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Service Manager Agent for WCF Installation Guide

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Preface

The "Service Manager Agent for WCF Installation Guide" provides instructions for installing and configuring a "Service Manager Agent for WCF" on supported Windows platforms.

IN THIS GUIDE

This guide includes the following chapters:

- Chapter 1, "Installing an Agent for WCF" provides a list of steps for installing an "Agent for WCF" using the "Agent for WCF Setup Wizard." Prerequisites and pre-installation steps that must be performed prior to beginning the installation are provided.
- Chapter 2, "Configuring an Agent for WCF" provides steps for configuring an "Agent for WCF" using the "Agent for WCF Configuration Wizard."
- Chapter 3, "Troubleshooting an Agent for WCF Installation" provides troubleshooting information to assist in the configuration and maintenance of an Agent for WCF.

SYSTEM REQUIREMENTS

- Agent for WCF

  The "Agent for WCF" supports the following configurations:

  - Platform Support

    Windows Server 2003 x32 and x64 editions, Windows 2008 Server x32 and x64 editions, Windows 2008 R2 Server and Windows 7.

  - Database Support

    Microsoft SQL Server 2000 and above, Oracle 10g and above.

- Policy Manager

  As a prerequisite, an "Agent for WCF" requires the installation and configuration of Policy Manager 6.0 as outlined in the "Policy Manager Installation Guide for Windows and UNIX Platforms" and *required* updates.

Note: Refer to the "Service Manager Agent for WCF Release Notes" for information on Policy Manager 6.0 Updates to be installed.

The following table lists the minimum system requirements for running Policy Manager 6.0 on *Windows* and *UNIX* platforms.

Component Name	Requirement	
Policy Manager Host	**Hardware** Single CPU, 2Ghz, 2GB RAM	
	Operating System	
	Windows	Windows XP with Service pack 1 Windows 2003 with Service pack 1 Windows 2008 Windows 7
Client Browser for accessing Policy Manager User Interface	IE 7.0 and above or Netscape 7.x and above Mozilla Firefox 3.6 and above	
Database Management Systems	Oracle 10 Microsoft SQL Server 2005 ***Note:*** *The database will usually not reside on the computer that is hosting Policy Manager.*	
Database Sizing Guidelines	● The base install, with configuration data, consumes an initial 10MB of space. ● Each detailed transaction log consumes approximately 500 bytes of database storage space. Typically, however, only 5% of transactions are logged in this manner. This means that 25KB of database storage space will be consumed for every 1000 transactions. At the transaction rate used in the test – 1250TPS – the database storage space was consumed at the rate of 112MB per hour. ● Assume an average recorded message size of 10KB. Typically, however, only 1% of transactions are logged in this manner. ● Alerts, performance data and SLA Rollup data add up to approximately 1KB per 100 transactions.	
Memory Configuration	The default maximum heap size for all SOA Software Containers (i.e., Java processes) is 1024MB.	
Documentation	A subset of the Policy Manager product documentation is published in Portable Document Format (PDF) and requires Acrobat Reader 6.0 or above.	

AGENT FOR WCF PROGRAM GROUP

The "Agent for WCF" Program Group for a complete installation includes the following menu options:

Menu Option	Agent for WCF Function	Action
Configuration Tools	*Configure Agent for WCF*	Launches the "Agent for WCF Configuration Wizard."
Documentation (Guides are in PDF format)	*Installation*	Service Manager Agent for WCF Installation Guide
	View Release Notes	Service Manager Agent for WCF Release Notes
	Use Cases	Managing WCF Services with Policy Manager
	Plug-In	Microsoft Visual Studio Add-in Users Guide

CUSTOMER SUPPORT

SOA Software offers a variety of support services to our customers. The following options are available:

Support Options:	
Email (direct)	support@soa.com
Phone	1-866 SOA-9876 (1-866-762-9876)
Email (Web)	The "Support" section of the SOA Software website (www.soa.com) provides an option for emailing product related inquiries to our support team.
Documentation Updates	Updates to Policy Manager product documentation are issued on a periodic basis and are available by submitting an email request to support@soa.com.

Chapter 1: Installing an Agent for WCF

OVERVIEW

The chapter provides instructions for installing the "Service Manager Agent for WCF" using the "Agent for WCF Setup Wizard."

