SOA Software: Troubleshooting Guide for WebSphere Application Server Agent

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Troubleshooting Guide for WebSphere Application Server Agent
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Note: This document is supplementary to the *SOA Software Troubleshooting Guide for Agents*, which includes general troubleshooting information for Agents. This document includes troubleshooting information unique to the WebSphere Application Server Agent.

This document provides information that might be useful to you in ensuring a successful installation of the WebSphere Application Server Agent. It includes the following troubleshooting and reference information unique to this Agent:

- Version Compatibility
- Setting Up the WebSphere Application Server Agent
- Log Files for WebSphere Application Server Agent
- Troubleshooting Issue/Resolution Information for WAS Server Agent

Version Compatibility

This section provides basic compatibility information for the WAS Agent, including:

- Application Server Compatibility
- JRE/JDK Compatibility

Application Server Compatibility

The WebSphere Application Server Agent application is compatible with WebSphere Application Server version 8.5.0.1. For more detailed information on application server compatibility, refer to the Installation Guide.

JRE/JDK Compatibility

The WebSphere Application Server Agent application is compatible with JDK 1.6.x versions.

Setting Up the WebSphere Application Server Agent

The WebSphere Application Server embedded Agent must be correctly installed and configured so that a Policy Manager instance can manage the services. This includes the following key steps:

- Install the WebSphere Application Server Agent software as described in the Installation Guide.

- Install EAR file to all instances: When you use the SOA Software Configure Container Instance Wizard to define the SOA Container for the WebSphere Application Server, an Enterprise Archive (EAR) file is created and copied into the <AGENT_HOME>\deployments\WebSphere folder.

    This file contains the bootstrap code to load the SOA Service Manager Container and any installed features such as the WebSphere Agent or SOA Delegate. The EAR file must be installed to each WebSphere Application Server instance that is running applications that need WebSphere Application Server Agent processing.

    In cluster environments, the EAR file must be deployed separately on every node in the cluster.

- Copy the SOA Software Agent shared libraries to the WebSphere Application Server classpath as described in the WebSphere Application Server Agent Installation Guide.

- After the WebSphere Application Server Agent installation is complete, the Administrator must update the web service EAR/WAR file with a servlet filter. The managed EAR/WAR file will include the SOA Software Servlet Filter that invokes the WebSphere Agent to manage the web services. The WebSphere Agent intercepts all HTTP requests via the Servlet Filter.

- The final step is to register the physical services in the Policy Manager Management Console and host the services in the Websphere Application Server SOA Container. After this configuration is complete, you will be able to attach policies to the managed physical services for monitoring or security.

Log Files for WebSphere Application Server Agent

This section provides information on where you can find log files to help troubleshoot issues with the WebSphere Application Server Agent:

- **JVM logs** (SystemOut.log and SystemErr.log) are located in the WebSphere Application Server file system at this location:

    <WebSphere_Root>\AppServer\profiles\<profile>\logs\<server_name>

- **Policy Manager log files** are in this location:

    <PM_HOME>\sm60\instances\<PM_INSTANCE>\log

- **Agent container logs** are in this location:

    <AGENT_HOME>\sm60\instances\<AGENT_INSTANCE>\log

Troubleshooting Issue/Resolution Information for WAS Server Agent

This section includes explanations and remedies for the following troubleshooting issues relating to the WebSphere Application Server Agent:

- Incompatible JRE/JDK
- Cannot Access Agent Admin Console

- Unable to Register Agent Container in Policy Manager 6.x Console
- Installation/Configuration Issues in a Cluster

Incompatible JRE/JDK

The WebSphere Application Server Agent application is compatible only with JDK 1.6.x versions. If you experience bundle startup issues in the Application Server console or Agent instance logs, it might be because of version incompatibility.

If you experience bundle startup issues, check the JVM logs (SystemOut.log and SystemErr.log) for any errors related to Agent application deployment/startup. The logs are at this location:

```
<WebSphere_root>\AppServer\profiles\<profile>\logs\<server_name>
```

Cannot Access Agent Admin Console

If there is a console access issue, it could be because of one of the following issues:

- HTTP Port Mismatch with Application Server Access Port
- Incorrect Context Path
- Incorrect Virtual Host Configured in WebSphere Application Server

HTTP Port Mismatch with Application Server Access Port

If you think there is an HTTP port mismatch, check that these two values match:

- The value for org.osgi.service.http.port in the system.properties file in this location:

  ```
  <AGENT_HOME>\sm60\instances\<AGENT_INSTANCE>
  ```

- The application server port on which it is running. The WebSphere Application Server runs on the following port:
  - For HTTP: 9080
  - For HTTPS: 9443

Incorrect Context Path

Verify that the context path set up in the Admin Console matches the context path used to deploy the SOA container application inside the WebSphere Application Server.

Incorrect Virtual Host Configured in WebSphere Application Server

Check to make sure that the URL and port number combination for the Admin Console URL are part of the virtual host that is associated with the SOA container application inside the WebSphere Application Server.

Unable to Register Agent Container in Policy Manager 6.x Console

If there is an issue with the metadata URL/metadata path, check the following, and fix as needed:

- Make sure that the metadata URL/metadata path provided when creating the Agent container are valid.
- Make sure that the hostname and port are correct for the machine where the application server resides.

Installation/Configuration Issues in a Cluster

For any issues with a cluster scenario, refer to the Installation Guide. Check the installation steps and make sure they were followed correctly.

Note: The Agent application is copied in all the nodes of the cluster. In a clustered environment, the SOA container installation directory is shared on a network and is mapped to a local drive on each WebSphere Application Server node machine.

Verify Whether Agent Is Running

If you are not sure whether the Agent is running, here are some steps you can take to help resolve:

- Check if all the bundles were started by looking at the latest log in the **SystemOut.log** file in this location:

  <WebSphere_root>/AppServer/profiles/<profile>/logs/<server_name>

- Check the number of bundles message in the OSGI console window.
- Check the container status in the Policy Manager management console. The container status will show whether the Agent container is running.
- Send a request to a managed service. If you do not receive an error response, the Agent is running. If there is an error, you will see the following response message:

  SOA Management is not running, service is blocked.

Provider Application Fails to Start after Adding Agent Filter

If the provider application fails to start after adding an Agent filter, it might be because shared JAR files used by the Agent are missing in the classpath of the provider application.

Shared JAR files used by the Agent must be added to the classpath of the application server before deploying/managing any web service provider.

For more information on the JAR files, refer to the Installation Guide.

These JAR files are available in the classpath of every application deployed in the application server instance. Copy the JAR files to the shared location and restart the application server instance.

A typical location for these files for the WebSphere Application Server is:

<WebSphere_root>/AppServer/lib/ext.