappings.
2. Configure the Trusted Identity Provider.
3. Configure Authentication Providers (see page 116).
4. Disable Client Loopback (see page 119).
5. Add SiteMinder Users to SharePoint. (see page 120)
6. Manage User Profiles. (see page 121)

Permissions Required for Trusted Identity Provider and Claims Provider

Users who create the trusted identity provider and install or configure the SharePoint claims provider need the following permissions:

User account permissions

User accounts require the following privileges:

- Domain user account.
- Member of Local administrator group on each SharePoint server in the farm (except for the SQL Server and SMTP server)
- Access to the SharePoint 2010 server databases.

Setup User Account

The setup user account requires the following permissions:

- Member of the WSS_ADMIN_WPG Windows security group.
- Member of the IIS_WPG role group.

Database permissions

The following database permissions are required:

- db_owner on the SharePoint Server 2010 server farm configuration database.
- db_owner on the SharePoint Server 2010 Central Administration content database.

PowerShell scripts for Claims Provider

Running the PowerShell scripts for the Claims Provider requires the following permissions:

- Local administrator on all SharePoint web front end (WFE) servers.
- Access (read/write) to the configuration database.

Note: The preceding permissions apply when the user is not an Administrator or not part of an Administrator group.

How to Create Alternate Access Mappings

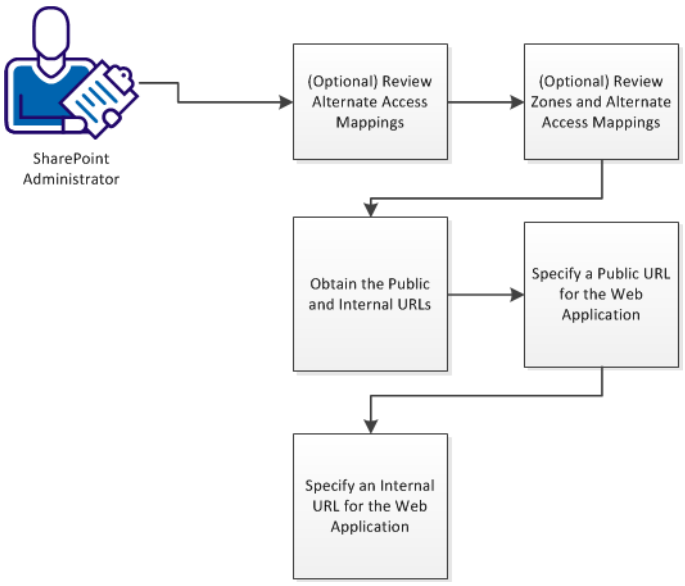
Alternate access mappings can direct users who request an external URL to a specific web application on your SharePoint servers. Create alternate access mappings between your external URLs and the web applications on your SharePoint servers.

The Agent for SharePoint uses proxy rules in a similar fashion. Users who authenticate through the Agent for SharePoint are redirected to the internal web application hosted in SharePoint.

Important! The proxy rules in the Agent for SharePoint must match the alternate access mappings for your SharePoint web application.

The following graphic describes how to create alternate access mappings:

How to Create Alternate Access Mappings



Follow these steps:

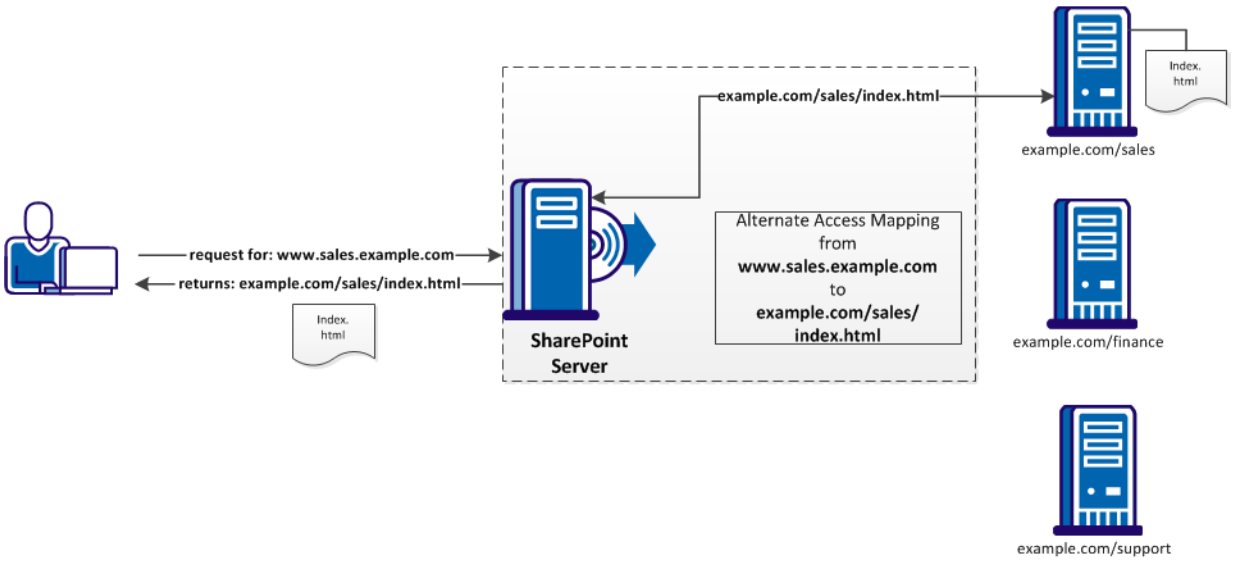
1. (Optional) Review the following topics that are related to SharePoint administration:
   - Alternate access mappings (see page 86).
   - Zones and alternate access mappings (see page 87).
2. Obtain the public and internal URLs (see page 89).
3. Specify a public URL for the web application (see page 91)
4. Specify an internal URL for the web application (see page 92).

Alternate Access Mappings

SharePoint central administration servers let you create alternate access mappings between external and internal URLs.

- External URLs are those URLs that your customers, partners, or people outside of your organization access. For example, your customers and partners could log in to your network using www.login.example.com.
- Internal URLs correspond to the location of the web application in your SharePoint environment. For example, the login server that processes logins could be named login123.example.com.

An alternate access mapping creates an association in SharePoint between your external login URL and the login server in the back end. For example, the SharePoint server directs all the requests for www.login.example.com to the login123.example.com server as shown in the following graphic:

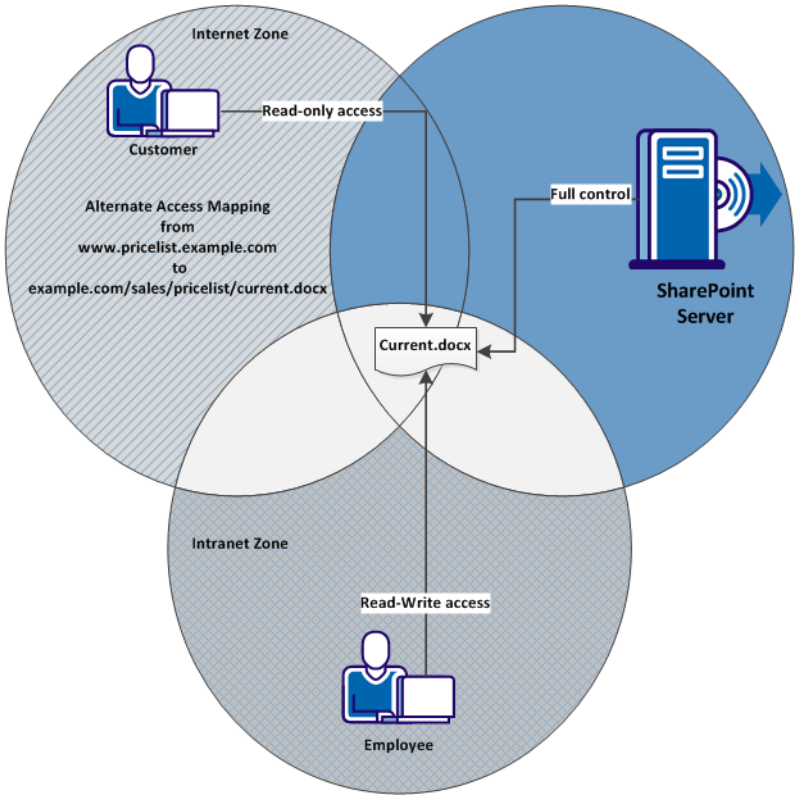


Zones and Alternate Access Mappings

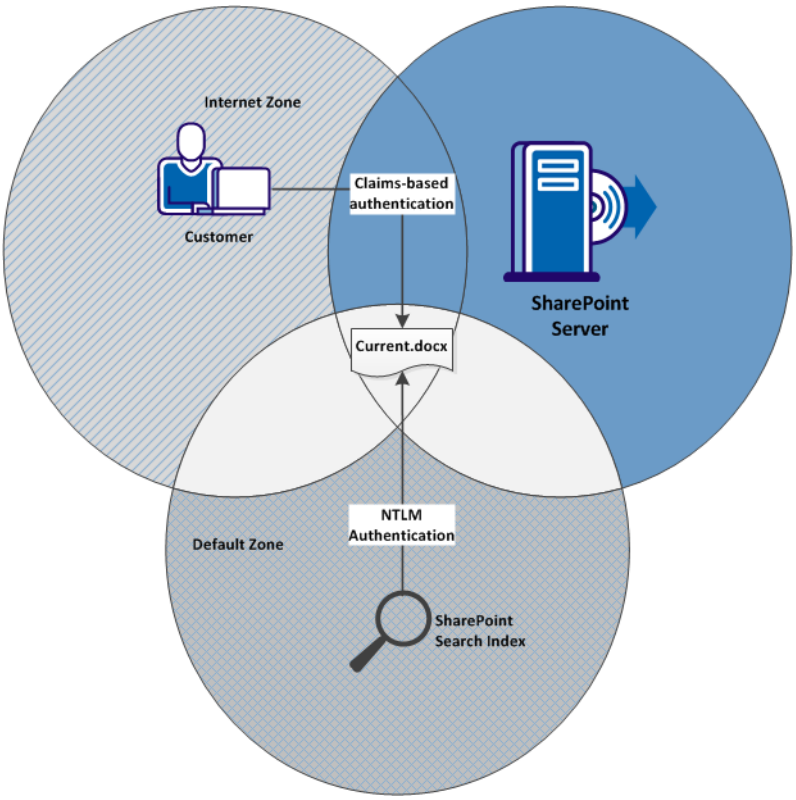
Alternate access mappings also support zones. Zones let you configure different access paths to a single web application on your SharePoint server. Creating alternate access mappings across different zones can accomplish the following goals:

- Create different URLs for the same web application. For example, you could have one URL for external users and a different URL for internal users that both point to the same web application.
- Allow customers read-only access to documents that are hosted on your SharePoint server, while granting full access to your employees.
- Require secure (HTTPS) connections to a web application for external visitors, while allowing employee access to the web application using HTTP.
- Index the content of your web application using the SharePoint search index (which requires NTLM access), while requiring another authentication method for users.

The following graphic describes how different zones permit different levels of access to the same document for external customers and internal employees:



The following graphic describes how multiple authentication methods apply to the same document by extending the associated web application to multiple zones:



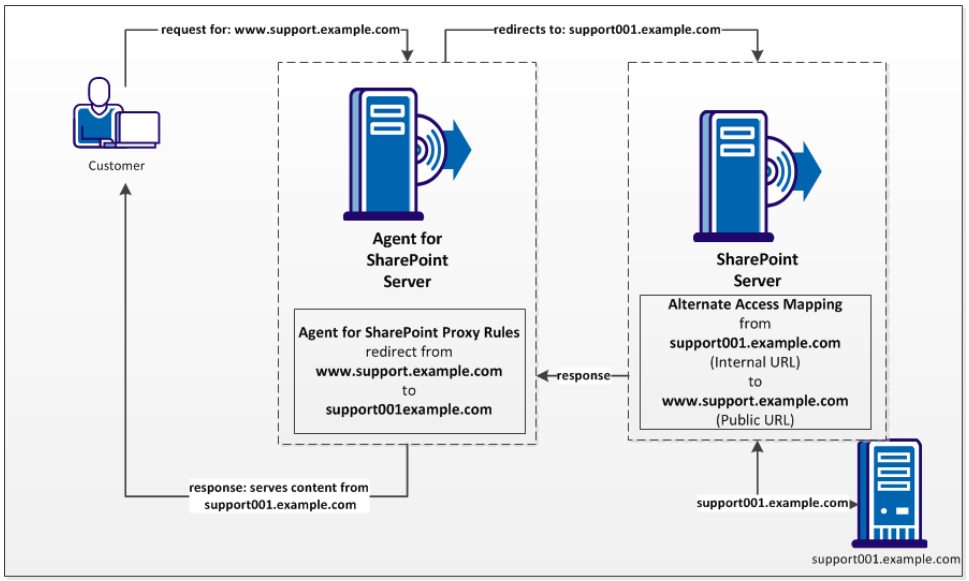
To accommodate the SharePoint search index, the web application must be extended into one zone that uses NTLM authentication.

Obtain the Public and Internal URLs

The Agent for SharePoint runs on a proxy-server. The Agent for SharePoint forwards requests to the web applications in your SharePoint environment using proxy rules. These proxy rules direct traffic from the public URL (the server hosting Agent for SharePoint) to your SharePoint web applications (the internal URLs).

For example, customers who access support.example.com are authenticated by the Agent for SharePoint. Next the user is redirected to a SharePoint web application hosted on a server named support001.example.com. The web application serves *the content* from support001.example.com back to the user who requested the support.example.com page.

The following graphic describes the relationship between proxy rules and alternate access mappings from the previous example:



Follow these steps:

1. Obtain the external URLs that are hosted on your Agent for SharePoint server from your network administrator. In this scenario, the URL www.support.example.com is hosted on the Agent for SharePoint server.
2. Log in to the server hosting the Agent for SharePoint.
3. Create *a copy* of the following file:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml
4. Open the copy that you created in Step 3 with a text editor.
5. Locate the line containing the nete:forward tags, as shown in the following example:

   ```
   <nete:forward>http://server2.company.com$1</nete:forward>
   ```

   Note: In a typical environment, the URL in the Step 5 matches the Internal URL for your SharePoint web application.
6. Record the public and internal URLs for future reference. You need these public and internal URLs to create your alternate access mappings.
7. Repeat Steps 4 through 6 for to obtain any additional Internal URLs for other web applications.

Specify a Public URL for the Web Application

The public URL is an external URL through which your customers or external users connect to your organization. The public URL appears in the web browsers of your users.

When you use the Agent for SharePoint in front of your SharePoint server farm, use the URL of the server hosting your Agent for SharePoint as the public URL.

Important! The proxy rule settings of the Agent for SharePoint must match your alternate access mappings.

This procedure describes creating alternate access mappings for the default zone. Adding another type of authentication to a single internal URL with an alternate access mapping is described in a separate scenario.

Follow these steps:

1. Click Start, Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Central Administration.

   The Central Administration home page appears.

2. Click Application Management.

   The Application Management page appears.

3. Click Configure alternate access mappings.

   The Alternate Access Mappings page appears with a list of available web applications.

   Note: If the web application that you want is not listed, click the Alternate Access Mapping Collection drop-down list. Pick the web application that you want.

4. Click Edit Public URLs.

   The Edit Public URLs page appears.

5. Locate the field for the zone that contains the internal URL for your web application. For example, if you created a web application named http://support001:27975 in the default zone, then locate the Default (zone) field with that URL.

6. Replace the internal URL in Step 5 with the public URL that you want. For example, if you are mapping from the internal URL http://supportp001:2975 to support.example.com, then replace the internal URL in the field with support.example.com.

7. Click Save.

Specify an Internal URL for the Web Application

This procedure allows the SharePoint Administrator to map the public URL (http://support.example.com) to the SharePoint internal URL (http://support001.example.com).

Follow these steps:

1. Click Start, Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Central Administration.

   The Central Administration home page appears.

2. Click Application Management.

   The Application Management page appears

3. Click Configure alternate access mappings.

   The Alternate Access Mappings page appears with a list of available web applications.

4. Click Add Internal URLs.

   The Add Internal URLs page appears.

   Note: If the mapping collection that you want edit does not appear, then select one from the Alternate Access Mapping Collection list.

5. Enter the internal URL as http://support001.example.com in the Add Internal URL section, in the URL protocol, host, and port field.

6. Click Save.

   The Alternate Access Mappings page appears with the saved settings. The following table describes how the alternate access mappings appear in SharePoint using the examples in this procedure:

Internal URL	Zone	Public URL for the Zone
http://support001.example.com	Default	http://support.example.com
http://support.example.com	Default	http://support.example.com

How to Configure the Trusted Identity Provider

The Windows Identity Framework in SharePoint 2010 supports multiple authentication providers. Create a Trusted Identity Provider in SharePoint to establish runtime integration with SiteMinder Agent for SharePoint. To configure the trusted identity provider follow these steps:

1. Copy the Policy Server signing certificate to the SharePoint central administration server (see page 93).
2. Copy the PowerShell script to the SharePoint central administration server (see page 94).
3. Modify the PowerShell script (see page 95).
4. (Optional) Add additional certificate authority certificates to the PowerShell script (see page 101).
5. Create the trusted identity provider (see page 103).
6. (Optional) Verify that the Trusted Identity Provider is registered (see page 104).

More information:

SharePoint 2010 Federation Worksheet (see page 323)

Copy the Policy Server Signing certificate to the SharePoint Central Administration Server

The Policy Server signing certificate that you exported from your key store on a Policy Server is required to create a trusted identity provider. This certificate lets the SharePoint claims provider verify the authentication claims (tokens) that the Policy Server sends.

Follow these steps:

1. Navigate to the directory on your Policy Server to which you exported your certificate from the central key store.
2. Locate the Policy Server signing certificate file that you exported, and then copy it to a directory on your SharePoint central administration server.

Copy the Powershell Script to the SharePoint Central Administration Server

The PowerShell script created by the SharePoint connection wizard on your Agent for SharePoint host is required to create a trusted identity provider. Copy it from your Agent for SharePoint host to your SharePoint central administration server.

Follow these steps:

1. Navigate to the following directory on your Agent for SharePoint server:

   Agent-for-SharePoint_home\sharepoint_connection_wizard\

2. Locate the PowerShell script created by the SharePoint connection wizard. The script uses the connection name you chose while running the wizard as the file name. For example, if your connection name was my_connection, the name of the script is my_connection.ps1.

3. Copy the PowerShell script to a directory on your SharePoint central administration server.

Modify the PowerShell Script

To create a trusted identity provider on your SharePoint central administration server, edit the PowerShell script to include the following information about your SharePoint environment:

- The full path to the root certificate (typically from a third-party Certificate Authority) that signed your certificate.
- Create a trusted root authority in SharePoint for the certificate authority which signed your certificate.
- The full path to your signing certificate.
- Friendly names for each of the claim mappings.
- The SharePoint realm name (to identify the trusted identity provider).

  Note: This value appears in SharePoint Central Administration under the list of available trusted identity providers.
- A friendly description for the trusted identity provider.

The specific modifications to the PowerShell script vary according to the type of certificates you want to use with your SiteMinder trusted identity provider. The following scenarios exist:

- You are using a certificate that is signed by an external certificate authority, and the certificate authority is *not* trusted by your SharePoint server.
- You are using a self-signed certificate and the certificate authority is *not* trusted by your SharePoint server.
- You are using a certificate, and the certificate authority is trusted by your SharePoint server. Check with your SharePoint administrator to confirm that the proper certificate authority is trusted.

Follow these steps:

1. Use the previous list to determine which scenario applies to your situation.
2. Perform the appropriate procedure from the following list:
   - Modify the PowerShell script for certificates that are signed by an external certificate authority (see page 96).
   - Modify the PowerShell script for un–trusted self-signed certificates (see page 98).
   - Modify the PowerShell script for certificates that are issued by a trusted certificate authority (see page 100).

Modify the PowerShell Script for Certificates Signed by an Un-Trusted External Certificate Authority

If your signing certificate is signed by an external certificate authority, modify the PowerShell script to do the following tasks:

- Import the certificate authority certificate (root certificate) into SharePoint.
- Create a SharePoint trusted root authority that is based on the certificate authority certificate.
- Import the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Locate the following text:

   ```
   "<full path to Root certificate file>"
   ```

3. Replace the previous text with the full path to your root certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\certificate_authority_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\certificate_authority_certificate.cer"
   ```

4. Locate the first occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

5. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPCAAuth, the updated line matches the following example:

   ```
   "SPCAAuth"
   ```

6. Locate the following text:

   ```
   "<full path to Signing certificate file>"
   ```

7. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\signing_certificate.cer"
   ```

8. Locate the second occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

9. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

   ```
   "SPSigningAuth"
   ```

10. Locate the following text:

    ```
    "<Name of the trusted identity provider>"
    ```

11. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

    ```
    "moss2O1O-wsfed1-casm"
    ```

12. Locate the following text:

    ```
    "<Description for the Trusted Identity Provider>"
    ```

13. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

    Note: The LDAP directory and Active Directory charts contain additional examples of possible names.

14. If your certificate chain contains *more than one* certificate authority certificate, add the other certificate authority certificates to the script (see page 101). If your script contains *one* certificate authority certificate, go to the next step.

15. Save your changes and close your text editor.

    The PowerShell script is modified.

16. Create a trusted identity provider (see page 103).

Modify the PowerShell Script for Un-Trusted Self-Signed Certificates

If you are using a self-signed certificate that is issued by a certificate authority which is not explicitly trusted by your SharePoint server, modify the PowerShell script to do the following tasks:

- Import the certificate authority certificate (root certificate) into SharePoint.
- Create a SharePoint trusted root authority that is based on the certificate authority certificate.
- Import the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Locate the following text:

   ```
   "<full path to Root certificate file>"
   ```

3. Replace the previous text with the full path to your root certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\certificate_authority_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\certificate_authority_certificate.cer"
   ```

4. Locate the first occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

5. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPCAAuth, the updated line matches the following example:

   ```
   "SPCAAuth"
   ```

6. Locate the following text:

   ```
   "<full path to Signing certificate file>"
   ```

7. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\signing_certificate.cer"
   ```

8. Locate the second occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

9. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

   ```
   "SPSigningAuth"
   ```

10. Locate the following text:

    ```
    "<Name of the trusted identity provider>"
    ```

11. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

    ```
    "moss2O1O-wsfed1-casm"
    ```

12. Locate the following text:

    ```
    "<Description for the Trusted Identity Provider>"
    ```

13. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

    Note: The LDAP directory and Active Directory charts contain additional examples of possible names.

14. If your certificate chain contains *more than one* certificate authority certificate, add the other certificate authority certificates to the script (see page 101). If your script contains *one* certificate authority certificate, go to the next step.

15. Save your changes and close your text editor.

    The PowerShell script is modified.

16. Create a trusted identity provider (see page 103).

Modify the PowerShell Script for Certificates Issued by a Trusted Certificate Authority

If you are using a certificate signed by a certificate authority that is trusted by the SharePoint server, modify the PowerShell script to do the following tasks:

- Skip the step to import the certificate authority certificate.
- Skip the stop to create a new SharePoint trusted root authority.
- Import only the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Comment the first two lines in the PowerShell script, as shown in the following example:

```
#$rootcert = New-Object
System.Security.Cryptography.X509Certificates.X509Certificate2("<full
path to Root certificate file>")
#New-SPTrustedRootAuthority -Name "<Trusted root authority name>"
-Certificate $rootcert
```

3. Locate the following text:

```
"<full path to Signing certificate file>"
```

4. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

```
"C:\certificates\sharepoint\signing_certificate.cer"
```

5. Locate the second occurrence of the following text:

```
<Trusted root authority name>
```

6. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

```
"SPSigningAuth"
```

7. Locate the following text:

```
"<Name of the trusted identity provider>"
```

8. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

```
"moss2O1O-wsfed1-casm"
```

9. Locate the following text:

```
"<Description for the Trusted Identity Provider>"
```

10. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

    Note: The LDAP directory and Active Directory charts contain additional examples of possible names.

11. Save your changes and close your text editor.

    The PowerShell script is modified.

12. Create a trusted identity provider (see page 103).

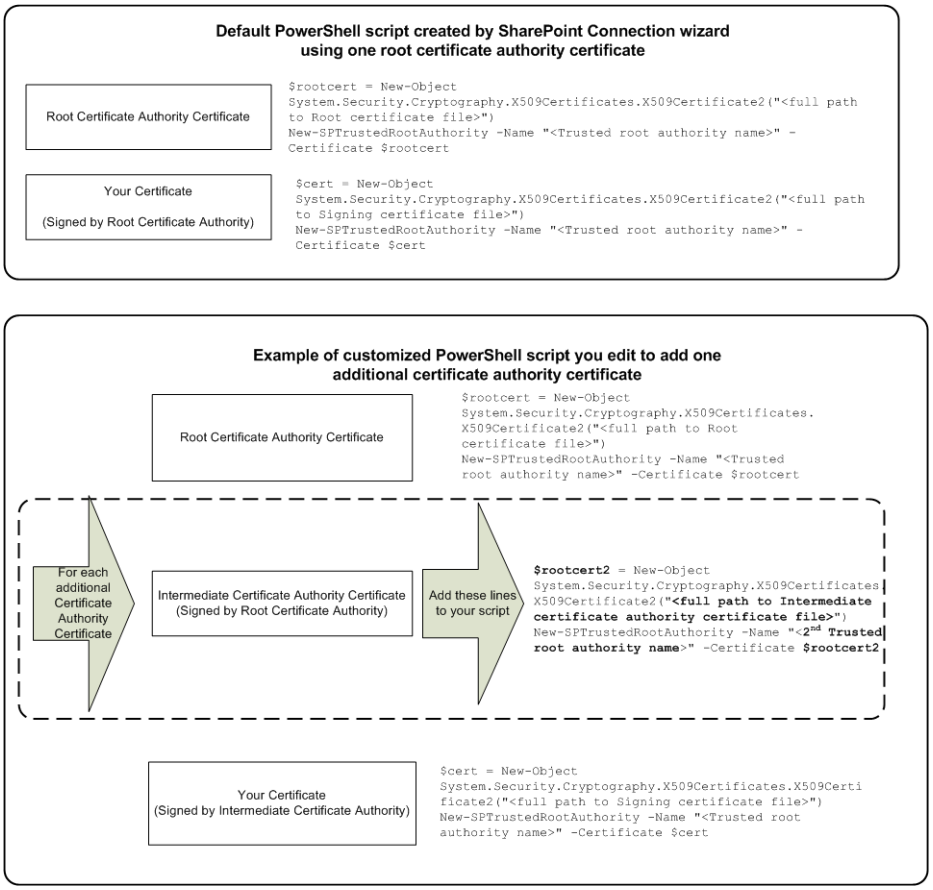
Add Additional Certificate Authority Certificates to the PowerShell Script

The PowerShell script created by the SharePoint connection wizard accommodates the following certificates:

- A certificate authority certificate (also named a root certificate)
- One SSL certificate.

The trusted identity provider requires that all certificates in the certificate chain are included. If an intermediate certificate authority signed your certificate instead, modify the PowerShell script to include both certificate authority certificates.

The following illustration describes the differences between the default PowerShell script, and a PowerShell script that accommodates multiple certificate-authority certificates:



Follow these steps:

1. Copy the following section from your PowerShell script:

   ```
   $rootcert = New-Object
   System.Security.Cryptography.X509Certificates.X509Certificate2("<full path to
   Root certificate file>")
   New-SPTrustedRootAuthority -Name "<Trusted root authority name>" -Certificate
   $rootcert
   ```

2. Copy the following section from your PowerShell script:
3. Add a new line after the section you copied, and then paste the copied into the new line.
4. Edit the pasted section using the changes shown in the following table as a guide:

Change this value:	To this value:
$rootcert	$rootcert2
<full path to Root certificate file>	<full path to additional certificate authority certificate file>
<Trusted root authority name>	Name of the additional trusted root authority

5. To add additional certificate authority certificates, repeat Steps 1 through 4.
6. Save your changes and close your text editor.

   The PowerShell script is modified.

7. Create a trusted identity provider (see page 103).

Run the Powershell Script to Create a Trusted Identity Provider

Run the modified PowerShell script to create a trusted identity provider on your SharePoint central administration server.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell
2. Navigate to the directory containing your edited PowerShell script.
3. Run the script with the following command:

   ```
   .\your_connection_name.ps1
   ```

   For example, if you named your connection "my_sharepoint" when you ran the connection wizard, the command would be .\my_sharepoint.ps1.

   The trusted identity provider is created.

Verify That the Trusted Identity Provider Is Registered

After running the PowerShell script to create your trusted identity provider, verify that it is registered in your SharePoint central administration server.

Follow these steps:

1. From your SharePoint central administration server, click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The Microsoft PowerShell command prompt appears.

2. Enter the following command:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of the trusted identity providers that are configured on the SharePoint central administration server appears.

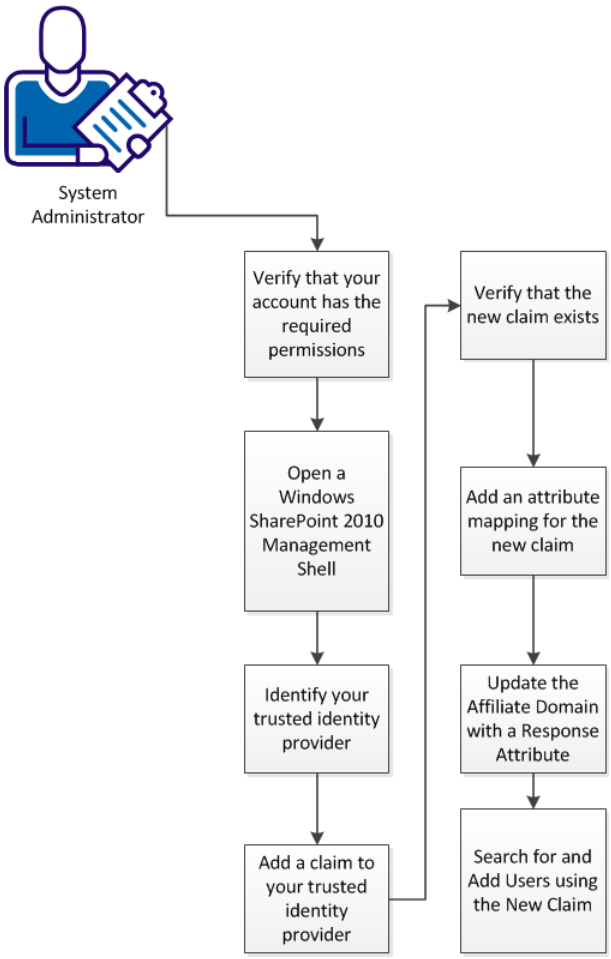
Chapter 8: Adding Claims to Trusted Identity Providers

SharePoint 2010 supports third-party identity providers. These identity providers authenticate and authorize users who request SharePoint resources. A SharePoint administrator configures a trusted identity provider for a SharePoint environment.

Claims are a form of attribute or role, that a user has. Each claim has a name to identify it, and a value that the trusted identity provider verifies by connecting to a user directory.

For example, you can configure claims that correspond to the SamAccountName attribute of an Active Directory server or a uid of an LDAP directory server.

You can add a claim to a SiteMinder trusted identity provider at any time. The following illustration describes the process:



To add a claim to a SiteMinder trusted identity provider, follow these steps:

1. Verify that your account has the required permissions (see page 107).
2. Open a SharePoint 2010 Management Shell window on your SharePoint Central Administration server (see page 107).
3. Identify your SiteMinder trusted identity provider (see page 107).
4. Add a claim to your trusted identity provider (see page 108).
5. Verify that the new claim exists. (see page 108)
6. Add an attribute mapping for the new claim (see page 109).
7. Update the affiliate domain with a response attribute (see page 110).
8. Search for and add users using the new claim (see page 112).

Verify that your Account has the Required Permissions

The user account with which you want to modify the SiteMinder trusted identity provider requires certain permissions. Modify the permissions of your user account if it does *not* meet the following conditions:

- An Administrator account.
- A member of the Administrators group.

Add the following privileges to your account:

- Local administrator on all SharePoint web front end (WFE) servers.
- Read/Write access to the configuration database.

Open a SharePoint 2010 Management Shell Window on your SharePoint Central Administration Server

Add claims to your <stmdnr> trusted identity provider using the SharePoint 2010 Management shell.

Follow these steps:

1. Log in to your SharePoint Central Administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   A SharePoint 2010 management shell command-line window appears.

Identify your Trusted Identity Provider

A SharePoint 2010 environment can have multiple trusted identity providers. Identify your SiteMinder trusted identity provider before modifying any claims that are associated with it.

Follow these steps:

1. Enter the following command to list all of the trusted identity providers:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers appears.
2. Locate your SiteMinder trusted identity provider in the list.

   Your SiteMinder trusted identity provider is identified.

Add a Claim to your Trusted Identity Provider

Adding a claim to your SiteMinder trusted identity provider involves several steps using the SharePoint 2010 Management Console. This example adds a claim for the last name of a user to the SiteMinder trusted identity provider. Use this example as a guide to add any claim you want to your SiteMinder trusted identity provider.

Follow these steps:

1. Enter the following command to assign the name of your <stmdnr> trusted identity provider to a variable:

   ```
   $trutsed_identity_provider_variable_name = Get-SPTrustedIdentityTokenIssuer
   -Identity "name_of_siteminder_trusted_identity_provider"
   ```

2. Enter the following command to add a claim type that is based on the last name of a user:

   ```
   $map2 = New-SPClaimTypeMapping -IncomingClaimType
   "http://schemas.xmlsoap.org/claims/lastname" -IncomingClaimTypeDisplayName
   "role" -LocalClaimType "http://schemas.xmlsoap.org/claims/lastname"
   ```

3. Enter the following command to associate the new claim type with your SiteMinder trusted identity provider:

   ```
   $map2 | Add-SPClaimTypeMapping -TrustedIdentityTokenIssuer
   $trutsed_identity_provider_variable_name
   ```

   The new claim is added to your trusted identity provider.

Verify the New Claim Exists

You can verify the addition of the new claim to your SiteMinder trusted identity provider. This example verifies the addition of a claim for the last name of a user.

Follow these steps:

1. Enter the following command to verify the presence of your new claim:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers appears.

2. Verify that new claim for your SiteMinder trusted identity provider appears.

Add an Attribute Mapping for the New Claim

Add an attribute mapping for the new claim using the SiteMinder Administrative UI. For this example, an attribute mapping links the claim, such as last name, to a specific attribute in your user directory. For both Active Directory servers and LDAP directories, map the Last Name claim to the sn attribute in your directory.

