SOA Software Intermediary for Microsoft®: Install Guide

SOA | **software™**

SOA Software Intermediary for Microsoft

Install Guide
SOAIM_70
October 2014

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Contents

Chapter 1 | Introduction

This guide provides instructions for installing and configuring Intermediary for Microsoft version 7.0, including applicable configuration in Policy Manager.

This chapter includes:

- [Intermediary for Microsoft: Product Overview](#)
- [Documentation Summary](#)
- [Customer Support](#)

Intermediary for Microsoft: Product Overview

Intermediary for Microsoft® is an API and SOA network intermediary tuned for the needs of the Microsoft platform. It provides key capabilities across a Microsoft services infrastructure, helping Microsoft customers manage their API infrastructure and allowing them to process their Microsoft-based transaction traffic in a Microsoft environment.

The Intermediary for Microsoft product is part of the SOA Software Platform, and runs with the SOA Software Policy Manager. It helps customers with services that run in a Microsoft environment, and also enables interoperability between non-Microsoft environments and Microsoft environments.

Once installed, set up, and configured, Intermediary for Microsoft will process your traffic and route it to your designated backend systems.

Key Features

Intermediary for Microsoft provides the following key features:

- **Policy-Driven Security**—Allows you to secure a Microsoft API infrastructure using native Microsoft components, including the Microsoft security technology you are already using. For example, you can use Intermediary for Microsoft to authenticate and authorize the Microsoft Windows user involved in a business transaction.

- **Monitoring**—Allows you to collect transaction data and metrics for all the transactions flowing through your API infrastructure without installing additional software into your Microsoft services. It can smoothly work with Microsoft-based business transaction data which is subject to proprietary Microsoft security and encoding technology.

- **Routing**—Routing Microsoft business transactions requires the ability to inspect the contents of Microsoft messages and make routing decisions before the message arrives at its intended destination. Intermediary for Microsoft works smoothly with the proprietary security and encoding technology used by Microsoft APIs and SOA services, so that it can inspect and therefore route Microsoft transactions.

- **Mediation**—Offers two categories of mediation: Encoding-based mediation, such as HTTP to NET.TCP, and security-based mediation, such as HTTP basic authentication to WS-HTTP. For example, a front-end application might use certain encoding and security protocols to communicate

with a back end that uses a different set of protocols. With Intermediary for Microsoft, you can ensure that the front end and back end can interoperate.

Documentation Summary

The table below provides a summary of the information in this document and how it's organized.

This chapter…	Provides this information…
Introduction	Documentation overview, high-level product summary, customer support information.
System Requirements and Prerequisites	System overview, prerequisites, system requirements, supported versions summary.
Installation	Installation overview, installation instructions.
Configuration	Instructions for configuring Intermediary for Microsoft and also related configuration in Policy Manager.
Clustering Intermediary for Microsoft	Setting up a cluster for Intermediary for Microsoft.
Updating and Uninstalling	Updating to a later release, uninstalling the product.
Troubleshooting	Troubleshooting errors.

Knowledgebase

SOA Software Customer Support site includes an "Intermediary for Microsoft" Knowledgebase that includes articles and "How To" topics relating to the product including:

- Intermediary for Microsoft support matrix
- How Do I Host a NET.TCP Service on Intermediary for Microsoft?
- What Do Each of the Ready to Use Samples Do?
- How Do I Get Started with Ready to Use Samples?

The Knowledgebase is continually updated with new and useful information, so check back often.

Customer Support

SOA Software offers a variety of support services by email and phone. Support options and details are listed below.

Support Option	Details
Email	- support@soa.com - The Support section of the SOA Software website at https://support.soa.com/support provides an option for emailing product-related inquiries to our Support team.
Phone	1-866-SOA-9876 (1-866-762-9876)
Support Site	The Support section of the SOA Software website at https://support.soa.com/support includes many product-related articles and tips that might help answer your questions.
Documentation Updates	We update our product documentation for each version. If

Support Option	Details
	you're not sure you have the latest documentation, send an email request to support@soa.com. Specify the product and version you're using.

For more information, visit https://support.soa.com/support/.

Chapter 2 | System Requirements and Prerequisites

This chapter provides information on the hardware and software you'll need to successfully install and run Intermediary for Microsoft. It includes the following sections:

- System Overview
- Prerequisites
- System Requirements
- Supported Versions Summary

System Overview

Intermediary for Microsoft acts as a gateway between your incoming traffic and your Microsoft-based backend systems. All traffic is channeled via Intermediary for Microsoft, which applies security, mediation, routing, and monitoring to the traffic.

Outgoing traffic is channeled via Intermediary for Microsoft in the same way, with the same benefits.

Intermediary for Microsoft runs with SOA Software Policy Manager, leveraging the advantages of Policy Manager in a Microsoft environment.

Prerequisites

To install the Intermediary for Microsoft product, you must first have the following software products installed:

- SOA Software Policy Manager (for certified versions, see *Supported Versions Summary* below)
- A relational database (for certified products and versions, see *Supported Versions Summary* below)
- A Windows Server machine

System Requirements

In order to run the Intermediary for Microsoft product, your installation setup should accommodate the following system requirements at a minimum:

- A dedicated 2-CPU Windows system running Windows Server 2008 R2, Windows Server 2012, or Windows Server 2012 R2
- 2 GB RAM
- 40 GB disk drive

Supported Versions Summary

The table below provides a summary of core and related products and the versions that are required or supported.

The information below applies to the Intermediary for Microsoft product, version 7.0, only.

Note: If your configuration does not match the certified versions listed for each product below, please contact SOA Support Customer Support before proceeding.

Product	Certified Versions
SOA Software Policy Manager	SOA Software Policy Manager release 7.1.5 *Note: This is the Policy Manager 7.1 GA executables on the support site are labelled with build number 7.1.17.*
Microsoft Windows Server	Windows Server 2008 R2 (IIS 7.5) Windows Server 2012 (IIS 8.0) Windows Server 2012 R2 (IIS 8.5)
Microsoft IIS	IIS 7.5, 8.0, 8.5
Microsoft .NET	Microsoft .NET 4.0 Microsoft .NET 4.5
Microsoft SQL Server	SQL Server 2008, 2012, 2014
Oracle Database	Version 10g and later
Community Manager	7.1.4

Chapter 3 | Installation

This chapter provides an overview of the installation process, and includes step-by-step procedures to walk you through installation of Intermediary for Microsoft. It includes:

- Installation Overview
- Installing Intermediary for Microsoft
- Installation Folders
- Installing the SOA Software Intermediary for Microsoft Schema Update
- Installing SOA Software Custom Policy Framework
- Installing SOA Software Intermediary for Microsoft Policy Manager Policy
- Installing SOA Software Intermediary for Microsoft Policy Provisioning

Note: The installation instructions assume that you have completed the prerequisites listed in Chapter 1, including installing and configuring Policy Manager.

Installation Overview

From a high level, the steps you'll take to get up and running with the Intermediary for Microsoft product are as follows:

1 Install Intermediary for Microsoft (this chapter).

2 Install the Policy Manager database schema for Intermediary for Microsoft (this chapter).

3 Configure a container in Intermediary for Microsoft (Chapter 4).

4 Configure the corresponding container in Policy Manager (Chapter 4). Every container in Intermediary for Microsoft will map to a container in Policy Manager.

5 Configure additional containers as needed (Chapter 4).

6 Optional: set up an Intermediary for Microsoft cluster in Policy Manager (Chapter 5).

7 Optional: add a listener to the Intermediary for Microsoft cluster (Chapter 5).

Installing Intermediary for Microsoft

Before you install, make sure you have all the hardware and software prerequisites in place, including an operational Policy Manager installation and at least one dedicated 2-CPU machine for Intermediary for Microsoft.