AGENT FOR WCF EDITIONS

The "Agent for WCF" comes in four editions that target different Microsoft.NET Framework versions and Windows OS platform architectures. Agent for WCF version editions manage services and client applications developed for respective Microsoft .NET Framework runtimes, version 3.5 or 4.0. The following Microsoft.NET version editions are available:

1. AgentForWCF.3.5.msi – Agent for WCF for Microsoft .NET 3.5 and x32 platform
2. AgentForWCF.3.5.x64.msi – Agent for WCF for Microsoft .NET 3.5 and x64 platform
3. AgentForWCF.msi – Agent for WCF for Microsoft .NET 4.0 and x32 platform
4. AgentForWCF.x64.msi – Agent for WCF for Microsoft .NET 4.05 and x64 platform

When selecting an edition that must be installed on a computer, select the platform edition first, then select the Microsoft .NET version edition second. You can install both .NET 3.5 and .NET 4.0 editions on the same machine side-by-side as long as their platform editions match the computer platform.

INSTALLING AGENT FOR WCF

This section provides instructions for performing a GUI installation of Service Manager 6.0 *Agent for WCF* for supported Windows platforms using the "Agent for WCF Setup Wizard."

Note: The "Agent for WCF Setup Wizard" also installs the "Microsoft Visual Studio Add-in." This optional component provides registry browse, service reference, and service publish capabilities. For more information, refer to the "Microsoft Visual Studio Add-in Users Guide"

available through the "Service Manager 6.0 Agent for WCF" program group.

To begin the installation process, you must have Administrator privileges on your computer.

To Install Agent for WCF

Step	Procedure
1.	To begin installation of the "Agent for WCF," launch the installation file "`AgentForWCF.msi`." If the installation process does not begin automatically, locate the `AgentForWCF.msi` file inside the Windows folder and double-click it. The "Welcome to the Agent for WCF Setup Wizard" displays.  **Figure 1-1: Welcome to Agent for WCF Setup Wizard**
2.	Click **Next**. The "License Agreement" screen displays.

To Install Agent for WCF

Figure 1-2: License Agreement

3. If you agree to the license terms, click the "**I Agree**" radio button, and **Next** to continue. The "Select Installation Folder" screen displays.

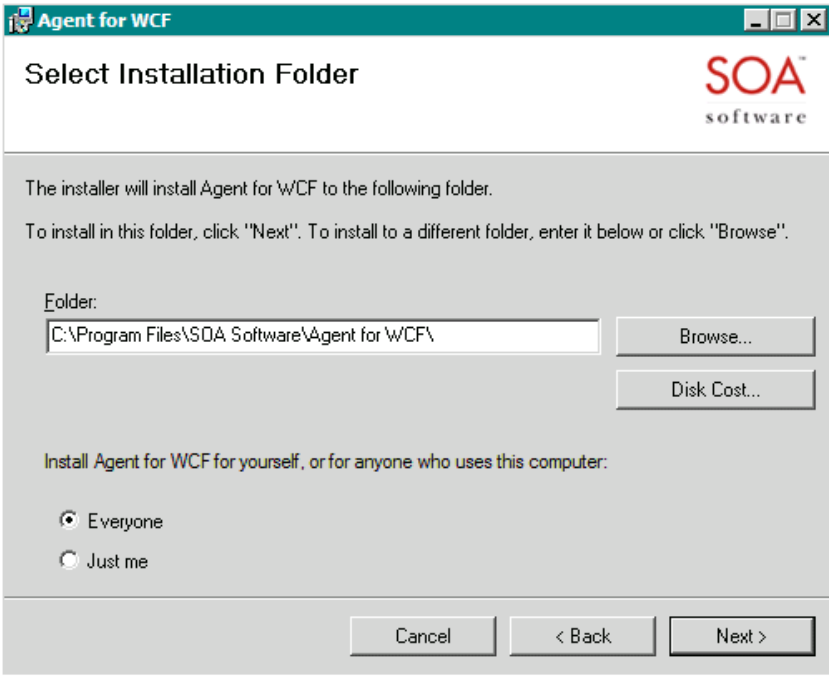
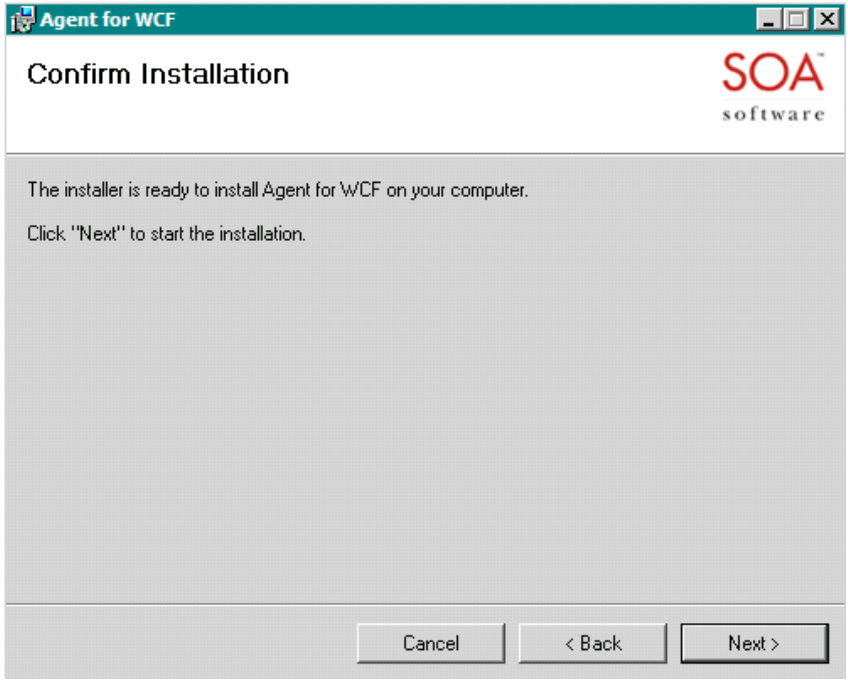


