

CA SiteMinder®

Web Agent Option Pack Guide

12.52



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CA Technologies Product References

This document references the following CA Technologies products:

- CA SiteMinder®

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Documentation Changes

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

- [Prerequisites to Deploy an FWS WAR File in JBoss Server](#) (see page 48)—Added the procedures required before deploying an FWS WAR file in a JBoss server (179123).
- [Deploy an FWS WAR File in JBoss or Tomcat](#) (see page 50)—Added a note about deploying the FWS WAR file in JBoss EAP 6.1 (179123).
- Requirements for Windows System with JBoss—Added the recommended system requirements to install the Web Agent Option Pack on a Windows system with JBoss 5.1.2. Resolves CQ 179105.
- The following items resolve CQ 171546 (STAR issue: 21429459):
 - [Create a WebAgent.conf File](#) (see page 35)—Removed the note, which stated that the agent configuration object referenced in the WebAgent.conf file must be a new object. This topic applies to the WebLogic, WebSphere, JBOSS, and Tomcat servers.
 - [Properties File for Federation Web Services](#) (see page 22)—Revised description of the AgentConfigLocation setting.
 - [Agent Configuration Object Settings Used by FWS](#) (see page 23)—Added this section to describe agent settings that the Federation Web Services application uses.

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Chapter 1: Introduction

This section contains the following topics:

[Features Provided by the Web Agent Option Pack](#) (see page 7)

Features Provided by the Web Agent Option Pack

The Web Agent Option Pack is a stand-alone component that must be installed separately from CA SiteMinder®. The component installs Federation Web Services (FWS) and support for eTelligent Rules POST variables on an application server or web server.

Note: Unlike the Web Agent Option Pack, the Policy Server Option Pack is no longer a stand-alone component. The Policy Server Option pack is included with the Policy Server installation.

The Web Agent Option Pack supports the following SiteMinder features:

CA SiteMinder® Federation (Legacy and Partnership)

Legacy Federation

Legacy Federation (formerly Federation Security Services).

Legacy federation is based on configuring CA SiteMinder® objects, such as affiliate domains, authentication schemes, and policies to protect federated resources.

Note: For more information, see *CA SiteMinder® Federation: Legacy Federation*.

Partnership Federation

Partnership federation is based on configuring federated partnerships. The partnership model does not require configuration of CA SiteMinder®-specific objects, such as domains, realms, and policies.

Note: For more information, see *CA SiteMinder® Federation: Partnership Federation Guide*.

eTelligent Rules

eTelligent Rules are policy expressions that combine Boolean operators and user-defined variables and that are evaluated at runtime. As policy expressions, eTelligent Rules allow administrators to implement fine-grained access control of protected resources on a CA SiteMinder®-protected website. To support POST variables, the Web Agent Option Pack is required.

Note: For more information about eTelligent Rules, see the *Policy Server Configuration Guide*.

Chapter 2: Installation Requirements and Considerations

This section contains the following topics:

[General Option Pack Installation Requirements](#) (see page 9)
[System Locale Must Match the Language of Installation and Configuration Directories \(169863\)](#) (see page 11)
[Components Required for CA SiteMinder® Federation](#) (see page 11)
[Components Required for eTelligent Rules](#) (see page 12)
[Version Compatibility](#) (see page 12)
[Environment Variables Added by the Installation](#) (see page 12)
[Java Virtual Machine Installation Error on Solaris can be Ignored \(149886\)](#) (see page 13)
[Web Agent Option Pack on JBOSS Requires Workaround](#) (see page 13)

General Option Pack Installation Requirements

Before you install the Web Agent Option Pack, the following components are required:

- Supported application server

For the supported application servers, see the Platform Support Matrix at the [Technical Support](#) site.

Note: If you use ServletExec as your application server, apply the most current hot fixes. Federation Web Services requires these hot fixes to work with ServletExec. To obtain the hot fixes, go to the [New Atlanta Communications](#) web site.

- A supported Java Development Kit (JDK).

This JDK is required even if you are using an application server that ships with a JDK or JRE.

- For Linux operating platforms, be sure that the required Linux libraries are installed.

Note: You can install the Web Agent Option Pack without the Web Agent. However, install the Web Agent *before* using federation.

Required Linux Libraries

Certain library files are required for components operating on Linux operating environments. Failure to install the correct libraries can cause the following error:

```
java.lang.UnsatisfiedLinkError
```

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

Red Hat 5.x:

`compat-gcc-34-c++-3.4.6-patch_version.i386`
`libstdc++-4.x.x-x.el5.i686.rpm`

Red Hat 6.x:

`libstdc++-4.x.x-x.el6.i686.rpm`

Additionally, for Red Hat 6.x (64-bit):

Note: All the RPM packages that are required for 64-bit Red Hat 6.x are 32-bit packages.

`libXau-1.0.5-1.el6.i686.rpm`
`libxcb-1.5-1.el6.i686.rpm`
`compat-db42-4.2.52-15.el6.i686.rpm`
`compat-db43-4.3.29-15.el6.i686.rpm`
`libX11-1.3-2.el6.i686.rpm`
`libXrender-0.9.5-1.el6.i686.rpm`
`libexpat.so.1` (provided by `expat-2.0.1-11.el6_2.i686.rpm`)
`libfreetype.so.6` (provided by `freetype-2.3.11-6.el6_2.9.i686.rpm`)
`libfontconfig.so.1` (provided by `fontconfig-2.8.0-3.el6.i686.rpm`)
`libICE-1.0.6-1.el6.i686.rpm`
`libuuid-2.17.2-12.7.el6.i686.rpm`
`libSM-1.1.0-7.1.el6.i686.rpm`
`libXext-1.1-3.el6.i686.rpm`
`compat-libstdc++-33-3.2.3-69.el6.i686.rpm`
`compat-db-4.6.21-15.el6.i686.rpm`
`libXi-1.3-3.el6.i686.rpm`
`libXtst-1.0.99.2-3.el6.i686.rpm`
`libXft-2.1.13-4.1.el6.i686.rpm`
`libXt-1.0.7-1.el6.i686.rpm`
`libXp-1.0.0-15.1.el6.i686.rpm`

Requirements for Windows System with JBoss (179105)

The Windows system with JBoss 5.1.2 where you install the Web Agent Option Pack must meet the following recommended system requirements:

- Memory—4 GB of system RAM.
- JVM heap size—Set the values for max heap and min heap as follows:
 - Max Heap - (-Xmx 1024m or -Xmx1g)
 - Min Heap - (-Xms 1024m or -Xms1g)

System Locale Must Match the Language of Installation and Configuration Directories (169863)

To install and configure a CA SiteMinder® component to a non-English directory, set the system to the same locale as the directory. Also, make sure that you installed the required language packages so the system can display and users can type localized characters in the installer screens.

For the details on how to set locale and required language packages, refer to respective operating system documents.

Components Required for CA SiteMinder® Federation

The following components are required for CA SiteMinder® Federation (Legacy and Partnership):

- Policy Server
- Application server or web server

Note: An application server with built-in web server, such as JBOSS, WebLogic or WebSphere, is required to deploy Federation Web Services. Alternately, a web server with an application server plug-in, such as ServletExec, can be used.

- Web Agent Option Pack

Note: Refer to the *Federation Release Notes* for any known issues regarding federation features and the Web Agent Option Pack.

Components Required for eTelligent Rules

The following components are required for eTelligent Rules:

- Policy Server
- Web Agent Option Pack

The Web Agent Option Pack is required to support eTelligent Rules that contain POST variables.

Version Compatibility

If the Web Agent and Web Agent Option Pack are installed on the same server, they must both be the *same* version, including the Service Pack and CR version. However, the Web Agent Option Pack can operate with Policy Servers of different, but compatible versions. To learn which Policy Server versions the Web Agent Option Pack is compatible with, see the SiteMinder Platform Support Matrix.

Important! When different compatible versions of the Web Agent Option Pack and Policy Server are mixed, federation functionality is limited to that of the lesser of the two components. Thus, if the Policy Server supports a federation feature but the Web Agent Option Pack does not, a request that requires that functionality may be rejected or the functionality ignored. The same is also true if the Web Agent Option pack supports a feature and the Policy Server does not.

More information:

[Mixed-Version Upgrade Considerations](#) (see page 59)

Environment Variables Added by the Installation

The installation of the Web Agent Option Pack sets the following environment variables:

- NETE_WA_OPACK = "INSTALLED"
- NETE_WA_PATH =
\$NETE_WA_ROOT\$\$/bin;\$NETE_WA_ROOT\$\$/bin\$/thirdparty;
\$NETE_JRE_ROOT\$\$/bin;\$NETE_JRE_ROOT\$\$/bin\$/server

Java Virtual Machine Installation Error on Solaris can be Ignored (149886)

Symptom:

You are doing a console mode installation of a CA SiteMinder® product on a Solaris platform. The following error message displays: "Unable to install the Java Virtual Machine included with this installer."

Solution:

Ignore this error message. The error is a third-party issue and it has no functional impact.

Web Agent Option Pack on JBOSS Requires Workaround

Symptom:

On a JBoss 5.1.2 server, system JARs are overriding application-specific JARs, such as those JARs for the Web Agent Option Pack.

Solution:

Prevent the Web Agent Option Pack XML API files from being overwritten by JBOSS system JARS.

Important! This workaround only applies to the version of JBOSS 5.1.x that the product supports.

Add the following filter package in two places in the **war-deployers-jboss-beans.xml** file:

```
<property name="filteredPackages">javax.servlet,org.apache.commons.  
logging,javax.xml.parsers,org.xml.sax,org.w3c.dom</property>
```

The filter package allows the use of the Web Agent Option Pack XML API files instead of the JBOSS system files.