If you haven't already done so, download the Intermediary for Microsoft executable from the SOA Software support site at https://support.soa.com/support, in the Downloads section.

Note: Before starting the installation process, make sure you are logged in as Administrator. You must run the installation as Administrator. If necessary, follow the steps in To run the installation as an Administrator in the Troubleshooting chapter, and then continue this procedure from Step 2.

1   Double-click the Intermediary for Microsoft MSI installation file
    (SOA_Software_Intermediary_for_Microsoft_NET40_7.x.x.) to start the installation. The
    Intermediary Setup Wizard starts, as shown below. Click **Next**.
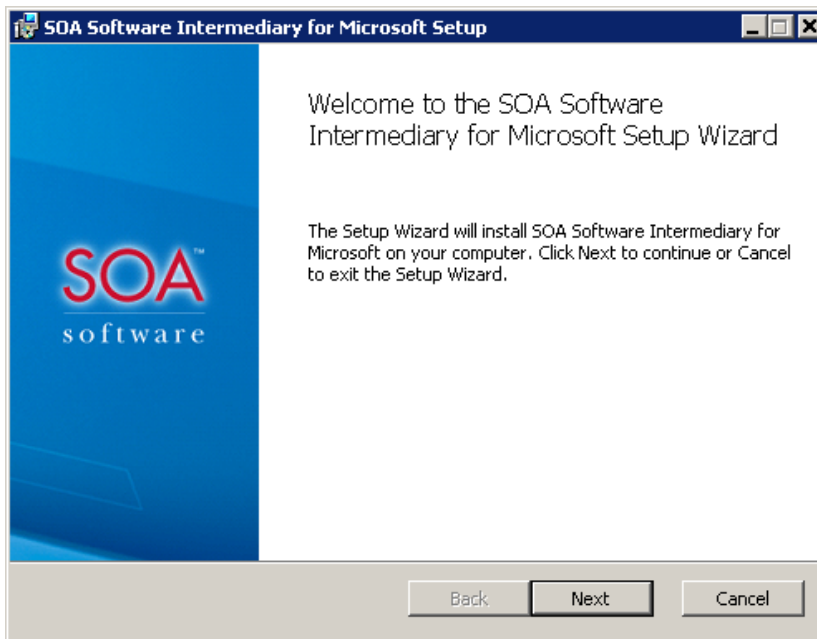
2   Review the end-user license agreement and accept the terms, and then click **Next**.

3   Accept the default installation location or change the location, and then click **Next**.

4   At the "Ready to Install" prompt, click **Install**. The program files are installed.

5   When all is complete, you'll see a completion summary. Click **Finish**.

Intermediary for Microsoft is now installed, and you are ready to start configuration.

Installation Folders

Installation of the Intermediary for Microsoft product adds a set of folders and files to the installation
machine.

This section provides details about these folders and files, including:

- Folder Structure Overview
- Folder Contents

Folder Structure Overview

The default installation location is:

\Program Files (x86)\SOA Software\Intermediary for Microsoft

You can change the installation location; however, it's best to accept the default. This approach
facilitates the product upgrade and maintenance process.

Within the Intermediary folder you'll see the folder structure shown below:
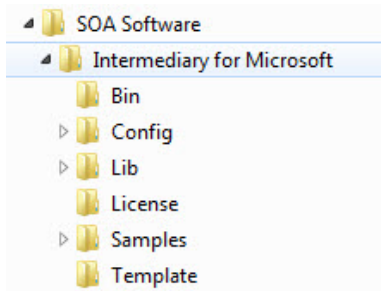
Once you've configured at least one container, the folder structure will include additional folders:

- Config/ContainerMetadata

- Websites/{ContainerName} (one folder for each container)

The additional Config/ContainerMetadata and Websites folders contain the configuration information for your containers.

Folder Contents

The table below provides a general description of each installation folder, including its purpose and contents.

This folder…	Contains this type of information…
Bin	Binary files. This is the core code for the program.
Config	Configuration files. These files help to change the behavior of the product. In some cases, you might edit these files to configure more advanced aspects of the product after installation.
Config/ContainerMetadata	When you configure the first container, the ContainerMetadata subfolder is created, and the container metadata file is stored within it. If you create additional containers, metadata files are added to this folder. Each metadata file has the same name as the container it corresponds to.
Lib	Library files containing additional installable features.
License	License information for any third-party software libraries used by Intermediary for Microsoft.
Samples	Artifacts to help show you how to address common use cases with Intermediary for Microsoft. Includes a Ready to Use package.
Template	Files used during deployment, for internal use only; you can ignore the files in this folder.
Websites	This folder isn't created as part of the basic installation, but as a result of post-installation configuration. When you configure the first container, this folder is created, as well as a subfolder for the container. The subfolder has the same name as the container, and contains the IIS metadata for the container in a **web.config** file. If you create additional containers, additional subfolders are created, each with the same name as the container, and each with a **web.config** file containing the IIS metadata.

Installing SOA Software Intermediary for Microsoft Schema Update

This feature makes new schemas available to Policy Manager to be installed via the "Manage Schemas" configuration action and adds support within Policy Manager for SOA Software Intermediary for Microsoft feature set. This step must be performed before creating and configuring a container in the next chapter.

> **Note:** If you do not see this feature in the Available Features list, verify that you have Policy Manager 7.1 with updates up to 7.1.5 installed.

1   In the SOA Software Administration Console, click the checkbox for *SOA Software Intermediary for Microsoft Schema Update*.

2   Click **Install Feature**, and follow the prompts.

3   After the installation is complete, click **Configure**.

4   On the Install Schemas page, select SOA Software Intermediary for Microsoft and then click **Finish**.

5   When the *Installation Complete* screen displays, click **OK** to restart the container.

Installing SOA Software Policy Manager Custom Policy Framework

This feature installs the Custom Policy Framework that is required for Intermediary for Microsoft policies to operate.

1   Navigate to the SOA Software/ Intermediary for Microsoft/Lib folder of your installation and select **com.soa.feature.policy.custom.fw.7.1.xxxxxx.zip**.

2   Extract the SOA Software Policy Manager custom policy ZIP file to the directory where Policy Manager is installed (i.e., pm70).

3   Open the SOA Software Administration Console, click the Repository tab and Refresh .

4   Select the Available Features tab and the *SOA Software Policy Manager Custom Policy Framework* feature.

5   Click **Install Feature**, and follow the prompts.

6   After the installation is complete, click **Configure**, select the *Custom Policy for Policy Manager* schema and click **Finish**.

7   When the *Installation Complete* screen displays, click **OK** to restart the container.

Installing SOA Software Intermediary for Microsoft Policy Manager Policy

This feature installs Policy Manager policy types for Intermediary for Microsoft.

1   Navigate to the SOA Software/ Intermediary for Microsoft/Lib folder of your installation and select **com.soa.microsoft.intermediary.pm.policy.feature.7.0.zip**.

2   Extract the ZIP file to the directory where Policy Manager is installed (i.e., pm70).

3   Open the SOA Software Administration Console.

4   Select the Available Features tab and the *SOA Software Intermediary for Microsoft Policy Manager Policy* feature.

5   Click **Install Feature**, and follow the prompts.

6   When the *Installation Complete* screen displays, click **OK** to restart the container.

7   Refer to http://docs.soa.com/ag/ims_policies/ims_policies.htm for a list of supported policies and documentation.

Installing SOA Software Ready to Use Policy Provisioning

This optional feature includes Policy Provisioning functionality to help streamline the process of adding new policies specific to Intermediary for Microsoft to your Policy Manager instance. It provisions Policy Manager with a variety of policies to enable various Microsoft service patterns.