Figure 1-3: Select Installation Folder

To Install Agent for WCF

	To install in the default folder, click **Next**. Otherwise, click **Browse**, select an installation folder, and click **OK**. To determine disk space requirements, click **Disk Cost** and then continue with your folder selection. The "Install Agent for WCF for yourself, or for anyone who uses this computer" option populates the Program Group menu for the "Agent for WCF" application. Click the radio button that represents how you would like the Program Group generated (i.e., Everyone, Just me). The default is "Just me." **Note:** An Agent must be installed in a unique folder outside of the Policy Manager release directory. Attempting to overwrite an existing Policy Manager installation is not recommended as it will compromise Policy Manager configuration files and lead to unexpected results.
4.	After you configured your installation folder, click **Next** to continue. The "Confirm Installation" screen displays.  **Figure 1-4: Confirm Installation**
5.	If you wish to make any changes, click **Back** and navigate to the screen you would like to update. To begin the installation process, click **Next**. The "Agent for WCF is being installed." progress indicator displays.

To Install Agent for WCF

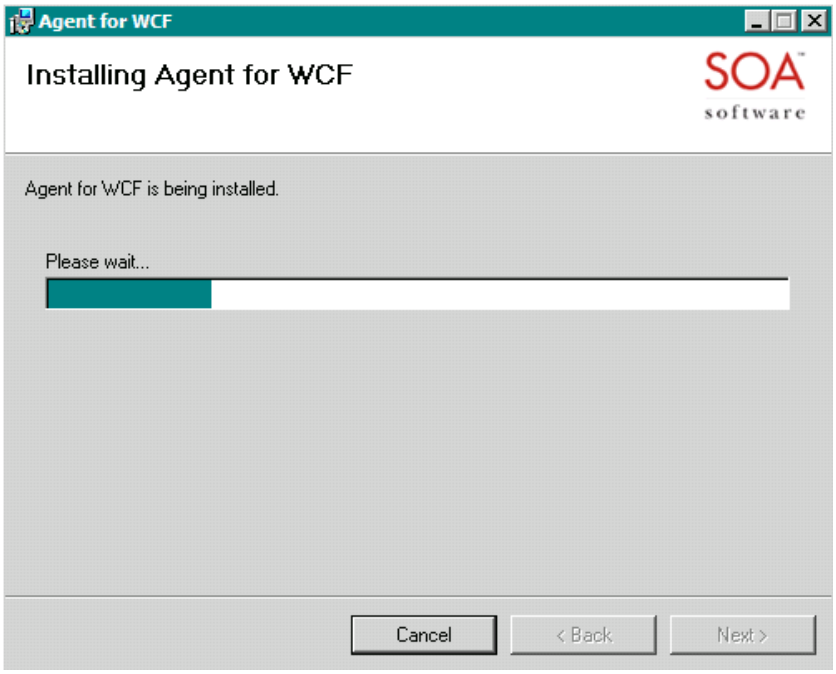


Figure 1-5: Installing Agent for WCF—*Progress Indicator*

6. After the "Agent for WCF" installation is complete the "Installation Complete" screen displays.

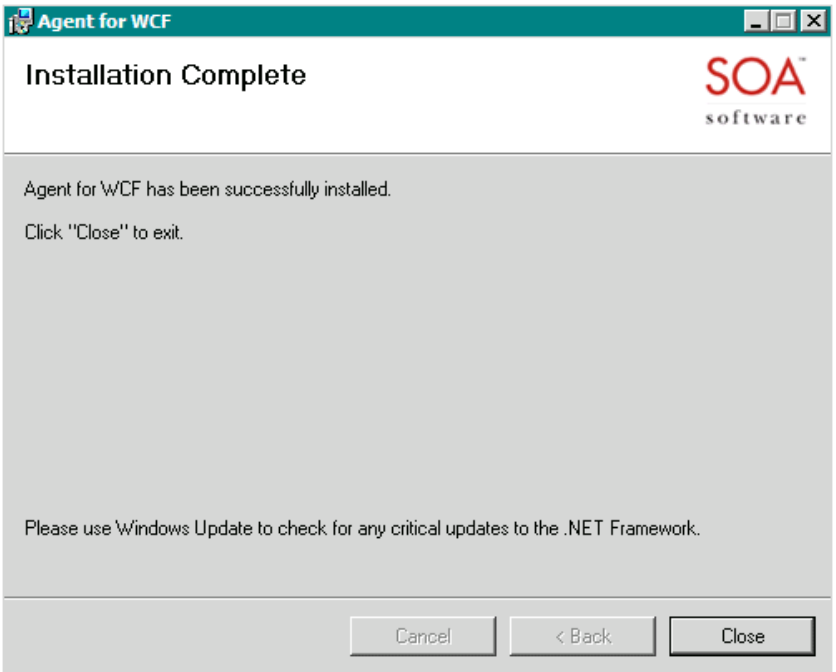


Figure 1-6: Installation Complete