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the name of the new claim. For example, if your new claim is Last Name, as shown in this example, enter the following text:

   ```
   Last Name
   ```
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the directory attribute that you want to associate with the claim you added. For example, if your new claim is Last Name, as shown in this example, enter the following text:

   ```
   sn
   ```
9. Click OK.

   The Modify User directory page appears.
10. Click Submit.

    The attribute mapping for the new claim is created.

Update the Affiliate Domain with a Response Attribute

Update the affiliate domain with a response attribute for your new claim. This update requires running the SharePoint connection wizard on the computer hosting your SiteMinder Agent for SharePoint.

This procedure adds the mapping of the new claim to your SiteMinder Policy Server.

Follow these steps:

1. Navigate to the following directory:

   `Agent-for-SharePoint_home/sharepoint_connection_wizard`

2. Do *one* of the following procedures:

   - For Windows operating environments, right-click the executable and then select Run as administrator.
   - For Solaris operating environments, enter the following command:

     `Solaris: sh ./ca-spconnect-version-sol.bin`
   - For Linux operating environments, enter the following command:

     `Linux: sh ./ca-spconnect-version-rhel30.bin`

   The wizard starts.

3. Click Next.

   The Login Details screen appears.

4. Complete the following fields with the information from your existing SiteMinder settings:

   Policy Server Name

   Specifies the Policy Server name or IP address.

   Username

   Specifies the Policy Server administrator username.

   Password

   Specifies the Policy Server administrator password.

   Agent Name

   Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

   Shared Secret Key

   Specifies the shared secret key that is associated with the Agent.

5. Click Next

   The Select Action screen appears.

6. Select Edit a SharePoint Connection option.
7. Click Next.

   The SharePoint Connection Properties screen appears.
8. Click Next until the Add Attributes screen appears.
9. Click the drop-down arrows and select the values for the new claim from the following lists:

   Attribute

   Specifies an attribute name for one of the following claim types:

   - Group based
   - Role based

   For multivalued attributes, prefix FMATTR, as shown in the following example:

   Example: (multivalued attributes) FMATTR:LastName

   Claim Type

   Specifies an attribute value in your directory that is associated with the specified attribute name.

   Example: (Active Directory attribute value for LastName) sn.

   Example: (LDAP Directory role-based claim) sn.
10. Click Add, and then click Next.

    The attribute details are saved and the Commit Details screen appears.
11. Click Install in the Commit Details screen.

    The Save Complete screen appears.
12. Click Done.

    The partnership details are saved, the SharePoint Connection is modified, and the wizard closes.

Search for and Add Users using the New Claim

You can search for users to add to your SharePoint Policy for web application using the new claim. For example, if you added a claim for the Last Name attribute, you can search for users by entering their last names in the SharePoint people picker.

Follow these steps:

1. Click Start, Programs, Microsoft SharePoint 2010 Products.

   The Central Administration home page appears.

2. Click Manage web applications, in the Application Management section.

   The Web Applications Management page appears with a list of available web applications.

3. Click the web application name for which you want to add users.

   The buttons on the ribbon become available.

4. Click User Policy on the ribbon.

   The Policy for Web Application dialog appears.

5. Click Add Users.

   The Select Zone dialog appears.

6. Verify that the Zone you want appears in the drop-down list, and then Click Next.

   The Add Users dialog appears.

7. Click the Browse button, in the Choose Users section, below the Users text box.

   The Select People and Groups – Webpage Dialog appears.

8. Enter a value that corresponds to the new claim. For example, if your new claim is Last Name, enter the last name of a user.

   The right pane displays the search results with a list of users whose attributes match the value on which you searched.

9. Select the user and click Add.

   The selected user is added.

10. (Optional) Repeat steps 8 and 9 to select additional users.

11. Click OK.

    The Add Users dialog appears and displays the selected user.

12. Under Choose Permissions, click the permissions that you want to grant to the users.

13. Click Finish.

    The selected users and permissions are added.

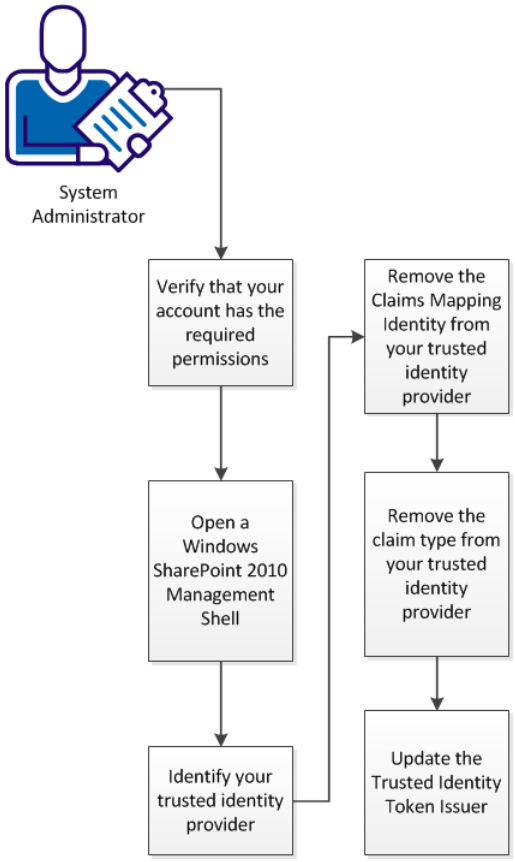
Removing Claims from Trusted Identity Providers

SharePoint 2010 supports third-party identity providers. These identity providers authenticate and authorize users who request SharePoint resources. A SharePoint administrator configures a trusted identity provider for a SharePoint environment.

Claims are a form of attribute or role, that a user has. Each claim has a name to identify it, and a value that the trusted identity provider verifies by connecting to a user directory.

For example, you can configure claims that correspond to the SamAccountName attribute of an Active Directory server or a uid of an LDAP directory server.

You can remove a claim to a SiteMinder trusted identity provider at any time. The following illustration describes the process:



To remove a claim from a SiteMinder trusted identity provider, follow these steps:

1. Verify that your account has the required permissions (see page 107).
2. Open a SharePoint 2010 Management Shell window on your SharePoint Central Administration server (see page 107).
3. Identify your trusted identity provider (see page 107).
4. Remove the claims mapping identity from your trusted identity provider (see page 115).
5. Remove the claim type from your trusted identity provider (see page 116).
6. Update the trusted identity token issuer (see page 116).

Verify that your Account has the Required Permissions

The user account with which you want to modify the SiteMinder trusted identity provider requires certain permissions. Modify the permissions of your user account if it does *not* meet the following conditions:

- An Administrator account.
- A member of the Administrators group.

Add the following privileges to your account:

- Local administrator on all SharePoint web front end (WFE) servers.
- Read/Write access to the configuration database.

Open a SharePoint 2010 Management Shell Window on your SharePoint Central Administration Server

Add claims to your <stmdnr> trusted identity provider using the SharePoint 2010 Management shell.

Follow these steps:

1. Log in to your SharePoint Central Administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   A SharePoint 2010 management shell command-line window appears.

Identify your Trusted Identity Provider

A SharePoint 2010 environment can have multiple trusted identity providers. Identify your SiteMinder trusted identity provider before modifying any claims that are associated with it.

Follow these steps:

1. Enter the following command to list all of the trusted identity providers:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers appears.

2. Locate your SiteMinder trusted identity provider in the list.

   Your SiteMinder trusted identity provider is identified.

Remove the ClaimsMapping Identity from your Trusted Identity Provider

Removing a claim from your SiteMinder trusted identity provider involves several steps using the SharePoint 2010 Management Console. This example removes a claim for the last name of a user from the SiteMinder trusted identity provider. Use this example as a guide to remove any claim you want from your SiteMinder trusted identity provider.

Follow these steps:

1. Enter the following command to assign the name of your <stmdnr> trusted identity provider to a variable:

   ```
   $trutsed_identity_provider_variable_name = Get-SPTrustedIdentityTokenIssuer
   -Identity "name_of_siteminder_trusted_identity_provider"
   ```

2. Enter the following command to verify that the correct item is assigned to the variable:

   ```
   echo $trutsed_identity_provider_variable_name
   ```

3. Enter the following command to remove the claim from the SiteMinder trusted identity provider. The command shown in the following example removes a claim for the last name of a user:

   ```
   Remove-SPClaimTypeMapping -Identity
   "http://schemas.xmlsoap.org/claims/lastname"  -TrustedIdentityTokenIssuer

   $trutsed_identity_provider_variable_name
   ```

4. Repeat Step 1 to refresh the variable for the SiteMinder trusted identity provider.

Remove the Claim Type from your Trusted Identity Provider

Remove the claim type from your SiteMinder trusted identity provider.

Follow these steps:

1. Enter the following command to list the claim types contained in the variable for your SiteMinder trusted identity provider:

   `$trutsed_identity_provider_variable_name.ClaimTypes`

2. From the previous list, locate the claim type that is associated with the claim identity you want to remove.
3. Enter the following command to remove the claim type:

   `$trutsed_identity_provider_variable_name.ClaimTypes.Remove("http://schemas.xmlsoap.org/claims/lastname")`

   For example, the previous command removes the claim type for the last name of a user.

Update the Trusted Identity Token Issuer

Update the SiteMinder trusted identity provider after removing the claim identity and the claim type.

Follow these steps:

1. Enter the following command to update the SiteMinder trusted identity provider:

   `$trutsed_identity_provider_variable_name.Update`

   The trusted identity provider is updated.

Configure the Authentication Providers

You can create a web application that uses Claims-based authentication type by using the SharePoint Central Administration user interface or Windows PowerShell. Use the Central Administration to create a web application.

If you want to automate the task of creating a web application, which is common in enterprises, use Windows PowerShell. You can also modify the authentication type of an existing classic based authentication to claims-based authentication using the PowerShell script.

Modify an Existing Classic Authentication to Claims-based Authentication

You can update a web application that uses classic authentication to claims-based authentication using a PowerShell script. The following procedure helps you migrate existing web applications configured to use classic authentication, to use claims-based authentication.

Important! You cannot reverse this process. After you convert the web application authentication type to a Claims-based authentication, you cannot reconvert the authentication to the previous type.

Follow these steps:

1. Open the SharePoint 2010 Management Shell command prompt.

   The command prompt appears.

2. Enter the following command to change the authentication mode to claims-based authentication:

   ```
   $WebAppName = "http:// yourWebAppUrl"
   $account = "yourDomain\yourUser"
   $wa = get-SPWebApplication $WebAppName

   Set-SPwebApplication $wa -AuthenticationProvider
   (New-SPAuthenticationProvider) -Zone Default
   ```

   The authentication mode is changed to claims-based authentication and the migration prompt is displayed.

   Note: The preceding command modifies an existing classic authentication web application to claims-based authentication. Associate this web application with the Trusted Identity Provider in the SharePoint Central Administration user interface.

3. Click Yes to continue, at the migration prompt.

4. Enter the following command to set the user as an administrator for the site:

   ```
   $wa = get-SPWebApplication $WebAppName
   $account = (New-SPClaimsPrincipal -identity $account -identitytype
   1).ToEncodedString()
   ```

   The user is set as the administrator for the site.

5. Enter the following command to configure the policy to enable the user to have full access:

   ```
   $zp = $wa.ZonePolicies("Default")
   $p = $zp.Add($account,"PSPolicy")
   $fc=$wa.PolicyRoles.GetSpecialRole("FullControl")
   $p.PolicyRoleBindings.Add($fc)
   $wa.Update()
   ```

   The user obtains full access.

6. Enter the following command to configure the policy to perform user migration:

   ```
   $wa = get-SPWebApplication $WebAppName
   $wa.MigrateUsers($true)
   ```

   The user migration process is completed.

7. Start SharePoint 2010 Central Administration from Start, Programs, Microsoft SharePoint 2010 Products.

   The Central Administration Home page appears.

8. Click Manage web applications, in the Application Management section.

   The Web Applications Management page appears with a list of available web applications.

9. Select the web application that has been updated and click Authentication Providers on the ribbon.

   The Authentication Providers dialog shows that the authentication type has been updated to claims-based authentication.

Note: For information about claims-based authentication and for using the Windows PowerShell, see the *SharePoint Server 2010 Deployment Guide* from the Microsoft TechNet website.

How to Disable Client Loopback

The Agent for SharePoint has a client loopback feature that lets you create policies in your SharePoint environment using directory attribute values that do not yet exist.

For example, suppose that your directory server contains an attribute named employeeType, and the employeeType attribute uses one of the following values for each user:

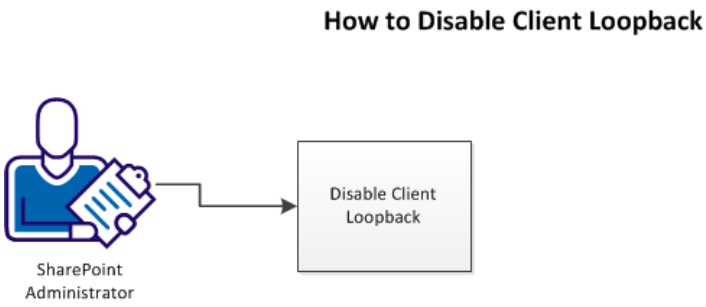
- Employee
- Contractor
- Manager
- Executive

For example, suppose you want to create an attribute value for the employeeType attribute named Vendor in your directory servers to use with SharePoint.

If a different group in your organization manages the directory servers, that task is beyond your control. The Claims Provider creates placeholders for the new attribute values using the loopback feature.

In this example, use the loopback feature so that the Vendor attribute value exists in your SharePoint environment it appears in the directory servers. New attribute values let you create SharePoint policies whenever you want, without waiting for your administrator to add the actual attribute values to your directory.

If you do not need to add attributes before they exist in your directory, disable the client loopback feature.



Follow these steps:

1. Disable client loopback (see page 120).

Disable Client Loopback

If you do *not* need to add attributes using the SharePoint people picker before they exist in your user directories, disable the client loopback feature. Leaving client loopback enabled when the directory attributes exist returns duplicates in the SharePoint people picker.

Follow these steps:

1. Log in to your SharePoint central administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The management shell command-line window opens.
3. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```
4. Enter the following command:

   ```
   .\Set-SMClaimProviderConfiguration.ps1 -DisableLoopBackSearch
   ```

   Loopback search is disabled.

Add and Grant Permission to SiteMinder Users

Add your users to SharePoint and assign permission levels depending on their roles. Permission levels allow users to perform a set of related tasks.

Follow these steps:

1. From your SharePoint central administration server, click, Start SharePoint 2010 Central Administration from Start, Programs, Microsoft SharePoint 2010 Products.

   The Central Administration home page appears.
2. Click Manage web applications, in the Application Management section.

   The Web Applications Management page appears with a list of available web applications.
3. Click the web application name for which you want to add users.

   The buttons on the ribbon become available.

4. Click User Policy on the ribbon.

   The Policy for Web Application dialog appears.

5. Click Add Users.

   The Select Zone dialog appears.

6. Verify that the Zone you want appears in the drop-down list, and then Click Next.

   The Add Users dialog appears.

7. Click the Browse button, in the Choose Users section, below the Users text box.

   The Select People and Groups – Webpage Dialog appears.

8. Browse and select the user group to search for the user.

   The right pane displays the search results with the list of users.

9. Select the user and click Add.

   SharePoint adds the selected user.

10. (Optional) Repeat steps 8 and 9 to select additional users.

11. Click OK.

    The Add Users dialog appears and displays the selected users.

12. Select the required permissions for the users, in the Choose Permissions section.

13. Click Finish.

    SharePoint adds the selected users and assigns the selected permissions to the users.

Manage User Profiles

The SiteMinder Agent for SharePoint 12.5.1 does not support User Profile Import or User Migration. However, you can use the Microsoft SharePoint User Profile Synchronization Service to import user information from external directory sources. The User Profile Synchronization Service lets you extract the additional data from the external directory and augments the user records with this data. Data can also be written to the directory source (such as Active Directory or an LDAP directory), provided appropriate permissions are present.

The User Profile Service in SharePoint stores information about users in a central location, that allows multiple SharePoint applications to manage user profiles. Enable the User Profile service using SharePoint Central Administration.

You can configure SharePoint to use the User Profile Synchronization Service to import SiteMinder users. And you can use the SiteMinder Agent for SharePoint solution to protect the web applications.

Note: For more information about User Profile Synchronization, see the *Configure profile synchronization* article from the Microsoft TechNet website.

Chapter 9: Features to Set Up Following Basic Installation and Configuration of the Agent for SharePoint

This section contains the following topics:

Additional SharePoint Configuration Options

Perform any of these additional configuration steps at any time:

- Create a web application that uses claims-based authentication (see page 123).
- Enable SSL on your IIS web server for a web application (see page 124).
- Enable SSL for the web application (see page 125).

Create a New Web Application with Claims based Authentication

Follow these steps:

1. Start SharePoint 2010 Central Administration from Start, Programs, Microsoft SharePoint 2010 Products.

   The Central Administration home page appears.

2. Click Manage web applications, in the Application Management section.

   The Web Applications Management page appears with a list of available web applications.

3. Click New, on the ribbon.

   Create New Web Application dialog appears.

4. Select Claims Based Authentication option, in the Authentication section.
5. Select Yes option for Use Secure Sockets Layer (SSL), in the Security Configuration section.
6. Select the Trusted Identity Provider option, in the Claims Authentication Types.

   Note: This option is already selected if you have set up Trusted Identity Provider authentication in Windows PowerShell.

   Important! Verify that the options for all other authentication types in the Claims Authentication Types section are cleared.
7. Complete the remaining appropriate sections.
8. Click OK.

   A new web application with claims authentication is created.

Note: For information about Claims-based authentication, see www.microsoft.com.

Enable SSL on IIS for the Web Application

A Secure Sockets Layer (SSL) encryption is required for a web application as it provides greater security. Remote clients access the web application using URLs starting with https:// when SSL is used.

The following procedure describes how to enable SSL on IIS Manager.

Follow these steps:

1. Click Start, Administrative Tools, Internet Information Services (IIS) Manager.

   The IIS Manager dialog appears.
2. Navigate to and select the Windows Claims-based authentication web application site that requires SSL encryption, in the Connections pane.
3. Click Edit Bindings in the Actions pane.

   The Site Bindings dialog appears.
4. Select the https entry, and then click Edit.

   The Edit Site Binding dialog appears.

5. Select the certificate for the server hosting your Agent for SharePoint from the list, in the SSL Certificate field.
6. Click OK.

   The Site Bindings dialog appears.
7. Click Close.

   The web application is enabled for SSL encryption.

Note: If you do not find an appropriate certificate, you cannot bypass the certificate warning screen. You can import the certificate that is issued to the URL into the client to bypass the certificate warning. For more information about configuring a Secure Sockets Layer, refer the *IIS 7 Operations Guide* from www.microsoft.com.

More information:

Create a New Web Application with Claims based Authentication (see page 123)
Enable SSL for the Web Application (see page 125)

Enable SSL for the Web Application

You can configure the web application to use SSL when you create a web application. See *Create a Web Application with Claims-based Authentication* for the procedure to enable SSL when creating a web application. Alternatively, you can extend the SLL capability of a web application by performing the following procedure.

Follow these steps:

1. Click Start, Programs, Microsoft SharePoint 2010 Products, Start SharePoint 2010 Central Administration.

   The Central Administration home page appears.
2. Click Application Management, Configure alternate access mappings section.

   The Central Administration> Alternate Access Mappings page appears with a list of available web applications.
3. Click Add Internal URLs button.

   The Central Administration> Add Internal URLs page appears.

4. Select an Alternate Access Mapping Collection from the Alternate Access Mapping Collection list.
5. Enter the URL with HTTPS in the Add Internal URL field and select a zone.

   For example, enter https://spserver.example.com.
6. Click OK.

   The Central Administration> Alternate Access Mappings page appears with the modified URL.

Note: If you do not find an appropriate certificate, you cannot bypass the certificate warning screen. If you have a certificate that is issued to the URL, you can import the certificate in to the client to bypass the certificate warning. For more information about enabling SSL, for the web application in SharePoint refer www.microsoft.com.

More information:

Create a New Web Application with Claims based Authentication (see page 123)
Enable SSL on IIS for the Web Application (see page 124)

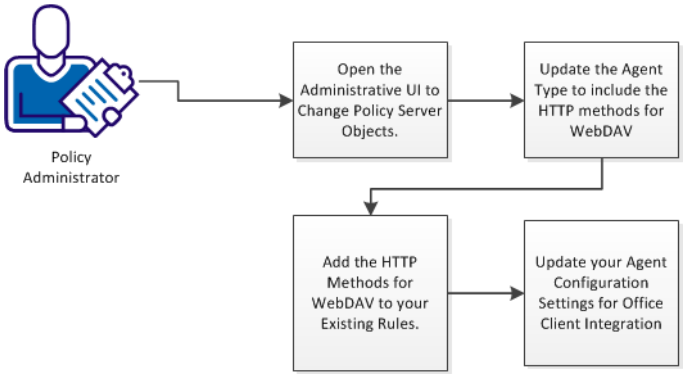
Office Client Integration

Office Client Integration lets users edit and update documents stored on SharePoint with the respective Microsoft Office applications. For example, someone who has Microsoft Word can revise a Word document stored SharePoint.

How to Configure Office Client Integration for the Agent for SharePoint

Office Client Integration lets users collaborate on Microsoft Office documents stored in SharePoint. When users open a Microsoft Office document on SharePoint, they use the related Microsoft Office application to edit the document.

How to Configure Office Client Integration



Follow these steps:

1. Open the Administrative UI to change Policy Server objects (see page 36).
2. Update the Agent Type to include the HTTP methods for WebDAV (see page 128).
3. Add the HTTP methods for WebDAV to your existing rules (see page 129).
4. Update your Agent Configuration Settings for Office Client Integration (see page 130).

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   `https://host_name:8443/iam/siteminder/adminui`

   host_name

   Specifies the fully qualified Administrative UI host system name.

2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

   Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Update the Agent Type to Include the HTTP Methods for WebDAV

To use the Office Client Integration feature, modify the Agent type to include the methods for WebDAV.

Follow these steps:

1. Click Infrastructure, Agents, Agent Type, Modify Agent Type.

   The Create Agent Type search pane appears.

2. Highlight the text in the search field, and then type the following:

   Web Agent

3. Click Search.

   The Web Agent type appears in the list.

4. Click Select.

   The Modify Agent Type: *Web Agent* pane appears.

5. Scroll to the bottom of the Actions section, and then click Create.

   A new action field appears at the end of the list.

6. Highlight the text in the New Action field, and then enter the following:

   Head

7. Scroll to the bottom of the Actions section, and then click Create.

   A new action field appears at the end of the list.

8. Repeat Steps 6 and 7 until all of the following methods are added:

   OPTIONS

   PROPFIND

   PROPPATCH

   COPY

   DELETE

   MOVE

   LOCK

   UNLOCK

9. Click Submit.

   The Modify Agent type task is submitted for processing. A confirmation screen appears.

10. Click OK.

    The Agent type settings for your SharePoint resources are updated.

Add the HTTP Methods for WebDAV to Your Existing Rules

To use the Office Client Integration feature with the Agent for SharePoint, update the web agent actions in any rules protecting SharePoint sites.

Follow these steps:

1. Click Policies, Domains, Rule, Modify Rule.

   The Modify Rule screen appears.

2. Click the option button of the domain that contains the rule you want, and then click Select.

   Modify Rule: Name screen appears.

3. In the Action drop-down list, press and hold Ctrl and click the following items:
   - HEAD
   - OPTIONS
   - PROPFIND
   - PROPPATCH
   - COPY
   - DELETE
   - MOVE
   - LOCK
   - UNLOCK
4. Click Submit.
5. Repeat Steps 2 through 4 for any additional rules that you want.

   The rule is updated, and the confirmation screen appears.

Update your Agent Configuration Settings for Office Client Integration

The parameter settings in the Agent Configuration Object that is associated with your Agent for SharePoint control how Office Client Integration operates on your Agent for SharePoint.

Follow these steps:

1. Click Infrastructure, Agent Configuration, Modify Agent Configuration.
2. Click the edit button for the Agent Configuration object of your Agent for SharePoint.

   The Modify Agent Configuration: Name pane opens.

3. Change the values of the following parameters:

SPClientIntegration

Specifies the hostnames of the SharePoint servers that the Agent for SharePoint protects on which you want to permit Office Client Integration. The default parameter is blank and listed as plain. If there are multiple host entries, use the multivalue option button to add multiple hosts.

Add a port number to the value if the Agent for SharePoint operates on a nondefault port (any port except 80 or 443).

To use this parameter, verify that the SharePoint resources that SiteMinder protects also have their Office Client Integration enabled on the SharePoint central administration server.

Because Office Client Integration requires a persistent FedAuth cookie, verify that your SharePoint server is *not* configured to use session cookies. By default, UseSessionCookies in SharePoint is set to NO.

Default: None

Limits: Multiple values are allowed. Use fully qualified domain names for all values.

Example: *agent_for_sharepoint_host_name.*example.com (default ports of 80 or 443)

Example: *agent_for_sharepoint_host_name.*example.com:81 (with a nondefault port number for HTTP)

Example: *agent_for_sharepoint_host_name.*example.com:4343 (with a nondefault port number for HTTPS)

SPDisableClientIntegration

Specifies the hostnames of the SharePoint servers that the Agent for SharePoint protects on which you want to prohibit Office Client Integration. The default parameter is blank and listed as plain. If there are multiple host entries, then switch over to a multi—value parameter. The URL in this parameter *requires* a port number (even for a default port such as 80 or 443).

This setting prevents SharePoint administrators from circumventing SiteMinder settings regarding Office Client integration.

Limit: Multiple values are allowed.

Example: *agent_for_sharepoint_host_name:port_number*

4. The following parameter describes the user agent values to which the Agent for SharePoint permits access:

   SPAuthorizeUserAgent

   Specifies a list of Microsoft Office user-agent strings for which the Agent for SharePoint allows access. This list is populated automatically with the default values when the Agent for SharePoint starts. The user-agent strings in this parameter act as a whitelist. Changes to this parameter override the default settings. Access is denied to clients whose user-agent string does not appear in the list.

   For example, setting the value to Microsoft Office allows access to all versions of Microsoft Office products that are associated with that user-agent string. Conversely, setting the value to Microsoft Office/12.0 allows access to only those versions of Microsoft Office products that are associated with that user-agent string.

   Default: Microsoft Office, MS FrontPage, MSFrontPage, Microsoft Data Access Internet Publishing Provider Protocol Discovery, Test for Web Form Existence, Microsoft-WebDAV-MiniRedir

   Limits: Multiple values are allowed.

5. Examine the default values of the previous parameter. Ask your SharePoint or IIS web server administrator if more user-agent values are required.

   Note: Microsoft (*not* CA Technologies) defined the user-agent strings in the previous parameter. For more information about these user-strings, search the Microsoft Developer Network (MSDN) library website for information about the user-string that you want.

6. Change the value of the CSSChecking parameter to no.

   Note: Because the Agent for SharePoint is a proxy-based solution, this setting is required for Office Client Integration.

7. Click OK.

   The new values appear next to the parameters in the list.

8. Click Submit.

   The Create Agent Configuration Task is submitted for processing and the confirmation message appears.

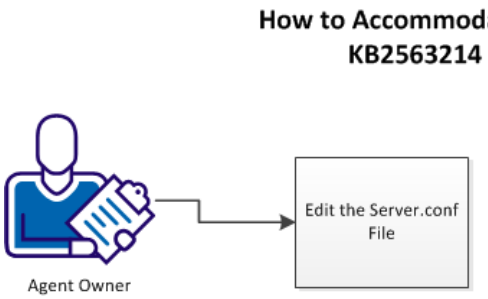
How to Configure WebDAV to Accomodate Microsoft Hot Fixes 2563214 and 2647954

The following hot fixes from Microsoft affect the behavior of the Agent for SharePoint:

- KB2563214
- KB2647954

These hotfixes return Web browser error messages with code 500 to users who try opening Microsoft Office documents.

As a work-around, modify the server.conf file on any servers running the Agent for SharePoint that have any of the previous hot fixes installed.



Follow these steps:

1. Modify the server.conf file on the server running your Agent for SharePoint (see page 134).

Modify the server.conf File

Adding new directives to the server.conf file on each Agent for SharePoint eliminates the error messages that the Microsoft hot fixes cause.

Follow these steps:

1. Log on to the server hosting your Agent for SharePoint.
2. Open the following file with a text editor:

   Agent-for-SharePoint_Home/secure-proxy/proxy-engine/conf/server.conf

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Search the file for the following tag:

   ```
   <SharePoint>
   ```
4. Do *one* of the following tasks:
   - If the tag in Step 3 is *already* in the file, remove any comment marks in the section to accommodate the hotfixes. Go to Step 5.
   - If the tag does *not* exist in the file, then go to Step 5.
5. Add the following section:

   ```
   <SharePoint>
         allowedClientMethods="PROPFIND,OPTIONS"
         allowedUserAgents="WebDAV"
   </SharePoint>
   ```
6. Save the file and close the text editor.

   The server.conf file is modified to accommodate the Microsoft hot fixes.
7. Repeat Steps 1 through 6 on all servers running the Agent for SharePoint.

Claims Provider

The Claims Provider in the Agent for SharePoint is used for configuring particular claim values to grant permissions to SharePoint resources using the SharePoint people picker. The Claims Provider is packaged as a SharePoint solution (WSP file) with its feature receiver.

The Claims Provider requires Directory Attribute Mappings that you configure using the SiteMinder Administrative UI. The Claims Provider uses these mappings to display the results of your searches in the SharePoint people picker.

Using the Claims Provider involves several separate procedures. Use the following process.

1. Create virtual attribute mappings (see page 136).
2. Install the Claims Provider (see page 151).
3. Configure the Claims Provider (see page 152).

Note: The Claims Provider for SharePoint installer supports Windows 64-bit Operating Systems.

Claims Provider Searches and Results

The SharePoint claims provider lets you search your SiteMinder directories with the SharePoint people picker.

The following table describes the relationships between the search criteria you enter in the people picker and the search results that appear:

When you search for this attribute in the SharePoint people picker:	The SharePoint people picker returns the following results:
User identifier or display name.	The user identifier or the display name of the user
Group name	The friendly name associated with the smusergroup attribute
Other attributes (such as claim names based on a role)	The attribute value you associated with the role.

Agent for SharePoint Virtual Attribute Mappings

Virtual attribute mappings create relationships between the attributes from your SiteMinder user directories and the SiteMinder claims provider. These mappings allow SiteMinder to search your user directories for claims, and display the results in the SharePoint people picker.

The following types of claims are supported:

- User claims (one is required)
- Group claims
- Role claims

Note: Configuring this feature requires information from several systems or administrators in your organization. Work with the administrators for your SharePoint environment and with administrators for the user directories in your organization.

Virtual Attribute Mapping Examples for an LDAP Directory

To search the user directory in your SiteMinder environment using the SharePoint people picker, create virtual attribute mappings. The Agent for SharePoint requires at least *one* attribute mapping for claims that are based on the ID of a user. Create additional mappings to accommodate your needs.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Each additional mapping creates another association between a specific attribute in your user directory and the Agent for SharePoint. The people picker in SharePoint uses these associations to search your user directory using the values you specify. For example, you can create an attribute mapping that lets you search by user name, group name or email address.

The following table identifies the typical LDAP directory attribute mappings and describes how they are used in your SiteMinder and SharePoint environments:

For LDAP Directories:	**Create a SiteMinder virtual attribute to search for this claim with the people picker.**		**Create a SiteMinder virtual attribute so the friendly names appear in the people picker next to the corresponding claim values.**		**Enter these corresponding values in the SharePoint Connection wizard.**		**(Optional) Customize the display name for the people picker**
Purpose	**1. Use this name for your virtual attribute.**	**2. Enter the name of the directory attribute you want to use for the claim value.**	**3. Use this name for the SiteMinder virtual attribute.**	**4. Use this name for the directory attribute you want to use as a claim value.**	**5. To define the claim in the connection wizard:**	**6. To define the attribute value for the claim in the connection wizard:**	**7. Replace the string following the -IncomingClaimTypeDisplayName with this value:**
Mandatory User claim that uniquely identifies the user.	useridentifier	uid	smuserdisplayname	displayName	Enter the following value in the Identifier Claim Name field: useridentifier	Enter the following value in the Directory Attribute field: uid	User ID

(Optional) Group-based user-claim that is based on a DN in the directory.	smusergroups	Description (use the friendly name of your groups).	Not required for group-based claims.	Click the Attribute drop-down list and then select the following value: smusergroups	Not required. The connection wizard configures this setting automatically.	Group
(Optional) Role-based user claim	userrole	employeeType	Not supported.	1. Click the Attribute drop-down list and then select the following value: NameValue 2. Click the Claim type drop-down list and select the following value: User Attribute 3. Click the Claim Name field and enter the following value: userrole	Enter the following value in the Directory Attribute field: employeeType	Role

Virtual Attribute Mapping Examples for a Microsoft Active Directory Server

To search the user directory in your SiteMinder environment using the SharePoint people picker, create virtual attribute mappings. The Agent for SharePoint requires at least *one* attribute mapping for claims that are based on the ID of a user. Create additional mappings to accommodate your needs.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Each additional mapping creates another association between a specific attribute in your user directory and the Agent for SharePoint. The people picker in SharePoint uses these associations to search your user directories using the values you specify. For example, you can create an attribute mapping that lets you search by user name, group name or email address.