1   Navigate to the SOA Software/ Intermediary for Microsoft/Lib folder of your installation and select **com.soa.microsoft.readytouse.policy.provisioning.x.x.x.zip**.

2   Extract the ZIP file to the directory where Policy Manager is installed (i.e., pm70).

3   Open the SOA Software Admin Console.

4   Select the Available Features tab and the *SOA Software Ready to Use Policy Provisioning* feature.

5   Click **Install Feature**, and follow the prompts.

6   When the *Installation Complete* screen displays, click **OK** to restart the container.

Chapter 4 | Configuration

This chapter provides general information and step-by-step instructions for configuration tasks you'll have to perform, in Intermediary for Microsoft and Policy Manager, to get your system up and running. It includes:

- Configuring Windows Server

- Creating a New Container in Intermediary for Microsoft

- Completing the Container Configuration in Intermediary for Microsoft

- Adding a Listener

- Optional: Enabling Active Directory Delegation

Configuring Windows Server

After installation, you'll need to modify your Windows Server settings so that Intermediary for Microsoft can work properly.

This section includes configuration steps for:

- Windows Server 2008 R2 (for IIS 7.5)

- Windows Server 2012 (for IIS 8.0) and Windows Server 2012 R2 (for IIS 8.5)

To configure Windows Server 2008 R2 (for IIS 7.5)

1   Go to the Control Panel on your machine and choose the **Programs and Features**.

2   In Server Manager, choose Turn Windows features on or off, then choose Roles and verify that Web Server (IIS) is installed.

3   In the Common HTTP Features section, make sure the following are enabled:

  – Default Document

  – Directory Browsing

  – HTTP Errors

  – Static Content

  – HTTP Redirection

4   In the Application Development section, make sure the following are enabled:

  – ASP.NET

  – .NET Extensibility

  – ISAPI Extensions

  – ISAPI Filters

5   In the Security section, enable all features.

6   In the Management Tools section, make sure the following are enabled:

    − IIS Management Console

    − IIS 6 Management Compatibility (all features)

7   In Server Manager, choose Features and click Add Features.

8   Install .NET Framework 3.5 Features (all features).

9   Install Windows Process Activation Service (all features).

10 Open up a command prompt (cmd.exe). In the command prompt, go to the C: drive:

```
c:
```

11 At the command prompt, change to the directory for the Microsoft .NET Framework version:

```
cd \ C:\Windows\Microsoft.NET\Framework\v4.0.30319
```

Note: On a 64-bit machine, the path is C:\Windows\Microsoft.NET\Framework64\v4.0.30319.

12 At the command prompt, execute the following:

```
aspnet_regiis.exe -i
```

13 When done, close the command prompt.

To configure Windows Server 2012 (for IIS 8.0) or Windows Server 2012 R2 (for IIS 8.5)

1   Go to Server Manager on your machine and choose Add Roles and Features.

2   In the Add Roles and Features wizard, choose Role-based or Feature-based and then choose Server Selection.

3   Choose Server Roles.

4   Make sure Web Server (IIS) is installed.

5   In the Web Server (IIS) Installed > Web Server Installed section, select Common HTTP Features, and make sure the following are enabled:

    − Default Document

    − Directory Browsing

    − HTTP Errors

    − Static Content

    − HTTP Redirection

6   In the Application Development section, make sure the following are enabled:

    − ASP.NET 3.5 and 4.5

    − .NET Extensibility 3.5 and 4.5

    − ISAPI Extensions

    − ISAPI Filters

7   In the Management Tools section, make sure the following are enabled:

    − IIS 6 Management Console

    − IIS 6 Management Compatibility (select IIS 6 – Metabase Compatibiity ONLY)

8   After completing your entries select Install.

9   In Service Manager, choose Features and install the following:

- .NET Framework 3.5 Features (all features)
- .NET Framework4.5 Features (all features)
- Windows Process Activation Service (all features)

10   The Windows Server configuration is now complete.

Creating a New Container in Intermediary for Microsoft

Once you've installed Intermediary for Microsoft, and updated the Policy Manager database schema for Intermediary for Microsoft, your next configuration step is to create a container. Essentially, the container is the home for your services, and runs on the Microsoft IIS web server.

For each container you define in Intermediary for Microsoft, you'll define a corresponding container in Policy Manager. Once you've done that, you'll be able to set up listeners and deploy virtual services.

To Create a New Container in Intermediary for Microsoft

1   From the Windows Programs menu, choose SOA Software | SOA Software Intermediary for Microsoft | Configure Intermediary for Microsoft.
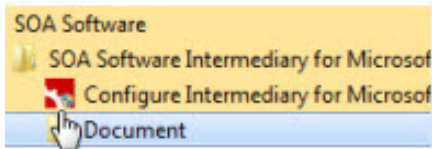
2   At the Welcome page, click **Next**.

3   At the Manage Containers page, click **Add Container**, as shown below.
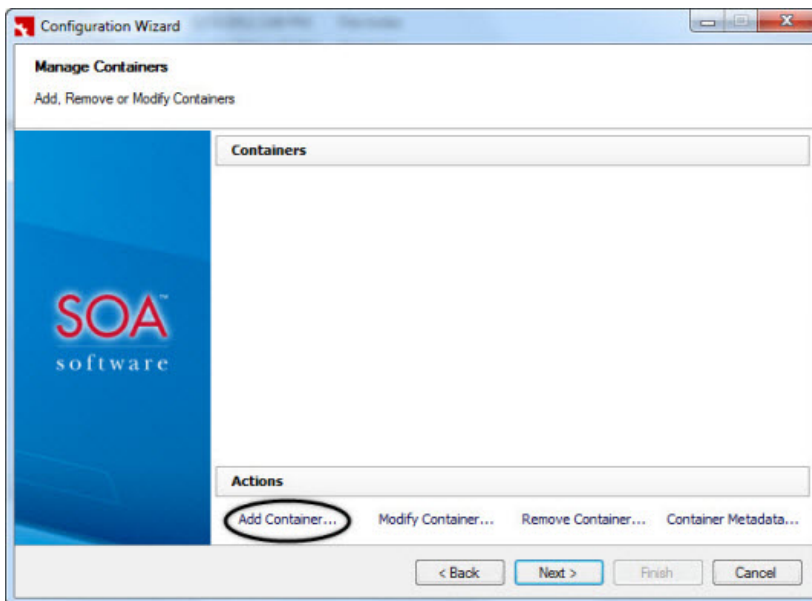
4   At the Add Container page, specify basic values for the container, as shown below.
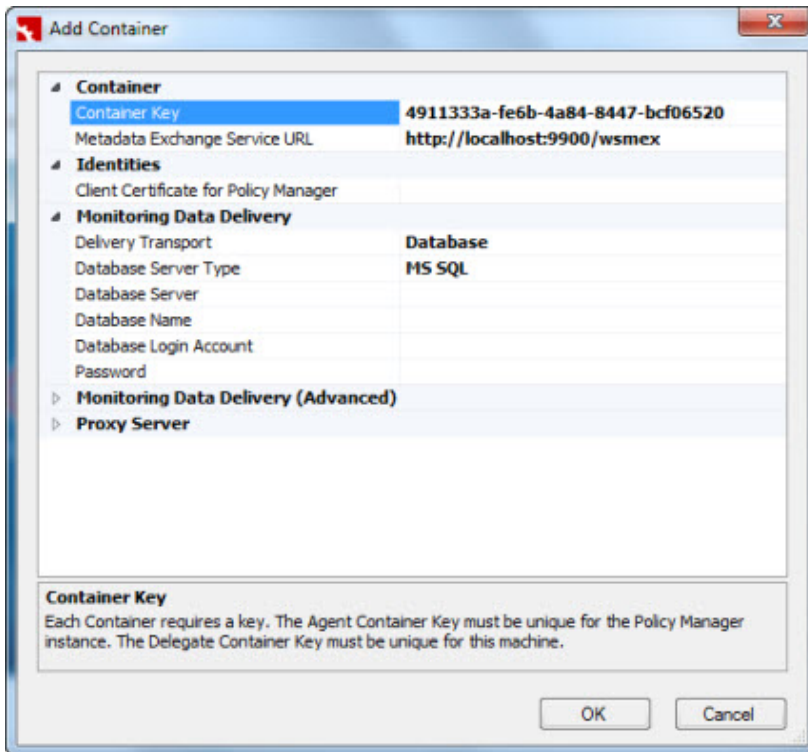
- – **Container Key**: A unique ID for your container. Policy Manager will use this ID to reference your container. A default value is assigned, but you can change it.
- – **Metadata Exchange Service URL**: The URL for the Policy Manager instance that your Intermediary for Microsoft installation is using. Defaults to http://localhost:9900/wsmex; modify the hostname as needed. For example: http://servername.companyname.local:9900/wsmex.