To Install Agent for WCF

	• To exit the "Agent for WCF Setup Wizard," click **Close**. • To view the Release Notes, from the Program Group click `SOA Software > Agent for WCP > Documentation > View Release Notes`.
7.	After you have exited the "Agent for WCF Setup Wizard" perform the following tasks: • Register the "Agent for WCF" in the Policy Manager "Management Console." • Configure the "Agent for WCF" using the "Agent for WCF Configuration Wizard."

Chapter 2: Configuring an Agent for WCF

OVERVIEW

The "Agent for WCF" uses the concept of a "Container." A container is a logical unit that groups a set of services or client endpoints and is controlled by a dedicated "controller" (i.e., an instance of the Policy Manager product). A container has its own unique identifier (key). The "Agent for WCF" treats "Agent" containers and "Delegate" containers differently. An Agent container manages one or more WCF services hosted on the same machine, but not necessarily services hosted in the same process or .NET application domain. A Delegate container manages the client-side endpoints that are used to call services registered in Policy Manager. Agent containers must be registered in Policy Manager, but Delegate containers cannot be registered in Policy Manager. There can be multiple Service and Delegate Containers "hosted" by a single "Agent for WCF" installation. All containers, however, manage services or clients running on the same machine.

This chapter describes the process of configuring an "Agent for WCF."