The following table identifies the typical Microsoft Active Directory attribute mappings and describes how they are used in your SiteMinder and SharePoint environments:

For Active Directories:	**Create a SiteMinder virtual attribute to search for this claim with the people picker.**		**Create a SiteMinder virtual attribute so the friendly names appear in the people picker next to the corresponding claim values.**		**Enter these corresponding values in the SharePoint Connection wizard.**		**(Optional) Customize the display name for the people picker**
Purpose	**1. Use this name for your virtual attribute.**	**2. Enter the name of the directory attribute you want to use for the claim value.**	**3. Use this name for the SiteMinder virtual attribute.**	**4. Use this name for the directory attribute you want to use as a claim value.**	**5. To define the claim in the connection wizard:**	**6. To define the attribute value for the claim in the connection wizard:**	**7. Replace the string following the -Incoming ClaimType DisplayName with this value:**
Mandatory User claim that uniquely identifies the user.	useridentifier	sAMAccountName	smuserdisplayname	displayName	Enter the following value in the Identifier Claim Name field: useridentifier	Enter the following value in the Directory Attribute field: sAMAccountName	User ID

(Optional) A group-based user-claim corresponding to a DN in the directory.	smusergroups	name (use the friendly name of your groups).	Not required for group-based claims.	Click the Attribute drop-down list and then select the following value: smusergroups	Not required. The connection wizard automatically configures this setting.	Group
(Optional) Role-based user claim	userrole	countryCode	Not supported.	1. Click the Attribute drop-down list and then select the following value: NameValue 2. Click the Claim type drop-down list and select the following value: User Attribute 3. Click the Claim Name field and enter the following value: userrole	Enter the following value in the Directory Attribute field: countryCode	Role

User Claims

Integration with SharePoint requires at least one claim that contains an identifier that uniquely identifies the user. These claims often appear in the people picker as cryptic values, such as the following example:

```
uid=e123456
```

Such claims are difficult to associate with the intended user. The Agent for SharePoint uses a special attribute mapping which retrieves the display name of the user. This user name appears next to the related identifier claim in the people picker. After this user mapping is configured, the previous example appears in the people picker like the following one:

uid=e123456 *associated_user_name*

Create an Attribute Mapping for User Claims in an LDAP Directory

The Agent for SharePoint requires an attribute mapping based on an attribute with a unique value for each user. Use the Administrative UI to create a pair of attribute mappings that defines how SiteMinder searches for user claims through the SharePoint people picker.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Note: For more information about the relationships between attribute mappings in an LDAP directory and the other components of your environment, see the LDAP examples chart (see page 137).

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `useridentifier`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `uid`
9. Click OK.

   The Modify User directory page appears.
10. To create the second mapping, repeat Steps 4 through 5.
11. Click the name field, and then enter the following name:

    `smuserdisplayname`
12. Verify that the Alias option button is selected, and then click the Definition field.
13. Enter the following definition:

    `displayName`
14. Click OK.

The Modify User directory page appears.

15. Click Submit.

    The attribute mappings are created.

Create an Attribute Mapping for User Claims in a Microsoft Active Directory Server

The Agent for SharePoint requires an attribute mapping that is based on an attribute with a unique value for each user. Use the Administrative UI to create a pair of attribute mappings that defines how SiteMinder searches for user claims through the SharePoint people picker.

Important! The Agent for SharePoint supports only one SiteMinder user directory.

Note: For more information about relationships between attribute mappings in an Active Directory server and other components of your environment, see the Active Directory examples table (see page 139).

Follow these steps:

1. Log in to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `useridentifier`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `sAMAccountName`
9. Click OK.

   The Modify User directory page appears.
10. To create the second mapping, repeat Steps 4 through 5.
11. Click the name field, and then enter the following name:

    `smuserdisplayname`
12. Verify that the Alias option button is selected, and then click the Definition field.
13. Enter the following definition:

    `displayName`
14. Click OK.

The Modify User directory page appears.

15. Click Submit.

    The attribute mappings are created.

Group Claims

You can also configure a claim that uses the groups to which the user belongs. Group mappings assign SharePoint permissions based on groups of users rather than individuals.

Some user directories define the groups of users by including an attribute in the record that contains the distinguished name (DN) of each group. The DN also appears as a cryptic value such as the following example:

```
entryDN=cn=grp12345,ou=Groups,dc=example,dc=com
```

Such claims are difficult to identify the name of the group associated with the value in the people picker.

The Agent for SharePoint uses two attribute mappings and the groups setting you specify in the SharePoint connection wizard to search for groups by their display name. The Agent for SharePoint retrieves both the display name of the group and DN of the group.

Both the display name and the DN of the group then appear in the people picker, for as shown in the following example:

cn=grp12345,ou=Groups,dc=example,dc=com(Sales Managers).

Create Attribute Mappings for Group-based Claims in LDAP Directories

You can also create attribute mappings based on a group of users. Use the Administrative UI to create an attribute mapping that defines how SiteMinder searches for group claims through the SharePoint people picker.

Note: For more information about the relationships between attribute mappings in an LDAP directory and the other components of your environment, see the LDAP examples chart (see page 137).

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   ```
   smusergroups
   ```
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   ```
   description
   ```
9. Click OK.

   The Modify User directory page appears.
10. Click Submit.

    The attribute mapping is created.

Create Attribute Mappings for Group-based Claims in Active Directory

You can also create attribute mappings based on a group of users. Use the Administrative UI to create an attribute mapping that defines how SiteMinder searches for group claims through the SharePoint people picker.

Note: For more information about relationships between attribute mappings in an Active Directory server and other components of your environment, see the Active Directory examples table (see page 139).

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   ```
   smusergroups
   ```
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   ```
   name
   ```
9. Click OK.

   The Modify User directory page appears.
10. Click Submit.

    The attribute mapping is created.

Role Claims

You can also configure any number of claims in Name=Value format. These name/value pairs are often named *role claims*.

Role claims are found by reading a configurable attribute on the user record in your user directory. You can then assign any name you want for the claim. For example, you can name a claim “userrole” and configure it to point to the “employeeType” attribute in your LDAP directory.

After authentication the Agent for SharePoint creates a name/value pair such as “userrole=manager” for the claim. If the "employeeType" attribute for the authenticated user contains the value named manager, SharePoint allows the user access to the resource.

Create an Attribute Mapping for a Role-based Claims in LDAP Directories

You can also create attribute mappings based on user roles. Use the Administrative UI to create an attribute mapping that defines how SiteMinder searches for role-based claims through the SharePoint people picker.

Note: For more information about the relationships between attribute mappings in an LDAP directory and the other components of your environment, see the LDAP examples chart (see page 137).

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `userrole`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `employeeType`
9. Click OK.

   The Modify User directory page appears.
10. Click Submit.

    The attribute mapping is created.
11. (Optional) Create more role-based mappings to suit your needs.

Create an Attribute Mapping for a Role-based Claims in Active Directory

You can also create attribute mappings based on user roles. Use the Administrative UI to create an attribute mapping that defines how SiteMinder searches for role-based claims through the SharePoint people picker.

Note: For more information about relationships between attribute mappings in an Active Directory server and other components of your environment, see the Active Directory examples table (see page 139).

Follow these steps:

1. Log on to the SiteMinder Administrative UI.
2. Click Infrastructure, Directory, User Directory, Modify User Directory.

   A list of user directory connections appears.
3. Click the option button for your user directory, and then click Select.

   The Modify User directory page appears.
4. Click Create.

   The create attribute mapping page appears.
5. Verify that the Create a new object of type Attribute Mapping option button is selected, and then click OK.
6. Click the name field, and enter the following name:

   `userrole`
7. Verify that the Alias option button is selected, and then click the Definition field.
8. Enter the following definition:

   `countryCode`
9. Click OK.

   The Modify User directory page appears.
10. Click Submit.

    The attribute mapping is created.
11. (Optional) Create more role-based mappings to suit your needs.

Install Claims Provider

If you are not the user who installed or configured SharePoint, you need one of the following privileges to run the Claims Provider installer:

- Administrator for the local server
- Administrator for the group
- Farm Administrator (for SharePoint farms)

If you are installing your Claims provider on a new SharePoint farm, install the claims provider on your SharePoint central administration server. If you add additional SharePoint servers to your farm later, install the claims provider on each SharePoint server you add.

Follow these steps:

1. Copy the installation program from the download location on the CA Support site.
2. Browse to the Win32 directory in the sp2010-agent-12.0-*version* folder.
3. Right-click the executable and select Run as administrator or double-click ca-sp2010claims-*version*-win64.exe.

   The installation program starts.
4. Follow the instructions from the installation wizard.
5. Restart your system after the installation finishes.

   The Claims provider is successfully installed.

More information:

Locate the SiteMinder Agent for SharePoint Platform Support Matrix (see page 325)
Locate the Installation Media (see page 326)

Verify Claims Provider Installation

Follow these steps:

1. Start SharePoint 2010 Central Administration from Start, Programs, Microsoft SharePoint 2010 Products.
2. Click System Settings.

   The Central Administration>System Settings page appears.
3. Click Manage Farm Solutions, in the Farm Management section.

   The Central Administration>Solution Management page appears and the status of the Claims Provider is shown as Deployed.

How to Configure the Claims Provider

After you install the SiteMinder Claims provider, add the claims search service and update the claims provider of the trusted identity token issuer:

Follow these steps:

1. Update the claims provider of the trusted identity token issuer (see page 152).
2. Add the Claims search service (see page 153).

After you add the Claims Search service, you can also configure the Claims Provider to suit your needs with any of the following optional procedures:

- Create SharePoint policies with place holders for expected directory attribute values. (see page 155)
- Change how directory attributes appear in the SharePoint people picker (see page 156).

Update the Claims Provider of the Trusted Identity Token Issuer

The Update-SMTrustedIdentityTokenIssuer command updates the claims provider of a trusted identity token issuer to CASiteMinderClaimProvider.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, the SharePoint 2010 Management Shell.

   The SharePoint 2010 Management Shell command prompt appears.

2. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

3. Enter the update command. This command has the following format:

   ```
   Update-SMTrustedIdentityTokenIssuer.ps1 –TrustedIdentityTokenIssuer
   “<Trusted_Identity_Provider_registered_with_SharePoint>”
   ```

   TrustedIdentityTokenIssuer

   Specifies the name of the SiteMinder trusted identity token issuer (trusted login provider) to update.

   Example:

   ```
   .\Update-SMTrustedIdentityTokenIssuer.ps1 –TrustedIdentityTokenIssuer
   “SiteMinder Federation”
   ```

   SharePoint is updated with the new claims provider of the trusted identity token issuer.

The following conditions apply when you execute the Update-SMTrustedIdentityTokenIssuer command:

- The default trusted claims provider created by SharePoint is removed.
- The SharePoint administrator can use the configured claim provider for searching claims.
- The claims provider of the trusted identity token issuer cannot be empty.
- A new trusted claims provider cannot be created.

Add Claims Search Web Service

Add the claims search web service used in the Agent for SharePoint to specific SharePoint web applications by executing the Add-SMClaimSearchService command. The changes made by this script are reflected across the SharePoint Farm.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, the SharePoint 2010 Management Shell.

   The SharePoint 2010 Management Shell command prompt appears.

2. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

3. Enter the add command. This command has the following format:

   ```
   ADD-SMClaimSearchService.ps1 –WebApplication <URL_of_web_application>
   –claimSearchService <URL_of_claim_search_service_in_spagent>
   ```

   WebApplication

   Specifies the URL of the web application.

   claimSearchService

   Specifies the URL of the claim search service running in Agent for SharePoint.

   Example:

   ```
   .\ADD-SMClaimSearchService.ps1 –WebApplication http://myhostname:1234
   –claimSearchService
   http://spagent.ca.com:2345/ClaimsWS/services/WSSharePointClaimsServiceImp
   l
   ```

   The claims search web service is added to the web.conf file of the web application.

4. Enter the add command again, to add the claims web search service to the web.conf file of the SharePoint Central Administration.

   ```
   ADD-SMClaimSearchService.ps1 –WebApplication <Central_Administration_URL>
   –claimSearchService <URL_of_claim_search_service_in_spagent>
   ```

WebApplication

Specifies the URL of the SharePoint Central Administration website.

claimSearchService

Specifies the URL of the claim search service running in the Agent for SharePoint. Add the port number you specified for the Claims WS of the Agent for SharePoint when you ran the Configuration wizard to the end of the URL.

Example:

```
.\ADD-SMClaimSearchService.ps1 –WebApplication
http://SharePoint_server_name:1221 –claimSearchService
http://spagent.ca.com:2345/ClaimsWS/services/WSSharePointClaimsServiceImp
l
```

The claims search web service is added to the web.conf file of the SharePoint Central Administration.

More information:

Agent for SharePoint Configuration Wizard Information Worksheet (see page 321)

Create SharePoint Policies with Placeholders for Expected Directory Attributes

The Agent for SharePoint has a client loopback feature that lets you create policies in your SharePoint environment using directory attribute values that do not yet exist.

For example, suppose that your directory server contains an attribute named employeeType, and the employeeType attribute uses one of the following values for each user:

- Employee
- Contractor
- Manager
- Executive

For example, suppose you want to create an attribute value for the employeeType attribute named Vendor in your directory servers to use with SharePoint.

If a different group in your organization manages the directory servers, that task is beyond your control. The Claims Provider creates placeholders for the new attribute values using the loopback feature.

In this example, use the loopback feature so that the Vendor attribute value exists in your SharePoint environment it appears in the directory servers. New attribute values let you create SharePoint policies whenever you want, without waiting for your administrator to add the actual attribute values to your directory.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The management shell command line window opens.

2. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

3. Enter the following command:

   ```
   .\Set-SMClaimProviderConfiguration.ps1 -EnableLoopBackSearch
   ```

   Loopback search is enabled.

4. Use the SharePoint people picker to search the new attribute values you want.

   A placeholder for the new attribute value is added to SharePoint using the loopback search function.

5. Repeat Step 4 to add additional placeholders for more attribute values.

6. (Optional) After adding your placeholders, disable support for the loopback search function by doing the following steps:

   a. Repeat Steps 1 and 2.

b. Enter the following command:

```
.\Set-SMClaimProviderConfiguration.ps1 -DisableLoopBackSearch
```

Loopback search is disabled.

Change How Directory Attributes Appear in the SharePoint People Picker

You can customize how certain directory attributes from your SiteMinder user directories appear in the SharePoint people picker.

Change how directory attributes appear in the SharePoint people picker

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The management shell command line window opens.

2. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

3. Enter the .\Set-SMClaimProviderConfiguration.ps1 command with one of the following options:

   -UserNameFormat

   Specifies how the user names for which you search appear in the SharePoint people picker. Use one of the following options:

   ValueOnly

   Displays only the value of the identifier claim attribute in your directory server associated with the user. For example, if your uid is user_*number,* then only user_*number* appears in your search results.

   Example: user_0001

   DisplaynameOnly

   Displays only the name of the user, using the format specified in your SiteMinder directory.

   Example: *last_name_of_user*, *first_name_of_user*

   DisplaynameAppended

   Displays the name of the user, and the value of the identifier claim attribute in your directory server associated with the user.

   Example: user_0001 (*last_name_of_user*, *first_name_of_user)*

-GroupNameFormat

Specifies how the group names for which you search appear in the SharePoint people picker. Use one of the following options:

ValueOnly

Displays only the domain name (DN) value of the group claim attribute in your directory server associated with the user.

Example: OU=group_0001, DC=example, DC=COM

DisplaynameOnly

Displays only the name of the group, using the format specified in your SiteMinder directory.

Example: *group_name*

DisplaynameAppended

Displays the name of the group, and the value of the group claim attribute in your directory server associated with the user.

Example: *group_name* OU=group_0001, DC=example, DC=COM

The appearance of the directory attributes is changed.

Remove Claims Search Web Service

The Remove-SMClaimSearchService command removes the changes made in the web.config file. The script identifies the modifications made by the user from the *CASiteMinderSharePoint2010Agent_ClaimsSearchServiceEndpoint* file.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, the SharePoint 2010 Management Shell.

   The SharePoint 2010 Management Shell command prompt appears.

2. Navigate to the folloiwng directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

3. Enter the remove command. This command has the following format:

   ```
   Remove-SMClaimSearchService.ps1 –WebApplication <URL_of_web_application>
   ```

   WebApplication

   Specifies the URL of the web application.

   Example:

   ```
   .\Remove-SMClaimSearchService.ps1 –WebApplication http://myhostname:1234
   ```

   The changes made in the web.config file are removed.

Extend Web Applications to Different Zones for CRAWL Service and Search Support

The Agent for SharePoint does not support CRAWL services because the service does not use SiteMinder cookies. The SharePoint CRAWL service uses Windows authentication, and the Agent for SharePoint uses claims authentication. Because the SharePoint CRAWL service cannot respond to the authentication challenge the Agent for SharePoint makes, the Agent for SharePoint denies the request. When this denial occurs, the connection to the CRAWL service or the search times out.

Follow these steps:

1. Extend the SharePoint web application with which you want to use the crawl service to a different zone.
2. Configure the extended web application (from Step 1) to use Integrated Windows (IWA or NTLM) authentication.
3. Configure the CRAWL service to use the URL of the extended SharePoint web application (from Step 1).

   Extending the web application to another zone provides protection of the web application with the Agent for SharePoint while supporting the CRAWL service and search functions.

Chapter 10: Advanced Options

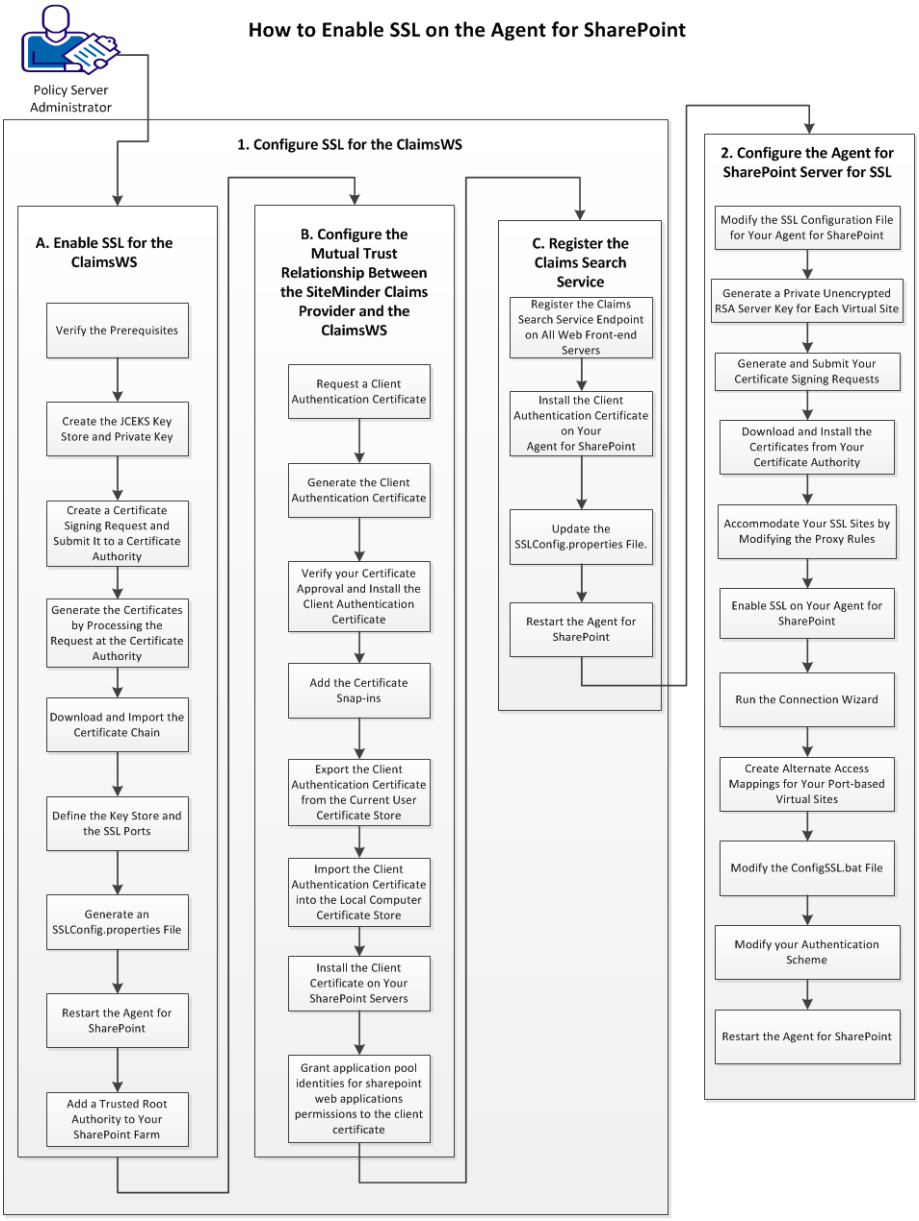
This section contains the following topics:

How to Enable SSL for the Agent for SharePoint

The procedure for enabling Secure Sockets Layer (SSL) communications on the Agent for SharePoint has the following parts:

- Protecting the ClaimsWS service with SSL
- Configuring the mutual trust relationship between the ClaimsWS and the SiteMinder claims provider.
- Configuring the Agent for SharePoint (reverse proxy) server for SSL.

The following graphic describes these procedures:


How to Enable SSL on the Agent for SharePoint
Policy Server Administrator
1. Configure SSL for the ClaimsWS
A. Enable SSL for the ClaimsWS
Verify the Prerequisites
Create the JCEKS Key Store and Private Key
Create a Certificate Signing Request and Submit It to a Certificate Authority
Generate the Certificates by Processing the Request at the Certificate Authority
Download and Import the Certificate Chain
Define the Key Store and the SSL Ports
Generate an SSLConfig.properties File
Restart the Agent for SharePoint
Add a Trusted Root Authority to Your SharePoint Farm
B. Configure the Mutual Trust Relationship Between the SiteMinder Claims Provider and the ClaimsWS
Request a Client Authentication Certificate
Generate the Client Authentication Certificate
Verify your Certificate Approval and Install the Client Authentication Certificate
Add the Certificate Snap-ins
Export the Client Authentication Certificate from the Current User Certificate Store
Import the Client Authentication Certificate into the Local Computer Certificate Store
Install the Client Certificate on Your SharePoint Servers
Grant application pool identities for sharepoint web applications permissions to the client certificate
C. Register the Claims Search Service
Register the Claims Search Service Endpoint on All Web Front-end Servers
Install the Client Authentication Certificate on Your Agent for SharePoint
Update the SSLConfig.properties File.
Restart the Agent for SharePoint
2. Configure the Agent for SharePoint Server for SSL
Modify the SSL Configuration File for Your Agent for SharePoint
Generate a Private Unencrypted RSA Server Key for Each Virtual Site
Generate and Submit Your Certificate Signing Requests
Download and Install the Certificates from Your Certificate Authority
Accommodate Your SSL Sites by Modifying the Proxy Rules
Enable SSL on Your Agent for SharePoint
Run the Connection Wizard
Create Alternate Access Mappings for Your Port-based Virtual Sites
Modify the ConfigSSL.bat File
Modify your Authentication Scheme
Restart the Agent for SharePoint

Follow these steps:

1. Enable SSL for the ClaimsWS service with the following steps:
   a. Verify the prerequisites (see page 163).
   b. Create the JCEKS key store and private key (see page 164).
   c. Create a certificate signing request and submit it to a certificate authority (see page 166).
   d. Generate the certificates by processing the request at the certificate authority (see page 168).
   e. Download and import the certificate chain (see page 169).
   f. Define the Key Store and the SSL ports (see page 170).
   g. Generate an SSLConfig.properties file (see page 171).
   h. Restart the Agent for SharePoint (see page 171).
   i. Add a trusted root authority to your SharePoint farm (see page 174).
2. Configure the mutual trust relationship between the SiteMinder claims provider and the ClaimsWS service with the following steps:
   a. Request a client authentication certificate (see page 175).
   b. Generate the client authentication certificate (see page 177).
   c. Verify your certificate approval and install the client authentication certificate (see page 178).
   d. Add the certificate snap-ins (see page 179).
   e. Export the client authentication certificate from the current user certificate store (see page 180).
   f. Import the client authentication certificate into the local computer certificate store (see page 181).
   g. Install the client certificate on your SharePoint servers (see page 182).
   h. Grant application pool identities for sharepoint web applications permissions to the client certificate (see page 183).
3. Register the Claims WS service with the following steps:
   a. Register the claims search service end point on all web front-end (WFE) servers (see page 184).
   b. Install the client authentication certificate on your Agent for SharePoint (see page 187).
   c. Update the SSLConfig.properties file (see page 188).
   d. Restart the Agent for SharePoint (see page 171).

4. Configure the Agent for SharePoint server for SSL with the following steps:
   a. Modify the SSL configuration file for your Agent for SharePoint (see page 191).
   b. Generate a private unencrypted RSA server key for each virtual site (see page 193).
   c. Generate and submit certificate signing requests (see page 194).
   d. Download and install the certificates from your certificate authority (see page 195).
   e. Accommodate your SSL sites by modifying the proxy rules (see page 196).
   f. Enable SSL on your Agent for SharePoint (see page 197).
   g. Run the connection wizard (see page 197).
   h. Create alternate access mappings for your port-based virtual sites (see page 200).
   i. Modify the ConfigSSL.bat file (see page 201).
   j. Modify your authentication scheme (see page 201).
   k. Restart the Agent for SharePoint (see page 171).

Verify the Prerequisites

The first step in protecting the ClaimsWS service is verifying the prerequiites.

Verify the following prerequisites before protecting the Claims WS service with SSL:

- Farm administrator privileges and local administrator privileges for each SharePoint server in the farm.
- The *java_home* variable in your environment points to the proper JDK installation directory.
  For example, if you are using Java 1.6, your *java_home* variable must point to the installation directory for the Java 1.6 JDK.
- For UNIX/Linux operating environments, verify the following conditions:
  - The Agent for SharePoint environment variables are exported to your environment. Run the following script:

    ```
    Agent-for-SharePoint_home\ca_sps_env.sh
    ```

Create the JCEKS Key Store and Private Key

The next step in protecting the ClaimsWS service is creating a JCEKS key store and private key.

The JCEKS key store is a repository for the certificates and their related private keys. The certificates that you create are stored in the JCEKS key store. Creating a key store also creates a server certificate. This process requires the following information:

- An alias (nickname) for the server certificate you are requesting.
- A password for the JCEKS key store.
- The fully qualified domain name of the server hosting your Agent for SharePoint
- The name of your organizational unit (department or group)
- The name of your organization.
- The locality of your organization.
- The two-letter state and country codes for your organization.

Follow these steps:

1. Log in to the system hosting your Agent for SharePoint.
2. Open a command-line window.
3. Navigate to the following directory:

   Agent_for_SharePoint_home\SSL\keys

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint

4. Run the following command:

   `keytool -genkeypair -keyalg RSA -keystore .\ServerCert.jceks -alias Alias_Name -storetype JCEKS -storepass keystore_password`

   The following table lists the prompts from the JCEKS keytool utility and sample responses:

Keytool Prompt:	Sample Response:	Purpose:
What is your First and Last Name?	agentforsharepointserver.example.com	Fully qualified domain name (FQDN) of the server hosting your Agent for SharePoint.
What is your Organizational Unit?	support	Department or group name

What is your Organization?	example	Name of your organization
What is your City or Locality?	Your City	City or Town
What is your State?	YS	Two-letter state or province abbreviation
What is your Country Code?	YC	Two-letter country code

The keytool utility displays a confirmation resembling the following example:

```
Is the following correct:
cn=agentforsharepointserver.example.com,ou=support,o=example,l=Your
City,st=YS,c=YC
```

5. Enter yes.

   The keystore and private key are created.

6. Leave the command-line window *open*, and continue with the next step of creating a certificate request.

Create a Certificate Signing Request and Submit It to a Certificate Authority

The next step in protecting the ClaimsWS service involves creating a certificate signing request for the server certificate in your JCEKS key store.

A signing request submits the certificate to a certificate authority. The certificate authority validates (signs) the certificate. Certificates that are signed third-party certificate authorities are considered more secure than self-signed certificates.

Self-singed certificates are acceptable for evaluation or testing environments.

To submit a certificate signing request, you need the following information:

- The alias of your server certificate for the Agent for SharePoint.
- A file name for your certificate request (.csr file).
- The password for your JCEKS key store.

Follow these steps:

1. Create a certificate signing request with the following command:

   ```
   keytool -certreq -v -alias Alias_Name -sigalg MD5withRSA -file
   .\file_name_of_certificate_request.csr -keypass keystore_password -keystore
   ServerCert.jceks -storepass keystore_password -storetype JCEKS
   ```

   The keytool utility produces a certificate signing request similar to the following example:

   ```
   -----BEGIN NEW CERTIFICATE REQUEST-----
   MIIBrzCCARgCAQAwbzELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAk1BMRMwEQYDVQQHEwpGcmFtaW5n
   aGFtMQswCQYDVQQKEwJDQTEPMA0GA1UECxMGU01URVNUMSAwHgYDVQQDExdzbXNwczIwMTAuc210
   ...
   ...
   ...
   dsrZKqtNaqym7DrkSql7LsUGcsACUp1K4PU6t3P16CKvagspJ18zwTqTRpkGtbu6emvEwpcQveuW
   k27YooCZ4XDzFxtpAnv9EIl7L4N4QHHxXCa8kIULOdGtJ4vD
   -----END NEW CERTIFICATE REQUEST-----
   ```

2. Copy the entire certificate signing request.
3. Close the command-line window.

4. Submit the certificate signing request to a certificate authority with the following steps:

   Note: This procedure demonstrates submitting a request to a Microsoft Active Directory Certificate Services certificate authority.

   a. Open your Web browser, and then navigate to the following URL:

      `https://fully_qualilfied_domain_name_of_server_running_active_directory_certificate_services/certsrv`

      Note: An example of such a URL is http://certificateauthority.example.com/certsrv.

   b. Click Request a certificate.

   c. Click the advanced certificate request link.

   d. Click the Create and submit a request to this CA.

   e. An Advanced Certificate Request form appears.

   f. Complete the form by doing the following tasks:

      - Submitting a request for a PKCS # 7 file.
      - Copying your certificate signing request into the field

      Note: Under the type of certificate needed drop-down list, verify that Client Authentication Certificate appears.

   g. Click Submit.

      A confirmation dialog appears.

   h. Click Yes.

      The request is submitted. Note your request ID for future reference.

Generate the Certificates by Processing the Request at the Certificate Authority

The next step in protecting the ClaimsWS service is having a certificate authority process your request.

After the certificate authority receives your certificate signing request, they will process the request and will return the signed certificate.

Some organizations use third-party certificate authorities to sign their certificate requests. Other organizations could possibly have an internal group that operates a certificate authority.

The following procedure demonstrates the process for approving a certificate with Microsoft Active Directory Certificate services:

Follow these steps:

Certificate administrators approve or reject certificate requests. Certificate administrator privileges are separate from the Administrator privileges in the Windows operating environment. Not all users who have accounts on the computer hosting Active Directory Certificate services have sufficient privileges to approve or reject certificates.

Use this procedure if you have certificate administrator privileges. Otherwise, ask the certificate administrator in your organization to issue the certificate for you.

Follow these steps:

1. Log in to the web server hosting the Active Directory Certificate services using an account with Certificate administrator privileges.
2. Click Start, Administrative Tools, Certification Authority.

   The certsrv snap-in appears.
3. Click the name of the certification authority, and then click the pending request folder.

   A list of pending certificate requests appears.
4. Right-click the request ID associated with the request for the client certificate.
5. From the context menu, select All Tasks, Issue.

   The certificate is issued.

   Continue with the next step of downloading and importing the certificate.

Download and Import the Certificate Chain

The next step in protecting the ClaimsWS service is downloading and importing the certificate chain.

After your certificate has been signed, download and install the following items to the server hosting your Agent for SharePoint:

- The signed certificate.
- The certificate chain (any additional certificate-authority certificates that your certificate-authority issued).

The certificate chain validates your certificate to the web browsers of your users.

This process requires the following information:

- The alias (nickname) of the server certificate you are requesting.
- The password for the JCEKS key store.

Follow these steps:

1. Log in to the server hosting your Agent for SharePoint.
2. Download the following files with the *same* Web browser from which sent the certificate signing request:
   - certnew.cer (your signed certificate)
   - certnew.p7b (the certificate chain)
3. Move the files that you downloaded in Step 2 to the following directory:

   `Agent_for_SharePoint_home/SSL/keys`
4. Import the certificate chain into the keystore with the following command;

   `keytool -importcert -v -noprompt -alias` *`Alias_Name`* `-file .\certnew.p7b -keypass` *`keystore_password`* `-keystore ServerCert.jceks -storepass` *`keystore_password`* `-storetype JCEKS`
5. Continue with the next step of defining the claims store and the SSL ports.

Define the KeyStore and the SSL Ports

The next step in protecting the ClaimsWS service is defining the key store and SSL ports.

After downloading and importing the certificate chain to the server hosing the Agent for SharePoint, add the following settings:

- The local SSL port number (defined when you ran the SharePoint Connection wizard).
- The path to the key store on the server that is hosting the Agent for SharePoint.

These settings are defined in the server.conf file.

Follow these steps:

1. Open the following file with a text editor:

   Agent_for_SharePoint_home\proxy-engine\conf\server.conf

   Locate the following section of the file:

   <localapp>

2. In the <localapp> section, locate the following line:

   #local.https.port=*port_number*

3. Remove the # from the beginning of the previous line.
4. Verify that the port number following the equal sign matches what you entered for the Claims WS service SSL port in the SharePoint connection wizard. If you defined port number 2525 for your connection, the edited line would match the following example:

   local.https.port=2525

5. Locate the following line:

   #local.https.keyStoreFileName="tomcat.keystore"

6. Remove the # from the beginning of the previous line.
7. Replace the tomcat.keystore with the relative path to the keystore you created for the keys and certificates that are associated with the Claims WS service. If the relative path to your keystore is ServerCert.jceks, then the edited line would match the following example:

   local.https.keyStoreFileName="ServerCert.jceks"

8. Save the file and close text editor.
9. Continue with the next step of generating an SSLConfig.properties file.

Generate an SSLConfig.properties File

The next step of protecting the ClaimsWS service involves generating an SSLConfig.properties file for the keystore.

Follow these steps:

1. On the server hosting your Agent for SharePoint, open a command-line window.
2. If you have not yet created the TrustStore, run the following command:

   `GenerateSSLConfig -keystorepass keystore_password`
3. When prompted, enter the following values:
   - *keystore_password* (keystore password)
   - false (Enable Client Authentication)

   Important! Do not enable client authentication yet.

Restart the Agent for SharePoint

Starting or stopping the Agent for SharePoint involves the following separate procedures:

1. Changing the value of EnableWebAgent in the WebAgent.conf file (see page 80).
2. Changing the state of the related services on the computer running the Agent for SharePoint (see page 81).