5   Click into the Client Certificate for Policy Manager field, and then click the ellipsis (…) to the right. The Certificate Wizard starts, as shown below.
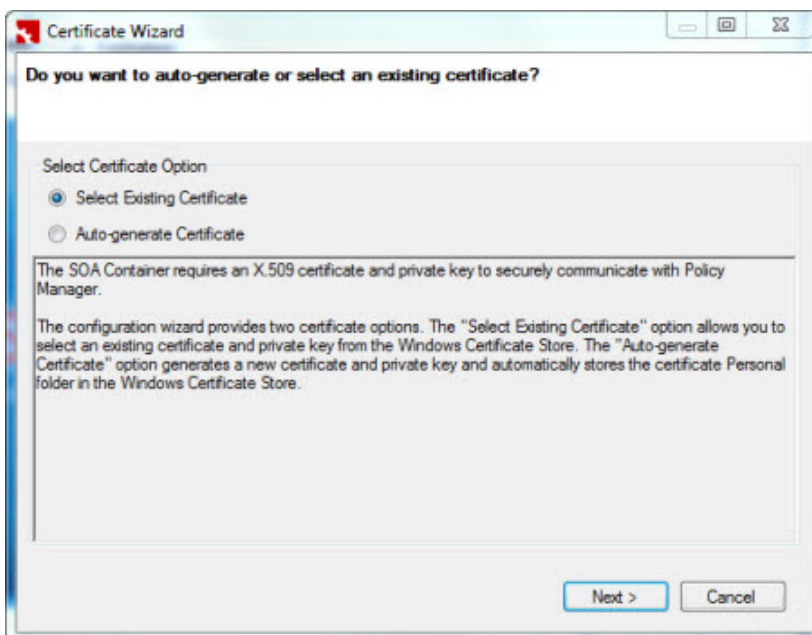
6   Choose **Auto-generate Certificate** and click **Next**. The wizard generates a certificate and private key

with the same name as your container.

7   Specify the Windows users who will have access to read the certificate and keypair. Existing permissions are displayed. If needed, you can add users, or choose a different account from the **Windows User Account** drop-down list.

8   Click **Finish** to save the identity information and return to the Add Container page.

9   In the Add Container page, in the Monitoring Data Delivery section, specify the following:

   – **Database Server**: The hostname of the database server.
   – **Database Name**: The name of the Policy Manager database instance.
   – **Database Login Account**: The UserID of the account being used to log in to the database.
   – **Password**: The password for the database login account.

10 Click **OK**. The container is configured.

Intermediary for Microsoft checks if the container is registered in Policy Manager, and prompts you to register it if it isn't. Intermediary for Microsoft offers the metadata document that contains all the information you'll need to configure Policy Manager, as shown below.
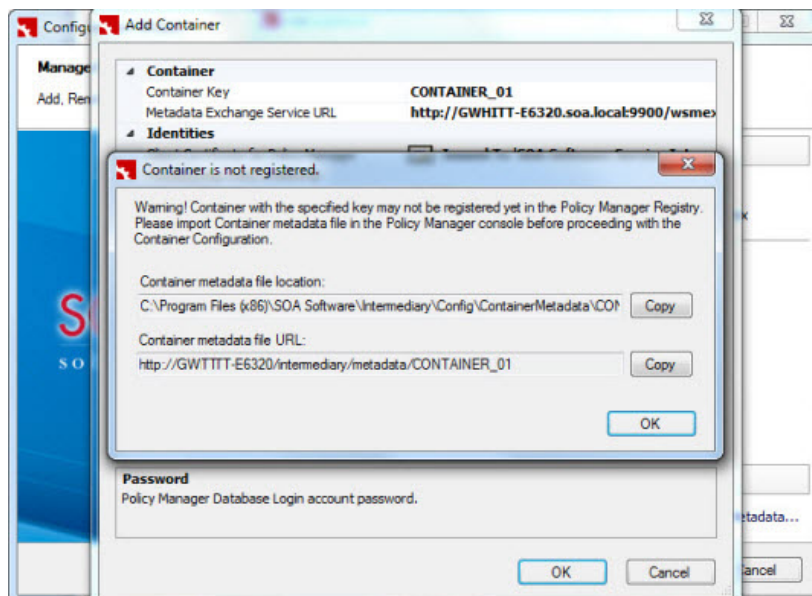
11 Copy the container metadata you'll need to set up the corresponding container in Policy Manager using one of the following options:

   – **Container metadata file location**: The path of the metadata document in the file system.
   – **Container metadata file URL**: A URL for the metadata document.

   Note: The actual metadata content is exactly the same in both cases.

You will use the metadata document to add a container to Policy Manager, as described below. Once you've done that, you'll need to return to the Add Container wizard to finish creating the container in Intermediary for Microsoft.

Adding a Container to Policy Manager

Once you've created a container in Intermediary for Microsoft, you must set up a corresponding container in Policy Manager using the metadata document that Intermediary for Microsoft provides.

When the container is set up in Policy Manager, you'll be able to set up listeners and deploy virtual services.

Before you begin:

- Start up your Policy Manager instance and make sure it's ready for use.

- In Intermediary for Microsoft, copy the metadata document as described in Step 11 of *To Create a New Container in Intermediary for Microsoft* above. Leave Intermediary for Microsoft open so that you can complete additional steps once the container is configured.

To add a container to Policy Manager using information from Intermediary for Microsoft