Follow these steps:

1. Locate the war-deployers-jboss-beans.xml file located in the directory:
/deployers/jbossweb.deployer/META-INF/
2. Find the following entry:

```
<property name="filteredPackages">javax.servlet,org.apache.  
commons.logging</property>
```

3. Change the entry to:

```
<property name="filteredPackages">javax.servlet,org.apache.commons.  
logging,javax.xml.parsers,org.xml.sax,org.w3c.dom</property>
```

This entry in the file is on one line.

4. Find the second instance of the entry in step 2 and replace it with the entry in step 3.

Add the filter package in both places in the XML file.

5. Save the XML file.

Chapter 3: Install the Web Agent Option Pack

This section contains the following topics:

[Installation Modes](#) (see page 15)

[Run the Web Agent Option Pack Installer](#) (see page 15)

[Move smvariable.dll file for eTelligent Rules](#) (see page 17)

[Next Step After Installation](#) (see page 18)

Installation Modes

The Web Agent Option Pack can be installed on a Web server running ServletExec or other supported application server, such as WebLogic, WebSphere, or JBoss.

You can install the Web Agent Option Pack in one of the following modes:

- GUI Mode
GUI mode uses a graphical installation wizard to install the Web Agent Option Pack.
- Console Mode (UNIX platforms only)
Uses command line questions about the installation in a UNIX console window.
- Unattended Mode
Installs the Web Agent Option Pack without user intervention. Use the unattended installation mode to automate additional installations on other machines in your network.

Note: You must install the Web Agent Option Pack using GUI or Console mode *before* running an unattended installation. The initial installation creates a properties file that contains the installation settings for the unattended installation.

Run the Web Agent Option Pack Installer

The Web Agent Option Pack can be installed as a stand-alone product. The installer attempts to find an installed Web Agent, but if it cannot, it prompts you to continue or cancel. Continuing prompts you for an installation path. Then the installer installs the Option Pack in the location that you specify.

Install the Web Agent Option Pack using the method for your platform:

- Windows systems: install in GUI mode.

Important! If you are installing the Web Agent Option Pack on a Windows system immediately after installing the Web Agent, reboot your system first.

- UNIX systems: install in GUI or console mode.

To install in console mode, you execute the Option Pack binary with the `-i console` command argument.

Follow these steps:

1. Stop the Web or application server and exit any applications that are running.
2. Log in to the CA [Technical Support](#) site.
3. Click Download Center.
4. Search the Download Center for the installation kit you need.
5. Run the installation program according to your platform.

- **Windows:** Double-click the executable.

- **UNIX:** At the command prompt, type one of the following commands:

- **GUI Mode**

- `./binary_filename`

- **Console Mode**

- `./binary_filename -i console`

Example: To run the installation in GUI mode on a Solaris platform, enter:

`./ca-wa-opack-12.52-sol.bin`

Note: If needed, use the `chmod` command to add execute permissions to the installation file, for example:

`chmod +x ca-wa-opack-12.52-sol.bin`

6. Follow the installation dialogs and prompts to complete the installation.

To re-install the Option Pack, run the executable again.

More information:

[Version Compatibility](#) (see page 12)

Move smvariable.dll file for eTelligent Rules

After you install the Web Agent option pack on your web server, move the smvariable.dll files if your environment meets *all* of the following criteria:

- You want to use eTelligent rules.
- You are using the Windows 2008 R2 (64-bit) operating environment.
- You are using an IIS 7.x Web Agent.

Perform this procedure for each installation of your Web Agent Option pack.

Follow these steps:

1. Move the dll file for 32-bit applications by doing the following steps:
 - a. Locate the following file:
`C:\Program Files\CA\webagent\win32\bin\non_stub\smvariable.dll`
 - b. Move the previous file into the following directory:
`C:\Program Files\CA\webagent\win32\bin`
2. Move the dll for 64-bit applications by doing the following steps:
 - a. Locate the following file:
`C:\Program Files\CA\webagent\win64\bin\non_stub\smvariable.dll`
 - b. Move the previous file into the following directory:
`C:\Program Files\CA\webagent\win64\bin`

The smvariable.dll files have been moved to accommodate eTelligent rules.

Next Step After Installation

After you complete the Web Agent Option pack installation, you can configure the features that you want.

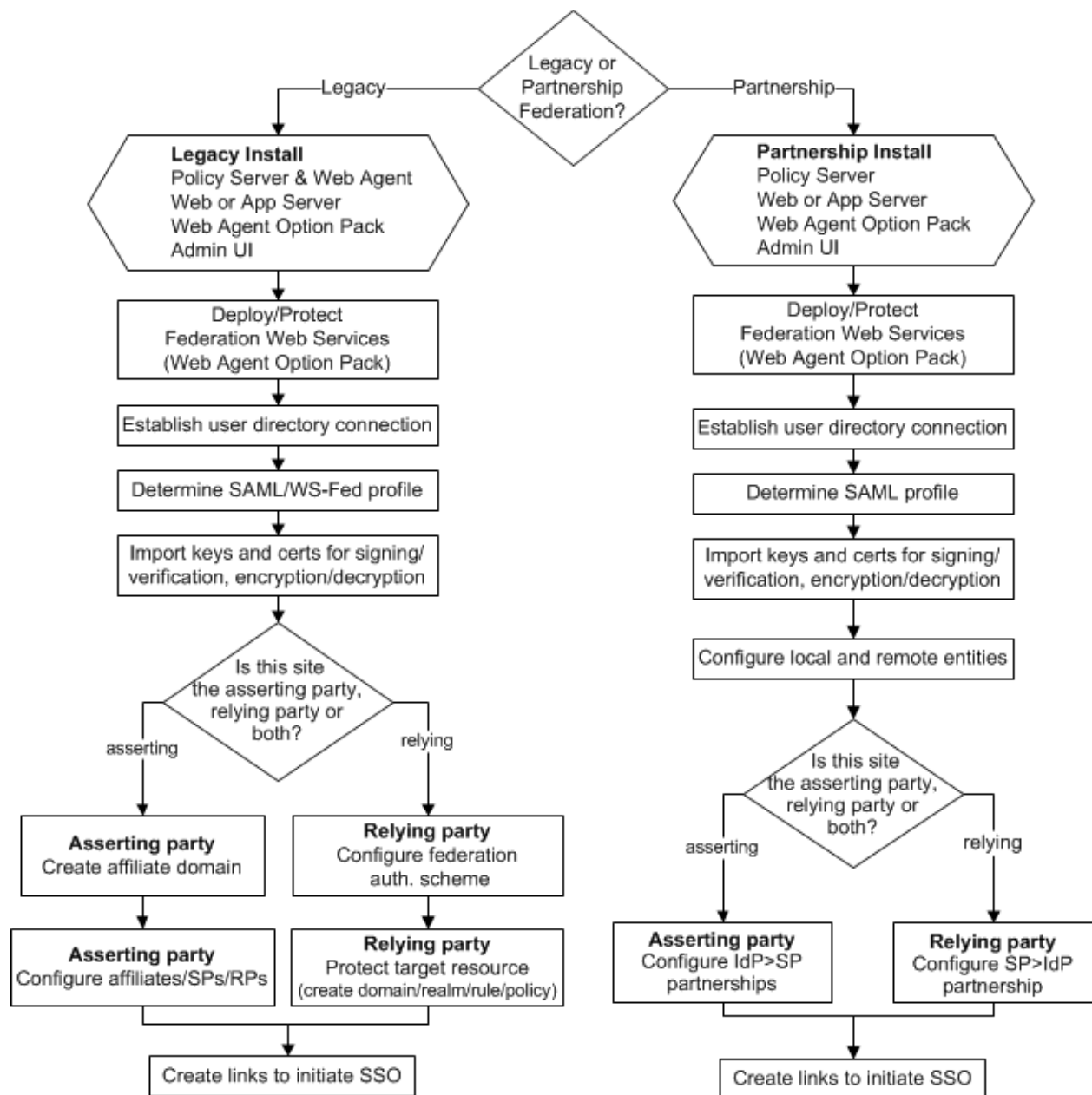
eTelligent Rules

Configure eTelligent rules according to the instructions in the *Policy Server Configuration Guide*.

Federation

For CA SiteMinder® Federation, configure the components to establish successful federated partnerships. Most of these components are configurable using the Administrative UI.

The following flow chart highlights the general process for legacy federation and partnership federation.



See the following guides for detailed instructions on required components and configuration procedures:

Legacy and partnership federation

Federation in Your Enterprise

Legacy federation

CA SiteMinder® Federation: Legacy Federation Guide

Legacy federation refers to the product known as Federation Security Services.

Partnership federation

CA SiteMinder® Federation: Partnership Federation Guide

Partnership Federation refers to partnership model of federation, previously available only with the standalone Federation Manager product.

Chapter 4: Deploy Federation Web Services for Federation

This section contains the following topics:

[Federation Web Services Application Overview](#) (see page 21)

[Properties File for Federation Web Services](#) (see page 22)

[Agent Configuration Object Settings Used by FWS](#) (see page 23)

[Set up the LoggerConfig.properties File](#) (see page 24)

[Deploy Federation Web Services as a Web Application](#) (see page 26)

Federation Web Services Application Overview

Federation Web Services (FWS) is a collection of servlets that are packaged as a web application in accordance with the Java Servlet API 2.3 specification. The Federation Web Services application is installed with the Web Agent Option Pack. The application is deployed within an application server, or deployed inside the Tomcat web server, which is embedded in the SPS federation gateway.

The web application is rooted at a specific URL within the web server, `http://www.your_webserver.com/affwebservices/`. URLs for the servlets included with the FWS application have this same root.