Change the Value of the EnableWebAgent Parameter

Change the value of the EnableWebAgent parameter to accomplish either of the following tasks:

- Start the Agent for SharePoint when the related services start.
- Stop the Agent for SharePoint when the related services start.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\WebAgent.conf
   ```

2. Locate the following line:

   ```
   EnableWebAgent="NO"
   ```

3. Change the value inside the quotation marks to *one* of the following values:
   - YES to start the Agent for SharePoint after the services start. Your resources are protected.
   - NO to stop the Agent for SharePoint after the services start. Your resources are *not* protected.
4. Change the state of the related services on your Agent for SharePoint (see page 81).

Change the States of the Services on your Agent for SharePoint

You can change the states of the related services on your Agent for SharePoint.

Note: To start or stop your Agent for SharePoint, change the value of the EnableWebAgent parameter first (see page 80).

Follow these steps:

1. To change the states of the related services, select *one* of the following procedures:
   - For Windows operating environments, go to Step 2.
   - To *start* the Agent for SharePoint on UNIX operating environments, go to Step 3.
   - To *stop* the Agent for SharePoint on UNIX operating environments, go to Step 4.
2. For Windows operating environments, do the following steps:
   a. From the Windows Start menu navigate to Administrative Tools, Services.

      The Services dialog appears.

   b. Scroll down the list of services and select SiteMinder Agent for SharePoint.

   c. From the Action menu, select All Tasks and select the command that you want.

   d. Repeat Step b for SiteMinder Agent for SharePoint Proxy Engine.

      The states of the services and Agent for SharePoint are changed.
3. To start the Agent for SharePoint on UNIX operating environments, do the following steps.
   a. Log in as a root user.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   c. Run the following command:

      ```
      ./sps-ctl start
      ```

      The service and the Agent for SharePoint start. The Agent for SharePoint stops or starts according to the value you set in the EnableWebAgent parameter (see page 80).
4. To stop the Agent for SharePoint on a system running UNIX, do the following steps:
   a. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   b. Run the following command:

      ```
      ./sps-ctl stop
      ```

      The service and the Agent for SharePoint stop.

Add a Trusted Root Authority to your SharePoint Farm

The next step in protecting the ClaimsWS service is adding a trusted root authority to your SharePoint farm.

Your SharePoint farm requires a new trusted root authority to identify and authenticate the information that it receives from the claims service. Create a trusted root authority on your SharePoint 2010 central administration server.

Follow these steps:

1. Copy the certificates for the ClaimsWS service from the system hosting your Agent for SharePoint, to a directory on your SharePoint central administration server. Include the signed certificate that you downloaded from your certificate authority (certnew.cer file) and all the certificates in the certificate chain (certnew.p7b).
2. Open the SharePoint 2010 central administration site.
3. Click Security.
4. Under General Security, click Manage trust.
5. Click New.

   The Create Trusted Relationship dialog appears.
6. Enter a name for the trust relationship.
7. Click the Browse button next to the Root Authority Certificate, and then locate the certificate that you copied over in Step 1.
8. Click OK.
9. Repeat Steps 1 through 8 for each Certificate Authority certificate in your certificate chain. For example, if your certificate chain includes three certificates, repeat this step three times.

   The trusted root authority is created.
10. Continue by configuring the mutual trust relationship between the SiteMinder claims provider and the ClaimsWS.

Request a Client Certificate

A mutual trust relationship between the following components is required for secure communications:

- The SharePoint claims search service.
- The SiteMinder claims provider.

The first step in creating this relationship is requesting a client authenticate certificate. This certificate is installed on all SharePoint web front-end (WFE) servers. The client authentication certificate allows the ClaimsWS service to verify the identities of the WFE servers.

Several third-party tools are available for creating certificates. This procedure provides one possible example using Active Directory Certificate services and IIS 7.

If your organization uses different tools or procedures to create client certificates, use those tools or procedures instead.

If you already have a client authentication certificate, skip this procedure.

Follow these steps:

1. Open a Web browser (from a system running an IIS web server).
2. Navigate to the following URL:

   `https://fully_qualilfied_domain_name_of_server_running_active_directory_certificate_services/certsrv`

   An example of such a URL is http://certificateauthority.example.com/certsrv.
3. Click Request a certificate.

   The Request a certificate screen appears.
4. Click the advanced certificate request link.
5. Click the Create and submit a request to this CA.

   An Advanced Certificate Request form appears.
6. Complete the form, using the following examples as a guide:

```
Name: SiteMinderClaimsProvider
E-Mail: admin@support.example.com
Company: Example
Department: Support
City: your_city
State: your_state
Country/Region your_country
Type of Certificate Needed: Client Authentication Certificate
Mark keys as exportable: ENABLED
Friendly Name: SiteMinderClaimsProvider
```

Note: Under the type of certificate needed drop-down list, verify that Client Authentication Certificate appears.

7. Click Submit.

   A confirmation dialog appears.

8. Click Yes.

   The request is submitted.

9. Note the following items for future reference:

   - Your request ID.
   - Verify the status of your request using the same browser within ten days.

Generate the Client Authentication Certificate

The next step in configuring a mutual trust relationship between the claims search service and the claims provider is generating the client authentication certificate.

The next step in protecting the ClaimsWS service is having a certificate authority process your request.

After the certificate authority receives your certificate signing request, they will process the request and will return the signed certificate.

Some organizations use third-party certificate authorities to sign their certificate requests. Other organizations could possibly have an internal group that operates a certificate authority.

The following procedure demonstrates the process for approving a certificate with Microsoft Active Directory Certificate services:

Follow these steps:

Certificate administrators approve or reject certificate requests. Certificate administrator privileges are separate from the Administrator privileges in the Windows operating environment. Not all users who have accounts on the computer hosting Active Directory Certificate services have sufficient privileges to approve or reject certificates.

Use this procedure if you have certificate administrator privileges. Otherwise, ask the certificate administrator in your organization to issue the certificate for you.

Follow these steps:

1. Log in to the web server hosting the Active Directory Certificate services using an account with Certificate administrator privileges.
2. Click Start, Administrative Tools, Certification Authority.

   The certsrv snap-in appears.
3. Click the name of the certification authority, and then click the pending request folder.

   A list of pending certificate requests appears.
4. Right-click the request ID associated with the request for the client certificate.
5. From the context menu, select All Tasks, Issue.

   The certificate is issued.

   Continue with the next step of downloading and importing the certificate.

Verify Your Certificate Approval and Install Your Client Authentication Certificate

The next step in creating a mutual trust relationship is verifying your approval and installing your client authentication certificate. Your IIS web server must have the client authentication certificate installed first before installing it on any SharePoint central administration or web front-end (WFE) servers.

Verify the status of your certificate request using the *same* IIS web server *and* Web browser from which you submitted the request. If your certificate is approved, install the certificate on your IIS web server first.

Follow these steps:

1. Open the same Web browser that you used to request your certificate on your system hosting an IIS web server.
2. Navigate to the following URL:

   `https://fully_qualilfied_domain_name_of_server_running_active_directory_certificate_services/certsrv`

   An example of such a URL is https://certificateauthority.example.com/certsrv.
3. Click View the status of a pending certificate request.

   A list of your certificate requests appears.
4. Click the link for your certificate request.

   The Certificate Issued screen appears. If it does not, contact the certificate administrator in your organization for more information.
5. Click the Install Certificate link.

   A confirmation dialog appears.
6. Click Yes.

   The certificate is installed under My User Account on your IIS web server. Continue with the next step of installing the certificate snap-ins on your IIS web server.

Add the Certificate Snap-ins

The next step for creating a mutual trust relationship between the Claims WS and the SiteMinder claims provider is adding the certificate snap-ins.

The following accounts on your IIS web server require the certificate snap-in:

- Local computer
- My user account

Follow these steps:

1. Click Start, Run.

   The Run dialog appears.

2. Type mmc in the Open field, and then click OK.

   The Microsoft Management console appears.

3. Click File, Add/Remove Snap-in.

   The Add or Remove Snap-ins dialog appears.

4. In the Available snap-ins list, click Certificates, and then click Add.

   The Certificates snap-in dialog appears.

5. Select the Computer account option button, and then click Next.

6. Select the Local computer option button, and then click Finish.

   The Certificates snap-in dialog closes. The Certificates snap-in appears in the Selected snap-ins list.

7. Click Certificates n the Available snap-ins list, and then click Add.

   The Certificates snap-in dialog appears.

8. Select the My User Account option button, and then click Finish.

9. Click OK.

   The Add or Remove Snap-ins dialog closes. The certificate snap-ins are added.

10. Save your instance of the console for future use. Otherwise, the snap-ins do not appear in the future.

Export the Client Authentication Certificate from the Current User Certificate Store

The next step for creating the mutual trust relationship is exporting the client certificate from the current user certificate store.

The Windows operating environment uses several different locations within the same computer to store certificates. These locations vary depending on the user account type. Installing your client authentication certificate on your IIS web server placed it in the following store:

- Certificates, Current User, Personal, Certificates

Export the certificate from the current user certificate store so it can be added to the other certificate stores on the computer.

Follow these steps:

1. Click Start, Run.

   The Run dialog appears.

2. Type mmc In the Open field, and then click OK.

   The Microsoft Management console appears.

3. Expand the console root folder, and then click "Certificates - Current User".

4. Expand "Certificates - Current User/Personal", and then double-click the 'Certificates' folder corresponding to where the certificate is stored.

   A list of certificates appears.

5. Right-click your client authentication certificate, and then select All Tasks, Export.

   The certificate export wizard opens.

6. Export the certificate using the Base-64 encoded X.509 (.cer) option.

   The client certificate is exported. Note the location of the exported certificate. Continue with the next step of importing the certificate into the local computer certificate store.

Import the Client Authentication Certificate into the Local Computer Certificate Store

The next step for creating the mutual trust relationship is importing the client authentication certificate into the local computer certificate store.

Import the client authentication certificate into the following certificate store on your IIS web server.

- Certificates, Local computer

Follow these steps:

1. Copy the client authentication certificate that you exported from the current user store to a directory on your IIS web server.
2. Click Start, Run.

   The Run dialog appears.
3. Type mmc in the Open field, and then click OK.
4. Expand Certificates (LocalComputer)
5. Expand Personal.

   The certificates folder appears.
6. Right-click the certificates folder, and then click All Tasks, Import.
7. Import the certificate.

   The certificate appears.
8. Double-click the client certificate. Verify that the General tab is selected.
9. Note the value in the Issued to field. You need this name to register the endpoint for the claims search service.

Install the Client Authentication Certificate on your SharePoint Servers

The next step in establishing the mutual trust relationship is installing the client-authentication certificate on more servers.

Install the client authentication certificate that you exported from your IIS web server on the following servers in your SharePoint environment:

- Your SharePoint central administration server.
- All web front-end (WFE) servers in your SharePoint farm.

Follow these steps:

1. Copy the exported client authentication certificate to a directory on your server.
2. Click Start, Run.

   The Run dialog appears.
3. In the Open field, type mmc and then click OK.
4. Expand Certificates — Local Computer.
5. Expand Personal.
6. The certificates folder appears.

   Right-click the certificates folder, and then click All Tasks, Import.
7. Import the client certificate.

   The certificate appears.
8. Double-click the client certificate. Verify that the General tab is selected.
9. Note the value in the Issued to field. You need this name to register the endpoint for the claims search service.
10. Repeat Steps 1 through 9 on each server in your environment (your SharePoint central administration server and on *each* WFE server). For example, if you have one SharePoint central administration server and five WFE servers, perform this procedure six times.

    The client authentication certificate is installed. Continue with the next step of granting permissions to the application pools.

Grant Application Pool Identities for SharePoint Web Applications Permissions to the Client Certificate

The next step in establishing the mutual trust relationship is granting permissions to the application pool identities associated with your SharePoint web applications.

All application pool identities that are associated with protected SharePoint web applications need read-only permissions to the client authentication certificate. Perform this procedure on all the following servers in your environment:

- Your SharePoint central administration server.
- All web front end (WFE) servers in your SharePoint farm.

Follow these steps:

1. Click Start, Run.

   The Run dialog appears.

2. In the Open field, type mmc and then click OK.

   The Microsoft Management console appears.

3. Expand the console root folder, and then click Certificates — Local Computer.

4. Locate your client certificate. Right-click your client certificate, and then select All tasks, Manage Private keys.

   The permissions dialog appears.

5. Locate the application pool identity in IIS Manager, Application Pool Section, and then grant that identity read access to the client certificate.

6. Repeat Step 5 for all other application pool identities.

7. Repeat Steps 1 through 6 on the SharePoint central administration server and all the WFE servers in your SharePoint farm. For example, if you have one SharePoint central administration server and five WFE servers, perform this procedure six times.

   The permissions are granted. Continue with the next step of registering the claims search service endpoint on all WFE servers.

Register the Claims Search Service Endpoint on all WFE Servers

The next step in establishing the mutual trust relationship is registering the claims search service endpoint on all WFE servers in your SharePoint farm.

Registering a new end point for the claims search service associates the secure connection with the client authentication certificate. A PowerShell script that is installed with the claims provider automates the registration process. Register the new end point for all of the web front end (WFE) servers in your SharePoint environment.

Follow these steps:

1. Remove any previously registered SiteMinder claims services from the WFE server by running the following script:

   SharePointClaimsProvider_directory\scripts\Remove-SMClaimSearchService.ps1 -WebApplication url_of_SharePoint_web_application

   The following example describes removing the registration of a previous claims search service endpoint for the following web applications:

   - SharePoint_webapplication.support.example.com:8189/ (runs on port 8189)
   - SharePoint_webapplication.support.example.com:8286/ (runs on port 8286)

   ```
   .\Add-SMClaimSearchService.ps1 -WebApplication
   http://SharePoint_webapplication.support.example.com:8189/
   -ClaimSerchService

   https://claim_search_service.support.example.com:8002/ClaimsWS/services/W
   SSharePointClaimsServiceImpl -EnableSSLClientAuthentication

   -ClientCertificateName SiteminderClaimsProvider

   .\Add-SMClaimSearchService.ps1 -WebApplication
   http://SharePoint_webapplication.support.example.com:8286/
   -ClaimSerchService

   https://claim_search_service.support.example.com:8002/ClaimsWS/services/W
   SSharePointClaimsServiceImpl -EnableSSLClientAuthentication

   -ClientCertificateName SiteminderClaimsProvider
   ```

2. Repeat Step 1 for each SharePoint web application on the WFE server
3. Gather the following information:

   –WebApplication *url_of_SharePoint_web application*

   Specifies the URL associated with a SharePoint web application.
   Example: http://*SharePoint_webapplication.support*.example.com:/ (runs on the default port).

   Example: http://*SharePoint_webapplication.support.*example.com:81/ (runs on port 81).

Example: http://*SharePoint_webapplication.support*.example.com:82/ (runs on port 82).

-ClaimSearchService *claims_search_service_URL*

Specifies the URL of the claims search service.

Limits: If the claim search service uses SSL, specify the https: protocol.

Example:
https://*claim_search_service.support*.example.com:8002/ClaimsWS/services/WSSharePointClaimsServiceImpl

–ClientCertificateName

Specifies the value in the Issued To: field of your client authentication certificate. This client certificate protects the Claims WS (web service).

Example: SiteminderClaimsProvider

4. Open the SharePoint 2010 Management Shell.
5. Navigate to the following directory:

   SharePointClaimsProvider_directory\scripts

6. Enter the following command for your first web application:

   ```
   .\Add-SMClaimSearchService.ps1 –WebApplication url_of_web_application url
   -ClaimSearchService https://claims_search_service_url
   -EnableSSLClientAuthentication –ClientCertificateName
   name_in_Issued-To:_field_of_Certificate
   ```

   The first end point is registered.

7. Repeat Step 4 for *each* SharePoint web application on the WFE server. The following example describes registering a claims search service endpoint for the following web applications:

   - SharePoint_webapplication.support.example.com:81 (runs on port 81)
   - SharePoint_webapplication.support.example.com:82 (runs on port 82)

   ```
   .\Add-SMClaimSearchService.ps1 -WebApplication
   http://SharePoint_webapplication.support.example.com81/
   -ClaimSerchService

   https://claim_search_service.support.example.com:8002/ClaimsWS/services/W
   SSharePointClaimsServiceImpl -EnableSSLClientAuthentication

   -ClientCertificateName SiteminderClaimsProvider

   .\Add-SMClaimSearchService.ps1 -WebApplication
   http://SharePoint_webapplication.support.example.com:82/
   -ClaimSerchService

   https://claim_search_service.support.example.com:8002/ClaimsWS/services/W
   SSharePointClaimsServiceImpl-EnableSSLClientAuthentication

   -ClientCertificateName SiteminderClaimsProvider
   ```

8. Restart your WFE server.
9. Repeat Steps 1 through 8 on all of the web front end (WFE) servers in your SharePoint environment.

   The claims serach service endpoint is registered. Continue with the next step of creating a trusted store for the root certificate authority certificate.

Install the Client Authentication Certificate on Your Agent for SharePoint

The next step in creating a mutual trust relationship is to install the client authentication certificate on the server that runs your Agent for SharePoint.

The Agent for SharePoint needs the same client authentication certificate that you installed on your SharePoint central administration server and your web front-end (WFE) servers.

Follow these steps:

1. Export the client authentication certificate from one of your WFE servers with the following steps:
   a. Log in to a WFE server that contains the client authentication certificate.
   b. Click Start, Run.

      The Run dialog appears.
   c. In the Open field, type mmc and then click OK.
   d. Expand Certificates — Local Computer.
   e. Expand Personal.

      The certificates folder appears.
   f. Right-click your client authentication certificate, and then select All Tasks, Export.

      The certificate export wizard opens.
   g. Export the certificate using the Base-64 encoded X.509 (.cer) option.

      The client authentication certificate is exported. Note the location of the exported certificate.
2. Copy the exported client authentication certificate from your WFE server to the following directory on the server that runs your Agent for SharePoint:

   Agent_for_SharePoint_Home/SSL/keys

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Run the following command:

   ```
   keytool -importcert -alias ClientAuthCert -file .\ClientAuthCert.cer -trustcerts
   -keystore .\TrustStore.jceks -storepass keystore_password -storetype JCEKS
   ```

   A confirmation prompt appears.
4. Enter yes.

The client authentication certificate is installed on the server that runs your Agent for SharePoint. Continue with the next step of updating the SSL Configuration file.

Update the SSLConfig.properties File

The next step of the process of creating a mutual trust relationship is updating the SSLConfig.properties file.

The server that runs your Agent for SharePoint requires a password-protected location (trust store) for the client authentication certificate. Specify a password for the trust store when creating it.

Follow these steps:

1. Run the following command on the server that runs your Agent for SharePoint:

   `GenerateSSLConfig -keystorepass keystore_password -truststore` *`Agent_for_SharePoint_Home`*`\SSL\keys\TrustStore.jceks -truststorepass` *`truststore_password`*

   A confirmation prompt for your trust store password appears.

2. Re—enter your trust store password.

   A confirmation prompt for client authentication appears.

3. Enter yes.

   The SSLConfig.properties file is updated. Continue with the next step of restarting your Agent for SharePoint.

Restart the Agent for SharePoint

Starting or stopping the Agent for SharePoint involves the following separate procedures:

1. Changing the value of EnableWebAgent in the WebAgent.conf file (see page 80).
2. Changing the state of the related services on the computer running the Agent for SharePoint (see page 81).

Change the Value of the EnableWebAgent Parameter

Change the value of the EnableWebAgent parameter to accomplish either of the following tasks:

- Start the Agent for SharePoint when the related services start.
- Stop the Agent for SharePoint when the related services start.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\WebAgent.conf
   ```

2. Locate the following line:

   ```
   EnableWebAgent="NO"
   ```

3. Change the value inside the quotation marks to *one* of the following values:
   - YES to start the Agent for SharePoint after the services start. Your resources are protected.
   - NO to stop the Agent for SharePoint after the services start. Your resources are *not* protected.
4. Change the state of the related services on your Agent for SharePoint (see page 81).

Change the States of the Services on your Agent for SharePoint

You can change the states of the related services on your Agent for SharePoint.

Note: To start or stop your Agent for SharePoint, change the value of the EnableWebAgent parameter first (see page 80).

Follow these steps:

1. To change the states of the related services, select *one* of the following procedures:
   - For Windows operating environments, go to Step 2.
   - To *start* the Agent for SharePoint on UNIX operating environments, go to Step 3.
   - To *stop* the Agent for SharePoint on UNIX operating environments, go to Step 4.
2. For Windows operating environments, do the following steps:
   a. From the Windows Start menu navigate to Administrative Tools, Services.

      The Services dialog appears.

   b. Scroll down the list of services and select SiteMinder Agent for SharePoint.

   c. From the Action menu, select All Tasks and select the command that you want.

   d. Repeat Step b for SiteMinder Agent for SharePoint Proxy Engine.

      The states of the services and Agent for SharePoint are changed.
3. To start the Agent for SharePoint on UNIX operating environments, do the following steps.
   a. Log in as a root user.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   c. Run the following command:

      ```
      ./sps-ctl start
      ```

      The service and the Agent for SharePoint start. The Agent for SharePoint stops or starts according to the value you set in the EnableWebAgent parameter (see page 80).
4. To stop the Agent for SharePoint on a system running UNIX, do the following steps:
   a. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   b. Run the following command:

      ```
      ./sps-ctl stop
      ```

      The service and the Agent for SharePoint stop.

Modify the SSL Configuration File for Your Agent for SharePoint

This section describes configuring secure communications between your Agent for SharePoint reverse proxy and the Public URLs of your SharePoint web applications.

The first step in configuring the reverse proxy for secure communications is modifying the SSL configuration file.

The SSL configuration file requires the following modifications:

- Add listening directives for each SSL port.
- Add virtual host sections for each port-based virtual host.

Follow these steps:

1. Log in to the server hosting your Agent for SharePoint:
2. Open the following file with a text editor:

   Agent-for-SharePoint_home\httpd\conf\extra\httpd-ssl.conf

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Add the appropriate number of 'Listen' directives for your environment. Use the following examples as a guide:

   - Listen 443 #(for the default http port 80)
   - Listen 481 #(for http port 81)
   - Listen 482 #(for http port 82)

   The previous example assumes that you already have three web applications listening for HTTP requests on ports 80, 81 and 82. The previous example shows how to add HTTPS ports 443, 481 and 482 respectively.

4. Add a section for each port-based virtual host, using the following examples as a guide:

```
<VirtualHost _default_:443>
# General setup for the virtual host
DocumentRoot "C:/CA/Agent-for-SharePoint/httpd/htdocs"
ServerName SMSPA2010.smtest.ca.com:443
ServerAdmin Admin@smtest.ca.com
# ErrorLog logs/error_log.log
# TransferLog logs/access_log.log
SSLEngine on
SSLCertificateFile
"C:/CA/Agent-for-SharePoint/SSL/certs/smspa2010.smtest.ca.com.cer"
SSLCertificateKeyFile
"C:/CA/Agent-for-SharePoint/SSL/keys/smspa2010.smtest.ca.com.key"
</VirtualHost>
<VirtualHost *:481>
DocumentRoot "C:/CA/Agent-for-SharePoint/httpd/htdocs/481smspa2010"
ServerName smspa2010.smtest.ca.com
ServerAdmin Admin@smtest.ca.com
ErrorLog logs/481smspa2010_error_log.log
TransferLog logs/481smspa2010_access_log.log
SSLEngine on
SSLCertificateFile
C:/CA/Agent-for-SharePoint/SSL/certs/smspa2010.smtest.ca.com.cer
SSLCertificateKeyFile
C:/CA/Agent-for-SharePoint/SSL/keys/smspa2010.smtest.ca.com.key
CustomLog logs/cipher_log_481smspa2010 \
"%t %h %{SSL_PROTOCOL}x %{SSL_CIPHER}x \"%r\" %b"
</VirtualHost>
<VirtualHost *:482>
DocumentRoot "C:/CA/Agent-for-SharePoint/httpd/htdocs/482smspa2010"
ServerName smspa2010.smtest.ca.com
ServerAdmin Admin@smtest.ca.com
ErrorLog logs/482smspa2010_error_log.log
TransferLog logs/482smspa2010_access_log.log
SSLEngine on
SSLCertificateFile
C:/CA/Agent-for-SharePoint/SSL/certs/smspa2010.smtest.ca.com.cer
SSLCertificateKeyFile
C:/CA/Agent-for-SharePoint/SSL/keys/smspa2010.smtest.ca.com.key
CustomLog logs/cipher_log_482smspa2010 \
"%t %h %{SSL_PROTOCOL}x %{SSL_CIPHER}x \"%r\" %b"
</VirtualHost>
```

   The previous example describes the virtual host entries that are created to match the port settings in Step 2.

5. Save the file and close the text editor.

   The SSL Configuration file is modified. Continue with the next step of generating certificates and keys for each unique server (FQDN) in your environment.

Generate a Private Unencrypted RSA Server Key for Each Virtual Site

The next step in configuring the reverse proxy for secure communications is generating a private unencrypted (Windows) RSA Key (server key) for each virtual site with a fully qualified domain name (FQDN).

Follow these steps:

1. Open a command-line window.
2. Navigate to the following directory

   Agent-for-Sharepoint_home\SSL\bin

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Generate the keys by running the following commands:

   ```
   .\openssl genrsa -out ..\keys\server_FQDN.key
   ```

   The following example describes creating a key for a server named smspa2010:

   ```
   .\openssl genrsa -out ..\keys\smspa2010.example.com.key
   ```
4. Repeat Step 3 for each virtual server.

   The private unencrypted server keys are created. Continue with the next step of generating a certificate signing request.

Generate and Submit Certificate Signing Requests

The next step in configuring the reverse proxy for secure communications is generating the certificate signing requests for each of the virtual servers.

Follow these steps:

1. Open a command-line window.
2. Generate the certificate signing requests by running the following command:

   ```
   .\openssl req -config .\openssl.cnf -new -key ..\keys\server_FQDN .key -out
   ..\keys\server_FQDN.csr
   ```

   The following example describes creating a certificate request for a server named smspa2010 on the support.example.com domain:

   ```
   .\openssl req -config .\openssl.cnf -new -key
   ..\keys\smspa2010.support.example.com.key -out
   ..\keys\smspa2010.support.example.com.csr
   ```

3. Create your certificate request by adding the information at each prompt, as shown in the following example:

   ```
   Country: Your_Country
   State: Your_State
   Locality: Your_Town
   Organization: Example
   Org. Unit: support
   CN: smspa2010.support.example.com
   E-Mail: admin@support.ca.com
   Challenge Pwd: firewall
   Optional name: blank
   ```

   Note: The value for the common name (CN) must match the fully qualified domain name (FQDN) of the web server.

   The system generates a certificate request with the certificate file name and a request number, as shown in the following example:

   ```
   smspa2010.support.example.com.csr 8
   ```

4. Record the file name and certificate signing request for future reference.
5. Repeat Steps 2 through 4 for the other virtual servers.
6. Submit your certificate signing requests to the certificate authority that your organization uses.

   The certificate signing requests are generated and submitted. Continue with the next step of downloading your certificates from your certificate authority.

Download and Install the Certificates from your Certificate Authority

The next step in configuring the reverse proxy for secure communications is downloading the signed certificates from the certificate authority.

The virtual host sections in your SSL configuration file specify a certificate location for each virtual host. The SSLCertificateFile line in the following example specifies the location for the spa2010.support.example.com server:

```
SSLCertificateFile
"Agent-for-SharePoint_home/SSL/certs/smspa2010.support.example.com.cer
```

Agent-for-SharePoint_Home

Indicates the directory where the Agent for SharePoint is installed.

Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint

Follow these steps:

1. Log in to your Agent for SharePoint server from which you issued the certificate requests.
2. Review the SSL configuration file for the SSLCerfificateFile lines.
3. Copy a certificate file to its respective location that is specified in the SSL Configuration file.
4. Repeat Step 3 for each unique server running a virtual host.

   The certificates are downloaded. Continue with the next step of accommodating your SSL sites by modifying the proxy rules.

Accommodate Your SSL Sites by Modifying the Proxy Rules

The next step in configuring the reverse proxy for secure communication is modifying the proxy rules for the server on which your Agent for SharePoint runs.

Note: Even if you are using only SSL, the proxy rules files require rules for both HTTP and HTTPS protocols.

Follow these steps:

1. Open the following file with a text editor:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint

2. Modify the ProxyRules.xml file for the SSL sites by adding proxy rules that include the SSL port and the related web application. The following example shows the new rules in bold:

```
<nete:proxyrules xmlns:nete="http://smspa2010.smtest.ca.com/" debug="yes">
<nete:cond type="host" criteria="endswith">
<nete:case value="81">
<nete:forward>http://w2k8r2.smtest.ca.com:14056$0</nete:forward>
</nete:case>
<nete:case value="82">
<nete:forward>http://w2k8r2.smtest.ca.com:31415$0</nete:forward>
</nete:case>
<nete:case value="481">
<nete:forward>http://w2k8r2.smtest.ca.com:14056$0</nete:forward>
</nete:case>
<nete:case value="482">
<nete:forward>http://w2k8r2.smtest.ca.com:31415$0</nete:forward>
</nete:case>
<nete:default>
<nete:forward>http://w2k8r2.smtest.ca.com:31567$0</nete:forward>
</nete:default>
</nete:cond>
</nete:proxyrules>
```

3. Save the file and close the text editor.

   The proxy rules are modified. Continue with the next step of enabling SSL on your Agent for SharePoint.

Enable SSL on Your Agent for SharePoint

The next step in configuring the reverse proxy for secure communication is enabling SSL on the server that runs your Agent for SharePoint.

To enable SLL on your Agent for SharePoint, run the appropriate command for your operating environment:

Windows

Agent-for-SharePoint_home\httpd\bin\configssl.bat -enable

UNIX/Linux

Agent-for-SharePoint_home/proxy-engine/sps-ctl startssl

SSL is enabled on your Agent for SharePoint. Continue with the next step of running the connection wizard.

Run the Connection Wizard

The next steps in configuring the reverse proxy for secure communications involve the following tasks:

- Running the connection wizard to change the protocol of the Authentication URL to HTTPS.
- Changing the SignIn URL on your SharePoint central administration server using several PowerShell commands.

Follow these steps:

1. Edit the existing connection using the Connection Wizard with the following steps:
   a. Log in to the server that runs your Agent for SharePoint.
   b. Navigate to the following directory:

      Agent-for-SharePoint_home/sharepoint_connection_wizard

   c. Do the appropriate step for your operating environment:
      - Windows: Right-click the executable and then select Run as administrator.
      - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
      - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

      The SharePoint Connection wizard starts.
   d. Click Next.

      The Login Details screen appears.

e. Enter the following login for the Policy Server.

Policy Server Name

Specifies the Policy Server name or IP address.

Username

Specifies the Policy Server administrator username.

Password

Specifies the Policy Server administrator password.

Agent Name

Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

Shared Secret Key

Specifies the shared secret key that is associated with the Agent.

f. Click Next

The Select Action screen appears.

g. Select Edit a SharePoint Connection option.

h. Click Next.

The SharePoint Connection Properties screen appears.

i. Change the protocol of the Authentication URL to HTTPS in the SharePoint Connection Properties screen.

j. Click Install in the Commit Details screen.

The Save Complete screen appears.

k. Click Done.

The partnership details are saved, the SharePoint Connection is modified, and the wizard closes.

2. Modify the SignInUrl of the SiteMinder Trusted Identity Token Issuer with the following steps:

   a. Log in to your SharePoint central administration server.

   b. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   c. Verify the following settings by running the Get-SPTrustedIdentityTokenIssuer command:

      - The name of the provider
        (such as *LDAP-Claims*)
      - The current SignInUrl
        (such as
        http://smspa2010.support.example.com/affwebservices/public/wsfeddispatcher).

   d. Run the Set-SPTrustedIdentityTokenIssuer command as shown in the following example:

      ```
      Set-SPTrustedIdentityTokenIssuer "LDAP-Claims" -SignInUrl
      https://smspa2010.support.example.com/affwebservices/public/wsfeddispatcher
      ```

   e. Run the Get-SPTrustedIdentityTokenIssuer command again to verify the change to the SigInUrl.

      Note: For more information about the Set-SPTrustedIdentityTokenIssuer command, see http://technet.microsoft.com/en-us/library/ff607792.aspx

   The protocol is changed. Continue with the next step of creating alternate access mappings for your port-based virtual sites.

Create Alternate Access Mappings for Your Port-Based Virtual Sites

The next step in configuring the reverse proxy for secure communication is creating alternate access mappings on your SharePoint server for the port-based virual hosts on your Agent for SharePoint.

Port-based proxy rules require the following alternate access mappings on your SharePoint central administration server:

- Set the public URL for the zone to the URL of your virtual host on your Agent for SharePoint that is associated with the web application.
- Set the internal URL to the SharePoint server to which the requests from the virtual host on the Agent for SharePoint are forwarded.

Follow these steps:

1. Open your SharePoint central administration site
2. Click Application Management.
3. Under Web Applications, click Configure Alternate Access Mappings..
4. Use the examples in the following table as a guide to edit your public URLs and Add Internal URLs:

Public URL (URL of your virtual site on your Agent for SharePoint)	**Internal URL (URL of web application on your SharePoint server)**
https://support.example.com	https://spa2010.support.example.com \443

The alternate access mappings are created. Continue with the next step of modifying the ConfigSLL.bat file.

Modify the ConfigSSL.bat File

The next step in configuring the reverse proxy for secure communication is modifying the ConfigSSL.bat file.

The ConfigSSL.bat file simplifies the configuration changes required to implement secure communication for your reverse proxy.

Follow these steps:

1. Open the following file with a text editor.
2. Change all instances of "SiteMinder Secure Proxy" to "SiteMinderAgentforSharePoint".
3. Save your changes to the file, and then close the text editor.
4. Run the updated configssl.bat file.

   The SSL configuration settings are updated. Continue with the next step of modifying your authentication scheme.

Modify Your Authentication Scheme

The next step in configuring the reverse proxy for secure communication is modifying your SiteMinder authentication scheme to use SSL.

Authentication schemes use HTTP unless you specify HTTPS when creating the authentication scheme.

Follow these steps:

1. Login to the Administrative UI.
2. Click Infrastructure, Authentication, Authentication Schemes.
3. Click the link of the authentication scheme that you want.
4. Click Modify.
5. Select the Use SSL Connection check box.
6. Click Submit.

   A confirmation screen appears.
7. Click OK.

   The authentication scheme is modified. Continue with the next step of restarting your Agent for SharePoint.

Restart the Agent for SharePoint

Starting or stopping the Agent for SharePoint involves the following separate procedures:

1. Changing the value of EnableWebAgent in the WebAgent.conf file (see page 80).
2. Changing the state of the related services on the computer running the Agent for SharePoint (see page 81).