1   In Policy Manager, in the organization tree on the left, click **Containers**.

2   On the right, click **Add Container**. The Add Container wizard starts, as shown below.
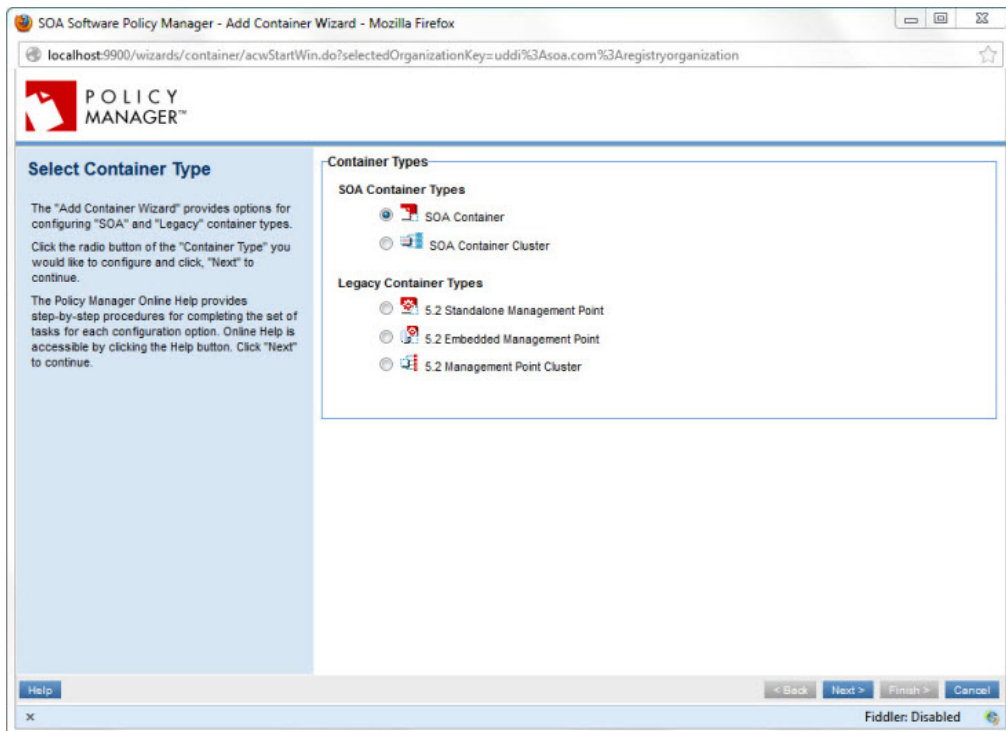
3   Click **Next** to accept the defaults and continue to the Metadata Import Options page shown below.

4   This is the place where you'll paste the link to the XML metadata information for your Intermediary for Microsoft container. Depending on the option you selected for copying the information in Intermediary for Microsoft, choose the corresponding option in Policy Manager:

–   **Metadata URL**: Paste the URL you copied from Intermediary for Microsoft.

–   **Metadata Path**: Click **Browse** and then paste the folder path, or navigate through your file system to the metadata file, and then click **Open**.

5   Once the metadata information is in place, click **Next**. The X.509 Certificate Not Trusted page is displayed.

6   To accept the certificate you set up for your container in Intermediary for Microsoft, click **Next**. The Specify Container Details page appears.

7   Provide an instance name for the Policy Manager container. You can use the same name as the Intermediary for Microsoft Container Key or a different name. You can also add a description. When done, click **Finish**. The wizard provides a summary for your review, as shown below.
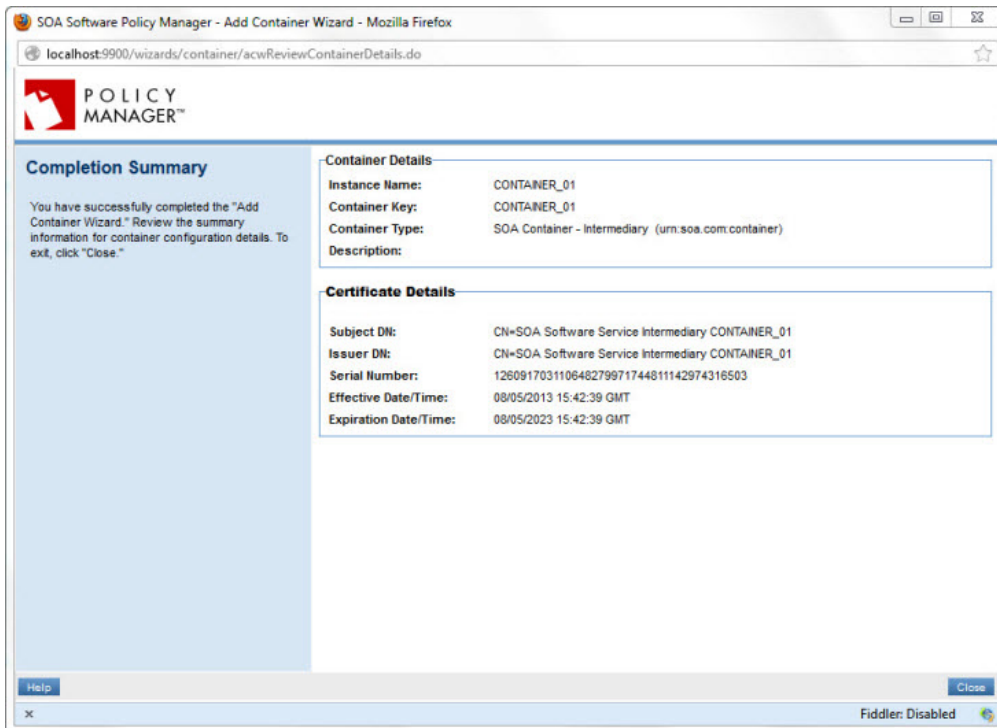
8   Review the details if needed, and then click **Close**.

The next step is to return to Intermediary for Microsoft and complete the container figuration. Follow the steps below.

Completing the Container Configuration in Intermediary for Microsoft

Once you've set up the container in Policy Manager to correspond to the container you started setting up in Intermediary for Microsoft, you'll need to go back to Intermediary for Microsoft to finish configuring your container. Follow the steps below.

To complete the container configuration in Intermediary for Microsoft
1   Switch back to Intermediary for Microsoft. You should still be at the prompt where you copied the metadata file location or URL. Click **OK**. The Add Container page is displayed, with a summary of container information, as shown below.
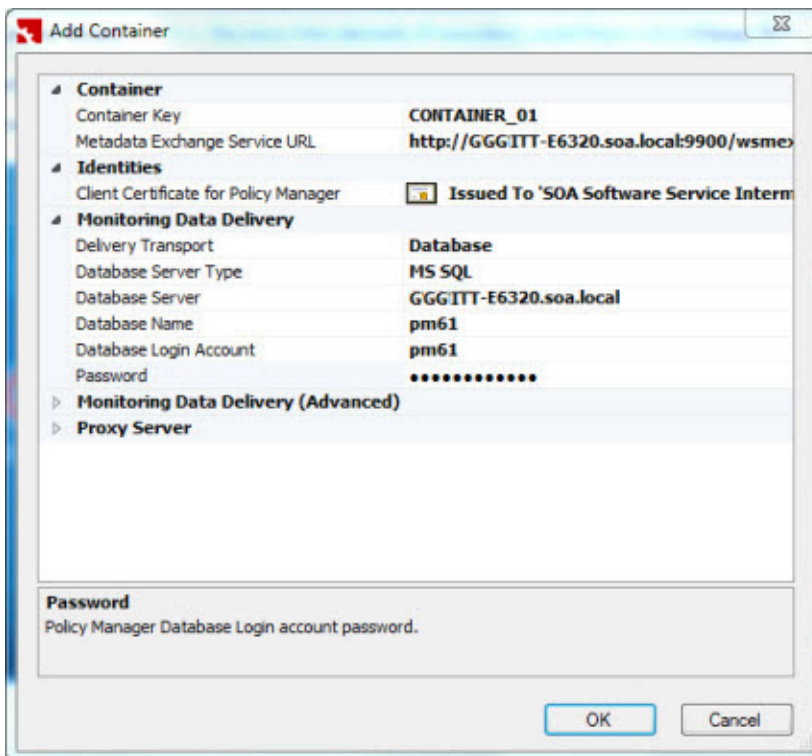
2 Click **OK**. The container is created. When it's done, you'll see a summary of your containers, as shown below. The new container is now on the list.
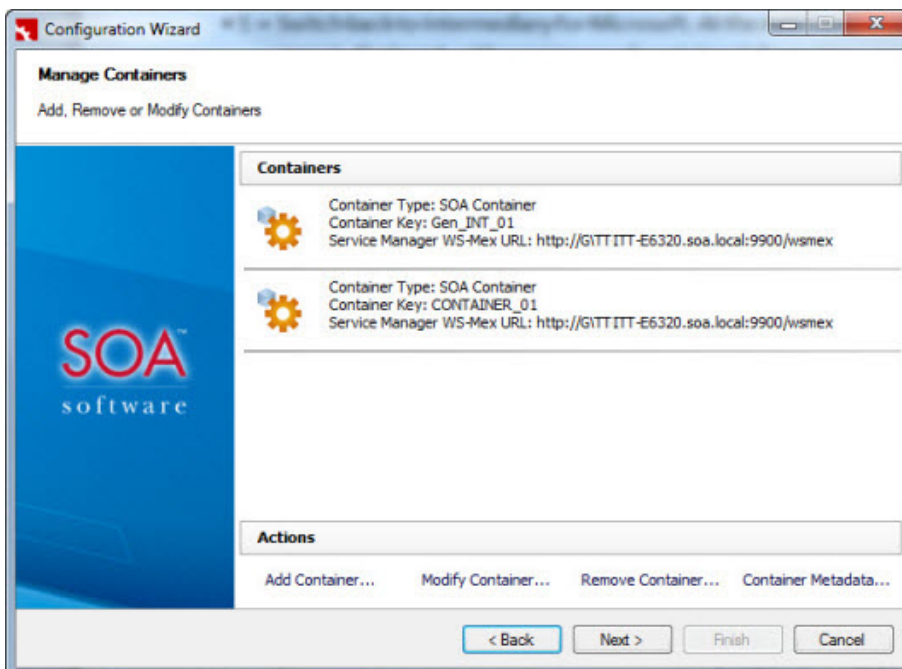
3 Click **Next**. The Intermediary Properties page is displayed.