The Federation Web Services application provides these services:

- Assertion Retrieval Service (SAML 1.x)
- SAML credential collector (SAML 1.x)
- Intersite Transfer Service (SAML 1.x)
- Artifact Resolution Service (SAML 2.0)
- Assertion Consumer Service (SAML 2.0)
- Security Token Consumer Service (WS-Federation)
- AuthnRequest service (SAML 2.0)
- Single Sign-on service (SAML 2.0 and WS-Federation)
- Single Logout Service (SAML 2.0)
- Signout Service (WS-Federation)

- Session Synchronization—ValidateSession & Logout calls—a value-added service, supporting a standards-based SOAP RPC mechanism (for the SAML Affiliate Agent only).
- Notification Alert—a value-added service, supporting a standards-based SOAP RPC mechanism (for the SAML Affiliate Agent only)

Note: Session synchronization and notification alert services are only used when the CA SiteMinder® SAML Affiliate Agent is at the relying party. These services are not supported with the SPS federation gateway.

Properties File for Federation Web Services

The AffWebServices.properties file contains all the initialization parameters for Federation Web Services. For deploying FWS, set only the parameter that specifies the location of the WebAgent.conf file. For the other settings, accept the default values or modify the values as needed.

Note: The AffWebServices.properties file is in UTF-8 format. If you plan to modify this file, use an editor that supports this format.

The settings are as follows:

AffWebServices.properties Settings	Value
NotificationLibraryType	Specifies the library type the Web Agent uses for notification alerts. Note: The SPS federation gateway does <i>not</i> support this setting.
NotificationLibraryDetails	Indicates the Java classname or the C library and function name. Note: The SPS federation gateway does <i>not</i> support this setting.
SMserverPort	Determines which Policy Server service at the producer processes the notification tunnel calls.
AgentConfigLocation	Indicates the location of the WebAgent.conf file. You must specify the location of the configuration file.

The installed location of the AffWebServices.properties file is in the following locations:

- For a web or application server
web_agent_or_webagent_option_pack_home/affwebservices/WEB-INF/classes
- For the SPS federation gateway:
sps_home/secure-proxy/Tomcat/webapps/affwebservices/WEB-INF/classes

web_agent_home

Indicates the installed location of the Web Agent.

sps_home

Indicates the installed location of CA SiteMinder® SPS.

Agent Configuration Object Settings Used by FWS

For partnership federation, Federation Web Services (FWS), installed by the Web Agent Option Pack uses the following agent configuration object settings for federated communication. You configure agent configuration objects in the Administrative UI.

For the descriptions of each setting, see the CA SiteMinder® Web Agent Configuration Guide.

- defaultagentname
Note: The FWS application uses the value of the defaultagentname parameter and not the agentname parameter.
- TransientIDCookies
- AcceptTPCookie
- TransientIPCheck
- CookieDomain
- CookieDomainScope
- SSOZoneName
- SSOTrustedZone
- UseSecureCookies

Set up the LoggerConfig.properties File

The LoggerConfig.properties file lets you enable logging so the Federation Web Services application can record the following information:

- Assertion retrieval
- Session management
- Notification alert information
- Trace messages

The log file shows activity at the asserting party and the relying party, depending on how your site is configured.

Note: The LoggerConfig.properties file is in UTF-8 format. If you plan to modify this file, use an editor that supports this format.

The installed location of the LoggerConfig.properties file is:

- For the Web Agent, the location is
web_agent_home/affwebservices/WEB-INF/classes
- For an application server
deployment_directory/affwebservices/WEB-INF/classes
- For the SPS federation gateway:
sps_home/secure-proxy/Tomcat/webapps/affwebservices/WEB-INF/classes

web_agent_home

Indicates the installed location of the Web Agent.

deployment_directory

Indicates the default deployment directory for your application server.

sps_home

Indicates the installed location of CA SiteMinder® SPS.

Modify the settings as needed. If a value is not specified, the default value for the default locale is used.

The following table shows the settings in the LoggerConfig.properties file.

LoggerConfig.properties Settings	Description
EnableDNSLookup	Instructs the FWS application whether to do a DNS or reverse DNS lookup when processing an incoming SAML request at the consuming site. Select Y or N. When an incoming SAML request is received at a consumer site, FWS logs the details of the request, including the requesting host name. The DNS lookup call collects the host name. The default behavior is to do the DNS lookup. If you select N for this heading, the DNS call is not made and the IP address is logged instead.
LoggingOn (required)	Enables log output. Select Y or N.
LocalFileName (required)	Names the file to use for log output.
LogLocalTime	Enables use of local time for log messages. Select Y or N.
LogRollover	Defines the type of rollover functionality. Select Y or N then define the LogSize or LogCount parameter.
LogSize	Specifies the maximum file size, in megabytes, when rolling over log files by size.
LogCount	Specifies how many log output files to leave when roll-over is enabled.
TracingOn	Enables trace log output. Select Y or N.
TraceFileName	Names the file to use for trace log output.
TraceConfig	Specifies the trace configuration file. For more information, see Trace Logging.
TraceRollover	Defines the type of rollover functionality for tracing. Select Y or N and then specify a TraceSize or TraceCount value.
TraceSize	Specifies the maximum file size, in megabytes, when rolling over trace log files by size.
TraceCount	Specifies how many trace log output files to leave when roll-over is enabled.

LoggerConfig.properties Settings	Description
TraceFormat	Specifies the trace output file format (default, fixed-width fields, delimited format, XML)
TraceDelim	Defines the character to use as a delimiter when using fixed-width fields as the trace format.

Deploy Federation Web Services as a Web Application

If you are using the Web Agent Option Pack, deploy the Federation Web Services (FWS) application into operation.

Configure one of the following application servers to work with FWS:

- [Set Up ServletExec to Work with Federation Web Services](#) (see page 26).
- [Set Up WebLogic to Work with Federation Web Services](#) (see page 32).
- [Set Up WebSphere to Work with Federation Web Services](#) (see page 38).
- [Set Up a JBOSS or Tomcat to Work with Federation Web Services](#) (see page 45).

If you are using the SPS federation gateway, Federation Web Services is already deployed on the embedded Tomcat server.

Note: Restart your server if a redeployment of Federation Web Services fails with the following error:

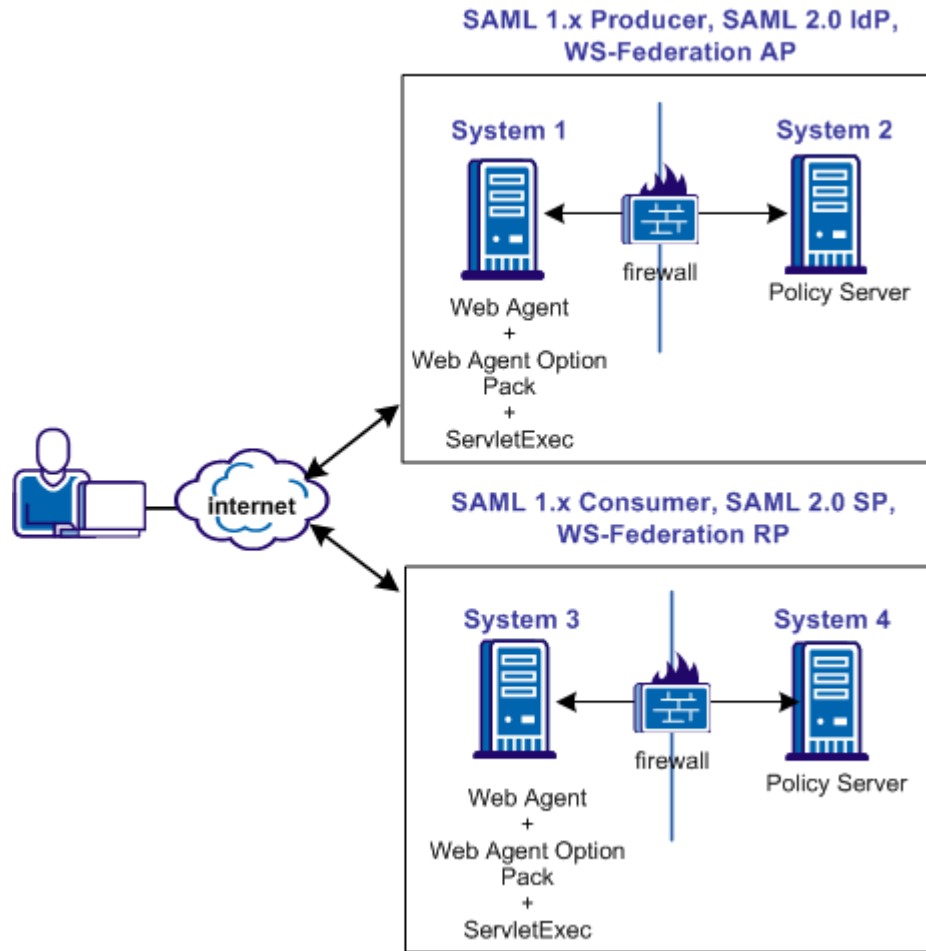
```
java.lang.UnsatisfiedLinkError: Native Library 'smerrlog.dll' already loaded in
another classloader com.netegrity.smerrlog.SmLogException: Failed to load
smerrlog.
```

Set Up ServletExec to Work with Federation Web Services

For the Federation Web Services (FWS) application to work with ServletExec, deploy Federation Web Services as a web application for ServletExec. Deploy the FWS application at the asserting and relying party.

Note: CA SiteMinder® 12.52 is shipped with a ServletExec license key file named ServletExec_AS_6_license_key.txt. If you do not have this license key, contact [CA Technical Support](#). From this license file, copy the license key and enter it in the ServletExec License dialog of the ServletExec Administration Console. For instructions on licensing ServletExec, see ServletExec documentation, available at the New Atlanta Communication <http://www.newatlanta.com> website.