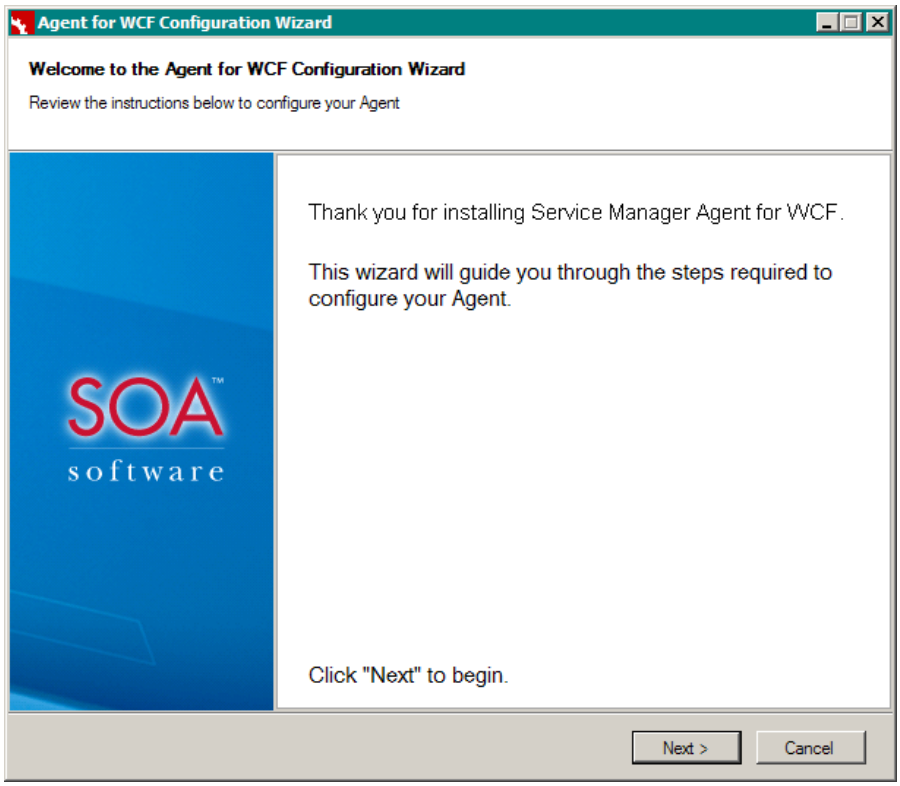
CONFIGURING THE AGENT FOR WCF

The following procedure illustrates how to configure the "Agent for WCF" using the "Agent for WCF Configuration Wizard." The configuration process provides three different "Configuration Types" which can selected based on your specific deployment scenario.

To Configure the Agent for WCF

Step	Procedure
1.	From the Windows Start menu select the **SOA Software > Agent for WCF > Configure Agent for WCF** to launch the "Agent for WCF Configuration Wizard." The "Welcome to the Agent for WCF Configuration Wizard" screen displays.

To Configure the Agent for WCF

	 **Figure 2-1: Agent for WCF Configuration Wizard—*Welcome*** 2. Review the information and click **Next** to continue. The "Manage Containers" screen displays. Click the **Add Container**... link to create a new container.