Change the Value of the EnableWebAgent Parameter

Change the value of the EnableWebAgent parameter to accomplish either of the following tasks:

- Start the Agent for SharePoint when the related services start.
- Stop the Agent for SharePoint when the related services start.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\WebAgent.conf
   ```

2. Locate the following line:

   ```
   EnableWebAgent="NO"
   ```

3. Change the value inside the quotation marks to *one* of the following values:
   - YES to start the Agent for SharePoint after the services start. Your resources are protected.
   - NO to stop the Agent for SharePoint after the services start. Your resources are *not* protected.
4. Change the state of the related services on your Agent for SharePoint (see page 81).

Change the States of the Services on your Agent for SharePoint

You can change the states of the related services on your Agent for SharePoint.

Note: To start or stop your Agent for SharePoint, change the value of the EnableWebAgent parameter first (see page 80).

Follow these steps:

1. To change the states of the related services, select *one* of the following procedures:
   - For Windows operating environments, go to Step 2.
   - To *start* the Agent for SharePoint on UNIX operating environments, go to Step 3.
   - To *stop* the Agent for SharePoint on UNIX operating environments, go to Step 4.
2. For Windows operating environments, do the following steps:
   a. From the Windows Start menu navigate to Administrative Tools, Services.

      The Services dialog appears.

   b. Scroll down the list of services and select SiteMinder Agent for SharePoint.

   c. From the Action menu, select All Tasks and select the command that you want.

   d. Repeat Step b for SiteMinder Agent for SharePoint Proxy Engine.

      The states of the services and Agent for SharePoint are changed.
3. To start the Agent for SharePoint on UNIX operating environments, do the following steps.
   a. Log in as a root user.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   c. Run the following command:

      ```
      ./sps-ctl start
      ```

      The service and the Agent for SharePoint start. The Agent for SharePoint stops or starts according to the value you set in the EnableWebAgent parameter (see page 80).
4. To stop the Agent for SharePoint on a system running UNIX, do the following steps:
   a. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   b. Run the following command:

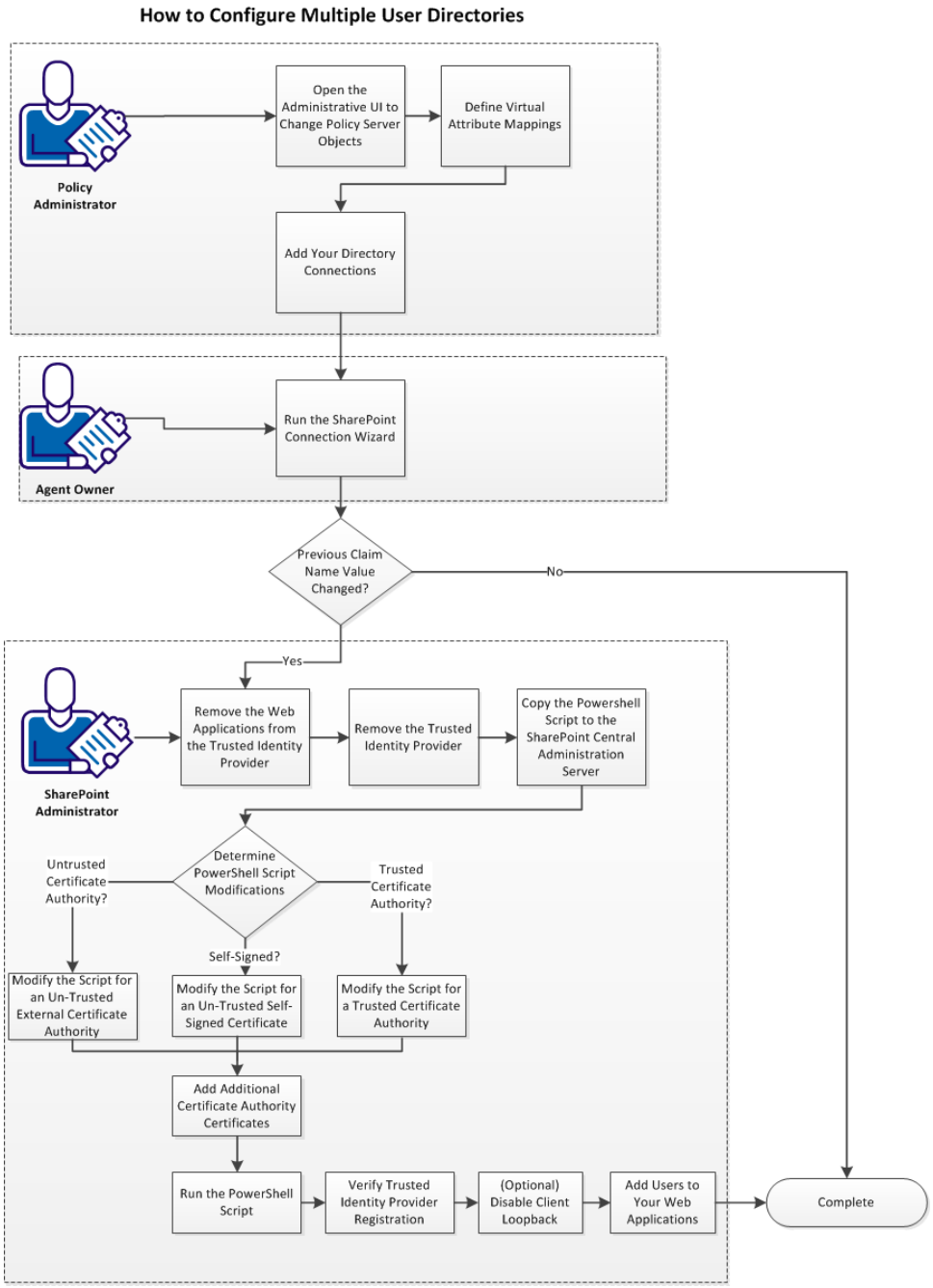
      ```
      ./sps-ctl stop
      ```

      The service and the Agent for SharePoint stop.

How to Configure Multiple User Directories

If the users who access your protected SharePoint web applications are stored in more than one user directory, configure multiple user directories.

Important! Multiple directory connections are supported with Policy Server version 12.5 and above only.



Follow these steps:

1. Open the Administrative UI to change Policy Server objects (see page 36).
2. Define virtual attribute mappings (see page 206).
3. Add directory connections (see page 208).
4. Run the SharePoint connection wizard (see page 209).
5. If you *changed* the value of an *existing* Claim Name (attribute), do the following steps:
   a. Remove the web applications from the trusted identity provider (see page 211).
   b. Remove the trusted identity provider (see page 212).
   c. Copy the PowerShell script to the SharePoint central administration server (see page 212).
   d. Determine the PowerShell script modifications (see page 213) (pick *one* of the following procedures):
      - Modify the script for an un-trusted certificate authority (see page 214).
      - Modify the script for an un-trusted self-signed certificate (see page 216).
      - Modify the script for a trusted certificate authority (see page 218).
   e. Add certificate authority certificates (see page 219).
   f. Run the PowerShell script (see page 221).
   g. Verify the trusted identity provider registration (see page 222).
   h. (Optional) Disable client loopback (see page 120).
   i. Add users to your web applications (see page 223).

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   `https://host_name:8443/iam/siteminder/adminui`

   host_name

   Specifies the fully qualified Administrative UI host system name.

2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

   Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Define Virtual Attribute Mappings

The next step in configuring multiple user directories is defining the virtual attribute mappings in each user directory. For example, suppose that some users exist in an Active Directory server while others exist in an LDAP directory server. Defining *virtual* attribute mappings, or aliases for each directory allows SiteMinder access to both directories.

The following table provides examples of typical attribute mappings for an Active Directory server, an LDAP directory server, and an ODBC database:

User Attribute Field (in Administrative UI)	Active Directory Attribute Name	LDAP Directory Attribute Name	ODBC Attribute Name
UID	sAMAccountname	cn	Name
AliasID	sAMAccountname	cn	Name
mail	userPrincipalName	Mail	EmailAddress
smusergroups	Manager	Name	Name

Follow these steps:

1. Click Infrastructure, Directories, User Directories.
2. Click the Edit icon of a user directory that you want.
3. Create an attribute mapping with the following steps:
   a. Scroll to the Attribute Mapping list, and then click Create.

      The Create Attribute Mapping pane opens.

   b. Verify that Create a new object is selected, and click OK.

      The Create Attribute Mapping: Name pane opens.

   c. Type a name and an optional description for the attribute mapping. For example, to create an attribute mapping for the UID, type UID.

   d. Select the Alias option button.

   e. In the Definition field, type the attribute name that you want to add, as shown in the following examples:

      - (Active Directory) sAMAccountname
      - (LDAP directory server) cn
      - (OBDC database) Name

   f. Click OK.
4. Repeat Steps 3a through 3f until all of the attributes have been added to the user directory.
5. Click Submit.

   The attribute mappings are added to your directory.
6. Repeat Steps 2 through 6 to add attributes to another user directory.

   The attribute mappings are defined.

Add Directory Connections

The next step in configuring multiple user directories is adding the user directory connections that contain the attribute mappings to the following items:

- Policy domains.
- Policy applications (EPM).

Follow these steps:

1. Pick the appropriate procedure for your type of policy from the following list:
   - If you use policy domains, go to Step 2.
   - If you use application policies (EPM), go to Step 4.
2. Add directory connections to your policy domain with the following steps:
   a. Click Policies, Domain, Domains.
   b. Click the edit icon of the domain that protects your SharePoint web applications.

      The Modify Domain: screen appears with the General tab selected.
   c. If the user directories to which you defined the attribute mappings do *not* appear in the list, go to Step 2d . Otherwise, click Cancel and go to Step 3.
   d. Click Add/Remove.
   e. Click the directory connection that you want from the Available Members list, and then click the right arrow.
   f. Repeat Step 2f to add other directories.
   g. Click OK.
   h. Click Submit.
3. Repeat Steps 2a through 2h for any other policy domains on which you want to add directory connections.
4. Add directory connections your application policy (EPM) with the following steps:
   a. Click Policies, Application, Applications.
   b. Click the edit icon of the application that protects your SharePoint web applications.

      The Modify Application: screen appears with the General tab selected.
   c. If the user directories to which you defined the attribute mappings do *not* appear in the list, go to Step 4d. Otherwise, click Cancel and go to Step 5.
   d. Click Add/Remove.
   e. Click the directory connection that you want from the Available Members list, and then click the right arrow.
   f. Repeat Step 4f to add other directories.

g. Click OK.

h. Click Submit.

5. Repeat Steps 4a through 4h for any other application policies (EPM) on which you want to add directory connections.

   The directory connections are added. Have your agent owner continue with the next step of running the SharePoint connection wizard.

Run the SharePoint Connection Wizard

As an agent owner who is responsible for running the server hosting the Agent for SharePoint, run the SharePoint connection wizard to finish configuring multiple user directories.

Follow these steps:

1. Log in to the server that runs your Agent for SharePoint.
2. Navigate to the following directory:

   Agent-for-SharePoint_home/sharepoint_connection_wizard

3. Do the appropriate step for your operating environment:
   - Windows: Right-click the executable and then select Run as administrator.
   - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
   - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

   The SharePoint Connection wizard starts.
4. Click Next.

   The Login Details screen appears.
5. Enter the following login for the Policy Server.

   Policy Server Name

   Specifies the Policy Server name or IP address.

   Username

   Specifies the Policy Server administrator username.

   Password

   Specifies the Policy Server administrator password.

   Agent Name

   Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

Shared Secret Key

Specifies the shared secret key that is associated with the Agent.

6. Click Next

   The Select Action screen appears.

7. Select Edit a SharePoint Connection option.

8. Click Next.

   The SharePoint Connection Properties screen appears.

9. Click through the wizard until you reach the Define Additional Claims screen.

10. Verify that Name Value Pair appears in the Attribute drop-down list.

11. Verify that User Attribute appears in the Claim Type drop-down list.

12. Click the Claim Name field. Type the name of the user attribute that is defined in one of your directory connections in the Administrative UI. For example, if your policy administrator defined UID as a user attribute in the Administrative UI, then type UID as the Claim Name.

13. Type the *alias* name of the attribute from your directory that your policy administrator defined in the Administrative UI. For example, if the alias name for the user attribute is userid then type userid as the directory attribute.

14. Click Add.

15. Repeat Steps 10 through 14 to add the attributes for your other directories.

16. Click through the wizard until the Commit Details screen appears.

17. Click Install.

    The Save Complete screen appears.

18. Click Done.

    The SharePoint connection wizard closes.

Remove the Web Applications from the Trusted Identity Provider

A trusted identity provider cannot be removed from SharePoint while any web applications are using it. Before you remove the trusted identity provider itself, remove the association between the SiteMinder trusted identity provider and any of your web agents using it.

Follow these steps:

1. Log in to your SharePoint central administration server.
2. Click Start, Microsoft SharePoint 2010 Products, SharePoint 2010 Central Administration.

   The Central Administration home page opens.
3. Under Application Management, click Manage web applications.

   The web application management page opens.
4. Click the line corresponding to the name of a web application using the SiteMinder trusted identity provider.

   The web application is selected.
5. On the ribbon, click Authentication Providers.

   The Authentication Providers dialog appears.
6. In the Authentication Providers dialog, click the link that corresponds to the zone of your web application. For example, if the web application using the SiteMinder trusted identity provider is in the Intranet zone, click the Intranet link.

   The Edit Authentication page appears.
7. Under Claims Authentication types, clear all Trusted Identity provider check boxes.
8. Click Save.

   The SiteMinder trusted identity provider is removed from the web application in the zone.
9. Repeat Steps 3 through 8 for all web applications and the zones using the SiteMinder trusted identity provider.

   The trusted identity provider is removed from all web applications and their respective zones.

Remove the Trusted Identity Provider

You can perform the following procedure to remove the trusted identity provider for SharePoint using Windows PowerShell.

Follow these steps:

1. Log in to your SharePoint central administration server.
2. Select Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The Microsoft PowerShell command prompt appears.
3. Enter the following command:

   `Remove-SPTrustedIdentityTokenIssuer -Identity`

   -Identity

   Specifies the name of the identity provider to remove.

   Example: Remove-SPTrustedIdentityTokenIssuer TestSTS

   The trusted identity provider for SharePoint is removed.

Copy the Powershell Script to the SharePoint Central Administration Server

Extra configuration steps are required if you changed the value of an existing Claim Name when you configured multiple user directories. The SharePoint connection wizard creates a PowerShell script that contains the new Claim Name. Copy this PowerShell script from your Agent for SharePoint host to your SharePoint central administration server.

Follow these steps:

1. Navigate to the following directory on the server running your Agent for SharePoint:

   Agent-for-SharePoint_home\sharepoint_connection_wizard\
2. Locate the PowerShell script that the SharePoint connection wizard created. The script uses the connection name that you chose while running the wizard as the file name. For example, if your connection name was *my_connection*, the name of the script is *my_connection*.ps1.
3. Copy the PowerShell script to a directory on your SharePoint central administration server.

Determine PowerShell Script Modifications

To create a trusted identity provider on your SharePoint central administration server, edit the PowerShell script to include the following information about your SharePoint environment:

- The full path to the root certificate (typically from a third-party Certificate Authority) that signed your certificate.
- Create a trusted root authority in SharePoint for the certificate authority which signed your certificate.
- The full path to your signing certificate.
- Friendly names for each of the claim mappings.
- The SharePoint realm name (to identify the trusted identity provider).

  Note: This value appears in SharePoint Central Administration under the list of available trusted identity providers.
- A friendly description for the trusted identity provider.

The specific modifications to the PowerShell script vary according to the type of certificates you want to use with your SiteMinder trusted identity provider.

Find the proper procedure for your situation in the following table:

If your certificates fit this situation:	Then use this procedure to modify your script:
You are using a certificate that is signed by an external certificate authority, and the certificate authority is not trusted by your SharePoint server.	Modify the script for an un-trusted external certificate authority (see page 214).
You are using a self-signed certificate and the certificate authority is *not* trusted by your SharePoint server.	Modify the script for an un–trusted self-signed certificate (see page 216).
You are using a certificate, and the certificate authority is trusted by your SharePoint server. Verify with your SharePoint administrator to confirm that the proper certificate authority is trusted.	Modify the script for a trusted certificate authority (see page 218).

Modify the Script for an Un-Trusted External Certificate Authority

f your signing certificate is signed by an external certificate authority, modify the PowerShell script to do the following tasks:

- Import the certificate authority certificate (root certificate) into SharePoint.
- Create a SharePoint trusted root authority that is based on the certificate authority certificate.
- Import the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Locate the following text:

   ```
   "<full path to Root certificate file>"
   ```

3. Replace the previous text with the full path to your root certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\certificate_authority_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\certificate_authority_certificate.cer"
   ```

4. Locate the first occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

5. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPCAAuth, the updated line matches the following example:

   ```
   "SPCAAuth"
   ```

6. Locate the following text:

   ```
   "<full path to Signing certificate file>"
   ```

7. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\signing_certificate.cer"
   ```

8. Locate the second occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

9. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

   ```
   "SPSigningAuth"
   ```

10. Locate the following text:

```
"<Name of the trusted identity provider>"
```

11. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

    ```
    "moss2O1O-wsfed1-casm"
    ```

12. Locate the following text:

    ```
    "<Description for the Trusted Identity Provider>"
    ```

13. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

14. If your certificate chain contains *more than one* certificate authority certificate, add the other certificate authority certificates to the script (see page 219). If your script contains *one* certificate authority certificate, go to the next step.

15. Save your changes and close your text editor.

    The PowerShell script is modified.

16. Run the PowerShell script (see page 221).

Modify the Script for an Un-Trusted Self-Signed Certificate

If you are using a self-signed certificate that is issued by a certificate authority which is not explicitly trusted by your SharePoint server, modify the PowerShell script to do the following tasks:

- Import the certificate authority certificate (root certificate) into SharePoint.
- Create a SharePoint trusted root authority that is based on the certificate authority certificate.
- Import the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Locate the following text:

   ```
   "<full path to Root certificate file>"
   ```

3. Replace the previous text with the full path to your root certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\certificate_authority_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\certificate_authority_certificate.cer"
   ```

4. Locate the first occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

5. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPCAAuth, the updated line matches the following example:

   ```
   "SPCAAuth"
   ```

6. Locate the following text:

   ```
   "<full path to Signing certificate file>"
   ```

7. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

   ```
   "C:\certificates\sharepoint\signing_certificate.cer"
   ```

8. Locate the second occurrence of the following text:

   ```
   <Trusted root authority name>
   ```

9. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

   ```
   "SPSigningAuth"
   ```

10. Locate the following text:

    ```
    "<Name of the trusted identity provider>"
    ```

11. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

    ```
    "moss2010-wsfed1-casm"
    ```

12. Locate the following text:

    ```
    "<Description for the Trusted Identity Provider>"
    ```

13. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

    Note: The LDAP directory and Active Directory charts contain additional examples of possible names.

14. If your certificate chain contains *more than one* certificate authority certificate, add the other certificate authority certificates to the script (see page 219). If your script contains *one* certificate authority certificate, go to the next step.

15. Save your changes and close your text editor.

    The PowerShell script is modified.

16. Run the PowerShell script (see page 221).

Modify the Script for a Trusted Certificate Authority

If you are using a certificate signed by a certificate authority that is trusted by the SharePoint server, modify the PowerShell script to do the following tasks:

- Skip the step to import the certificate authority certificate.
- Skip the stop to create a new SharePoint trusted root authority.
- Import only the signing certificate.

Follow these steps:

1. Open the PowerShell script with any text editor.
2. Comment the first two lines in the PowerShell script, as shown in the following example:

```
#$rootcert = New-Object
System.Security.Cryptography.X509Certificates.X509Certificate2("<full
path to Root certificate file>")
#New-SPTrustedRootAuthority -Name "<Trusted root authority name>"
-Certificate $rootcert
```

3. Locate the following text:

```
"<full path to Signing certificate file>"
```

4. Replace the previous text with the full path to your Signing certificate. For example, if the full path to your certificate is C:\certificates\sharepoint\signing_certificate.cer, the updated line matches the following example:

```
"C:\certificates\sharepoint\signing_certificate.cer"
```

5. Locate the second occurrence of the following text:

```
<Trusted root authority name>
```

6. Replace the previous text with a friendly name for the new trusted root authority in SharePoint. For example, if the name you want is SPSigningAuth, the updated line matches the following example:

```
"SPSigningAuth"
```

7. Locate the following text:

```
"<Name of the trusted identity provider>"
```

8. Replace the previous text with the name of your SharePoint realm (the realm name follows $realm = in the PowerShell script). For example, if the name of your SharePoint realm is $realm="urn:moss2O1O-wsfed1-casm", the updated line could match the following example:

```
"moss2O1O-wsfed1-casm"
```

9. Locate the following text:

```
"<Description for the Trusted Identity Provider>"
```

10. Replace the previous text with a description for your trusted identity provider. For example, if you want to describe the trusted identity provider as "SiteMinder Provider," the updated line could match the following example:

    ```
    "SiteMinder Provider"
    ```

11. Save your changes and close your text editor.

    The PowerShell script is modified.

12. Run the PowerShell script (see page 221).

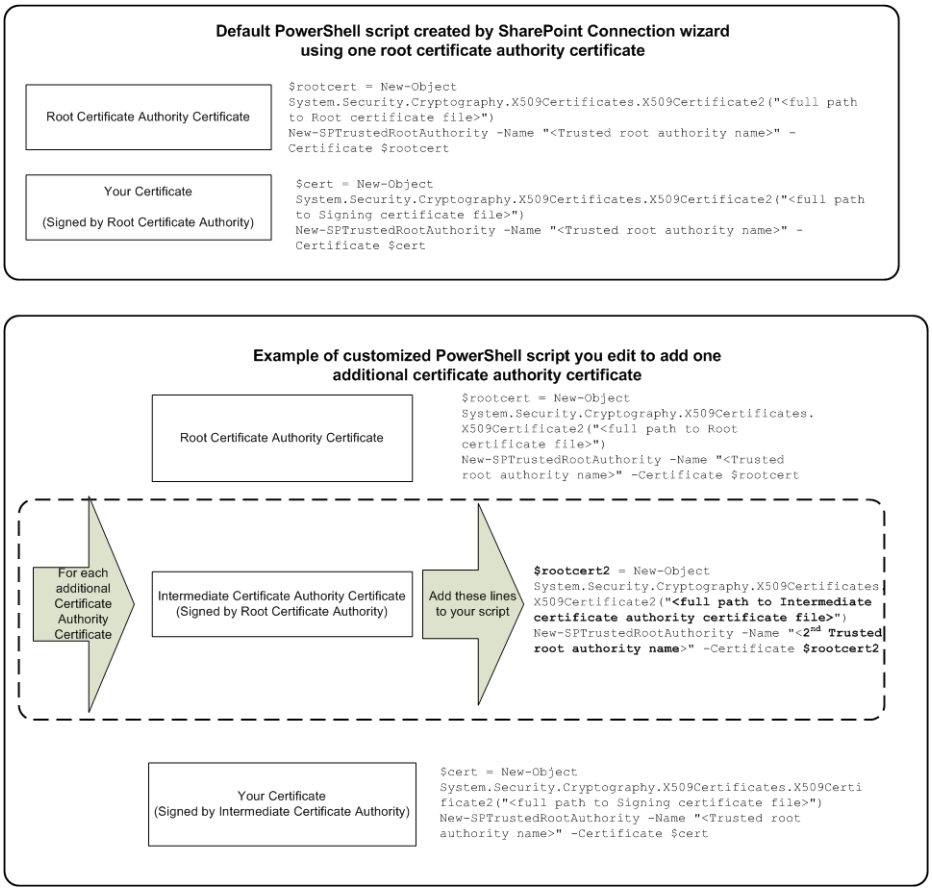
Add Additional Certificate Authority Certificates

he PowerShell script created by the SharePoint connection wizard accommodates the following certificates:

- A certificate authority certificate (also named a root certificate)
- One SSL certificate.

The trusted identity provider requires that all certificates in the certificate chain are included. If an intermediate certificate authority signed your certificate instead, modify the PowerShell script to include both certificate authority certificates.

The following graphic describes the differences between the default PowerShell script, and a PowerShell script that accommodates multiple certificate-authority certificates:



Follow these steps:

1. Copy the following section from your PowerShell script:

   ```
   $rootcert = New-Object
   System.Security.Cryptography.X509Certificates.X509Certificate2("<full path to
   Root certificate file>")
   New-SPTrustedRootAuthority -Name "<Trusted root authority name>" -Certificate
   $rootcert
   ```

2. Copy the following section from your PowerShell script:
3. Add a new line after the section you copied, and then paste the copied into the new line.
4. Edit the pasted section using the changes shown in the following table as a guide:

Change this value:	**To this value:**
$rootcert	$rootcert2

<full path to Root certificate file>	<full path to additional certificate authority certificate file>
<Trusted root authority name>	Name of the additional trusted root authority

5. To add additional certificate authority certificates, repeat Steps 1 through 4.
6. Save your changes and close your text editor.

   The additional certificate authority certificates are added.
7. Run the PowerShell script (see page 221).

Run the PowerShell Script

Run the PowerShell script that contains the updated Claim Name value on your SharePoint central administration server.

Follow these steps:

1. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.
2. Navigate to the directory containing the modified PowerShell script.
3. Run the script with the following command:

   `.\your_connection_name.ps1`

   For example, if you named your connection *my_sharepoint* when you ran the connection wizard, the command would be .*my_sharepoint*.ps1.

   The trusted identity provider is modified.

Verify Trusted Identity Provider Registration

After running the PowerShell script to create your trusted identity provider, verify that it is registered in your SharePoint central administration server.

Follow these steps:

1. From your SharePoint central administration server, click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The Microsoft PowerShell command prompt appears.

2. Enter the following command:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of the trusted identity providers that are configured on the SharePoint central administration server appears.

Disable Client Loopback

If you do *not* need to add attributes using the SharePoint people picker before they exist in your user directories, disable the client loopback feature. Leaving client loopback enabled when the directory attributes exist returns duplicates in the SharePoint people picker.

Follow these steps:

1. Log in to your SharePoint central administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The management shell command-line window opens.

3. Navigate to the following directory:

   ```
   C:\Program Files\CA\SharePointClaimsProvider\scripts
   ```

4. Enter the following command:

   ```
   .\Set-SMClaimProviderConfiguration.ps1 -DisableLoopBackSearch
   ```

   Loopback search is disabled.

Add Users to Your Web Applications

Add your users to SharePoint and assign permission levels depending on their roles. Permission levels allow users to perform a set of related tasks.

Follow these steps:

1. From your SharePoint central administration server, click, Start SharePoint 2010 Central Administration from Start, Programs, Microsoft SharePoint 2010 Products.

   The Central Administration home page appears.

2. Click Manage web applications, in the Application Management section.

   The Web Applications Management page appears with a list of available web applications.

3. Click the web application name for which you want to add users.

   The buttons on the ribbon become available.

4. Click User Policy on the ribbon.

   The Policy for Web Application dialog appears.

5. Click Add Users.

   The Select Zone dialog appears.

6. Verify that the Zone you want appears in the drop-down list, and then Click Next.

   The Add Users dialog appears.

7. Click the Browse button, in the Choose Users section, below the Users text box.

   The Select People and Groups – Webpage Dialog appears.

8. Browse and select the user group to search for the user.

   The right pane displays the search results with the list of users.

9. Select the user and click Add.

   SharePoint adds the selected user.

10. (Optional) Repeat steps 8 and 9 to select additional users.

11. Click OK.

    The Add Users dialog appears and displays the selected users.

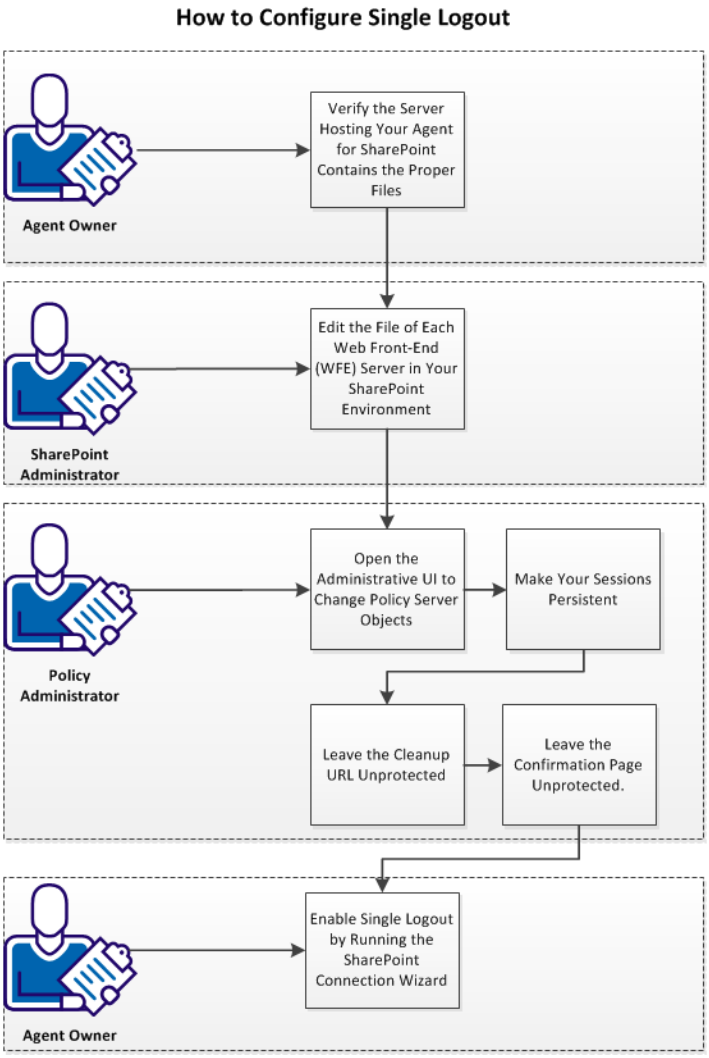
12. Select the required permissions for the users, in the Choose Permissions section.

13. Click Finish.

    SharePoint adds the selected users and assigns the selected permissions to the users.

How to Configure Single Logout

Users who visit multiple websites that the Agent for SharePoint protects have a Fedauth browser cookie for each website. Configuring the single logout verifies that these Fedauth cookies are removed from the browser of the user upon logout.



Follow these steps:

1. Verify that the server hosting your Agent for SharePoint contains the proper files (see page 225).
2. Edit the file of each web front-end (WFE) server in your SharePoint environment (see page 226).
3. Open the Administrative UI (see page 36), and then perform the following tasks:
   a. Make your sessions persistent (see page 228).
   b. Leave the cleanup URL unprotected (see page 229).
   c. Leave the confirmation page unprotected (see page 231).
4. Enable single logout by running the SharePoint Connection wizard (see page 232).

Verify the Server Hosting Your Agent for SharePoint Has the Proper Files

As an agent owner who is responsible for running the server hosting the Agent for SharePoint, verify that the server contains the correct .jsp file. This step is the first step in configuring the single log-out feature.

Follow these steps:

1. Log in to the system hosting your Agent for SharePoint.
2. Navigate to the following directory:

   Agent-for-SharePoint_Home\Tomcat\webapps\affwebservices

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Verify that the following files exist:
   - signoutconfirmurl.jsp
   - spsignoutconfirmurl.jsp

   Note: If the previous file does not exist, verify that the proper version of the Agent for SharePoint is installed on your server.

   The presence of the proper file is verified. Have your SharePoint administrator continue with the next step of editing the files on your web front-end (WFE) servers.

Edit the File of Each Web Front-End (WFE) Server in Your SharePoint Environment

As a SharePoint administrator who is responsible for running the SharePoint environment, edit the Welcome.ascx file on your WFE servers. Editing the file replaces the SharePoint signout URL with the URL of the <stmdnr> signout page. This step is the next step in configuring the single logout feature.

Follow these steps:

1. Log in to your WFE server.
2. Make a backup copy of the following file:

   ```
   %ProgramFiles%\Common Files\Microsoft Shared\Web Server
   Extensions\14\TEMPLATE\CONTROLTEMPLATES\Welcome.ascx
   ```

3. Open the original version of the Welcome.ascx file with a text editor:

   Important! Do not use Notepad, Wordpad (or any other text editor with line-length limitations) to edit the .config (XML) files. A text editor that is designed for writing programming source code typically does not have such line-length limitations. For more information, see the documentation or online help for your respective editor.

4. Locate the following line:

   ```
   <SharePoint:MenuItemTemplate runat="server" id="ID_Logout"
   ```

5. Change ID_Logout to ID_Logout2, as shown in the following example:

   ```
   <SharePoint:MenuItemTemplate runat="server" id="ID_Logout2"
   ```

6. Locate the following line:

   ```
   UseShortID="true"
   ```

7. Add a line following the previous line (shown in Step 6).
8. Add the following settings to the new line:
   `ClientonClickNavigateurl="http://example.com/affwebservices/public/wsfedsignout?wa=wsignout1.0"`
9. Replace the example.com text in the previous line with the domain of your SharePoint web application. For example, if the domain of your SharePoint web application is support.example.com, then the text in Step 8 would resemble the following example:

   ```
   ClientonClickNavigateurl="http://support.example.com/affwebservices/public/wsfedsignout?wa=wsignout1.0"
   ```

10. Save the file and close the text editor.
11. Restart the Internet Information Services (IIS) on your WFE server.
12. Repeat Steps 1 through 11 on all of your WFE servers.

    The files of each WFE servers are edited. Have your policy administrator perform the next steps by opening the Administrative UI.

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   `https://host_name:8443/iam/siteminder/adminui`

   host_name

   Specifies the fully qualified Administrative UI host system name.

2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

   Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Make Your Sessions Persistent

As a policy administrator who manages the polices on the Policy Server, the next step in configuring single logout is making your sessions persistent.

Follow these steps:

1. Pick the appropriate procedure for your type of policy from the following list:
   - If you use policy domains, go to Step 2.
   - If you use application policies (EPM), go to Step 4.
2. Make the sessions in your policy domain persistent with the following steps:
   a. Click Policies, Domain, Realms.
   b. Click the edit icon of the realm that protects your SharePoint web applications.
   c. Click the Persistent option button (in the Session section).
   d. Click Submit.
3. Repeat Steps 2a through 2d for any other policy domains on which you want to configure single logout.
4. Make the sessions in your application policy (EPM) persistent with the following steps:
   a. Click Policies, Application, Applications.
   b. Click the edit icon of the application that protects your SharePoint web applications.
   c. Verify that the General tab is selected, and then click Advanced Settings...
   d. Click the Persistent option button (in the Session section).
   e. Click OK.
   f. Click Submit.
5. Repeat Steps 4a through 4f for any other policy applications (EPM) on which you want to configure single logout.