4 Click **Next**. The Configuration Finalization page is displayed.

5 Click **Finish**. The final configuration steps are completed. When configuration is complete, you'll see a success message, as shown below.
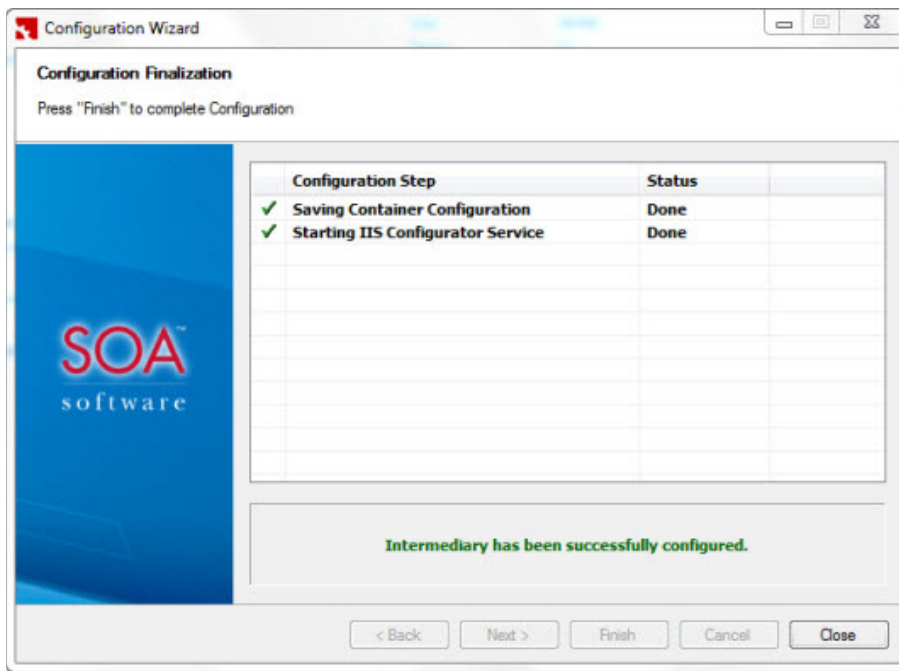
6   Click **Close**.

Adding a Listener

Once your container is set up, you can add a listener.

To add a listener to your Intermediary for Microsoft container in Policy Manager

1   In Policy Manager, in the Organization Tree on the left, select the first container that you want to set up a listener for.

2   In the center panel, click **Add Container Listener**.

3   At the Select Container Listener Type page, click **Next**.

4   The Configure HTTP Container Listener page appears, as shown below.

Specify values for the listener:

- **Listener Name**: A name for the listener; for example, http.

- **Host Name**: This can be either an IP address, with the **Bind to all interfaces** checkbox cleared, or a friendly hostname that routes to the Intermediary for Microsoft machine, with **Bind to all interfaces** checked.

- **Port Number**: A unique port number for the listener; for example, 9905.

5   Click **Finish**.

6   Repeat steps 2 through 5 for additional containers. Make sure the port name is unique for each listener.

Optional: Enabling Active Directory Delegation

As part of configuration, we recommend that you modify the settings in your Active Directory service. This is not required, but without making this change you'll be missing some of the functionality of Intermediary for Microsoft—specifically, impersonation and delegation functions.

To enable Active Directory delegation

1   In the Microsoft Management Console (MMC), open the **Active Directory Users and Computers** snap-in for the Active Directory instance against which Intermediary for Microsoft is configured.

2   In the left pane, navigate to Computers.

3   In the right pane, choose the machine that Intermediary for Microsoft is running on.

4   Right-click and choose **Properties**, and then click the **Delegation** tab.

5   Click the **Trust this computer for delegation to any service (Kerberos only)** button, as shown below.
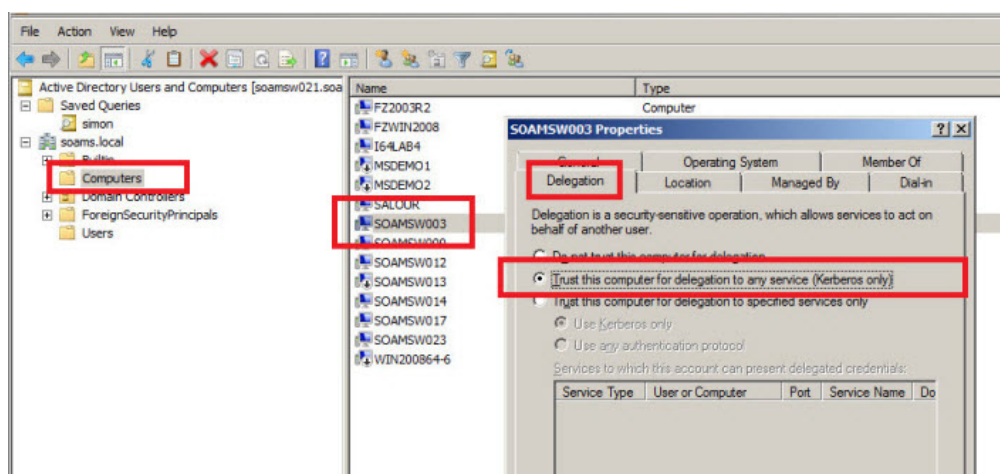
6   Save and exit.

Chapter 5 | Clustering Intermediary for Microsoft

You can set up multiple Intermediary for Microsoft containers to run as a cluster. Clustering is not necessary or required, but this option allows you to take advantage of the high availability and load balancing features of an Intermediary for Microsoft cluster.

To do this, you'll need to follow this sequence of actions:

- In Intermediary for Microsoft, set up the first container, including setting up the corresponding container in Policy Manager (Chapter 4).

- Set up additional containers as needed, each on a separate machine, and add each to Policy Manager (Chapter 4).

- In Policy Manager, create a container cluster and add the Intermediary for Microsoft containers to it (see below).

## Creating a Cluster for Intermediary for Microsoft in Policy Manager

By creating a cluster for your Intermediary for Microsoft machines in Policy Manager, you'll be able to set up a group of Intermediary for Microsoft machines that can all host the same virtual services, for the purposes of high availability and load balancing.