To Configure the Agent for WCF

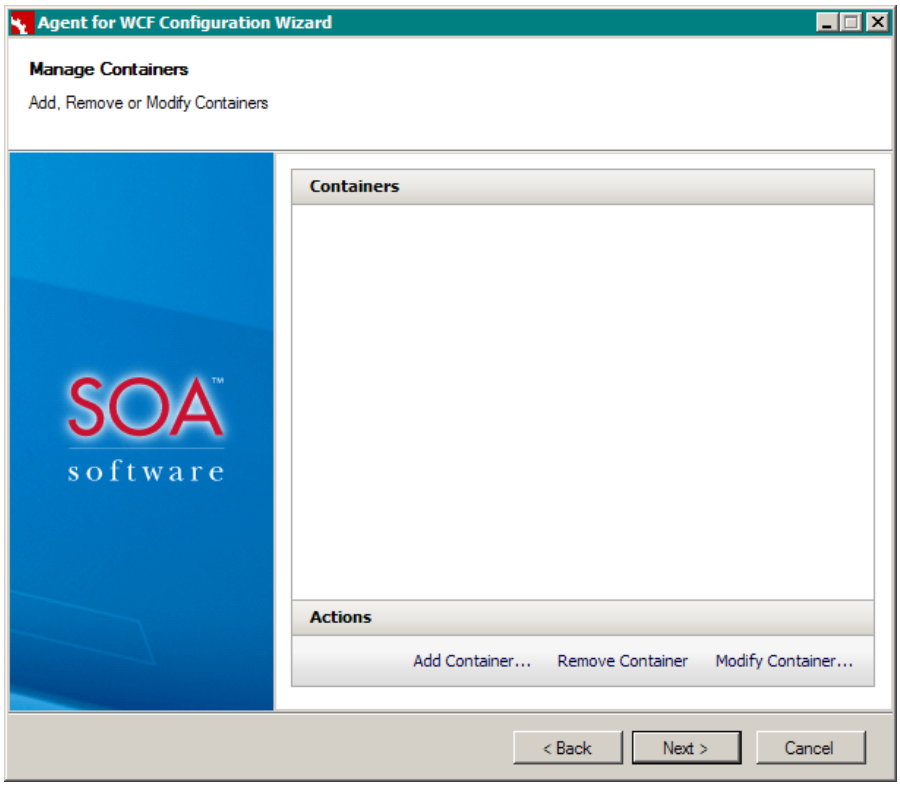


Figure 2-2: Agent for WCF Configuration Wizard—*Manage Containers*

3.	Configure Delegate Container In the "Add Container" window, select "Delegate Container" in the "Container Type" dropdown, enter an arbitrary "Container Key" and provide a URL to the Workbench metadata Exchange Service. This URL uniquely identifies the Workbench instance. For the Policy Manager Version select version 6.0 (default value). The other option, 5.2 allows a container to be configured against a Service Manager 5.2 instance for backward compatibility.

To Configure the Agent for WCF

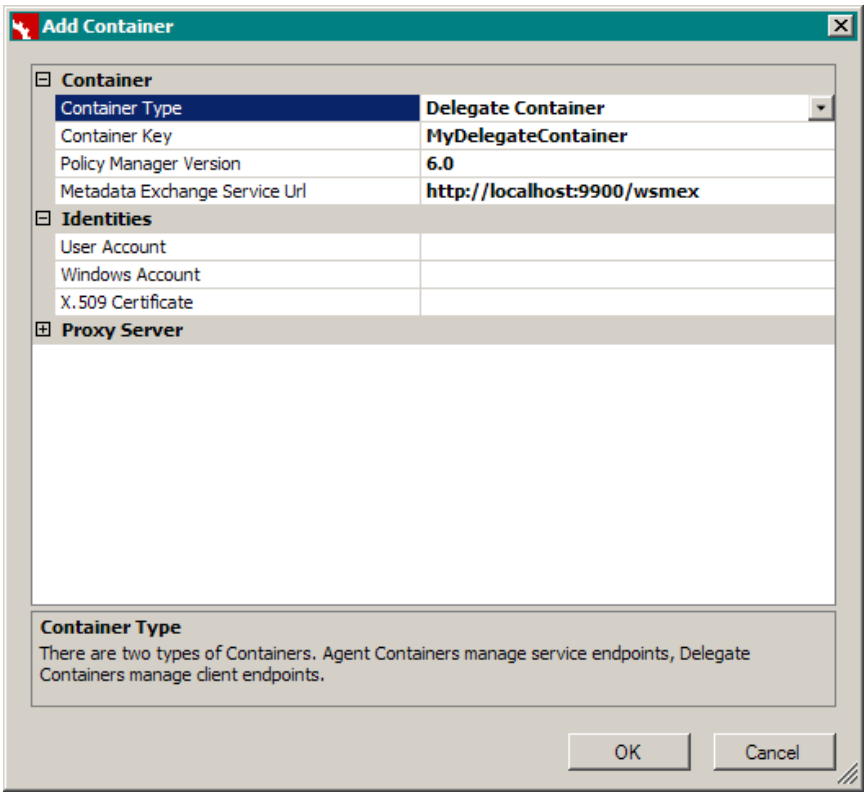


Figure 2-3: Agent for WCF Configuration Wizard—*Add Container (Configure Delegate Container)*

4. You can optionally associate the Delegate Container with a user or X.509 certificate identity. This will allow the "Agent for WCF" to present client credentials to a service automatically when client authentication with a User Name token or X.509 certificate is required. Note that the "Agent for WCF" will not override security credentials specified in the client application configuration file.

   a. To configure User Name and Password user account

      i. Click on the "User Account" field under the "Identities" category and then click "...".

      ii. Enter User Name and Password information.