The following illustration shows a sample configuration of CA SiteMinder® and ServletExec. ServletExec, the Web Agent Option Pack, and the Web Agent are installed on the same server; however, this setup is not required.



Important! Apply the most current hot fixes for ServletExec. Federation Web Services requires the hot fixes to work with ServletExec. To obtain the hot fixes, go to the [New Atlanta Communication website](#).

Follow these steps:

1. Open the ServletExec Administration Console.
2. Under Web Applications, select manage.
The Manage Web Applications dialog opens.
3. Click Add a Web Applications.

4. Enter the following information:
 - a. Application Name: affwebservices
 - b. URL Context Path: /affwebservices/
 - c. Location: affwebservices_homeExample:
C:\program files\ca\webagent\affwebservices
5. Click Submit.
6. Exit the ServletExec Console.

Source the Environment Script on a UNIX Operating Environments

After you install the Web Agent Option Pack on a UNIX system, the installation program creates an environment script (ca-wa-opack-env.sh).

Source the environment script so the library path of the application server points to the location of the Web Agent Option Pack /bin directory.

Source the script by entering the following command at the command line:

```
. ./ca-wa-opack-env.sh
```

Setting the correct library path lets the option pack and the web or application server to work together.

After you source the script, the library path is set. The variable name for the library path differs depending on the operating system. Example of several library paths:

Solaris/Linux

```
LD_LIBRARY_PATH=/webagent_option_pack_home/bin
```

HP-UX

```
SHLIB_PATH=/webagent_option_pack_home/bin
```

AIX

```
LIBPATH=/webagent_option_pack_home/bin
```

Important! The application server startup script can reset the library path. Ensure that the path to the Web Agent Option Pack is the first entry in the path.

The path to the Web Agent Option Pack environment script points to one of the following locations:

- The installation directory of the web agent option pack. The default location is: */webagent_option_pack_home/bin*.
- The installation directory of the web agent.

If you install the option pack on the same system as the web agent, the script resides in the web agent directory. For any UNIX installation, the default location is */web_agent_home/bin*.

Modify the FWS Properties File for a ServletExec Deployment

The `AffWebServices.properties` file contains all the initialization parameters for Federation Web Services. For deploying FWS, set only the parameter that specifies the location of the `WebAgent.conf` file.

To configure the `AffWebServices.properties` file

1. Navigate to the `AffWebServices.properties` file. For ServletExec, go to *web_agent_home/affwebservices/WEB-INF/classes*.
2. Set the `AgentConfigLocation` parameter to the location of the `WebAgent.conf` file at each partner site.
 - Windows example:
`C:\Program Files\ca\webagent\bin\IIS\WebAgent.conf`
Note: Federation Web Services is a Java component, so the Windows paths must contain double backslashes.
 - UNIX example:
`server_home/servers/https-hostname/config/WebAgent.conf`
 - Windows example for the SPS federation gateway
`sps_home\proxy-engine\conf\defaultagent\WebAgent.conf`
 - UNIX example for the SPS federation gateway
`sps_home/proxy-engine/conf/defaultagent/WebAgent.conf`
3. Repeat this procedure for each application server where the Web Agent Option Pack is installed.
4. Accept the default values for the rest of the settings.

Enable ServletExec to Write to the IIS File System

The IIS server user account must have proper rights for IIS to allow a plug-in to write to its file system. For ServletExec to write to the federation log files, the anonymous user account that is associated with ServletExec must have permissions to write to the file system.

Follow these steps:

1. Open the IIS Internet Information Services Manager on the system where ServletExec is installed.
2. Navigate to Web Sites, Default Web Site.
The set of applications is displayed in the right pane.
3. Select ServletExec and right-click Properties.
4. Select the Directory Security tab in the Properties dialog.
5. Click Edit in the Authentication and access control section.
The Authentication Methods dialog opens.
6. Set the controls as follows.
 - a. Select Enable Anonymous Access.
For anonymous access, enter a name and password of a user account that has the permissions to right to the Windows file system. To grant this right to a user account, see Windows documentation. For example, you can use the IUSR Internet Guest account for anonymous access.
 - b. Clear Basic authentication.
 - c. Clear Integrated Windows authentication.
7. If prompted, apply the security changes to all child components of the web server.
8. Restart the web server.

The user account that is associated with ServletExec can now write to the IIS file system.

Follow these steps:

1. Open Control Panel, Administrative Tools, Local Security Policy, Local Policies, User Rights Assignment.
The Local Security Settings dialog displays.
2. Double-click Act as part of the operating system.
The Act as part of the operating system Properties dialog opens.
3. Add the anonymous user account to the Local Security Setting dialog.
4. Click OK.
5. Exit from the control panel.

Optionally, we strongly recommend that you look at the Agent Configuration Object for the Web Agent protecting the IIS Web Server. This object verifies that the SetRemoteUser parameter is set to yes to preventing any anonymous user from writing to the file system.

Ensure the IIS Default Web Site Exists

The Web Agent requires the IIS Web Server to have a Default Web Site for proper installation. The Default Web Site is automatically installed with the IIS Web Server. If this website does not exist, install the CA SiteMinder® virtual directories to a different website on IIS. To install the CA SiteMinder® virtual directories to a different website on IIS, edit the Metabase.

A technical note on the site describes the [Technical Support site](#) changes that are needed. To find the note:

1. Go to the main Support page.
2. Select Literature, Tech Notes.
3. Select the document titled METABASE -3 Error.

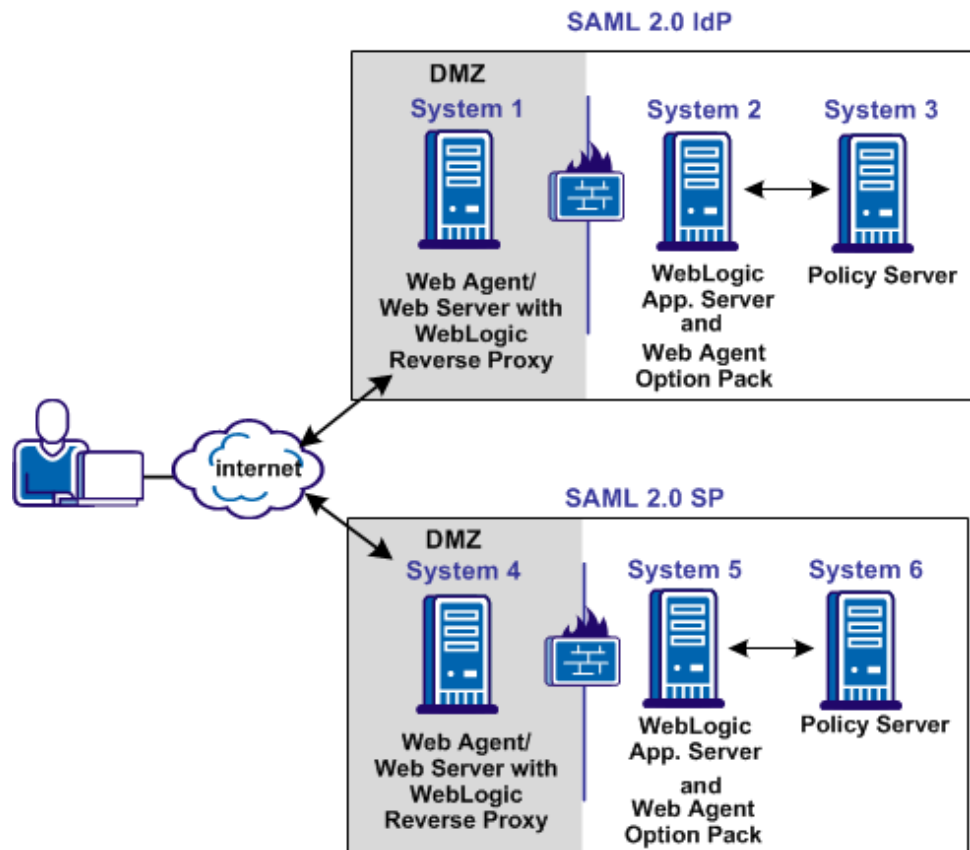
The documents are listed in alphabetical order.

Set Up WebLogic to Work with Federation Web Services

To enable Federation Web Services (FWS) for a CA SiteMinder®/WebLogic configuration, deploy the FWS application.

Note: For a list of supported version of WebLogic, see the CA SiteMinder® 12.52 Platform Support Matrix on the Technical Support site.

The following illustration shows a CA SiteMinder® and WebLogic sample configuration. The illustration provides an example of how to use FWS in a sample federated environment.



In this environment, deploy the FWS application on System 2 and System 5.

Important! Complete the deployment procedure for the Web Agent at the asserting party and the relying party.

After installing the software components on the systems in the illustration, deploy the FWS application. Deploy the application on System 2 for the asserting party and on System 5 for the relying party.

To deploy the FWS application

1. Set the LD_LIBRARY_PATH Variable
2. Create a SmHost.conf File
3. Create a WebAgent.conf File
4. Modify the AffWebServices.properties File
5. Configure the WebLogic Reverse Proxy Plug-in.
6. Deploy the FWS Application on WebLogic.

Important! For the FWS application to work with WebLogic Server, review the weblogic.xml file in the WEB-INF directory. Verify that the prefer-web-inf-classes parameter in the weblogic.xml file is set to true.

For instructions on reviewing the weblogic.xml file, go to [Deploy the FWS Application on WebLogic](#) (see page 37).

Source the Environment Script on a UNIX Operating Environments

After you install the Web Agent Option Pack on a UNIX system, the installation program creates an environment script (ca-wa-opack-env.sh).

Source the environment script so the library path of the application server points to the location of the Web Agent Option Pack /bin directory.