To create a cluster in Policy Manager

1   Start Policy Manager.

2   In the Organization Tree on the left, click **Containers**, and then click **Add Container**, as shown below.
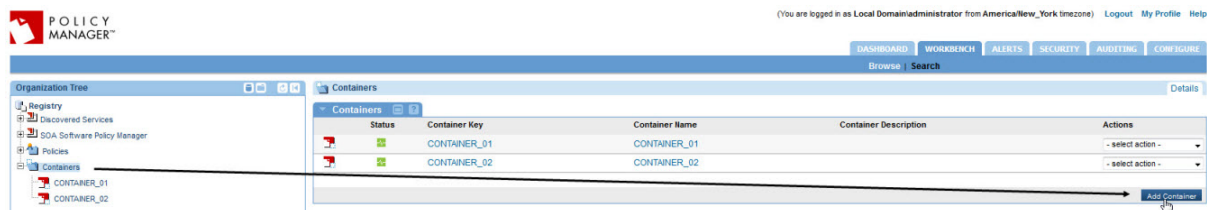

3   In the Select Container Type window, choose SOA Container Cluster and then click **Next**.

4   In the Specify Container Details window, give your cluster an instance name, as shown below, and then click **Next**.
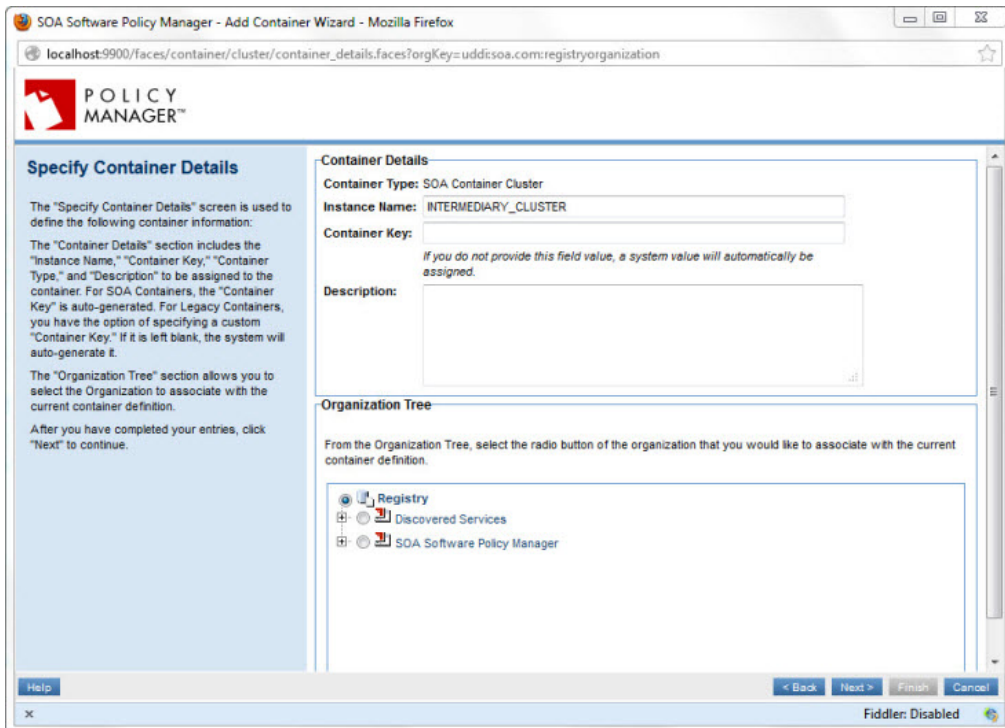
5   In the Select Cluster Nodes window, click the Containers node to view available containers. Choose one or more containers to be included in the cluster and then click **Next**.
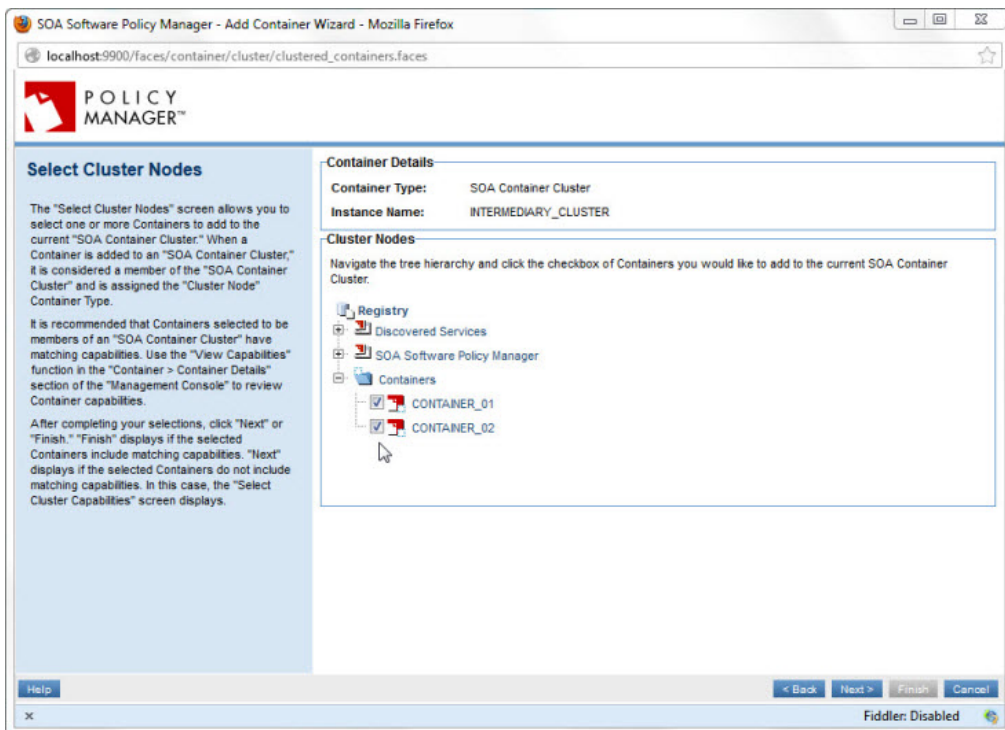
6   In the Select Cluster Capabilities window, choose the container you want the cluster to be modeled on. The cluster will use the metadata from the container you specify. Click **Finish**.
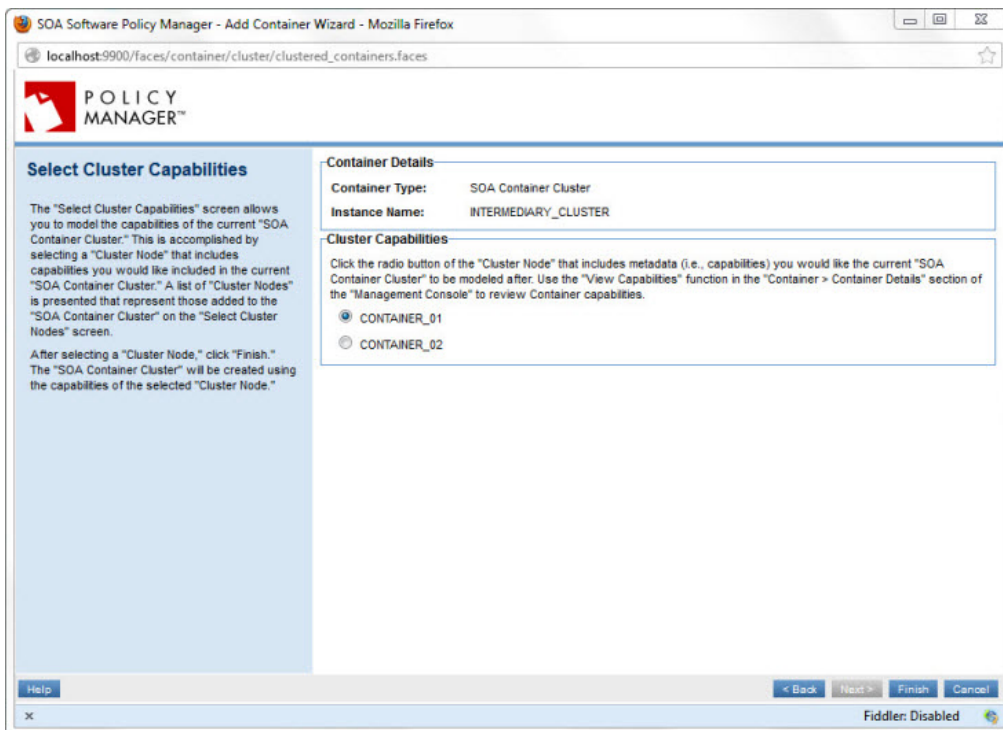
You now have a cluster defined for your Intermediary for Microsoft. You can use your cluster to take advantage of the high availability and load balancing features of Policy Manager. When you host a virtual service on the cluster, availability and load are shared between all machines in the cluster.