   The sessions are persistent. Have your policy administrator continue with the next step of leaving the cleanup URL unprotected.

Leave the Clean Up URL Unprotected

As a policy administrator who manages the polices on the Policy Server, the next step in configuring single logout is leaving the cleanup URL unprotected.

Leaving the cleanup URL unprotected prevents a security challenge from appearing during the single logout process.

Follow these steps:

1. Pick the appropriate procedure for your type of policy from the following list:
   - If you use policy domains, go to Step 2.
   - If you use application policies (EPM), go to Step 4.
2. Leave the cleanup URL unprotected in your policy domain with the following steps:
   a. Click Policies, Domain, Realms.
   b. Click Create Realm
   c. Verify that the domain with your SharePoint web applications is selected and then click Next.
   d. Enter a name and optional description for the new realm.
   e. Click the Lookup Agent/Agent Group button, and then add the agent object that protects your SharePoint web applications.
   f. Click the resource filter field, and then add the following text:

      ```
      _trust?wa=wsignoutcleanup1.0
      ```

   g. Click the Unprotected option button.
   h. Click Finish.
3. Repeat Steps 2a through 2h for each policy domain protecting your SharePoint web applications.
4. Leave the cleanup URL unprotected in your application policy (EPM) with the following steps:
   a. Click Policies, Application, Applications.
   b. Click the edit icon of the application that protects your SharePoint web applications.
   c. Verify that the General tab is selected, and then click Create Component.
   d. Enter a name for the component.
   e. Click the Lookup Agent/Agent Group button, and then add the agent object that protects your SharePoint web applications.
   f. Click the resource filter field, and then add the following text:

      ```
      _trust?wa=wsignoutcleanup1.0
      ```

g. Click the Unprotected option button.

h. Click OK.

i. Click Submit.

5. Repeat Steps 4a through 4i for each application policy (EPM) protecting your SharePoint web applications.

   The cleanup URLs are unprotected. Have your policy administrator continue with the next step of leaving the confirmation URL unprotected.

Leave the Confirmation Page Unprotected

As a policy administrator who manages the polices on the Policy Server, the next step in configuring single logout is leaving the confirmation page unprotected.

Leaving the confirmation page unprotected prevents a security challenge from appearing during the single logout process.

Follow these steps:

1. Pick the appropriate procedure for your type of policy from the following list:
   - If you use policy domains, go to Step 2.
   - If you use application policies (EPM), go to Step 4.
2. Leave the confirmation page unprotected in your policy domain with the following steps:
   a. Click Policies, Domain, Realms.
   b. Click Create Realm
   c. Verify that the domain with your SharePoint web applications is selected and then click Next.
   d. Enter a name and optional description for the new realm.
   e. Click the Lookup Agent/Agent Group button, and then add the agent object that protects your SharePoint web applications.
   f. Click the resource filter field, and then add the following text:

      ```
      affwebservices/spsignoutconfirmurl.jsp
      ```

   g. Click the Unprotected option button.
   h. Click Finish.
3. Repeat Steps 2a through 2h for each policy domain protecting your SharePoint web applications.
4. Leave the confirmation page unprotected in your application policy (EPM) with the following steps:
   a. Click Policies, Application, Applications.
   b. Click the edit icon of the application that protects your SharePoint web applications.
   c. Verify that the General tab is selected, and then click Create Component.
   d. Enter a name for the component.
   e. Click the Lookup Agent/Agent Group button, and then add the agent object that protects your SharePoint web applications.
   f. Click the resource filter field, and then add the following text:

      ```
      affwebservices/spsignoutconfirmurl.jsp
      ```

g. Click the Unprotected option button.

h. Click OK.

i. Click Submit.

5. Repeat Steps 4a through 4i for each application policy (EPM) protecting your SharePoint web applications.

   The confirmation pages are unprotected. Have your SharePoint administrator continue with the next step of enabling single logout by running the SharePoint connection wizard.

Enable Single Logout by Running the SharePoint Connection Wizard

As an agent owner who is responsible for running the server hosting the Agent for SharePoint, run the SharePoint connection wizard to finish enabling single logout.

Follow these steps:

1. Edit the existing connection using the Connection Wizard with the following steps:

   a. Log in to the server that runs your Agent for SharePoint.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/sharepoint_connection_wizard

   c. Do the appropriate step for your operating environment:

      - Windows: Right-click the executable and then select Run as administrator.
      - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
      - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

      The SharePoint Connection wizard starts.

   d. Click Next.

      The Login Details screen appears.

   e. Enter the following login for the Policy Server.

      Policy Server Name

      Specifies the Policy Server name or IP address.

      Username

      Specifies the Policy Server administrator username.

Password

Specifies the Policy Server administrator password.

Agent Name

Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

Shared Secret Key

Specifies the shared secret key that is associated with the Agent.

f. Click Next

The Select Action screen appears.

g. Select Edit a SharePoint Connection option.

h. Click Next.

The SharePoint Connection Properties screen appears.

i. Click through the wizard until you reach the Single Logout Configuration screen.

j. Select the Enabled SignOut check box.

k. Click the CleanUp URL field and then type the cleanup URLs from all of your protected web applications.

Note: Separate multiple URLs with semi-colons.

l. Click the Confirm URL field and type the confirmation pages (URLs) from all of your protected web applications. Use the following examples as a guide:

`http://SharePoint_web_application_one_page_URL/affwebservices/spsignoutconfirmurl.jsp;`
`http://SharePoint_web_application_two_page_URL/affwebservices/spsignoutconfirmurl.jsp`

Note: Separate multiple URLs with semi-colons.

m. Click through the wizard until the Commit Details screen appears.

n. Click Install.

The Save Complete screen appears.

o. Click Done.

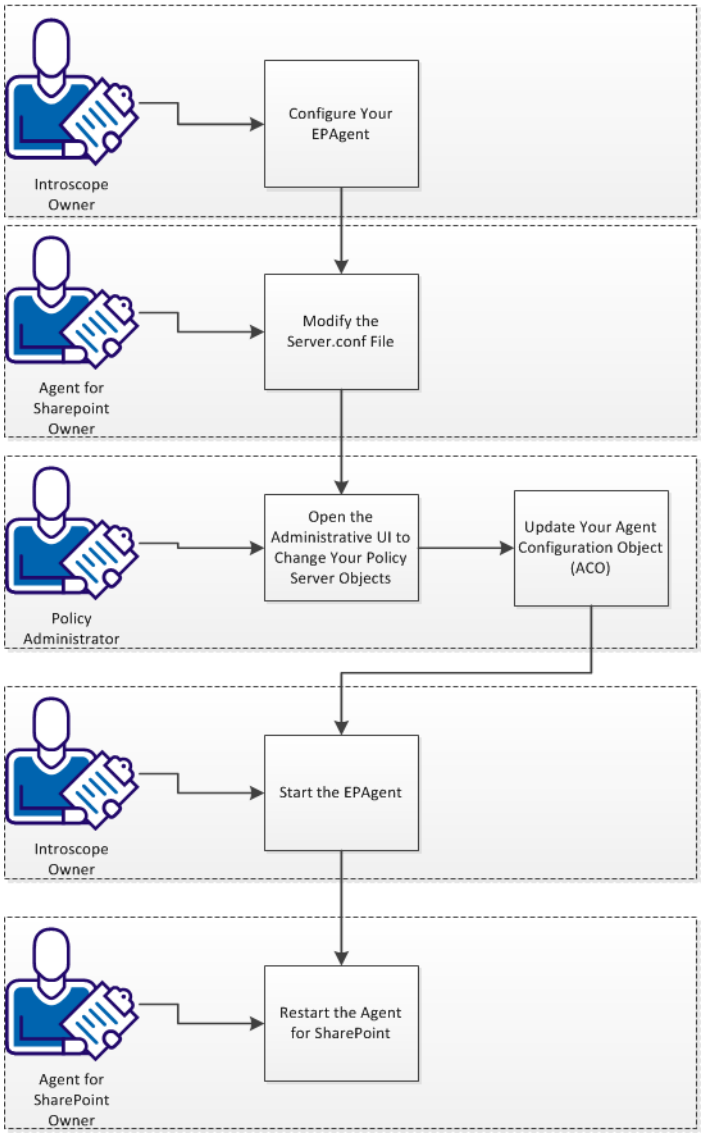
The SharePoint connection wizard closes. Single logout is enabled.

How to Monitor Data with CA Introscope

CA Introscope® can monitor the following statistics of the server that hosts the Agent for SharePoint:

- The average response time for each of the following Agent for SharePoint components:
  - Session Discovery
  - Java Web Agent
  - Post Agent Session Writer
  - Proxy Rules Filter
  - Noodle Servlet
  - HTTP Client
- The average response time for each backend server.
- The wait times for the Agent for SharePoint requests.
- Number of hits for each proxy rule.
- The health data for the Agent for SharePoint framework instances.

How to Monitor Data with CA Introscope®



Follow these steps:

1. Configure your EPAgent (see page 236).
2. Modify the server.conf file (see page 238).
3. Open the Administrative UI to change Policy Server objects (see page 36).
4. Update your Agent Configuration object (ACO) (see page 240).
5. Start the EPAgent using the appropriate procedure for your operating environment:
   - Start your EPAgent on Windows operating environments (see page 241).
   - Start your EPAgent on UNIX operating environments (see page 241).
6. Restart the Agent for SharePoint (see page 171).

Configure Your EPAgent

You can configure the following items on your EPAgent:

- Properties (see page 236)
- Logging options (see page 237)
- Plug-ins (see page 237)
- Network data sources (see page 237)

Configure EPAgent Properties

The properties used by the EPAgent are the same as the properties that are used for the Java agent.

Follow these steps:

1. Configure the EPAgent settings in the *IntroscopeEPAgent.properties* file. The settings for the EPAgent are the same type as found in the [assign the value for wisc in your book] Agent profile.

   Note: For more information about properties, see the *[assign the value for wapm in your book] Java Agent Implementation Guide*.

2. If you change the name or location of the *IntroscopeEPAgent.properties* file, you can set it with the Java system property:

   -Dcom.wily.introscope.epagent.properties=filename

   Note: This system property should immediately follow "java" in the command line. If it is placed later on the command line—for example, after *-jar*—it will not work.

Configure EPAgent Logging Options

By default, the EPAgent sends message and error output to the command console. You can configure the EPAgent to send message and error output to a log file also.

Follow these steps:

1. Open the file <*EPAgent_Home*>/epagent/IntroscopeEPAgent.properties.
2. Modify the properties.

Configuring EPAgent Plug-ins

To run EPAgent using the default plug-ins, you simply need to uncomment certain properties in IntroscopeEPAgent.properties file.

However, you may want to remove plug-ins you don't need from the default plug-ins in the IntroscopeEPAgent.properties file, or add additional plug-ins.

EPAgent plug-ins are separated into two sections in the IntroscopeEPAgent.properties file, stateful and stateless.

Configuring the EPAgent for Network Data Sources

You can configure the EPAgent to accept data from network sources.

- Configure the EPAgent for simple or XML network input.
- Configure the EPAgent for HTTP GET input.

Modify the server.conf File

After the Introscope owner configures the EPAgent, the next step is modifying the server.conf file of the server on which the Agent for SharePoint runs.

Follow these steps:

1. Log in to the server hosting your Agent for SharePoint.
2. Open the following file with a text editor:

   Agent-for-SharePoint_Home/proxy-engine/conf/server.conf

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Locate the following section:

   ```
   <metric-reporter name="WilyMetricReporter">
   ```
4. Change the value on the enabled line (in the previous section) to "yes", as shown in the following example:

   ```
   enabled="yes"
   ```
5. Save the file and close the text editor.

   The server.conf file is modified. Continue with the next steps of having your policy administrator open the Administrative UI and update your Agent Configuration object (ACO).

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   https://*host_name:*8443/iam/siteminder/adminui

   host_name

   Specifies the fully qualified Administrative UI host system name.
2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Update Your Agent Configuration Object (ACO)

The next step in monitoring data with CA Introscope® involves updating a configuration parameter in your Agent Configuration Object (ACO).

Follow these steps:

1. Click Infrastructure, Agent, Agent Configuration Objects.
2. Click the edit icon in the line Agent Configuration Object you want.
3. Locate the following parameter:

   EnableIntroscopeApiSupport

   Collects information about the agent and sends it to CA Introscope® using a plug-in. This parameter uses the following settings:

   - When set to yes, the plug-in calls an API to collect the data.
   - When set to no, the plug-in creates an HTTP header with the data.
   - When set to both, the plug-in calls the API to collect the data *and* creates an HTTP header with the data.
   - When set to none, data not collected.

   Default: No.

   Limits: Yes, Both, No, None.

   Example: (HTTP header) sm-wa-perf-counters = *server_name*.example.com:6180,86117203,86118343,1,0,0,1,0,0,1,0,0,0,0,0,1,0,0,0,0,0,0,0,1125,0,15,1,1,750,750,
4. Click the edit icon next to the previous parameter, and then add the settings that you want.
5. (Optional) To *disable* automatic monitoring of the agent instance metrics that are configured with the Agent for SharePoint, change the value of the following parameter to no:

   EnableMonitoring

   Specifies whether the agent sends monitoring information to the Policy Server.

   Default: Yes.
6. Click OK.
7. Click Submit.

   Your Agent Configuration object is updated. Continue with the next step of having your Introscope administrator start the EPAgent.

Start Your EPAgent on Windows Operating Environments

You can run the EPAgent as either a standalone .jar file, or a Java application.

To run the EPAgent as a standalone .jar file

- Run a Java command-line with the appropriate *-jar* flag, as in the following example:

```
java -jar <EPAgent_Home>/epagent/lib/EPAgent.jar
-Dcom.wily.introscope.epagent.properties="<EPAgent_Home>/epagent/IntroscopeEP
Agent.properties"
```

To run the EPAgent as a Java application

- Add the EPAgent files to the appropriate *classpath* as in the following example:

```
java -classpath "<EPAgent_Home>/epagent/lib/EPAgent.jar"
-Dcom.wily.introscope.epagent.properties="<EPAgent_Home>/epagent/IntroscopeEP
Agent.properties"
```

Start Your EPAgent on UNIX Operating Environments

You can use a control script (shell script) to run the Introscope EPAgent on a UNIX operating system.

Follow these steps:

1. Open a command prompt.
2. Navigate to the directory that has the control script. For example:

   ```
   cd Introscope<version_number>/bin
   ```

3. Run the command that corresponds to the action you want:

   EPACtrl.sh start

   Starts the EPAgent.

   EPACtrl.sh status

   Shows the status of EPAgent process whether it is running or stopped.

   EPACtrl.sh stop

   Stops the EPAgent process

   EPACtrl.sh help

   Displays the help menu.

Restart the Agent for SharePoint

Starting or stopping the Agent for SharePoint involves the following separate procedures:

1. Changing the value of EnableWebAgent in the WebAgent.conf file (see page 80).
2. Changing the state of the related services on the computer running the Agent for SharePoint (see page 81).

Change the Value of the EnableWebAgent Parameter

Change the value of the EnableWebAgent parameter to accomplish either of the following tasks:

- Start the Agent for SharePoint when the related services start.
- Stop the Agent for SharePoint when the related services start.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\proxy-engine\conf\defaultagent\WebAgent.conf
   ```

2. Locate the following line:

   ```
   EnableWebAgent="NO"
   ```

3. Change the value inside the quotation marks to *one* of the following values:
   - YES to start the Agent for SharePoint after the services start. Your resources are protected.
   - NO to stop the Agent for SharePoint after the services start. Your resources are *not* protected.
4. Change the state of the related services on your Agent for SharePoint (see page 81).

Change the States of the Services on your Agent for SharePoint

You can change the states of the related services on your Agent for SharePoint.

Note: To start or stop your Agent for SharePoint, change the value of the EnableWebAgent parameter first (see page 80).

Follow these steps:

1. To change the states of the related services, select *one* of the following procedures:
   - For Windows operating environments, go to Step 2.
   - To *start* the Agent for SharePoint on UNIX operating environments, go to Step 3.
   - To *stop* the Agent for SharePoint on UNIX operating environments, go to Step 4.
2. For Windows operating environments, do the following steps:
   a. From the Windows Start menu navigate to Administrative Tools, Services.

      The Services dialog appears.

   b. Scroll down the list of services and select SiteMinder Agent for SharePoint.

   c. From the Action menu, select All Tasks and select the command that you want.

   d. Repeat Step b for SiteMinder Agent for SharePoint Proxy Engine.

      The states of the services and Agent for SharePoint are changed.
3. To start the Agent for SharePoint on UNIX operating environments, do the following steps.
   a. Log in as a root user.

   b. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   c. Run the following command:

      ```
      ./sps-ctl start
      ```

      The service and the Agent for SharePoint start. The Agent for SharePoint stops or starts according to the value you set in the EnableWebAgent parameter (see page 80).
4. To stop the Agent for SharePoint on a system running UNIX, do the following steps:
   a. Navigate to the following directory:

      Agent-for-SharePoint_home/proxy-engine

   b. Run the following command:

      ```
      ./sps-ctl stop
      ```

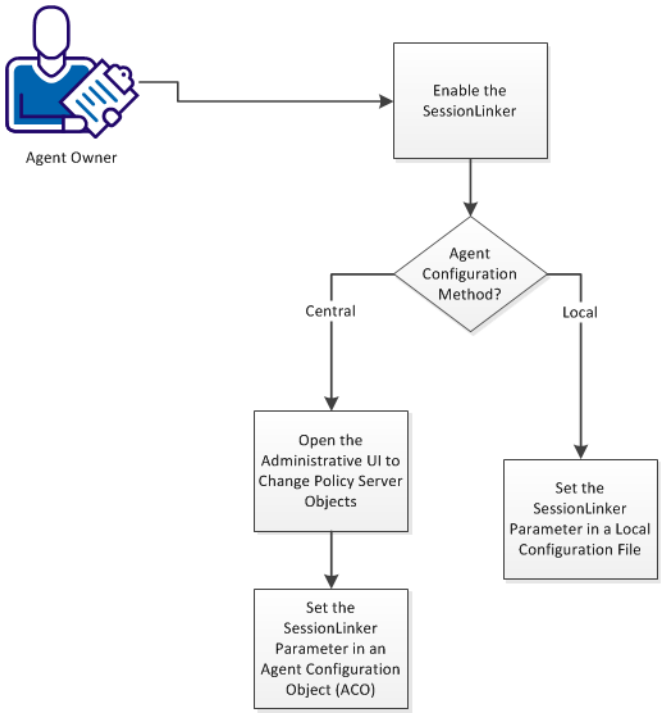
      The service and the Agent for SharePoint stop.

How to Use the Session Linker

The SessionLinker synchronizes a SiteMinder session with a third-party application session (such as SharePoint) for better security. If a user logs out from SiteMinder, the SessionLinker invalidates the related session of the third-party application.

Part of this synchronization process uses cookies from the third-party application. The SessionLinker requires certain information about these third-party cookies to link the sessions.

How to Use the SessionLinker



Follow these steps:

1. Enable the session linker.
2. Pick the procedure that matches your agent configuration method from the following list:
   - For agents using an Agent Configuration object (ACO) on a Policy Server, follow these steps:
     a. Open the Administrative UI (see page 36).
     b. Set the SessionLinker parameter in an Agent Configuration object (see page 246).
   - For agents using a local configuration file on the, set the Session parameter in a local configuration file (see page 248).

Enable the SessionLinker

Because the SessionLinker operates on a server, enable it on the server first.

Follow these steps:

1. Log in to the server that runs your Agent for SharePoint.
2. Open the following file with a text editor:

   `Agent-for-SharePoint_Home\proxy-engine\conf\defaultagent\WebAgent.conf`

   Agent-for-SharePoint_Home

   Indicates the directory where the Agent for SharePoint is installed.

   Default: (Windows) C:\Program Files\CA\Agent-for-SharePoint
   Default: (UNIX/Linux) /opt/CA/Agent-for-SharePoint
3. Locate the following line that applies to your operating environment::

   (Windows)
   `#LoadPlugin="`*`Agent-for-SharePoint_Home`*`\agentframework\bin\SessionLinkerPlugin.dll"`

   (UNIX/Linux)
   `#LoadPlugin="`*`Agent-for-SharePoint_Home`*`\agentframework\bin\LibSessionLinkerPlugin.so`
4. Delete the # character at the beginning of the line.
5. Save the file and close the text editor.

   The SessionLinker is enabled.

Open the Administrative UI to Change Policy Server Objects

Open the Administrative UI to change SiteMinder objects on your Policy Server.

Follow these steps:

1. Open the following URL in a browser.

   `https://host_name:8443/iam/siteminder/adminui`

   host_name

   Specifies the fully qualified Administrative UI host system name.

2. Enter your SiteMinder superuser name in the User Name field.
3. Enter the SiteMinder superuser account password in the Password field.

   Note: If your superuser account password contains one or more dollar-sign ($) characters, replace each instance of the dollar-sign character with $DOLLAR$ in the Password field. For example, if the SiteMinder superuser account password is $password, enter $DOLLAR$password in the Password field.

4. Verify that the proper server name or IP address appears in the Server drop-down list.
5. Click Log In.

Set the SessionLinker Parameter in an Agent Configuration Object

A configuration parameter controls the SessionLinker. Add the SessionLinker parameter to your Agent Configuration object (ACO) if the configuration settings for your agents are centrally managed on a Policy Server.

Follow these steps:

1. From the Administrative UI, click the Infrastructure, Agent Configuration Objects.
2. Click the edit icon in the line Agent Configuration Object you want.
3. Click Add.

   The Create Parameter dialog appears.

4. Type the following text in the Name field:

   `SessionLinker`

5. Click the Value field, and then add the following settings (on one line):

   Important! Use semicolons (;) to separate each SessionLinker setting. For example, Cookie=*cookie_name*;NOBLOT;URL=*url_value*;

   COOKIE=*cookie_name;*

   Specifies the name of the cookie from the third-party (foreign) application. If cookie names change, use an asterisk as a wildcard character. For example, if the cookies from your third party begin with APSESSION, use APPSESSION for the value of this setting.

   Examples: Cookie Names

   - COOKIE=APPSESSION;
   - COOKIE=APP*;
   - COOKIE=APPLICATION*;

   BLOT | NOBLOT;

   (Optional) Specifies how the SessionLinker responds to invalid sessions. If the value of this parameter is set to BLOT, the user is granted access. The third party (foreign) session cookie is *not* passed through the web server to the target page. If the value of this parameter is set to NOBLOT, the user is redirected to URL specified in the URL setting. If the value of this setting is NOBLOT, set the URL parameter.

   Default: BLOT

   Limits: BLOT, NOBLOT

   URL=*url_value*;

   Specifies a URL to where users are redirected when the value of the SessionLinker parameter contains NOBLOT. Users are directed to this URL and no the target page.

   Example: URL=/InvaidSessionWarning.jsp

   ORPHANTIMEOUT=*seconds*

   Specifies the number of seconds that the SessionLinker maintains orphaned sessions.

   Default: 86400 (24 hours)

   Limits: Cannot be *less* than the *maximum number of seconds* that cookies from the third party (foreign) application are accepted.

COOKIESCOPE=*number_of_characters;*

(Optional) Specifies the number of characters in a URL, so that cookies used in more than area of a website can be distinguished. Suppose different applications use the same 15-character URL string as a prefix for naming its cookies. Use a larger value for the cookiescope setting. The larger number distinguishes between specific resources in other locations.

Examples of URLs and corresponding values:

- /scripts/wgate/ (15-character prefix string)
- /scripts/wgate/abc (18-character string)
- /scripts/wgate/xyz (18-character string)

OPTIONS=USE_HOST_LINKS;

Instructs the SessionLinker to link sessions for each virtual host defined in the server.conf file of your Agent for SharePoint.

Default: USE_HOST_LINKS

Example:
Cookie=*cookie_value*;BLOT;Orphantimeout=1440;OPTIONS=USE_HOST_LINKS;

6. Click OK.
7. Click Submit.

   The SessionLinker parameter is added to your Agent Configuration Object.

Set the SessionLinker Parameter in a Local Configuration File

A configuration parameter controls the SessionLinker. Add the SessionLinker parameter to your local configuration file If the configuration settings for your agents are stored on each server.

Follow these steps:

1. Log in to the server that runs your Agent for SharePoint.
2. Open the following file with a text editor:

   Agent-for-SharePoint_Home\proxy-engine\conf\defaultagent\LocalConfig.conf
3. Locate the following line:

   SessionGracePeriod="30"
4. Add line after the previous line.

   Note: The order of the parameters in the LocalConfig.conf file does *not* matter, but having then in alphabetical order makes them easier to find.
5. Type the following text:

   SessionLinker="

6. Add the following settings (on one line):

   Important! Use semicolons (;) to separate each SessionLinker setting. For example, Cookie=*cookie_name*;NOBLOT;URL=*url_value*;

   COOKIE=*cookie_name;*

   Specifies the name of the cookie from the third-party (foreign) application. If cookie names change, use an asterisk as a wildcard character. For example, if the cookies from your third party begin with APSESSION, use APPSESSION for the value of this setting.

   Examples: Cookie Names

   - COOKIE=APPSESSION;
   - COOKIE=APP*;
   - COOKIE=APPLICATION*;

   BLOT | NOBLOT;

   (Optional) Specifies how the SessionLinker responds to invalid sessions. If the value of this parameter is set to BLOT, the user is granted access. The third party (foreign) session cookie is *not* passed through the web server to the target page. If the value of this parameter is set to NOBLOT, the user is redirected to URL specified in the URL setting. If the value of this setting is NOBLOT, set the URL parameter.

   Default: BLOT

   Limits: BLOT, NOBLOT

   URL=*url_value*;

   Specifies a URL to where users are redirected when the value of the SessionLinker parameter contains NOBLOT. Users are directed to this URL and no the target page.

   Example: URL=/InvaidSessionWarning.jsp

   ORPHANTIMEOUT=*seconds*

   Specifies the number of seconds that the SessionLinker maintains orphaned sessions.

   Default: 86400 (24 hours)

   Limits: Cannot be *less* than the *maximum number of seconds* that cookies from the third party (foreign) application are accepted.

COOKIESCOPE=*number_of_characters;*

(Optional) Specifies the number of characters in a URL, so that cookies used in more than area of a website can be distinguished. Suppose different applications use the same 15-character URL string as a prefix for naming its cookies. Use a larger value for the cookiescope setting. The larger number distinguishes between specific resources in other locations.

Examples of URLs and corresponding values:

- /scripts/wgate/ (15-character prefix string)
- /scripts/wgate/abc (18-character string)
- /scripts/wgate/xyz (18-character string)

OPTIONS=USE_HOST_LINKS;

Instructs the SessionLinker to link sessions for each virtual host defined in the server.conf file of your Agent for SharePoint.

Default: USE_HOST_LINKS

Example:
Cookie=*cookie_value*;BLOT;Orphantimeout=1440;OPTIONS=USE_HOST_LINKS;

7. At the end of the line, type a double-quotation mark (").
8. Save the file, and then close the text editor.

   The SessionLinker parameter is added to your local configuration file.
9. Repeat Steps 1 through 8 on all servers running your Agent for SharePoint that use local configuration.

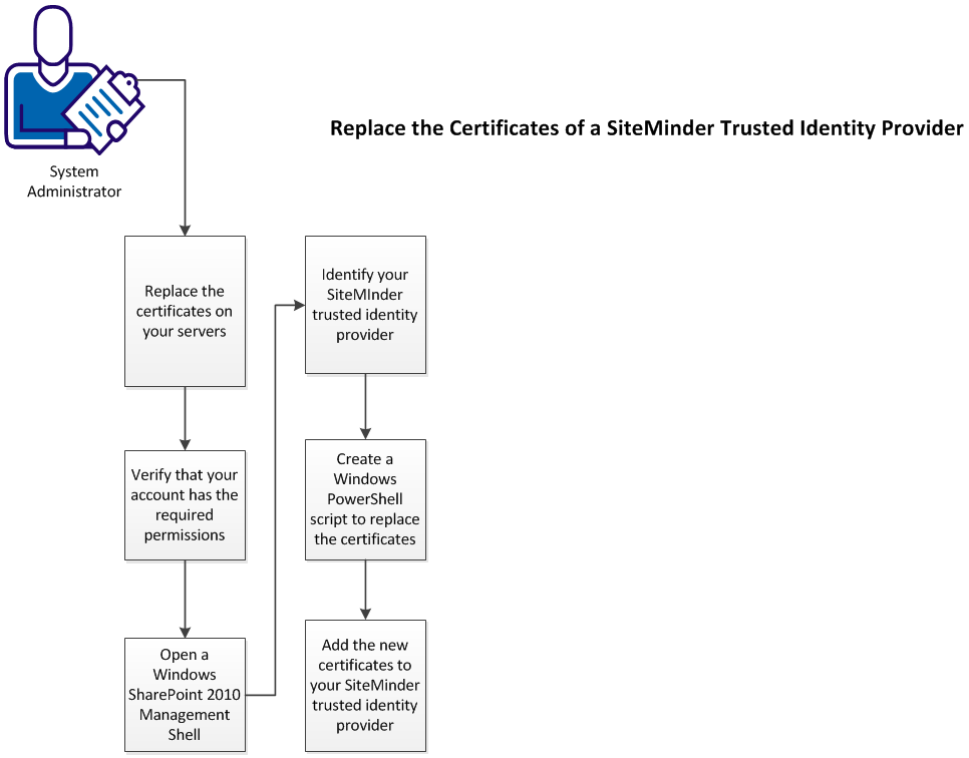
Chapter 11: How to Replace the Certificates for your SiteMinder Trusted Identity Provider

SiteMinder trusted identity providers use the following SSL certificates to encrypt their communications with the SiteMinder Policy Server:

- A certificate authority certificate (CA-certificate or root certificate).
- An x.509 certificate (signing certificate).

When any of the previous certificates expire, you can replace them with valid certificates.

The following illustration describes how to replace the certificates of your SiteMinder trusted identity provider:



To replace the certificates for your SiteMinder trusted identity provider, follow these steps:

1. Replace the certificates on your servers (see page 253).
2. Verify that your account has the required permissions (see page 107).
3. Open a SharePoint 2010 management shell window on your SharePoint central administration server (see page 107).
4. Identify your SiteMinder trusted identity provider (see page 107).
5. Create a Windows PowerShell script to update the certificates (see page 255).
6. Add the new certificates to your SiteMinder trusted identity provider (see page 256).

Replace the Certificates on your Servers

Replace the expired certificates on the following computers:

- The computer hosting your SharePoint central administration server.
- Any computers hosting a web front end (WFE) for your SharePoint environment.

Follow these steps:

1. Perform the following steps on the computer hosting your SharePoint central administration server:
   a. Remove the expired CA-certificate (root certificate) from the computer.
   b. Copy your new CA-certificate (root certificate) to the computer.

      Note: Record this information for future use in your Windows PowerShell script.
   c. Remove the expired signing certificate from the computer.
   d. Copy your new signing certificate to the computer.

      Note: Record this information for future use in your Windows PowerShell script.
2. Perform the following steps on a computer hosting a web front end (WFE) server in your SharePoint environment:
   a. Remove the expired CA-certificate (root certificate) from the computer.
   b. Copy your new CA-certificate (root certificate) to the computer.

      Note: Record this information for future use in your Windows PowerShell script.
   c. Remove the expired signing certificate from the computer.
   d. Copy your new signing certificate to the computer.

      Note: Record this information for future use in your Windows PowerShell script.
3. Repeat Step 2 for all web front end (WFE) servers in your SharePoint environment.

   The certificates on your computers have been replaced.

Verify that your Account has the Required Permissions

The user account with which you want to modify the SiteMinder trusted identity provider requires certain permissions. Modify the permissions of your user account if it does *not* meet the following conditions:

- An Administrator account.
- A member of the Administrators group.

Add the following privileges to your account:

- Local administrator on all SharePoint web front end (WFE) servers.
- Read/Write access to the configuration database.

Open a SharePoint 2010 Management Shell Window on your SharePoint Central Administration Server

Add claims to your <stmdnr> trusted identity provider using the SharePoint 2010 Management shell.

Follow these steps:

1. Log in to your SharePoint Central Administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   A SharePoint 2010 management shell command-line window appears.

Identify your Trusted Identity Provider

A SharePoint 2010 environment can have multiple trusted identity providers. Identify your SiteMinder trusted identity provider before modifying any claims that are associated with it.

Follow these steps:

1. Enter the following command to list all of the trusted identity providers:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers appears.
2. Locate your SiteMinder trusted identity provider in the list.

   Your SiteMinder trusted identity provider is identified.

Create a PowerShell Script to Update the Certificates

Adding the new certificates to your SiteMinder trusted identity provider involves several steps using the SharePoint 2010 Management shell.

We recommend using a PowerShell script that contains all of the commands, such as the one shown in the following example:

```
Remove-SPTrustedRootAuthority CASigningRootCert
Remove-SPTrustedRootAuthority CASigningCert