Source the script by entering the following command at the command line:

```
. ./ca-wa-opack-env.sh
```

Setting the correct library path lets the option pack and the web or application server to work together.

After you source the script, the library path is set. The variable name for the library path differs depending on the operating system. Example of several library paths:

Solaris/Linux

```
LD_LIBRARY_PATH=/webagent_option_pack_home/bin
```

HP-UX

```
SHLIB_PATH=/webagent_option_pack_home/bin
```

AIX

```
LIBPATH=/webagent_option_pack_home/bin
```

Important! The application server startup script can reset the library path. Ensure that the path to the Web Agent Option Pack is the first entry in the path.

The path to the Web Agent Option Pack environment script points to one of the following locations:

- The installation directory of the web agent option pack. The default location is: `/webagent_option_pack_home/bin`.
- The installation directory of the web agent.

If you install the option pack on the same system as the web agent, the script resides in the web agent directory. For any UNIX installation, the default location is `/web_agent_home/bin`.

Create an SmHost.conf File

The FWS application requires an SmHost.conf file. However, the Web Agent Option Pack does not install this file, so you must create it.

To create an SmHost.conf

1. Go to the directory `/webagent_option_pack_home/bin`
2. Run the `smregghost.exe`.

For instructions on running `smregghost.exe`, see the *Web Agent Installation Guide*.

3. Put the SmHost.conf file in the following directory on Systems 2 and 5:
`/webagent_option_pack_home/config`

Create a WebAgent.conf File

The FWS application requires the WebAgent.conf file. However, the Web Agent Option Pack does not install this file, so you must create it.

To create a WebAgent.conf file

1. Copy the WebAgent.conf file from System 1 to the following directory on System 2 and System 5:

/webagent_option_pack_home/config

webagent_option_pack_home

Defines the installed location of the Web Agent Option Pack on System 2 or System 5.

2. Modify the WebAgent.conf file by:
 - a. Setting the EnableWebAgent parameter to YES.
 - b. Modifying other configuration parameters to suit FWS.

The following sample shows a WebAgent.conf file for the FWS application:

```
# WebAgent.conf - configuration file for the Federation Web Services Application
#agentname="agent_name, IP_address"
HostConfigFile="/webagent_option_pack/config/SmHost.conf"
AgentConfigObject="agent_config_object_name"
EnableWebAgent="YES"
```

Modify the FWS Properties File

The AffWebServices.properties file contains all the initialization parameters for Federation Web Services. For deploying FWS, set only the parameter that specifies the location of the WebAgent.conf file.

Follow these steps:

1. Navigate to the AffWebServices.properties file. Locate this file in the following directory:
web_agent_optionpack_home/affwebservices/WEB-INF/classes
2. Set the AgentConfigLocation parameter to the location of the WebAgent.conf file at each partner site.
 - Windows example:
`C:\Program Files\CA\webagent_optionpack\config\WebAgent.conf`
Note: Federation Web Services is a Java component, so the Windows paths must contain double backslashes.
 - UNIX example:
web_agent_optionpack_home/config/WebAgent.conf
 - Windows example for the SPS federation gateway
sps_home\proxy-engine\conf\defaultagent\WebAgent.conf
 - UNIX example for the SPS federation gateway
sps_home/proxy-engine/conf/defaultagent/WebAgent.conf
3. Repeat this procedure for each application server where the Web Agent Option Pack is installed.
4. Accept the default values for the rest of the settings in the properties file.

Configure the WebLogic Reverse Proxy Plug-in

To set up the WebLogic Reverse Proxy plug-in:

1. On System 1, configure the WebLogic reverse proxy plug-in on the Apache Web Server.

For more information, see WebLogic documentation.

2. Add the following aliases to the configuration file of the web server.

This example uses the Apache httpd.conf file.

```
<IfModule mod_weblogic.c>
WebLogicHost <WebLogic_Machine_IP_Address>
WebLogicPort <WebLogic_Machine_Port_Number>
</IfModule>

<Location /affwebservices>
SetHandler weblogic-handler
Debug ALL
</Location>
```

Deploy the FWS Application on WebLogic

Deploy the FWS application on System 2 and System 5.

Important! For the FWS application to work with WebLogic Server, review the weblogic.xml file in the WEB-INF directory. Verify that the prefer-web-inf-classes parameter is set to true.

The weblogic.xml file is located in the directory webagent\affwebservices\WEB-INF.

The following code excerpt shows how to set the prefer-web-inf-classes parameter:

```
<weblogic-web-app>
<container-descriptor>
<prefer-web-inf-classes>true</prefer-web-inf-classes>
</container-descriptor>
</weblogic-web-app>
```

In addition, verify that the precompile parameter is set to true, as listed following:

```
<jsp-descriptor>
<precompile>true</precompile>
</jsp-descriptor>
```

Follow these steps: to deploy FWS

1. Use the WebLogic Server Console and deploy FWS. The FWS application is installed in:

/webagent_option_pack_home/affwebservices/

For more information about deploying a web application, see the WebLogic documentation.

2. Test that the FWS application is working. Open a web browser and enter:

http://fqhn:port_number/affwebservices/assertionretriever

fqhn

Defines the fully qualified host name.

port_number

Defines the port number of the server where the Federation Web Services application is installed.

For example:

http://myhost.ca.com:81/affwebservices/assertionretriever

If Federation Web Services is operating correctly, you see the following message:

Assertion Retrieval Service has been successfully initialized.

The requested servlet accepts only HTTP POST requests.

This message indicates that Federation Web Services is listening for data activity.

The FWS application is now deployed for the WebLogic server.

If Federation Web Services is not operating correctly, a message that the Assertion Retrieval Service has failed displays. If the service fails, review the Federation Web Services log.

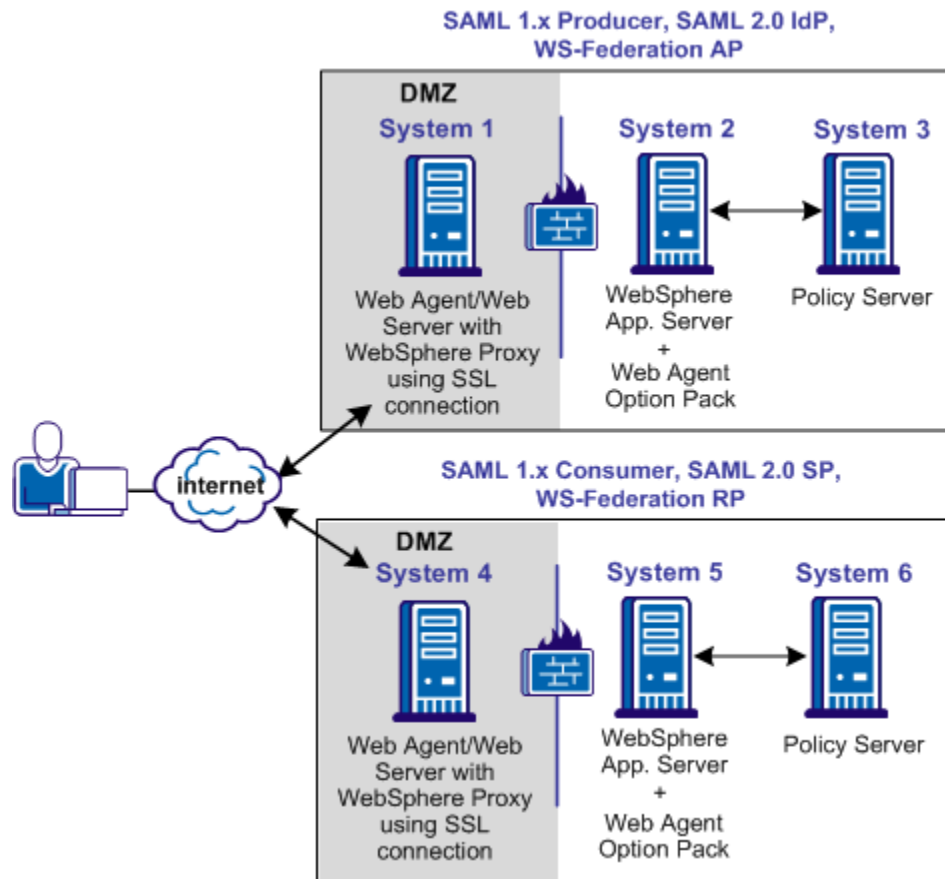
Note: For instructions on enabling trace logging for the FWS application, see Trace Logging.

Set Up WebSphere to Work with Federation Web Services

To enable FWS in a federated environment for a CA SiteMinder®/WebSphere Application Server (WAS) configuration, deploy the FWS application.

On Systems 2 and 5, deploy FWS. These systems must also have WAS and the associated WAS Fix Pack, if applicable. On Systems 1 and 4, install the Web Agent and the WAS Proxy Plug-in. Enable SSL between the proxy and the WAS.

The following illustration shows a CA SiteMinder® and WebSphere sample configuration.



Prerequisites:

- Install WAS on systems that have the WebSphere Application Server installed.
- Complete the deployment procedure for the Web Agent at the asserting party and the relying party.

After installing the software components on the systems in the illustration, deploy FWS on System 2 and System 5 by following these steps:

1. Set the WebSphere LD_LIBRARY_PATH variable.
2. Create a SmHost.conf file.
3. Create a WebAgent.conf file.
4. Modify the AffWebServices.properties file.
5. Copy option pack library files to WebSphere.
6. Deploy a Federation Web Services WAR File in WebSphere.

Source the Environment Script on a UNIX Operating Environments

After you install the Web Agent Option Pack on a UNIX system, the installation program creates an environment script (`ca-wa-opack-env.sh`).

Source the environment script so the library path of the application server points to the location of the Web Agent Option Pack `/bin` directory.