Adding a Listener to a Container Cluster

Once you've created a container cluster, as explained above, and also added listeners to individual containers, you can also add a listener to your Intermediary for Microsoft cluster.

To add a listener to a container cluster

1   In Policy Manager, in the Organization Tree, under Containers, click the Intermediary for Microsoft cluster.

2   In the center panel, click **Add Container Listener**, as shown below.
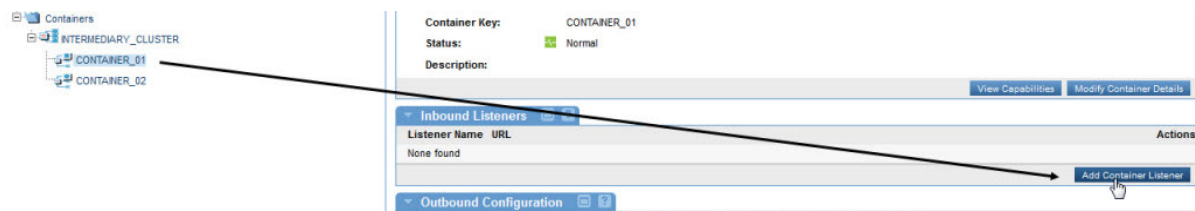
3   At the Select Container Listener Type page, click **Next**. The Configure HTTP Container Listener page appears, as shown below.

4   Specify values for the listener:

–   **Listener Name**: A name for the listener; for example, http.

–   **Host Name**: A unique name for the container; for example: LOADBALANCER.

–   **Port Number**: A unique port number for the load balancer; for example, 80.

5   Click **Finish**.

The cluster container is now configured as a load balancer.

Chapter 6 | Updating and Uninstalling

This chapter includes instructions and related information for scenarios where you might need to make changes after installation, including:

- Updating to a Later Version of the Product
- Uninstalling Intermediary for Microsoft

Updating to a Later Version of the Product

Note: It's always a good idea to back up files before performing a major evolution such as changing to a new version.

When you update to a later version, the process essentially consists of two steps:

1   Uninstalling the current version. The uninstall process removes program files but preserves your configuration files. For instructions, see Uninstalling Intermediary for Microsoft below.

2   Installing the new version. By accepting the default locations, or installing to the same location from which you removed the files in Step 1, your configuration files will be in the correct location for the new installation. For instructions, see Installing Intermediary for Microsoft in Chapter 3.

Once you've completed steps 1 and 2 above, just open up Intermediary for Microsoft and you're ready to go.

Uninstalling Intermediary for Microsoft

You can uninstall Intermediary for Microsoft via the Control Panel, Programs and Features.

When you uninstall, all program files are removed. However, certain configuration files, containing information you entered as part of setup, are left behind. This is intentional, since you might be uninstalling an earlier version as part of upgrading to a later version.

This section includes two procedures:

- To Uninstall Intermediary for Microsoft: Follow these steps whether you are uninstalling or upgrading.
- **To remove residual installation files**: Follow these steps only if you want a complete uninstall.

To Uninstall Intermediary for Microsoft

1   Go to the Control Panel on your machine and choose the Programs and Features list.

For example, choose Start | Control Panel | Programs and Features. The exact naming and navigation might vary on your machine.

2   On the Programs List, find **SOA Software Intermediary**.

3   Select it, and then click **Uninstall**.

You can click the **Uninstall** button at the top of the list, or choose from the right-click menu.

4   At the "Are you sure…?" prompt, click **Yes**.

5   When the process is complete, close the Programs list.

> **Note**: The uninstall process leaves behind some residual data files. This is intentional, since uninstallation is also the first step in the product upgrade process. If you no longer want the data files on your machine, follow the instructions below to remove them.

To remove residual installation files (full uninstall only)

Before following the steps below, uninstall SOA Software Intermediary from the Programs and Features list as explained above.

1   Navigate to the Intermediary for Microsoft installation location on your machine. For example:

    C:\Program Files (x86)\SOA Software\Intermediary for Microsoft

2   Delete the Intermediary for Microsoft folder. You'll need to provide Administrator permission for the deletion.

The files are removed. Your system is now completely clear of all residual Intermediary for Microsoft files.

Chapter 7 | Troubleshooting

This chapter includes information to help you troubleshoot in case you come across any issues with installing, running, or modifying Intermediary for Microsoft. It includes:

- Common Installation Issues

Common Installation Issues

This section provides information and tips on troubleshooting installation problems.

It includes:

- Errors During Installation: Not logged in as Administrator

Errors During Installation: Not Logged In As Administrator

If you are not logged in as Administrator, the installation will fail. Administrator rights are required. If you find the installation is failing, it's a good idea to check first to make sure you are running it as an Administrator. Close out of the installation and then try starting it again, making sure you are running it as an Administrator. To do this, follow the steps below.

To run the installation as an Administrator

1   From the Start button, in the Search box, type **cmd** (do not press Enter).

    You'll see cmd.exe listed under Programs.

2   Right-click **cmd.exe** and choose **Run as administrator**, as shown below.
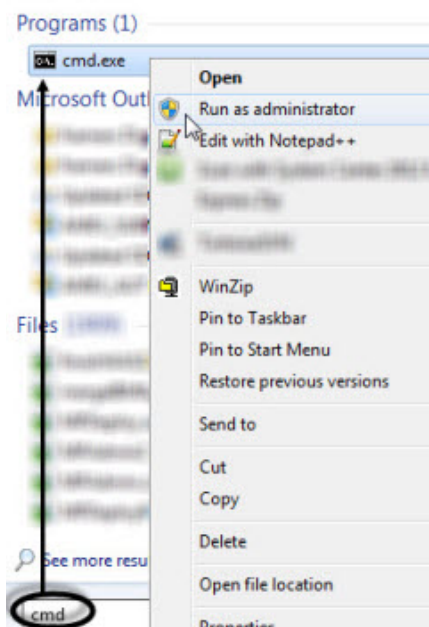
    A command prompt opens. You are running this window as an Administrator.

Note: You might see a User Account Control prompt before the command prompt opens. If this happens, click **Yes** to allow the command window to open.

3   In the command prompt window, navigate to the folder where you have the MSI installation file. For example:

cd \ Downloads

4   Type the name of the installation file and press Enter. The SOA Software Intermediary Setup Wizard opens.

5   Follow the standard installation steps as listed in To install Intermediary for Microsoft, from Step 2 onwards.