$rootcert = New-Object
System.Security.Cryptography.X509Certificates.X509Certificate2("full_path_to_updated_certificate_authority_certificate.cer")
$cert = New-Object
System.Security.Cryptography.X509Certificates.X509Certificate2("full_path_to_signing_certificate.cer")
$tip = Get-SPTrustedIdentityTokenIssuer
name_of_siteminder_trusted_identity_provider
$tip.SigningCertificate = $cert
$tip.Update()
New-SPTrustedRootAuthority -Name "CASigningRootCert" -Certificate $cert
New-SPTrustedRootAuthority -Name "CASigningCert" -Certificate $cert
```

Follow these steps:

1. Copy the example script shown previous and save it on your SharePoint central administration server as a .ps1 file.
2. Open the .ps1 file with a text editor.
3. Edit the .ps1 file to suit your environment with the following steps:
   a. Locate the following text:

      full_path_to_updated_certificate_authority_certificate

   b. Replace the previous text with the full path to your new certificate authority (root) certificate.

      Example: C:\exampleserver\certificates\rootcertificate.cer

   c. Locate the following text:

      full_path_to_signing_certificate

   d. Replace the previous text with the full path to your new signing certificate.

      Example:
      C:\exampleserver\certificates\signingcertificates\sharepointsigningcertificate.cer

   e. Locate the following text:

      name_of_siteminder_trusted_identity_provider

   f. Replace the previous text with the name of your SiteMinder trusted identity provider.

      Example: SiteMinder_TIP
4. Save the .ps1 file and close the text editor.

   The Windows PowerShell script is created.

Add the New Certificates to your SiteMinder Trusted Identity Provider

Add the new certificates to your SiteMinder trusted identity provider by running the PowerShell script on your SharePoint Central administration server.

Follow these steps:

1. Change the directory of your SharePoint 2010 Management shell window to the directory that contains your .ps1 file.
2. Execute your .ps1 file with the following command.

   \.*name_of_your_.ps1_file*.ps1

   The new certificates are added to the trusted identity provider.

Virtual Hosts with the Agent for SharePoint

The following sections describe using virtual hosts with your Agent for SharePoint.

Virtual Host Configurations Supported by the Agent for SharePoint

The SiteMinder Agent for SharePoint supports virtual hosts. Virtual hosts conserve hardware resources by operating different websites on a single server.

The Agent for SharePoint supports virtual hosts that use the following configuration methods:

Port-based virtual hosts

Indicates a virtual host on your Agent for SharePoint server that operates on a unique port number.

Host-header-based virtual hosts

Indicates a virtual host on your Agent for SharePoint server that uses unique host header values.

Path-based virtual hosts

Indicates a virtual host on your Agent for SharePoint server using unique URI values.

More information:

Set a Basic Proxy Rule for the Agent for SharePoint (see page 69)

Define Virtual Hosts for each Web Application

Virtual hosts are required for each SharePoint web application you want to protect. Define a virtual host for each SharePoint web application on the Agent for SharePoint server. A single virtual host definition on the Agent for SharePoint server accommodates the following types of proxy rules:

- Port-based forwarding
- Host-header-based forwarding
- Path-based forwarding

Follow these steps:

1. Use a text editor to open the following file:

   Agent-for-SharePoint_home\proxy-engine\conf\server.conf

2. Locate the following line:

   hostnames="*default_SharePoint_URL*"

3. Change the value of previous line to include a default URL to which you want to forward any requests that are *not* for your web applications. Any requests that are not for your web applications are forwarded to this default URL. For example, a generic SharePoint page can appear to users who do not request a specific resource.

4. Copy the following section:

```
<VirtualHost name="default">
    #addresses="192.168.1.100"
    hostnames="default_SharePoint_URL"
    defaultsessionscheme="default"

    # specify the block size for request and response in KBs

    requestblocksize="4"

    responseblocksize="4"

    #The defaults can be overriden
    #not only for the Virtual Host
    #but for the WebAgent for that
    #virtual host as well
    #<WebAgent>
    #</WebAgent>
</VirtualHost>
```

5. Add a new line below the </VirtualHost> tag.

6. Copy the section from Step 4 and paste it into the new line you created in Step 5.

7. Do the following steps:

   a. Replace the word default in the <VirtualHost name= tag with a unique name you want.

b. Replace the URL in the <hostnames= tag with the URL of your web application.

8. Save your changes to the file.
9. Repeat Steps 5 through 8 until virtual hosts are defined for all your web applications.

How to Configure Port-based Virtual Hosts

Configuring port-based virtual hosts on your Agent for SharePoint is a process that involves several separate procedures. Some procedures involve different components in your environment. To configure port-based virtual hosts on your Agent for SharePoint server, use the following process:

1. Define a virtual host for each web application (see page 258).
2. Have your network administrator update your DNS server with the virtual host settings (see page 259).
3. Create proxy rules for your port-based virtual hosts (see page 260).
4. On your SharePoint central administration server, do the following (see page 261):
   a. Change the public URL of the web application to the virtual host defined in the Agent for SharePoint.
   b. Change the internal URL of the web application to the actual URL of your SharePoint resource.

Update the DNS Tables with your Port-based Virtual Hosts

The virtual host names defined on your Agent for SharePoint require an association with the IP address of the Agent for SharePoint in the DNS servers of your organization. Have your network administrator update the DNS tables in your organization accordingly.

Create Proxy Rules for your Port-based Virtual Hosts

Port-based virtual hosts require different settings than the default proxy rule file used by the Agent for SharePoint. After defining virtual hosts for your web applications, create proxy rules for your port-based virtual hosts.

Follow these steps:

1. To preserve your current proxy rules, rename your existing proxyrules.xml file in the following directory:

   Agent-for-SharePoint_home\proxy-engine\conf

2. Open the following file with a text editor:

   Agent-for-SharePoint_home\proxy-engine\examples\proxyrules\proxyrules_example1.xml

3. Save a copy of the previous file using the following path and file name:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

4. Locate the following line:

   ```
   <nete:proxyrules xmlns:nete="http://www.company.com/">
   ```

5. Replace the http://www.company.com/ with the name of your virtual host, as shown in the following example:

   ```
   <nete:proxyrules xmlns:nete="http://www.example.com/">
   ```

6. Locate the following line:

   ```
   <nete:case value="banking.company.com:80">
   ```

7. Replace the banking.company:com:80 with the domain name, suffix and port number for your SharePoint web application, as shown in the following example:

   ```
   sharepoint.example.com:8606
   ```

8. Add your other web applications to the proxy rules file by repeating Steps 5 through 7 in the following section:

   ```
   <!-- replace bondtrading.company.com with a virtual host defined in the
   server.conf file -->
         <nete:case value="bondtrading.company.com:80">
         <!-- replace http://server2.company.com with the appropriate destination
   server -->
            <nete:forward>http://server2.company.com$1</nete:forward>
   </nete:case>
   ```

9. Duplicate the previous section and modify it until all your port-based web applications have proxy rules.

10. Locate the following line:

    ```
    <nete:forward>http://home.company.com$1</nete:forward>
    ```

11. Replace the http://home.company.com in the previous line with the URL of a default site you want to use for requests *not* matching your web applications.
12. Save the file and close the text editor.
13. Restart the Agent for SharePoint (see page 79).

Add Public and Internal URLs on your SharePoint Server for your Port-Based Hosts

Port-based proxy rules require the following alternate access mappings on your SharePoint central administration server:

- Set the public URL for the zone to the URL of your virtual host associated with the web application.
- Set the internal URL to the server to which the requests from the virtual host are forwarded.

The following table describes an example of the alternate access mappings for port-based proxy rules:

Internal URL	Zone	Public URL for Zone
http://www.sharepoint.example.com:8606	Default	http://sharepoint.example.com

Follow these steps:

1. Open your SharePoint central administration site.
2. Click Application Management.
3. Under Web Applications, click Configure Alternate Access Mappings.
4. Use the examples in the previous table as a guide to edit your public URLs and Add Internal URLs (see page 92).

How to Configure Host-Header-Based Virtual Hosts

Configuring host-header-based virtual hosts on your Agent for SharePoint is a process that involves several separate procedures. Some procedures involve different components in your environment. To configure host-header-based virtual hosts on your Agent for SharePoint server, use the following process:

1. Define a virtual host for each web application (see page 258).
2. Have your network administrator update your DNS server with the virtual host settings (see page 262).
3. Create proxy rules for your host-header-based virtual hosts (see page 263).
4. On your SharePoint central administration server, do the following (see page 264):
   a. Change the public URL of the web application to the virtual host defined in the Agent for SharePoint.
   b. Change the internal URL of the web application to the actual URL of your SharePoint resource.

Update the DNS Tables with your Host-Header-Based Virtual Hosts

The virtual host names defined on your Agent for SharePoint require an association with the IP address of the Agent for SharePoint in the DNS servers of your organization. Have your network administrator update the DNS tables in your organization accordingly.

Create Proxy Rules for your Host-Header-Based Virtual Hosts

Host-header-based virtual hosts require different settings than the default proxy rule file used by the Agent for SharePoint. After defining your virtual hosts for your web applications, create proxy rules for your host-header-based virtual hosts.

Follow these steps:

1. To preserve your current proxy rules, rename your existing proxyrules.xml file in the following directory:

   Agent-for-SharePoint_home\proxy-engine\conf

2. Open the following file with a text editor:

   Agent-for-SharePoint_home\proxy-engine\examples\proxyrules\proxyrules_example2.xml

3. Save a copy of the previous file using the following path and file name:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

4. Locate the following line:

   ```
   <nete:proxyrules xmlns:nete="http://www.company.com/">
   ```

5. Replace http://www.company.com/ in the previous line with the name of your virtual host, as shown in the following example:

   ```
   <nete:proxyrules xmlns:nete="http://www.example.com/">
   ```

6. Locate the following line:

   ```
   <nete:cond type="header" criteria="equals" headername="HEADER">
   ```

7. Replace HEADER in the previous line with the following:

   ```
   HOST
   ```

8. Locate the following line:

   ```
   <nete:case value="value1">
   ```

9. Replace value1 in the previous line with the value of a host header you want, as shown in the following example:

   ```
   <nete:case value="sharepoint.example.com">
   ```

10. Locate the following line:

    ```
    <nete:forward>http://server1.company.com</nete:forward>
    ```

11. Replace the http://server1.company.com with the URL of the server to which you want to forward requests that use the header value from Step 8. Use the following example as a guide:

    ```
    <nete:forward>http://sharepointserver1.example.com</nete:forward>
    ```

12. Add additional header values and destination servers by repeating Steps 8 through 11 on the following respective lines in the file:

```
<nete:case value="value2">

<nete:forward>http://server2.company.com</nete:forward>
```

13. Locate the following line:

```
<nete:forward>http://home.company.com$1</nete:forward>
```

14. Replace the http://home.company.com in the previous line with the URL of a default site you want to use for requests *not* matching your web applications.
15. Save the file and close the text editor.
16. Restart the Agent for SharePoint (see page 79).

Add Public and Internal URLs on your SharePoint server for your Host-Header-Based Hosts

Host-header-based proxy rules require the following alternate access mappings on your SharePoint central administration server:

- Set the public URL for the zone to the URL of your virtual host associated with the web application.
- Set the internal URL to the server to which the requests from the virtual host are forwarded.

The following table describes an example of the alternate access mappings for host-header-based proxy rules:

Internal URL	Zone	Public URL for Zone
http://www.sharepointserver1.example.com	Default	http://sharepoint.example.com

Follow these steps:

1. Open your SharePoint central administration site.
2. Click Application Management.
3. Under Web Applications, click Configure Alternate Access Mappings.
4. Use the examples in the previous table as a guide to edit your public URLs and Add Internal URLs (see page 92).

How to Configure Path-based Virtual Hosts

If your web applications share the same ports and use host-header values to separate traffic, you can configure path-based virtual hosts.

Configuring path-based virtual hosts on your Agent for SharePoint is a process that involves several separate procedures. Some procedures involve different components in your environment. To configure path-based virtual hosts on your Agent for SharePoint server, use the following process:

1. Define a virtual host for each web application (see page 258).
2. Have your network administrator update your DNS server with the virtual host settings (see page 265).
3. Create proxy rules for your path-based virtual hosts (see page 266).
4. On your SharePoint central administration server, do the following (see page 267):
    a. Change the public URL of the web application to the virtual host defined in the Agent for SharePoint.
    b. Change the internal URL of the web application to the actual URL of your SharePoint resource.

Update the DNS Tables with your Path-based Virtual Hosts

The virtual host names defined on your Agent for SharePoint require an association with the IP address of the Agent for SharePoint in the DNS servers of your organization. Have your network administrator update the DNS tables in your organization accordingly.

Create Proxy Rules for your Path-based Virtual Hosts

Path-based virtual hosts require different settings than the default proxy rule file used by the Agent for SharePoint. After defining your virtual hosts for your web applications, create proxy rules for your path-based virtual hosts.

Follow these steps:

1. To preserve your current proxy rules, rename your existing proxyrules.xml file in the following directory:

   Agent-for-SharePoint_home\proxy-engine\conf

2. Open the following file with a text editor:

   Agent-for-SharePoint_home\proxy-engine\examples\proxyrules\proxyrules_example2.xml

3. Save a copy of the previous file using the following path and file name:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

4. Locate the following line:

   ```
   <nete:proxyrules xmlns:nete="http://www.netegrity.com/">
   ```

5. Replace http://www.netegrity.com/ in the previous line with the name of your virtual host, as shown in the following example:

   ```
   <nete:proxyrules xmlns:nete="http://www.example.com/">
   ```

6. Locate the following line:

   ```
   <nete:case value="/dir1">
   ```

7. Replace the /dir1 in the previous line with the path (URI) for which you want the request redirected. For example, if the path is /sales, all URLs containing /sales are redirected to the resource you specify.

8. Locate the following line:

   ```
   <nete:forward>http://server1.company.com$2</nete:forward>
   ```

9. Replace the http://server1.company.com with the URL of the server to which you want to forward requests that use the path (URI) value from Step 8. Use the following example as a guide:

   ```
   <nete:forward>http://sharepointserver1.example.com</nete:forward>
   ```

10. Add additional header values and destination servers by repeating Steps 6 through 9 on the following respective lines in the file:

    ```
    <nete:case value="/dir2">
    ```

    ```
    <nete:forward>http://server2.company.com$2</nete:forward>
    ```

11. Locate the following line:

    ```
    <nete:forward>http://home.company.com$1</nete:forward>
    ```

12. Replace the http://home.company.com in the previous line with the URL of a default site you want to use for requests *not* matching your web applications.
13. Save the file and close the text editor.
14. Restart the Agent for SharePoint (see page 79).

Add Public and Internal URLs on your SharePoint server for Path-Based Virtual Hosts

Path-based proxy rules require the following alternate access mappings on your SharePoint central administration server:

- Set the public URL for the zone to the URL of your virtual host associated with the web application.
- Set the internal URL to the server to which the requests from the virtual host are forwarded.

The following table describes an example of the alternate access mappings for path-based proxy rules:

Internal URL	Zone	Public URL for Zone
http://www.sharepointserver1.example.com	Default	http://sharepoint.example.com

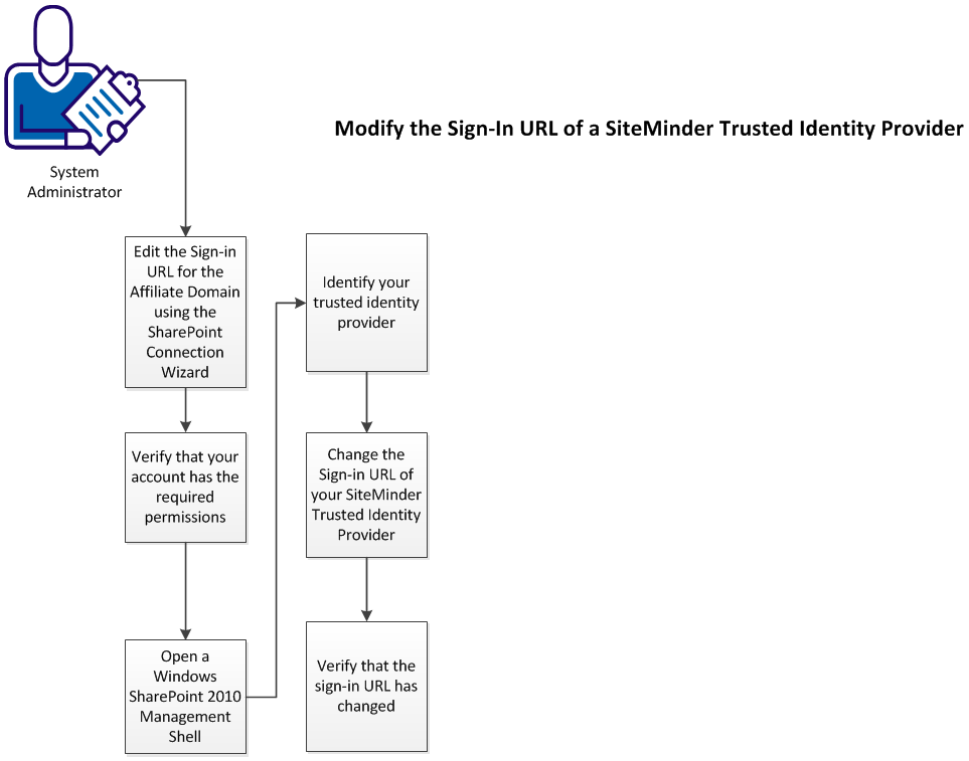
Follow these steps:

1. Open your SharePoint central administration site.
2. Click Application Management.
3. Under Web Applications, click Configure Alternate Access Mappings.
4. Use the examples in the previous table as a guide to edit your public URLs and Add Internal URLs (see page 92).

Chapter 12: How to Modify the Sign-In URL of your SiteMinder Trusted Identity Provider

This scenario describes changing the sign-in URL of your SiteMinder trusted identity provider of an existing SiteMinder environment. For example, update the URL if you change the protocol of your sign-in URL from HTTP to HTTPS.

The following illustration describes the process of modifying the sign-in URL of your SiteMinder trusted identity provider:



To modify the sign-in URL of your SiteMinder identity provider, follow these steps:

1. Edit the sign-in URL for the affiliate domain using the SharePoint connection wizard (see page 270).
2. Verify that your account has the required permissions (see page 107).
3. Open a SharePoint 2010 Management Shell window on your SharePoint Central Administration server (see page 107).
4. Identify your SiteMinder trusted identity provider (see page 107).
5. Change the sign-in URL of your SiteMinder trusted identity provider (see page 273).
6. Verify that the sign-in URL has changed (see page 274).

Edit the Sign-In URL for the Affilliate Domain using the Sharepoint Connection Wizard

You can update the affiliate domain with a new sign-in URL for your SiteMinder trusted identity provider. This update requires running the SharePoint connection wizard on the computer hosting your SiteMinder Agent for SharePoint.

This procedure adds the new sign-in URL of your SiteMinder trusted identity provider on your SiteMinder Policy Server.

Follow these steps:

1. Navigate to the following directory:

   `Agent-for-SharePoint_home/sharepoint_connection_wizard`

2. Do *one* of the following procedures:

   - For Windows operating environments, right-click the executable and then select Run as administrator.
   - For Solaris operating environments, enter the following command:

     `Solaris: sh ./ca-spconnect-`*`version`*`-sol.bin`

   - For Linux operating environments, enter the following command:

     `Linux: sh ./ca-spconnect-`*`version`*`-rhel30.bin`

   The wizard starts.

3. Click Next.

   The Login Details screen appears.

4. Complete the following fields with the information from your existing SiteMinder settings:

   Policy Server Name

   Specifies the Policy Server name or IP address.

   Username

   Specifies the Policy Server administrator username.

   Password

   Specifies the Policy Server administrator password.

   Agent Name

   Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

   Shared Secret Key

   Specifies the shared secret key that is associated with the Agent.

5. Click Next

   The Select Action screen appears.

6. Select Edit a SharePoint Connection option.

7. Click Next.

   The SharePoint Connection Properties screen appears.

8. Click Next until the SharePoint Connection Properties screen appears.

9. Locate the following field:

   Authentication URL

   Specifies the *port number that is associated* with the predefined protected URL which the SharePoint connection wizard adds automatically. When users try accessing a protected SharePoint resource without a SiteMinder session, they are redirected to the Authentication URL.

   If you are using a default port number (such as 80 for HTTP or 443 for HTTPS), delete the <port> setting from this field.

   Note: We recommend using HTTPS on production environments and pages which handle user credentials, such as login pages.

10. Change the protocol (such as HTTP or HTTPS) or the port number.

11. Click Next.

    The attribute details are saved and the Commit Details screen appears.

12. Click Install in the Commit Details screen.

    The Save Complete screen appears.

13. Click Done.

    The partnership details are saved, the SharePoint Connection is modified, and the wizard closes.

Verify that your Account has the Required Permissions

The user account with which you want to modify the SiteMinder trusted identity provider requires certain permissions. Modify the permissions of your user account if it does *not* meet the following conditions:

- An Administrator account.
- A member of the Administrators group.

Add the following privileges to your account:

- Local administrator on all SharePoint web front end (WFE) servers.
- Read/Write access to the configuration database.

Open a SharePoint 2010 Management Shell Window on your SharePoint Central Administration Server

Add claims to your <stmdnr> trusted identity provider using the SharePoint 2010 Management shell.

Follow these steps:

1. Log in to your SharePoint Central Administration server.
2. Click Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   A SharePoint 2010 management shell command-line window appears.

Identify your Trusted Identity Provider

A SharePoint 2010 environment can have multiple trusted identity providers. Identify your SiteMinder trusted identity provider before modifying any claims that are associated with it.

Follow these steps:

1. Enter the following command to list all of the trusted identity providers:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers appears.

2. Locate your SiteMinder trusted identity provider in the list.

   Your SiteMinder trusted identity provider is identified.

Change the Sign-in URL of your SiteMinder Trusted Identity Provider

Use the SharePoint 2010 Management Console to Changing the sign-in URL of your SiteMinder trusted identity provider.

Follow these steps:

1. Enter the following command to change the sign-in URL of your SiteMinder trusted identity provider:

   ```
   Set-SPTrustedIdentityTokenIssuer
   "name_of_your_siteminder_trusted_identity_provider" -SignInUrl new_sign-in_URL
   ```

   Example: Changing Sign-in URL

   This example shows how to change a sign-in URL for a trusted identity provider named SMTIP.

   ```
   Set-SPTrustedIdentityTokenIssuer "SMTIP" -SignInUrl
   https://sharepoint.example.com
   ```

   The sign-in URL is changed.

Verify that the Sign-in URL has Changed

You can verify the new sign-in URL for your SiteMinder trusted identity provider.

Follow these steps:

1. Enter the following command to verify the presence the new sign-in URL:

   ```
   Get-SPTrustedIdentityTokenIssuer
   ```

   A list of trusted identity providers and their respective settings appears.
2. Verify that the sign-in URL for your SiteMinder trusted identity provider is correct.

Configure the Agent for SharePoint for Web Applications That Use NTLM Authentication

If the web server uses a connection-oriented authentication scheme, configure a connection-oriented connection pool for secure forward request processing.

Important! We highly recommend that you do not configure a connection-oriented connection pool.

Follow these steps:

1. Verify that the value for the JK environment variable REMOTE_PORT is set in the httpd.conf file.
2. Open server.conf and add the following lines in <Service name="forward"> section:

```
# Pool configuraiton for connection oriented authentication backend
    # connections eg: NTLM.
    <connection-pool name="connection oriented authentication">
    connection-timeout="connection_timeout_value"
    max-size="maximum_connections"
    enabled="yes|no"
</connection-pool>
```

connection_timeout_value

Defines the time in seconds the connection times out. We recommend that you set a lower value.

Default: 5

maximum_connections

Defines the number of connections in the connection pool.

Default: 50

yes|no

Specifies the status of the connection-oriented connection pools. Set the value to yes to enable the connection-oriented connection pools.

Default: yes

3. Open proxyrules.xml and add the connection-auth attribute to the forward rule.

```
Example: <nete:forward connection-auth="yes">hostname:port$1</nete:forward>
```

Chapter 13: CA DLP Content Classification Service and the Agent for SharePoint

Set the Proxy Rules for the Agent for SharePoint when using CA DLP Content Classification Service with Multiple Authentication

The Agent for SharePoint operates as a proxy-based solution. To protect your SharePoint resources, edit the default proxy rules file so that the Agent for SharePoint forwards requests to one of the following destinations:

- A hardware load balancer that redirects incoming requests to multiple web front ends associated with multiple SharePoint servers in a SharePoint server farm.
- A single web front end that is associated with multiple SharePoint servers in a SharePoint server farm.

If you are using the Agent for SharePoint, the CA DLP content classification service, and multiple authentication, specific proxy rules are required to ensure proper classification and protection of your SharePoint resources.

Multiple authentication allows authorized users to access resources using different credentials. For example, employees within an organization can access resources using Integrated Windows authentication (IWA), while customers and partner organizations use login names and passwords stored in a separate directory server. Both groups use different credentials to authenticate for the same resources.

Important! Do not use any other proxy rule settings with the Agent for SharePoint, the CA DLP content classification service, and multi–authentication. Resources that the CA DLP content classification service classifies use an HTTP request header for proper forwarding by the Agent for SharePoint. If the Agent for SharePoint does not properly forward these requests using the rules as they are shown here, unauthorized access and disclosure of your protected information is possible.

Follow these steps:

1. Locate the following file on your Agent for SharePoint:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

2. Rename the previous file using a name similar to the following example:

   proxyrules_xml_default.txt

3. Open the following file on your Agent for SharePoint with a text editor:

   Agent-for-SharePoint_home\proxy-engine\examples\proxyrules\proxyrules_example2.xml

4. Save the previous file as a new file in the following location:

   Agent-for-SharePoint_home\proxy-engine\conf\proxyrules.xml

5. Locate the following text in the updated proxyrules.xml file:

   :///$$PROXY_RULES_DTD$$"

6. Replace the previous text with the following text:

   ```
   :///C:\Program
   Files\CA\Agent-for-SharePoint\proxy-engine\conf\dtd\proxyrules.dtd"
   ```

7. Locate the following text:

   ```
   http://www.company.com
   ```

8. Change the previous text to the domain of your organization. Use the following example as a guide:

   ```
   http:www.example.com
   ```

9. Locate the following line:

   ```
   <nete:cond type="header" criteria="equals" headername="HEADER">
   ```

10. Edit the previous line to match the following line:

    ```
    <nete:cond type="header" headername="SMSERVICETOKEN">
    ```

11. Locate the following line:

    ```
    <nete:case value="value1">
    ```

12. Edit the previous line to match the following line:

    ```
    <nete:case value="DLP">
    ```

13. Add a line after the previous line.

14. Copy and paste the following xml syntax onto the new line:

    ```
    <nete:xprcond>

    <nete:xpr>

    <nete:rule>^/_login/default.aspx\?ReturnUrl=(.*)</nete:rule>
    <nete:result>http://sharepoint.example.com:port_number/_trust/default.aspx?tr
    ust=name_of_siteminder_trusted_identity_provider&amp;ReturnUrl=$1</nete:resul
    t>
    </nete:xpr>

    <nete:xpr-default>

    <nete:forward>http://sharepoint.example:port_number$0</nete:forward>

    </nete:xpr-default>

    </nete:xprcond>
    ```

15. Replace both instances of the **sharepoint.example:***port_number* in the previous section with *one* of the following values:

    - The host name, domain and port number of your hardware load balancer. This hardware load balancer operates between your Agent for SharePoint server and the SharePoint servers.
    - host name, domain and port number of your single web front end. In this context, this web front end (WFE) refers a web server that operates in front of your "back end" SharePoint servers.

16. Replace the instance of *name_of_siteminder_trusted_identity_provider* in the previous section with the name of your SiteMinder trusted identity provider.
17. Locate the following line in the file:

    ```
    <nete:forward>http://home.company.com</nete:forward>
    ```

18. Replace the **home.company.com** in the previous line with *one* of the following values:

    - The host name, domain and port number of your hardware load balancer. This hardware load balancer operates between your Agent for SharePoint server and the SharePoint servers.
    - host name, domain and port number of your single web front end. In this context, this web front end (WFE) refers a web server that operates in front of your "back end" SharePoint servers.

19. Save the file and close your text editor.

    The proxy rules are set.

More information:

Virtual Host Configurations Supported by the Agent for SharePoint (see page 257)

Chapter 14: Troubleshooting

This section contains the following topics:

Attributes Appear Truncated in SharePoint

Symptom:

I have noticed the following problems occurring:

- My directory attributes appear truncated in SharePoint.
- I see the following message in my log files:

  `[WARNING: Response attribute will be trimmed. [attr = FMATTR:memberOf] [actual attr len = number] [ response attr len = number]]`

Solution:

Do the following tasks:

1. Open the following file on your Policy Server:

   policy_server_home`\config\properties\EntitlementGenerator.properties`

2. Locate the following line:

   `com.netegrity.assertiongenerator.wsfed.MaxUserAttributeLength=1024`

3. Change the value 1024 (at the end of the line) to a larger number. We recommend using multiples of 1024.

Log Files Show Access Denied Due to BadURLChars Settings

Symptom:

The log files of my Agent for SharePoint show users were denied access to resources because of the settings in the BadURLChars parameter.

Solution:

Follow these steps:

1. Examine the request to determine which character from the URL appears in the list of values for the following parameter:

   BadUrlChars

   Specifies the character sequences that cannot be used in URL requests. The Agent for SharePoint examines the characters in the URL that occur before the "?" character against those characters specified by this parameter. If any of the specified characters are found, the Agent for SharePoint rejects the request.

   You can specify the following characters:

   - a backward slash (\)
   - two forward slashes (//)
   - period and a forward slash (./)
   - forward slash and a period (/.)
   - forward slash and an asterisk (/*)
   - an asterisk and a period (*.)
   - a tilde (~)
   - %2D
   - %20
   - %00-%1f
   - %25 (do *not* add this value to the list if the URLs of your protected SharePoint resources contain blank spaces [%20])

   Separate multiple characters with commas. Do *not* use spaces.

   You can use the bad URL characters in CGI parameters if the question mark (?) precedes the bad URL characters.

   Default: (Agent for SharePoint) //,./,/.,/*,*.,~,\,%00-%1f

   Limits:

   - You can specify characters literally. You can also enter the URL-encoded form of that character. For example, you can enter the letter a, or you can enter the encoded equivalent of %61.

- You can specify a maximum number of 4096 characters (including commas that are used for separating characters).
- You can specify ranges of characters that are separated with hyphens. The syntax is: *starting_character-ending_character*. For example, you can enter a-z as a range of characters.
- Specify quotes (") with the URL-encoded equivalent of %22. Do *not* use ASCII.

2. Remove the character in your URL from the list of values in the previous parameter.

Log Files Show Access Denied Because of SPAuthorizeUserAgent Settings

Symptom:

The trace log files of my Agent for SharePoint show users were denied access to resources because of the settings in the SPAuthorizeUserAgent parameter.

Solution:

Follow these steps:

1. Examine the request shown in the trace log file to determine which User Agent string value was denied access. The following example shows typical trace log file results for this parameter:

```
spauthorizeuseragent=Microsoft Office Protocol Discovery
spauthorizeuseragent=Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.1; WOW64;
Trident/4.0; SLCC2; .NET CLR 2.0.50727; FDM; .NET CLR 3.5.30729; .NET CLR
3.0.30729; .NET4.0C; .NET4.0E)
spauthorizeuseragent=Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64;
Trident/4.0; SLCC2; .NET CLR 2.0.50727; FDM; .NET CLR 3.5.30729; .NET CLR
3.0.30729; .NET4.0C; .NET4.0E)
spauthorizeuseragent=Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US;
rv:1.9.2.13) Gecko/20101203 Firefox/3.6.13
spauthorizeuseragent=Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.1; WOW64;
Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729;
InfoPath.2; MS-RTC LM8; .NET4.0C)
spauthorizeuseragent=Microsoft Office/12.0
spauthorizeuseragent=Microsoft Office/12.0 (Windows NT 6.1; Microsoft Office
Word 12.0.6545; Pro)
spauthorizeuseragent=Microsoft Office Existence Discovery
spauthorizeuseragent=Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.1; WOW64;
Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729;
InfoPath.2; MS-RTC LM8; .NET4.0C; MSOffice 12)
spauthorizeuseragent=MSFrontPage/12.0
spauthorizeuseragent=Mozilla/4.0 (compatible; MS FrontPage 12.0)
spauthorizeuseragent=Microsoft-WebDAV-MiniRedir/6.1.7600
```

2. Add the user agent string from your trace log to the list of values in the following parameter:

   SPAuthorizeUserAgent

   Specifies a list of Microsoft Office user-agent strings for which the Agent for SharePoint allows access. This list is populated automatically with the default values when the Agent for SharePoint starts. The user-agent strings in this parameter act as a whitelist. Changes to this parameter override the default settings. Access is denied to clients whose user-agent string does not appear in the list.

For example, setting the value to Microsoft Office allows access to all versions of Microsoft Office products that are associated with that user-agent string. Conversely, setting the value to Microsoft Office/12.0 allows access to only those versions of Microsoft Office products that are associated with that user-agent string.

Default: Microsoft Office, MS FrontPage, MSFrontPage, Microsoft Data Access Internet Publishing Provider Protocol Discovery, Test for Web Form Existence, Microsoft-WebDAV-MiniRedir

Limits: Multiple values are allowed.

Enable Search of Custom Object Classes in Your LDAP Directory

Symptom:

My LDAP directory contains custom object classes, but SiteMinder does not find them during searches.

Solution:

Follow these steps:

Note: For UNIX and Linux environments, navigate to the /registry directory, and then locate the previous setting in the sm.registry file.

1. Open the following registry location on each Policy Server:

   `HKLM\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\Ds\GroupClassFilters`

2. Locate the following key:

   `LDAP:`

3. Change the value of the data to the following:

   `*`

4. Navigate to the following key:

   `HKLM\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\`

   `Ds\ClassFilters`

5. Locate the following key:

   `LDAP:`

6. Change the value of the data to the following:

   `*`

REST API in Excel Services Does Not Work Due to CSSChecking ACO Parameter

Symptom:

REST API in Excel Services does not work when a SharePoint web application using Claims-based Authentication is protected with SiteMinder.

Solution:

The REST API in Excel Services does not work because the CSSChecking ACO parameter is enabled by default. CSSChecking verifies URLs for escaped and unescaped characters defined in the BadCSSChars parameter and returns with an Access Denied message.

Disable the CSSChecking ACO parameter. This change allows the REST API in Excel Services to work when a SharePoint web application using Claims-based Authentication is protected with SiteMinder.

Follow these steps:

1. Log on to the SiteMinder Administrative UI.

   The relevant tabs for your administrator privileges appear.

2. Click Infrastructure, Agents, Agent Configuration, Modify Agent Configuration.

   The Modify Agent Configuration: Search screen opens.

3. Select the Agent Configuration object from the list and click Select.

   The Modify Agent Configuration: ACO_Name dialog appears.

4. Click the Edit button on the CssChecking Parameter.

   The Edit Parameter dialog appears.

5. Enter No in the Value field and click OK.

   The Modify Agent Configuration: ACO_Name dialog appears with the General and Parameters group boxes.

6. Click Submit.

   The Modify Agent Configuration Object task is submitted for processing and the confirmation message appears.

Cannot Log Off Users from Sites and Subsites without Referring LogOffURI ACO (CQ 135854)

Symptom:

I cannot log off from a SharePoint site or a subsite.

Solution:

You cannot log off from a SharePoint site or a subsite because the actual logoff URL is different. Verify the signoff URL for each of the sites and subsites and add them to the LogOffURI ACO parameter.

For example, assume http://example.ca.com/ is the main site and http://example.ca.com/hr and http://example.ca.com/finance are subsites. The logoff URI is different for each of the sites and the subsites. Configure all of the sign-out pages as logoff URIs in the LogOffURI ACO parameter.

Enable Paging for Searches of Active Directory User Stores (32-bit systems)

Valid for Policy Servers that are installed on Windows 32-bit operating environments that are connected to Active Directory servers.

Symptom:

I cannot use the SharePoint people picker to search my Active Directory user store.

Solution:

The Active Directory namespace does not support paging, causing searches of more than 1000 users to fail. To support searches of large numbers of users in the Active Directory namespace, set the EnablePagingADNameSpace registry key to one.

To enable paging for searches on your Windows Policy Server:

1. Open the Windows registry editor.
2. Locate the following registry key:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace`
3. Set the value of the key to 1.

To enable paging for searches on your UNIX Policy Server:

1. Navigate to *policy_server_installation_directory*/siteminder/registry
2. Open sm.registry in a text editor.
3. Locate the following text in the file:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace`
4. Set the value of the key to 1.

Enable Paging for Searches of Active Directory User Stores (64-bit systems)

Valid for Policy Servers that are installed on Windows 64-bit operating environments (using WoW64 mode) that are connected to Active Directory servers.

Symptom:

I cannot use the SharePoint people picker to search my Active Directory user store.

Solution:

The Active Directory namespace does not support paging, causing searches of more than 1000 users to fail. To support searches of large numbers of users in the Active Directory namespace, set the EnablePagingADNameSpace registry key to one.

To enable paging for searches on your Windows Policy Server:

1. Open the Windows registry editor.
2. Locate the following registry key:

   ```
   HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Netegrity\SiteMinder\CurrentVersion\Ds\LDAPProvider\EnablePagingADNameSpace
   ```

3. Set the value of the key to 1.

Users Cannot Access Office Applications in Internet Explorer 7 when Office Client Integration Is Enabled

Valid for Windows Vista

Symptom:

I cannot access Office applications in Internet Explorer 7 when Office Client Integration is enabled.

Solution:

This error is the result of a known Microsoft issue. Persistent cookies are not shared between Internet Explorer 7 and Office applications in Windows Vista. Internet Explorer 7 has an isolated cache location where files saved by web pages and persistent cookies are saved.

To access Office applications, add the SharePoint site to the list of trusted sites. This change enables the Web to save persistent cookies and temporary files to the regular cache. In this location, persistent cookies and temporary files are available to Office applications.

The following procedure shows how to add the SharePoint site (http://spagent.example:port) to the list of trusted sites in Internet Explorer 7.

Follow these steps:

1. Open Internet Explorer 7 browser.
2. Click Internet Options in the Tools menu.

   The Tools menu opens.
3. Click on the Security tab.

   The Security tab opens.
4. Click on Trusted Sites.

   The Trusted Sites icon is selected and the description appears.
5. Click on the Sites button.
6. Type the SharePoint site http://spagent.example:port into the text box and click the Add button.
7. (Optional) Clear the Require server verification (https://) option.

   Note: Clear the Require server verification (https://) option to add sites to the zone that do not use the https:// protocol. This setting protects your information while it is being transferred to the server that the site is hosted on.
8. Click the Close button.

   The Trusted Sites dialog opens.

9. Click OK.

   The Internet Options dialog opens.

Note: For more information about this issue, see the KB article 932118 on Microsoft Support site.

I Can Only View Read Only Copies of Documents on SharePoint Sites, but the Office Client Integration Is Enabled

Symptom:

My SharePoint servers have the Office Client Integration feature enabled, but I cannot open any of the documents for editing. I can only open read-only files.

Sometimes I also see the following error message:

```
An error (1502) occurred during the action Open File. File not found.
```

Solution:

Verify that the host names in the following Agent for SharePoint configuration parameter do *not* contain port numbers:

SPClientIntegration

Specifies the hostnames of the SharePoint servers that the Agent for SharePoint protects on which you want to permit Office Client Integration. The default parameter is blank and listed as plain. If there are multiple host entries, use the multivalue option button to add multiple hosts.

Add a port number to the value if the Agent for SharePoint operates on a nondefault port (any port except 80 or 443).

To use this parameter, verify that the SharePoint resources that SiteMinder protects also have their Office Client Integration enabled on the SharePoint central administration server.

Because Office Client Integration requires a persistent FedAuth cookie, verify that your SharePoint server is *not* configured to use session cookies. By default, UseSessionCookies in SharePoint is set to NO.

Default: None

Limits: Multiple values are allowed. Use fully qualified domain names for all values.

Example: *agent_for_sharepoint_host_name.*example.com (default ports of 80 or 443)

Example: *agent_for_sharepoint_host_name.*example.com:81 (with a nondefault port number for HTTP)

Example: *agent_for_sharepoint_host_name.*example.com:4343 (with a nondefault port number for HTTPS)

SharePoint FedAuth Cookies and Office Client Integration Behavior

Symptom:

SharePoint stores a persistent FedAuth cookie on the hard drives of authenticated users. I do not want the SharePoint server to use these persistent cookies.

Solution:

You can configure SharePoint so a persistent FedAuth cookie is not stored. However, disabling the persistent FedAuth cookie also disables the single-sign on function of Office Client Integration. Users who try to open files on the SharePoint server are challenged for their credentials.

Note: For more information about how to disable FedAuth cookies in SharePoint 2010, go to the technet blogs website, and then search for the following phrase:

"Setting the Login Token Expiration Correctly for SharePoint 2010 SAML Claims Users"

Registration Failed with Unknown Error 127

Valid on Linux operating environments

Symptom:

I received the following error:

```
Registration Failed: Unknown Error 127
```

Solution:

Verify that your Linux operating environment meets the proper prerequisites.

More information:

Agent for SharePoint Prerequisites for Linux Operating Environments (see page 30)

Chapter 15: Agent for SharePoint Log Files

This section contains the following topics:

Agent for SharePoint Logging

The Agent for SharePoint log files record information about the status of the agent and other events. You can turn on various logs and tracing components to debug and troubleshoot events.

A log is a record of events that occur during program execution. A log consists of a series of log messages, each one describing some event that occurred during program execution. Log messages are written to log files.

A trace file provides detailed information about program operation for tracing and debugging purposes. Trace messages are ordinarily turned off during normal operation. Trace messages are embedded in the source code and cannot easily be localized. Moreover, trace messages can include significant data in addition to the message itself; for example, the name of the current user or realm.

The agent contains the following log files:

- server.log (see page 296)
- webagent.log (see page 297)
- trace.log (see page 297)
- Httpclient.log (see page 297)
- federation.log (see page 299)
- federationtrace.log (see page 300)
- claimswebservice.log (see page 301)
- claimswebservicetrace.log (see page 302)
- SPConnectionWizard.log (see page 303)

Important! We recommend you to enable logging only for debugging. In a production environment, enabling logging can cause performance degradation.

Server Logging

The Server.log file defines the startup and shutdown of the Agent for SharePoint. The <Server> element in the server.conf allows you to specify the logging settings for the Agent for SharePoint. The Web Agent error logging and trace logging configuration is done in the Web Agent configuration file (webagent.conf or localconfig.conf) or the Agent Configuration Object configured at the Policy Server.

Logging is enabled by default in the server.conf file and the log level is set to 2.

The logging section has the following format:

```
# Logging for the server
# 1 - FATAL
# 2 - ERROR
# 3 - INFO
# 4 - DEBUG
loglevel="2"
logconsole="yes"
logfile="yes"
logappend="no"
# Note: If logfilename is specified as a relative file, it
# will be relative to proxy-engine/
logfilename="logs/server.log"
```

loglevel

Sets the log level of the Agent for SharePoint server log. The higher the log level, the greater the detail of information that is recorded in the Agent for SharePoint log.

The log levels are as follows:

1

Indicates the least amount of detail in the log. Only fatal errors are recorded at log level 1.

2

Reports any error messages. Any errors that occur during processing are recorded at log level 2.

3

Indicates that warnings and other informational messages are recorded in the log.

4

Indicates debugging, the highest level of detail in the log.

logconsole

Specifies that the log file is written to the console window.

logfile

Specifies that the log information is written to a file. Set the parameter to yes to write the file to the location specified in the logfilename parameter. Set it to no if you do not want to write the log to a file.

logappend

Indicates that the log information is appended to a log file when the Agent for SharePoint starts. Set this parameter to yes to append data to an existing log file when the Agent for SharePoint restarts. Set this parameter to no if you do not want to append data.

logfilename

Defines the path and filename of the Agent for SharePoint log file. The default location is logs/server.log.

SiteMinder Web Agent Logging

The webagent.log file is a standard (WebAgent) HTTPluggin.dll HLA log file. Webagent.log logs events which monitor the communication between the Agent for SharePoint and the Policy Server. The name and location for this file is defined in the Agent Configuration Object. The logging parameters for this file are configured in the Logfile setting in the Agent Configuration Object.

SiteMinder Trace Logging

The trace.log file is a standard (WebAgent) HTTPPluggin.dll LowLevel trace file. The name and location for this file is defined in the Agent Configuration Object. The logging parameters for this file are configured in the SharePointAgentTrace.conf file. This file is found in the directory *Agent-for-SharePoint_home*/proxy-engine/conf/defaultagent.

HttpClient Logging

You can enable HttpLogging by setting the httpclientlog parameter to "yes". This parameter in located in the <Server> section of the server.conf file. By default, this parameter is set to "no".

We recommend that you enable HttpClient logging only for debugging. In a production environment, enabling logging can cause performance degradation.

Configure HttpClient Logging

You can configure various aspects of HttpClient logging by setting values to parameters in the httpclientlogging.properties file. This file is located in the *Agent-for-SharePoint_home*\Tomcat\properties directory.

Important! Because of potential performance degradation, do not enable HttpClient logging in a production environment.

The httpclientlogging.properties file has the following configurable parameters:

java.util.logging.FileHandler.formatter

Description: Specifies the name of the formatter class

Limits:

java.util.logging.SimpleFormatter — writes brief summaries of log records

java.util.logging.XMLFormatter — writes detailed descriptions in XML format

Default: java.util.logging.SimpleFormatter

java.util.logging.FileHandler.pattern

Description: Specifies the name of the HttpClient log file.

Limits:

Agent-for-SharePoint_home\proxy-engine\logs\httpclient%g.log

%g represents the generation number of the rotated log file.

java.util.logging.FileHandler.count

Description: Specifies the number of output files in a cycle

Default: 10

java.util.logging.FileHandler.limit

Description: Specifies an approximate maximum number of bytes to write to any on log file.

Limits: If set to zero, there is no limit.

Default: 5,000,000

In addition, you can specify the content of the logs with the following parameters:

Note: The value is always FINEST.

org.apache.commons.httpclient.level=FINEST

Specifies context logging only

httpclient.wire.header.level=FINEST

org.apache.commons.httpclient.level=FINEST

Specifies header wire and context logging

httpclient.wire.level=FINEST

org.apache.commons.httpclient.level=FINEST

Specifies full wire (header and content) and context logging

Federation Logging

The federation.log file in the Agent for SharePoint records error messages. The logger.properties file controls the configuration for this log.

The federation logging is disabled by default. You can enable federation logging by performing the following procedure in the LoggerConfig.properties file.

Note: Restart the Agent for SharePoint if you change the LoggerConfig.properties file.

Follow these steps:

1. Open the LoggerConfig.properties file. This file can be found in the directory *Agent-for-SharePoint*_home/Tomcat/webapps/affwebservices/WEB-INF/classes.
2. Set the LoggingOn parameter to Y.
3. Accept the default name and location for the LogFileName setting, which points to the federation.log file.
4. Restart your Agent for SharePoint.

   Error logging in the federation.log is now enabled.

More Information:

How to Start and Stop the Agent for SharePoint (see page 79)

Federation Trace Logging

The federationtrace.log file provides trace for each federation transaction that happens at the FSS layer in the Agent for SharePoint. The federationtrace log file is located in A*gent-for-SharePoint*_home/proxy-engine/logs. The LoggerConfig.properties file controls the configuration for this log.

The federation trace logging is disabled by default. You can enable federationtrace logging by performing the following procedure in the LoggerConfig.properties file.

Note: Restart the Agent for SharePoint if you change the LoggerConfig.properties file.

Follow these steps:

1. Open the LoggerConfig.properties file. This file can be found in the directory *Agent-for-SharePoint*_home/Tomcat/webapps/affwebservices/WEB-INF/classes.
2. Set the TracingOn setting to Y.
3. Accept the default name and location for the TraceFileName setting, which points to the federationtrace.log file.

   Note: Verify that the federationtrace.log file location points to the following directory
   Agent-for-SharePoint_home\\proxy-engine\\conf\\defaultagent\\FederationTrace.conf

   Federation trace logging is now enabled.

More information:

How to Start and Stop the Agent for SharePoint (see page 79)

Configure Federation Trace Logging

To collect federation transaction trace messages for the Agent for SharePoint, configure the federation trace logging.

Follow these steps:

1. Open the federationtrace.conf file. This file can be found in the directory *Agent-for-SharePoint_home*/proxy-engine/conf/defaultagent/federationtrace.conf.
2. Do one of the following:
   - Make a copy of the default template, federationtrace.conf and modify the file to include only the data you want to monitor.
   - Copy one of the preconfigured templates and assign a new name to it.

   Note: Do not edit the template directly.

3. Open the LoggerConfig.properties file in the directory *Agent-for-SharePoint_home*/Tomcat/webapps/affwebservices/WEB-INF/classes, and set the following parameters:
   - Set TracingOn to Yes. This option instructs the trace facility to write messages to a file.
   - Set the TraceFileName parameter to the full path of the trace log file. The default location is in *Agent-for-SharePoint_home*/proxy-engine/logs/federationtrace.log.
   - Set the TraceConfigFile parameter to the full path of the trace configuration file, either the default template, federationtrace.conf or another template. The default location is in *Agent-for-SharePoint_home*/proxy-engine/conf/defaultagent/federationtrace.conf.
4. Optionally, you can format the trace log file, the file that contains the log output. The following parameters are the Web Agent configuration parameters that dictate the format of the trace log file:
   - TraceRollover
   - TraceSize
   - TraceCount
   - TraceFormat
   - TraceDelim

   The LoggerConfig.properties file contains descriptions of all these settings.

   Note: Restart the Agent for SharePoint if you change the LoggerConfig.properties file.

Claims Web Service Logging

The claimswebservice.log records events that take place in the WS layer in the Agent for SharePoint. This file can be found in the directory *Agent-for-SharePoint_home*/proxy-engine/logs. The logging configuration is done in the LoggerConfig.properties file.

The claims web service logging is disabled by default. You can enable claims web service logging by performing the following procedure in the LoggerConfig.properties file.

Note: Restart the Agent for SharePoint if you change the LoggerConfig.properties file.

Follow these steps:

1. Open the LoggerConfig.properties file. This file can be found in the directory *Agent-for-SharePoint_home*/Tomcat/webapps/ClaimsWS/WEB-INF/classes.

2. Set the LoggingOn setting to Y.

   Accept the default name and location for the LogFileName setting, which points to the claimswebservice.log file.

   Claims web service logging is now enabled.

More information:

How to Start and Stop the Agent for SharePoint (see page 79)

Claims Web Service Trace Logging

The claimswebservicetrace.log provides trace for each user lookup that happens at the WS layer in the Agent for SharePoint. This file can be found in the directory *Agent-for-SharePoint_home*/proxy-engine/logs. The logging configuration is done in the FederationTrace.conf file. The FederationTrace.conf file can be found in the directory *Agent-for-SharePoint_home*/proxy-engine/conf/defaultagent.

Claims Web Service Trace logging is disabled by default. You can enable Claims Web Service logging by performing the following procedure in the LoggerConfig.properties file.

Note: Restart the Agent for SharePoint if you change the LoggerConfig.properties file.

Follow these steps:

1. Open the LoggerConfig.properties file. This file can be found in the directory *Agent-for-SharePoint_home*/Tomcat/webapps/ClaimsWS/WEB-INF/classes.
2. Set the TracingOn setting to Y.

   Accept the default name and location for the LogFileName setting, which points to the claimswebservicetrace.log file.

   Claims web service trace logging is now enabled.

More information:

How to Start and Stop the Agent for SharePoint (see page 79)

SharePoint Connection Wizard Logging

The SPConnectionWizard.log generates a log file which records events related to creating, editing, or deleting a SharePoint Connection. The log file reports data that the user has entered for creating or editing a connection, and if the connection was successfully or not. If the connection fails, then it lists the reason for failure.

When a connection has been successfully created or edited, the connection wizard generates a script file. Use this script file to create a trusted identity provider.

The SPConnectionWizard.log file is enabled by default. This file can be found in the directory *Agent-for-SharePoint*_home/sharepoint_connection_wizard/logs.

Note: For more information about creating a trusted identity provider, see the procedure on creating a trusted identity provider.

Configure SSL Logging for the Agent for SharePoint

You can configure SSL logging for the web server which hosts the Agent for SharePoint.

Follow these steps:

1. Open the following file with a text editor:

   ```
   Agent-for-SharePoint_home\httpd\conf\extra\httpd-ssl.conf
   ```

2. Locate the following line in the file:

   ```
   CustomLog logs/ssl_request_log \
       "%t %h %{SSL_PROTOCOL}x %{SSL_CIPHER}x \"%r\" %b"
   ```

3. Verify that all of the previous lines are not commented (They do *not* start with a # character).
4. Save the file and close the text editor.
5. Restart the Agent for SharePoint.

   SSL logging for the Agent for SharePoint is configured.

More information:

How to Start and Stop the Agent for SharePoint (see page 79)

SharePoint 2010 Logs

The Unified Logging Service (ULS Logs) is the primary logging or debugging service in SharePoint 2010. ULS Logs write SharePoint events to the SharePoint Trace Log, and stores them in the file system.

The ULS Logs for SharePoint are by default created under C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\LOGS. ULS logs are also sometimes referred to as Trace Logs.

You can configure logging parameters by modifying the required settings from Monitoring, Reporting, Configure diagnostic logging in Central Administration UI.

Note: For more information about logging in SharePoint, refer *Debugging and Logging Capabilities in SharePoint 2010* article from the Microsoft TechNet website.

Appendix A: SessionLinker Reference

This section contains the following topics:

How the SessionLinker Works

The SessionLinker synchronizes a SiteMinder session with a third-party application session for better security. If a user logs out of SiteMinder, the SessionLinker invalidates the related session of the third-party application.

When a user authenticates, SiteMinder assigns a unique session identifier to that user session. The session identifier, called the SiteMinder Session ID, remains constant for that user for the life of the user session. If the user logs out of SiteMinder through the Logout URL, SiteMinder deletes the SMSESSION cookie that SiteMinder uses to track the SiteMinder Session ID.

The SessionLinker module takes application session cookies and associates them, one by one, with a SiteMinder session. Once associated, the application cookie (referred to here as the foreign cookie) can only be used in conjunction with that particular SiteMinder session. The SessionLinker prevents attempts by other SiteMinder sessions to use the same foreign session.

To understand the SessionLinker operation, associate the SiteMinder session and corresponding foreign cookies that SiteMinder tracks together in a table, as shown in the following example:

SiteMinder Session ID	Foreign Cookie
ONE	ABCD
TWO	LMNO
THREE	PQRST
FOUR	VWXY

The SessionLinker uses the following process:

1. The SessionLinker receives a request from a web server.
2. The SessionLinker extracts the SiteMinder Session ID from the HTTP headers and the Foreign Cookie from all the incoming HTTP cookies.
3. The SessionLinker compares the values that are presented from the web server against the contents of the table to determine whether the request must be allowed, as shown in the following examples:
   a. If the Session ID is FIVE and the Foreign Cookie is RSTU, SessionLinker inserts these values into the table.
   b. If the Session ID is SIX and the Foreign Cookie is ABCD, SessionLinker blocks the request because the Foreign Cookie ABCD is already associated with Session ONE.
   c. If the Session ID is ONE and the Foreign Cookie is HIJK, the old session is orphaned and SessionLinker updates the table to associate Session ID ONE with HIJK. When a session is orphaned, the Foreign Cookie can no longer be presented by anyone. This feature allows the SessionLinker to support applications that update the cookie during the user session.

The entire process is repeated for each Foreign Cookie. The resulting table may appear as follows:

SiteMinder Session ID	Foreign Cookie
Orphaned	ABCD
ONE	HIJK
TWO	LMNO
THREE	PQRST
FOUR	VWXY
FIVE	RSTU

What the SessionLinker Does Not Support

The SessionLinker does *not* do any of the following tasks:

- Track cookies issued to the user throughout the SiteMinder environment. Doing so would require a persistent data store that could be read from and written to by every web server employing SessionLinker. The massive number of reads and writes necessary to support this tracking would require substantial processing power and bandwidth, and is thus unmanageable.

- Destroy the cookies of an existing user when the user logs out of SiteMinder. Because the cookies are not being tracked centrally, no mechanism knows which cookies to destroy. In addition, because of the way different web browsers handle cookies, the logout page cannot always determine which cookies the user has received. Finally, SessionLinker does not actually integrate with the SiteMinder logout process.
- Terminate the session of an underlying application. To support this function, the SessionLinker would need to know how to terminate sessions in each of the applications – many of which do not have an exposed API to manage sessions. Because applications can be configured to terminate sessions after some amount of idle time, and there is little the overhead in leaving a session active, this function has not been implemented.

SessionLinker accomplishes the linking by preventing the user from presenting an invalid Foreign Session cookie.

Appendix B: Working with Cookies

This section contains the following topics:

Single Session Cookie Enforcement

In most cases, an application has a specific name that is always used for an associated session cookie. In other cases, the name of the cookie begins with a known string, such as ASPSESSIONID or MYAPPSESSION, and ends with a random or unpredictable suffix. In such cases, the SessionLinker prevents users from presenting more than one of these cookies and enforces the expected session linking.

If the SessionLinker detects multiple potential session cookies, it performs the following steps:

1. Blocks access to sessions
2. Destroys all the cookies
3. Redirects the user to a URL that you specify. If you do not specify a URL, the internal server error is displayed.

Enable Wildcard Cookie Names

You can add the following parameters of the ACO configured on the Policy Server to the configuration settings already selected:

COOKIE

Specifies that a cookies beginning with the specified name must be considered as a potential foreign session cookie. The cookie value may end in an asterisk (*). If you specify a cookie value other than a wildcard syntax, you must specify COOKIEPATH and COOKIEDOMAIN values that determine how to destroy the incoming cookies.

COOKIEPATH

Specifies the cookie path. If you specified a wildcard syntax for the COOKIE parameter, do not specify this parameter. The COOKIEPATH value depends on the session cookie, and has the following format:

`COOKIEPATH=<Path for outbound cookies or cookies>`

Default Value: /

Example: COOKIEPATH=/

COOKIEDOMAIN

Specifies the cookie domain. If you specified a wildcard syntax for the COOKIE parameter, you can specify this value in the following format:

`COOKIEDOMAIN=<domain name for outbound cookie or cookies>`

Default Value: Blank

Example: COOKIEDOMAIN=.ca.com

Maintain Links to Multiple Cookies

Some web applications use more than one cookie simultaneously within the same area of the site. You can configure the SessionLinker to maintain links from a single SiteMinder session to a number of cookies. A maximum of ten foreign session cookies can be linked to a single SiteMinder session.

Follow these steps:

1. Determine the correct configuration string for each cookie.

   Note: Each configuration string requires at least a COOKIE directive, but any of the directives can be combined.

2. Assign an integer from 0 through 9 to each cookie.

3. Append the selected number to the directive name.

   Note: You can use any number for each set of directives but the settings for a single cookie require the same number.

4. Concatenate the separate configuration strings into a single string.

Troubleshooting

If an error occurs, consider the following possibilities to troubleshoot the error:

- Verify that the valid SMSESSION cookie and FOREIGN SESSION cookie are set at the user and are passed to the SPS.
- If you enabled the SessionLinker using the webagent.conf file, verify that the web agent is enabled.
- Verify that the SessionLinker ACO syntax is correct.
- If agent tracing is enabled in the SessionLinker ACO, verify the logs and trace messages in the agent logs and trace.
- Verify that the SPS loaded the SessionLinker plug-in binary properly. Check the agents.log file for log messages. If there are any errors, check if any dependent libraries exist for the SessionLinker plug-in library on the SPS.
- If a request is rejected, verify that the session identifiers on SiteMinder Policy Server (SMSESSION) and application web server (FOREIGN SESSION) are linked are the same user.

Chapter 16: Remove SiteMinder Agent for SharePoint

This section contains the following topics:

How to Remove the SiteMinder Agent for SharePoint

To remove the SiteMinder Agent for SharePoint, complete the following procedures:

1. Remove the Claims Provider from SharePoint (see page 313).
2. Run the SharePoint Connection wizard to delete your SharePoint Connection (see page 314).
3. Perform the following steps on your SharePoint central administration server:
   a. Remove the trusted identity provider from any web applications using it (see page 316).
   b. Remove the Trusted Identity Provider from SharePoint (see page 317).
4. Remove the Agent for SharePoint.
5. (Optional) Remove Policy Server Objects from the Policy Store (see page 318).

Remove Claims Provider

You can remove the Claims Provider from the computer hosting SharePoint Central Administrative by completing the following procedure.

Follow these steps:

1. Select Start, Control Panel, Programs, Uninstall a program.

   The Uninstall or change a program page appears.
2. Select CA SiteMinder Claims Provider for SharePoint.
3. Click Uninstall.
4. Read the confirmation information and click Uninstall.
5. Click Done.

The Claims Provider is removed from your system.

Delete a SharePoint Connection

Follow these steps:

1. Perform the following:
   - (Windows)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Right-click the executable and select Run as administrator.

      The SharePoint Connection wizard starts.
   - (Unix)
   a. Navigate to the following directory:
   Agent-for-SharePoint_home/sharepoint_connection_wizard
   b. Enter one of the following commands:
      - Solaris: sh ./ca-spconnect-12.0-sp3-sol.bin
      - Linux: sh ./ca-spconnect-12.0-sp3-rhel30.bin

      The SharePoint Connection wizard starts.
2. Click Next.

   The Login Details screen appears.
3. Enter the following login details to connect to the Policy Server.

   Policy Server Name

   Specifies the Policy Server name or IP address.

   Username

   Specifies the Policy Server administrator username.

   Password

   Specifies the Policy Server administrator password.

   Agent Name

   Specifies the Agent-4x. The connection with the Policy Server is established using the details given in the Agent Name.

   Shared Secret Key

   Specifies the shared secret key associated with the Agent.
4. Click Next

   The Select Action screen appears.
5. Select Delete a SharePoint connection option.
6. Click Next.

The Delete from list screen appears.

7. Select the items from the list and click Delete.
8. Click Next.

   The Commit details screen appears.
9. Click Install.

   The Save complete screen appears.
10. Click Done.

    The partnership details are saved, the SharePoint Connection is deleted, and the wizard closes.

More information:

SharePoint Connection Wizard Information Worksheet (see page 322)

Remove the Trusted Identity Provider from any Web Applications Using it

A trusted identity provider cannot be removed from SharePoint while any web applications are using it. Before you remove the trusted identity provider itself, remove the association between the SiteMinder trusted identity provider and any of your web agents using it.

Follow these steps:

1. Log in to your SharePoint central administration server.
2. Click Start, Microsoft SharePoint 2010 Products, SharePoint 2010 Central Administration.

   The Central Administration home page opens.
3. Under Application Management, click Manage web applications.

   The web application management page opens.
4. Click the line corresponding to the name of a web application using the SiteMinder trusted identity provider.

   The web application is selected.
5. On the ribbon, click Authentication Providers.

   The Authentication Providers dialog appears.
6. In the Authentication Providers dialog, click the link that corresponds to the zone of your web application. For example, if the web application using the SiteMinder trusted identity provider is in the Intranet zone, click the Intranet link.

   The Edit Authentication page appears.
7. Under Claims Authentication types, clear all Trusted Identity provider check boxes.
8. Click Save.

   The SiteMinder trusted identity provider is removed from the web application in the zone.
9. Repeat Steps 3 through 8 for all web applications and the zones using the SiteMinder trusted identity provider.

   The trusted identity provider is removed from all web applications and their respective zones.

More information:

Alternate Connection Wizard Method to Help Resolve Firewall Issues (see page 75)

Remove Trusted Identity Provider

You can perform the following procedure to remove the trusted identity provider for SharePoint using Windows PowerShell.

Follow these steps:

1. Select Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Management Shell.

   The Microsoft PowerShell command prompt appears.

2. Enter following command:

   `Remove-SPTrustedIdentityTokenIssuer -Identity`

   -Identity

   Specifies the name of the identity provider to remove.

   Example: Remove-SPTrustedIdentityTokenIssuer TestSTS

   The trusted identity provider for SharePoint is removed.

Note: If you re-create a Trusted Identity Provider, verify that a hash precedes the 'New-SPTrustedRootAuthority' line in the powershell script. As the certificates (signing, root CA, and intermediate CA) are not removed, modify the powershell script by adding hash to avoid certificate errors.

Remove the Agent for SharePoint from Windows

You can remove the Agent for SharePoint from your Windows system by performing the following procedure.

Follow these steps:

1. Select Start, Control Panel.
2. Select Programs, Uninstall a program.
3. Select SiteMinder Agent for SharePoint *version*.
4. Click Uninstall/Change.

5. Read the confirmation information and click Uninstall.
6. Click Finish.

   The uninstall confirmation screen appears.
7. Select one of the following options:
   - Yes, restart my system
   - No, I will restart my system myself
8. Click Done.

Note: If you have modified any of the Agent for SharePoint files such as server.conf, the uninstall program does not remove these files or their parent folders.

Remove the Agent for SharePoint from UNIX

Use the following procedure to uninstall Agent for SharePoint from a UNIX system.

Follow these steps:

1. Open a console window.
2. Navigate to the root installation directory.
3. Run the following program at the command prompt:

   ./ca-spagent-uninstall.sh

Note: If you have modified any Agent for SharePoint files, such as server.conf, the uninstall program does not remove these files or their parent folders automatically. Remove any files and folders for files you have changed.

(Optional) Delete Policy Store Objects

If you do not intend to use the Policy Store objects after removing the agent, delete the objects using the SiteMinder Administrative UI.

Note: Your administrative privileges determine the objects you can access.

Follow these steps:

1. Click *<tab>*, *<Policy Server category>*.

   Example: Click Infrastructure, Authentication.

2. Click <*Policy Server object*>, Delete <*Policy Server object*>.

   The Delete Object pane opens.

   Example: Click Authentication Scheme, Delete Authentication Scheme.

   The Delete Authentication Scheme pane opens.

3. Specify search criteria, and click Search.

   A list of objects that match the search criteria opens.

4. Select an object from the list, and click Select.

   A confirmation pane opens.

   Note: You can select more than one object at a time.

5. Click Yes.

   The Delete Object task is submitted for processing.

Appendix C: Agent for SharePoint Worksheets

This section contains the following topics:

Agent for SharePoint Configuration Wizard Information Worksheet

Use this worksheet to gather the required information to configure the Agent for SharePoint.

Information Required	Your Value
SiteMinder administrator name	
SiteMinder administrator password	
Trusted host name	
Host Configuration Object	
Agent Configuration Object	
IP address of the Policy Server where the host is registered	
Host Configuration File name and location	
Name and location of the Web Agent configuration file	
Email address of the Apache web server administrator	
Fully qualified host name of the server	
Port number for HTTP requests	
Port number for SSL requests	
Port number for HTTP Claims web service	
Port number for SSL Claims web service	

More information:

Run the Configuration Wizard (see page 66)

SharePoint Connection Wizard Information Worksheet

Use this worksheet to gather the required information to configure the SharePoint Connection Wizard.

Important! The SharePoint connection wizard automatically creates federation objects (resource partners) in your Policy Servers. Use only the SharePoint connection wizard to create or manage these objects. If you have a Federation Security Services license, these objects also appear in the FSS Administrative UI. Advise your Federation Security Services Administrator not to modify these objects with the FSS Administrative UI unless explicitly told to do so by CA support personnel.

Information Needed	Your Value
Policy Server name	
Policy Server administrator username	
Policy Server administrator password	
Agent-4x name	
Shared Secret Key of the Agent-4x	
Domain associated with the SharePoint connection	
Name of the SharePoint connection	
Authentication URL	
SharePoint Realm Name	
Skew Time	
Validity Duration	
Signing Alias	
Protection level	
Identifier Claim Name	
Directory Attribute	
Attribute	(group-based claims) smusergroups (role-based claims) userrole
Claim Type	

SharePoint 2010 Federation Worksheet

Use this worksheet to gather the required information to configure SharePoint for SiteMinder.

Information Needed	Your Value
Trusted Identity Provider name	
Certificate authority certificate	
Certificate-Authority Certificates	
Claims Mappings	
Claims Identifier	
Realm	
SignInUrl	
UseWReply	
Name ID	
Account Partner ID	
Signing Certificate	
Security Token Consuming Service	

More information:

Configure SharePoint (see page 83)

Appendix D: Platform Support and Installation Media

This section contains the following topics:

Locate the SiteMinder Agent for SharePoint Platform Support Matrix

You can find a comprehensive list of the CA and third–party components supported by SiteMinder on the Technical Support site.

Follow these steps:

1. Log in to the Technical Support site.

   The Support home page appears.

2. Under Support, click Support By Product.
3. In the Select a Product Page field, enter SiteMinder and press Enter.

   The SiteMinder product page appears.

4. Scroll to the Product Status section and click CA SiteMinder Family of Products Platform Support Matrices.

   The CA SiteMinder Platform Support Matrices section appears.

5. Under CA SiteMinder Agent for SharePoint, click the PDF link.

   The CA SiteMinder Agent for SharePoint Platform Support Matrix opens in a new tab.

Locate the Bookshelf

The SiteMinder Agent for SharePoint bookshelf is available on the Technical Support site.

Follow these steps:

1. Log in to the Technical Support site.

   The Support home page appears.

2. Under Support, Under Support, click Documentation.
3. In the Select a Bookshelf field select SiteMinder Agent for SharePoint *version* and click Go.

   The SiteMinder Agent for SharePoint bookshelf page appears.

Locate the Installation Media

You can find a comprehensive list of the SiteMinder installation media on the Technical Support site.

Follow these steps:

1. Log in to the Technical Support site.
2. Under Support, click Download Center, Products.

   The Download Center screen appears.
3. Enter SiteMinder Agent for SharePoint in the Select a Product field.
4. Select a release from the Select a Release list.
5. Select a service pack from the Select a Gen Level list.
6. Click Go.

   The Product Downloads screen appears. All SiteMinder Agent for SharePoint installation executables are listed.

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