Source the script by entering the following command at the command line:

```
. ./ca-wa-opack-env.sh
```

Setting the correct library path lets the option pack and the web or application server to work together.

After you source the script, the library path is set. The variable name for the library path differs depending on the operating system. Example of several library paths:

Solaris/Linux

```
LD_LIBRARY_PATH=/webagent_option_pack_home/bin
```

HP-UX

```
SHLIB_PATH=/webagent_option_pack_home/bin
```

AIX

```
LIBPATH=/webagent_option_pack_home/bin
```

Important! The application server startup script can reset the library path. Ensure that the path to the Web Agent Option Pack is the first entry in the path.

The path to the Web Agent Option Pack environment script points to one of the following locations:

- The installation directory of the web agent option pack. The default location is: `/webagent_option_pack_home/bin`.
- The installation directory of the web agent.

If you install the option pack on the same system as the web agent, the script resides in the web agent directory. For any UNIX installation, the default location is `/web_agent_home/bin`.

Create an SmHost.conf File

The FWS application requires the SmHost.conf file. However, the Web Agent Option Pack does not install this file, so you must create it.

To create an SmHost.conf file

1. Create an SmHost.conf file by running smreghost.exe, which is located in the following directory:

/webagent_option_pack_home/bin

2. Put the SmHost.conf file in the following directory on System 2 and System 5:

/webagent_option_pack_home/config

Create a WebAgent.conf File

The FWS application requires the WebAgent.conf file; however, the Web Agent Option Pack does not install this file so you must create it.

To create a WebAgent.conf file

1. Copy the WebAgent.conf file from System 1 to the following directory on System 2 and System 5:

/webagent_option_pack_home/config

where,

webagent_option_pack_home

Defines the installed location of the Web Agent Option Pack on System 2 and System 5.

2. Modify the WebAgent.conf file by:
 - a. Setting the EnableWebAgent parameter to YES.
 - b. Modifying any other configuration parameters to suit the environment for the FWS application.

The following sample shows a WebAgent.conf file for the FWS application:

```
# WebAgent.conf - configuration file for the Federation Web Services Application
#agentname="<agent_name>, <IP_address>"
HostConfigFile="/<webagent_option_pack>/config/SmHost.conf"
AgentConfigObject="<agent_config_object_name>"
EnableWebAgent="YES"
```

Modify the FWS Properties File

The AffWebServices.properties file contains all the initialization parameters for Federation Web Services. For deploying FWS, set only the parameter that specifies the location of the WebAgent.conf file.

Follow these steps:

1. Navigate to the AffWebServices.properties file. Locate this file in the following directory:
web_agent_optionpack_home/affwebservices/WEB-INF/classes
2. Set the AgentConfigLocation parameter to the location of the WebAgent.conf file at each partner site.
 - Windows example:
C:\Program Files\CA\webagent_optionpack\config\WebAgent.conf
Note: Federation Web Services is a Java component, so the Windows paths must contain double backslashes.
 - UNIX example:
web_agent_optionpack_home/config/WebAgent.conf
 - Windows example for the SPS federation gateway
sps_home\proxy-engine\conf\defaultagent\WebAgent.conf
 - UNIX example for the SPS federation gateway
sps_home/proxy-engine/conf/defaultagent/WebAgent.conf
3. Repeat this procedure for each application server where the Web Agent Option Pack is installed.
4. Accept the default values for the rest of the settings in the properties file.

Copy Web Agent Option Pack Libraries to WebSphere

Copy the Web Agent Option Pack library files on System 2 and System 5.

Follow these steps:

1. Copy the following files from the directory *\webagent_option_pack\bin*
 - smcommonutil.dll
 - smerrlog.dll
 - smfedclientcomponent.dll
 - smjavaagentapi.dll
2. Place the copied libraries in the following directory:
\WebSphere_home\AppServer\bin

Deploy a Federation Web Services WAR File in WebSphere

To deploy the FWS WAR file

1. Create a WAR file of the Federation Web Services application. The application is installed in:

`\webagent_option_pack\affwebservices\`

For more information about creating a WAR file, see WebSphere documentation.

2. Deploy the WAR file using WebSphere Administrator Console.

For more information, see WebSphere documentation.

Important! If you make subsequent changes to any of the properties files in the `affwebservices` directory, recreate a WAR file and redeploy this file in the application server.

3. From the WebSphere Administrator Console, go to Applications, Enterprise Applications.
4. Select the name of the web services WAR file, such as `affwebservices_war`.
5. On the Configuration tab:

- a. Set the Classloader Mode.

There are two possible modes for class loading:

- Classes loaded with the parent class loader first (default)
- Classes loaded with the local class loader first

The mode you select is implementation-dependent. In releases before 7.0, these modes were named `PARENT_FIRST` and `PARENT_LAST`. See the WebSphere documentation for further information.

- b. Set WAR Classloader Policy to Application.
- c. Save the settings.

6. Test that the Federation Web Services application is working by opening a web browser and entering:

`http://fqhn:port_number/affwebservices/assertionretriever`

where,

fqhn

Defines the fully qualified host name.

port_number

Defines the port number of the server where the Federation Web Services application is installed.

For example:

`http://myhost.ca.com:81/affwebservices/assertionretriever`

If Federation Web Services is operating correctly, the following message appears:

Assertion Retrieval Service has been successfully initialized.

The requested servlet accepts only HTTP POST requests.

This message indicates that Federation Web Services is listening for data activity.

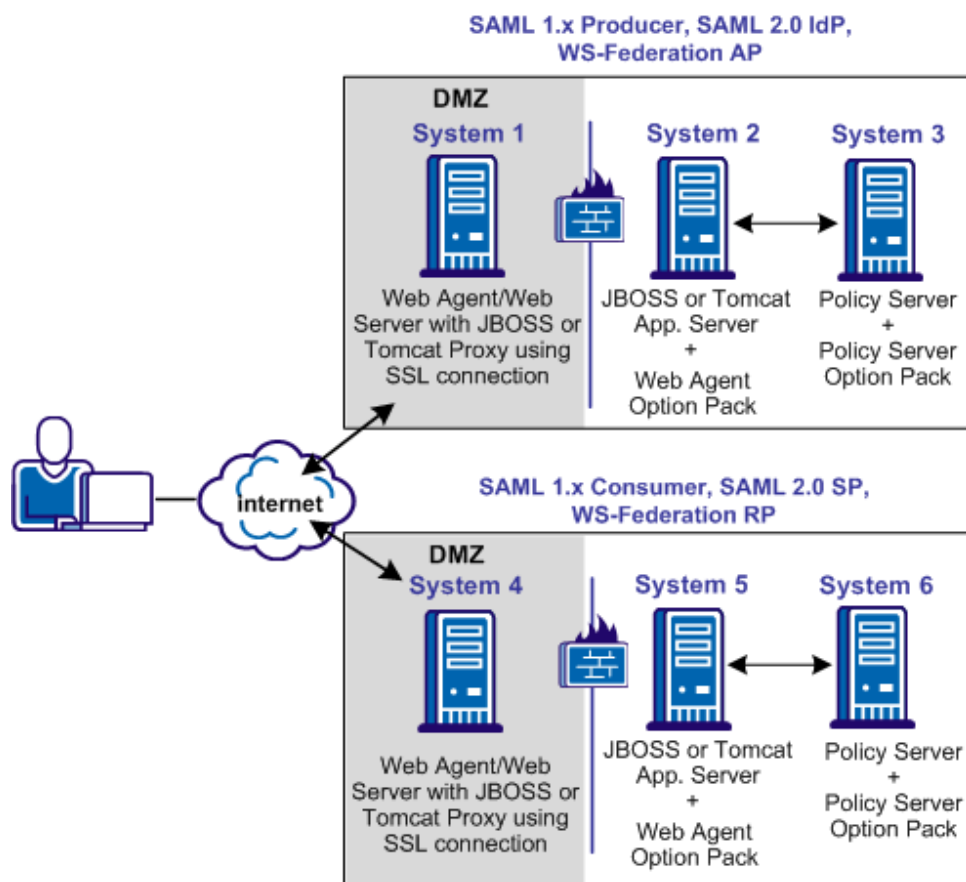
When the Federation Web Services is not operating correctly, a message states that the Assertion Retrieval Service has failed. If the Assertion Retrieval Service fails, verify the Federation Web Services log.

Note: For more information about enabling trace logging for the FWS application, see Trace Logging.

Set Up JBOSS or Tomcat to Work with Federation Web Services

To use a JBoss or Tomcat Application Server in a CA SiteMinder® federated environment, deploy the FWS application on the application server.

The following illustration shows the deployment with JBOSS or Tomcat. On Systems 1 and 4, the Web Agent is installed with the JBOSS or Tomcat Connector for proxy support. SSL is enabled between the proxy and the application server. On Systems 2 and 5, FWS is deployed with the application server by way of the Web Agent Option Pack. On Systems 3 and 6, FWS is deployed with the application server by way of the Policy Server Option Pack.



The process for deploying FWS is as follows:

1. Source the environment script on UNIX operating environments.
2. Create an SmHost.conf file.
3. Create a WebAgent.conf file.
4. Modify the AffWebServices properties file.
5. Deploy the FWS WAR file in the application server.

The following sections detail each step in the process.

Source the Environment Script on a UNIX Operating Environments

After you install the Web Agent Option Pack on a UNIX system, the installation program creates an environment script (`ca-wa-opack-env.sh`).

Source the environment script so the library path of the application server points to the location of the Web Agent Option Pack `/bin` directory.

Source the script by entering the following command at the command line:

```
. ./ca-wa-opack-env.sh
```

Setting the correct library path lets the option pack and the web or application server to work together.

After you source the script, the library path is set. The variable name for the library path differs depending on the operating system. Example of several library paths:

Solaris/Linux

```
LD_LIBRARY_PATH=/webagent_option_pack_home/bin
```

HP-UX

```
SHLIB_PATH=/webagent_option_pack_home/bin
```

AIX

```
LIBPATH=/webagent_option_pack_home/bin
```

Important! The application server startup script can reset the library path. Ensure that the path to the Web Agent Option Pack is the first entry in the path.

The path to the Web Agent Option Pack environment script points to one of the following locations:

- The installation directory of the web agent option pack. The default location is: `/webagent_option_pack_home/bin`.
- The installation directory of the web agent.

If you install the option pack on the same system as the web agent, the script resides in the web agent directory. For any UNIX installation, the default location is `/web_agent_home/bin`.

Create an SmHost.conf File

The FWS application requires the SmHost.conf file. However, the Web Agent Option Pack does not install this file, so you must create it.

1. Create an SmHost.conf file by running smreghost.exe, which is located in the following directory:

/webagent_option_pack/bin

2. Put the SmHost.conf file in the following directory on System 2 and System 5:

/webagent_option_pack/config

Create a WebAgent.conf File

The FWS application requires the WebAgent.conf file. However, the Web Agent Option Pack does not install this file, so you must create it.

1. Copy the WebAgent.conf file from System 1 to the following directory on System 2 and System 5:

/webagent_option_pack/config

where,

webagent_option_pack

Defines the installed location of the Web Agent Option Pack on System 2 and System 5.

2. Modify the WebAgent.conf file as follows:
 - a. Set the EnableWebAgent parameter to YES.
 - b. Modify any other configuration parameters to suit the environment for the FWS application.

The following sample shows a WebAgent.conf file for the FWS application:

```
# WebAgent.conf - configuration file for the Federation Web Services Application
#agentname="agent_name, IP_address"
HostConfigFile="/webagent_option_pack_home/config/SmHost.conf"
AgentConfigObject="agent_config_object_name"
EnableWebAgent="YES"
```

Modify the FWS Properties File

The AffWebServices.properties file contains all the initialization parameters for Federation Web Services. For deploying FWS, set only the parameter that specifies the location of the WebAgent.conf file.

Follow these steps:

1. Navigate to the AffWebServices.properties file. Locate this file in the following directory:
web_agent_optionpack_home/affwebservices/WEB-INF/classes
2. Set the AgentConfigLocation parameter to the location of the WebAgent.conf file at each partner site.
 - Windows example:
C:\Program Files\CA\webagent_optionpack\config\WebAgent.conf
Note: Federation Web Services is a Java component, so the Windows paths must contain double backslashes.
 - UNIX example:
web_agent_optionpack_home/config/WebAgent.conf
 - Windows example for the SPS federation gateway
sps_home\proxy-engine\conf\defaultagent\WebAgent.conf
 - UNIX example for the SPS federation gateway
sps_home/proxy-engine/conf/defaultagent/WebAgent.conf
3. Repeat this procedure for each application server where the Web Agent Option Pack is installed.
4. Accept the default values for the rest of the settings in the properties file.

Prerequisites to Deploy an FWS WAR File in JBoss Server

The affwebservices war file fails to deploy in JBoss 6.1, by default.

To deploy the affwebservices war file, do the following steps:

1. Update the affwebservices deployment descriptor file.
2. Create a module.xml file.

Update the Affwebservices Deployment Descriptor File

Edit the affwebservices deployment descriptor to add a few <context-param> entries.

Follow these steps:

1. Open the affwebservices deployment descriptor file (*webagent_option_pack/affwebservices/WEB-INF/web.xml*) in a text editor.
2. Add the following lines after the <web-app> tag and before the <servlet> tag:

```
<context-param>
<param-name>resteasy.scan</param-name>
<param-value>>false</param-value>
</context-param>
<context-param>
<param-name>resteasy.scan.resources</param-name>
<param-value>>false</param-value>
</context-param>
<context-param>
<param-name>resteasy.scan.providers</param-name>
<param-value>>false</param-value>
</context-param>
```

3. Save and exit the text editor.

Create a module.xml File

To deploy the war file, create a directory in the JBoss container, associate the jars files, and create a module.xml file that describes the jar files.

Follow these steps:

1. Create a directory structure as follows under the <JBOSS- _HOME>\modules location:

```
com\rsa\cryptoj\main
```

2. Copy the cryptoj.jar, certj.jar, and sslj.jar files from the following location:

```
<NETE_WA_ROOT>\affwebservices\WEB-INF\lib\
to
```

```
<JBOSS-HOME>\modules\com\rsa\cryptoj\main\
```

3. Create a module.xml file in the following location:

```
<JBOSS-HOME>\modules\com\rsa\cryptoj\main
```

4. Add the following to the xml file:

```
<?xml version="1.0" encoding="UTF-8"?>
<module xmlns="urn:jboss:module:1.0" name="com.rsa.cryptoj">
  <resources>
    <resource-root path="cryptoj.jar"/>
    <resource-root path="certj.jar"/>
    <resource-root path="sslj.jar"/>
  </resources>
  <dependencies>
    <module name="sun.jdk"/>
    <module name="javax.api"/>
  </dependencies>
</module>
```

5. Restart the JBoss server.

You can deploy the affwebservices war file in the JBoss server.

Deploy an FWS WAR File in JBoss or Tomcat

Follow these steps:

1. Open a command window and navigate to the affwebservices directory, which is located in:

/webagent_option_pack/affwebservices/.

2. Create a WAR file by entering the command:

```
jar cvf affwebservices.war *
```

For more information about deploying a Web application, see the documentation for your application server.

3. Copy the affwebservices.war file to the appropriate server location:

JBoss

JBoss_home/server/default/deploy/

JBoss_home is the installed location of the JBoss application server.

Note: For JBoss EAP 6.1, use the admin console to deploy the affwebservices.war file.

Important! For JBoss, deploy affwebservices in an exploded state. Refer to <https://access.redhat.com/knowledge/solutions/34813>.

Tomcat

Tomcat_home/webapps

Tomcat_home is the installed location of the Tomcat application server.

4. Restart the application server.
5. After the server has restarted, access the JBOSS or Tomcat Administrative Console. All the services that affwebservices supports appear on the main Console page.
6. Test that the FWS application is working by opening a web browser and entering the following URL:

`http://fqhn:port_number/affwebservices/assertionretriever`

fqhn

Represents the fully qualified host name and

port_number

Specifies the port number of the server where the Federation Web Services application is installed.

For example:

`http://myhost.ca.com:81/affwebservices/assertionretriever`

If FWS is operating correctly, the following message is displayed:

Assertion Retrieval Service has been successfully initialized.
The requested servlet accepts only HTTP POST requests.

This message indicates that FWS is listening for data activity. The FWS application is now deployed for the application server.

When FWS is not operating correctly, a message states that the Assertion Retrieval Service has failed. If there is a failure, review the FWS log.

Note: For more information about enabling trace logging for the FWS application, see Trace Logging.

Chapter 5: Unattended Mode Installation

This section contains the following topics:

[How to Run an Unattended Mode Installation](#) (see page 53)

How to Run an Unattended Mode Installation

After the Web Agent Option Pack is installed on one system, you can automate installations on other Web or application servers using the Web Agent Option Pack's unattended mode installation. An unattended mode installation lets you install or uninstall the Web Agent Option Pack without any user intervention.

To run an unattended mode installation, you must:

1. Run an installation in GUI or Console mode to install the unattended installation properties file.
2. Modify the properties file.
3. Run the unattended installation.

This chapter covers the following topics:

- [Prepare an Unattended Mode Installation](#) (see page 53)
- Run an Unattended Mode Installation
- Stop an Unattended Mode Installation in Progress

Prepare an Unattended Mode Installation

An unattended mode installation uses the `ca-wa-opack-installer.properties` file to propagate the Option Pack installation set-up across all servers in your network. You can define the installation parameters in the properties file then copy the properties file and the Web Agent Option Pack executable file to any applicable server in your network. After the files are copied, you can run an unattended installation.

To prepare an unattended mode installation

1. Run an initial installation of the Web Agent Option Pack in GUI or Console mode.
This installation will install the `ca-wa-opack-installer.properties` file.

2. Open the `ca-wa-opack-installer.properties` file, and if needed, modify the settings. The properties file is in the directory `web_agent_opack_home/install_config_info`.

USER_INSTALL_DIR

Specifies the Web Agent Option Pack's installation location.

USER_REQUESTED_RESTART

Specifies restarting the machine after installation.

Note: These default values were saved in the properties file during the initial installation.

3. Save the properties file.

Run an Unattended Mode Installation

You can run an unattended mode installation.

Follow these steps:

1. Be sure that you have completed the preparation steps.
2. Copy the following files to a local directory on the system where you want to install the option pack.
 - Web Agent Option Pack executable or binary
 - `ca-wa-opack-version-windows_platform.exe`
 - `ca-wa-opack-version-operating_system.bin`
 - `ca-wa-opack-installer.properties`
3. Open a console window and navigate to the location where you copied the files.
4. Execute the following command:

```
webagent_option_pack_executable -f properties_file -i silent
```

Windows example:

```
ca-wa-opack-12.52-win32.exe -f ca-wa-opack-installer.properties -i silent
```

Solaris example:

```
./ca-wa-opack-12.52-sol.bin -f ca-wa-opack-installer.properties -i silent
```

Note: These examples assume that you are running the installation from the directory containing the executable and properties files. If you are not running the installation from this directory, specify the full path to these files. If there are spaces in the directory path, enclose the entire path in quotation marks.

The progress of the unattended installation is displayed. When the installation is complete, the command prompt is redisplayed.

5. Determine that the installation completed successfully by viewing the log file `CA_SiteMinder_Option_Pack_12.52_for_Web_Agent_InstallLog.log`. This file is located in the directory `web_agent_opack_home/install_config_info`.

Stop an Unattended Mode Installation in Progress

Follow these steps:

Windows

Open the Windows Task Manager, and stop the following two processes:

- `ca-wa-opack-12.52-win32.exe`
- `wa_option_pack.exe`

UNIX

Type `Ctrl+C`.

Chapter 6: Uninstall the Web Agent Option Pack

This section contains the following topics:

[Uninstall the Web Agent Option Pack from Windows Systems](#) (see page 57)

[Uninstall the Web Agent Option Pack from UNIX Systems](#) (see page 57)

Uninstall the Web Agent Option Pack from Windows Systems

Uninstall the Web Agent Option Pack to remove it from your Windows system.

Follow these steps:

1. Stop the web server.
2. Exit any applications that are running.
3. Open the Windows Control Panel.
4. Double-click Add or Remove Programs.
5. Select CA CA SiteMinder® Option Pack for Web Agent.
6. Click Remove.
7. Confirm the action.
8. Click Uninstall.
9. Stop and restart the web server.

Uninstall the Web Agent Option Pack from UNIX Systems

You can uninstall the Web Agent Option Pack from UNIX systems in GUI or console mode. To uninstall in console mode, execute the Option Pack binary file with the command argument "-i console".

Follow these steps:

1. Stop the Web server, and exit any applications that are running.
2. Open a console window.

3. Add the location of the JDK to the PATH environment variable, as follows:

```
PATH=/jdk_home/bin:${PATH}
export PATH
```

Note: *jdk_home* is the location of the JDK. This step eliminates the error message which states that the Java virtual machine cannot be found.

4. Navigate to the installed location of the Web Agent.

Example: /opt/ca/webagent/

5. At the prompt, type one of the following commands:

GUI Mode: ./ca-wa-opack-uninstall.sh

Console Mode: ./ca-wa-opack-uninstall.sh -i console

6. Review the dialog box that prompts you to confirm the removal of the Option Pack; then click Uninstall.

The Web Agent Option Pack is now removed from your system.

Chapter 7: Upgrade the Web Agent Option Pack

This section contains the following topics:

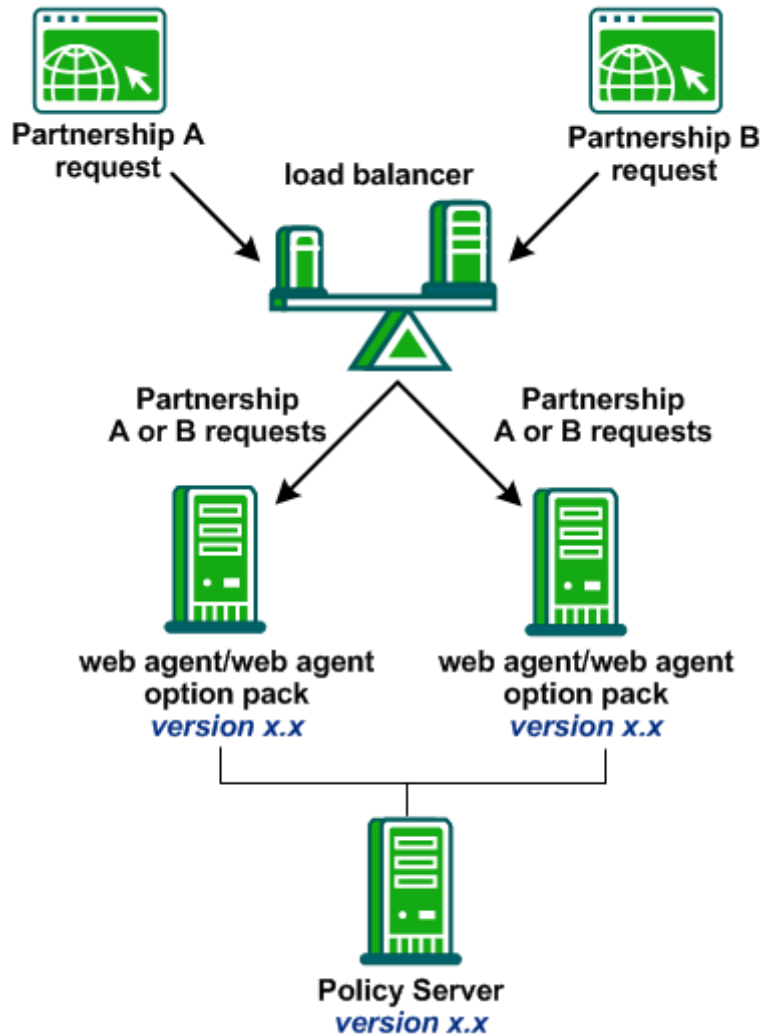
[Mixed-Version Upgrade Considerations](#) (see page 59)

[Perform an Option Pack Upgrade](#) (see page 62)

Mixed-Version Upgrade Considerations

To simplify migrations and upgrades, the Web Agent Option Pack can operate with Policy Servers of different, compatible versions. This mixed-version support allows you to keep Web Agents at their current version while you upgrade Policy Servers and other Web Agents. However, mixed-version environments are not recommended for permanent use because they limit the federation functionality to that of the lesser of the two components.

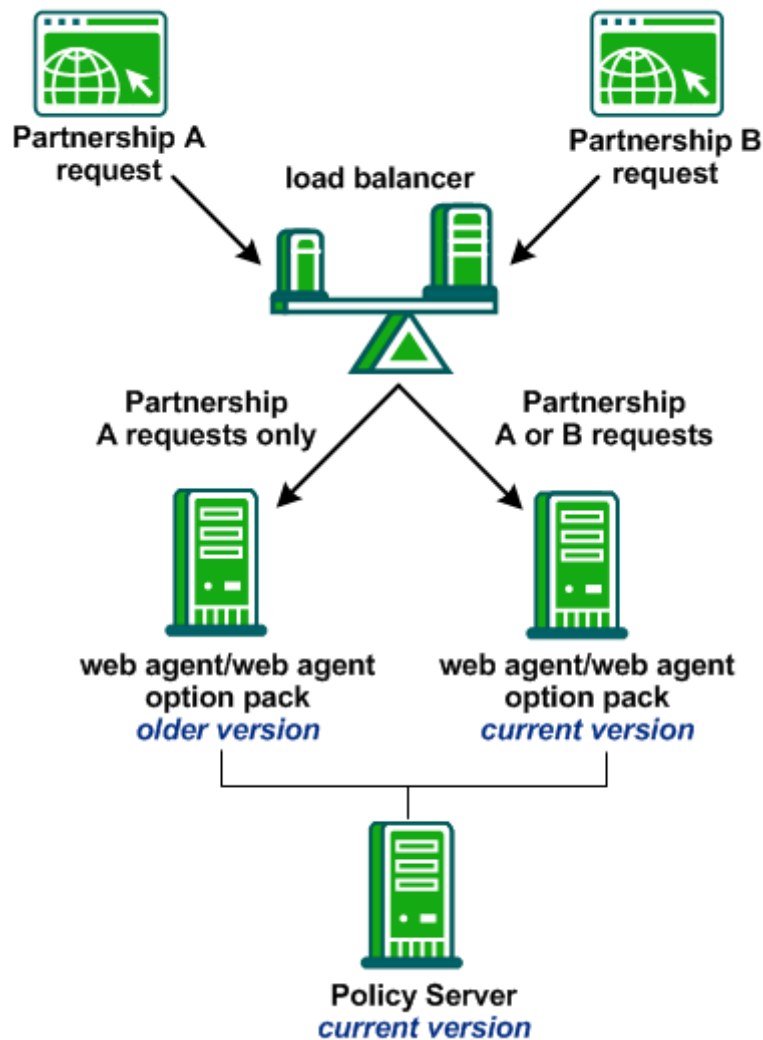
Version-dependent functional limitations exist when upgrading environments that use hardware load balancers for distributing requests between web servers. Consider a deployment where two Web Agents with Web Agent Option Packs and a Policy Server are at the same older version, as shown in the following diagram:



During a rolling upgrade, the administrator upgrades the Policy Server and only one Web Agent and Option Pack to 12.52. The upgraded agent and option pack supports SAML 2.0 user consent at the IdP. Partnership B is reconfigured to require user consent at the IdP and Partnership A security configuration remains unchanged.

Partnership A functionality continues to work regardless of the option pack to which it is routed because it is not using new functionality. However, Partnership B requests (which require user consent at the IdP) fail whenever the load balancer directs the request to the older version option pack.

To prevent Partnership B request failures until both web agents are upgraded, the administrator must configure the load balancer to route Partnership B requests solely to the current option pack. This configuration is shown in the following diagram:



More information:

[Version Compatibility](#) (see page 12)

Perform an Option Pack Upgrade

Consider the following points before upgrading the Web Agent Option Pack:

- The Web Agent Option Pack version must be compatible with the Policy Server version. To learn which Policy Server versions the Web Agent Option Pack is compatible with, see the CA SiteMinder® Platform Support Matrix.
- When different compatible versions of the Web Agent Option Pack and Policy Server are mixed, federation functionality is limited to that of the lesser of the two components.
- If the Web Agent and Web Agent Option Pack are installed on the same system, they must be the same version, including the Service Pack and CR version.

Important! When upgrading, the program automatically creates new back-up configuration files and overwrites the existing configuration files.

To upgrade the Web Agent Option Pack

1. Run the Web Agent Option Pack installation program. The installation program can be run as an upgrade.
For more information, see the [installation instructions](#) (see page 15).
2. Follow the prompts to upgrade the system.

More information:

[Version Compatibility](#) (see page 12)

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