To Configure the Agent for WCF

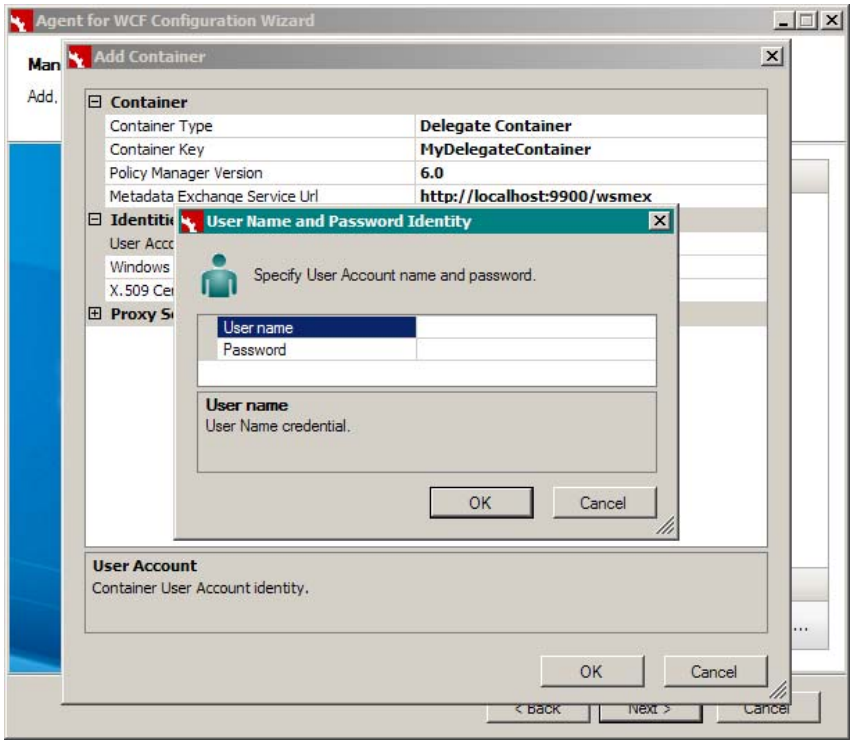


Figure 2-4: Agent for WCF Configuration Wizard—*Add Container (User Name and Password Identity)*

iii. Click **OK** to save the account information. The credentials data will be encrypted and stored in the Agent metabase.

To configure Windows user account

a. Click on the "Windows Account" field under the "Identities" category. Then click "...".

b. Enter User name, Password, and Domain information.

To Configure the Agent for WCF

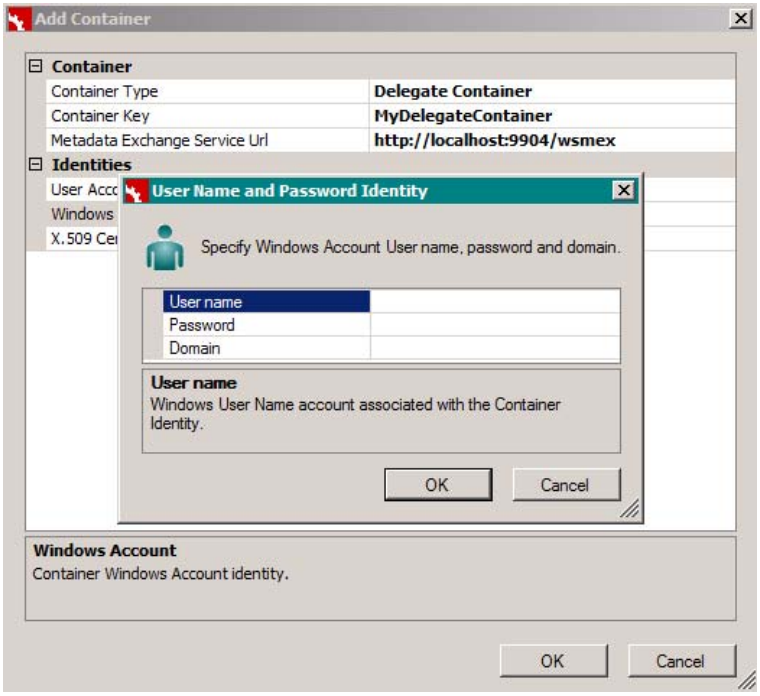


Figure 2-5: Agent for WCF Configuration Wizard—Add Container (*Username, Password, and Domain*)

c. Click **OK** to save the account information. The credentials data will be encrypted and stored in the Agent metabase.

5. b. To configure client certificate

i. Click on the "X.509 Certificate" field under the "Identities" category. Then click "...".

ii Select a certificate from the list of certificates in the Local Machine's personal store.

To Configure the Agent for WCF

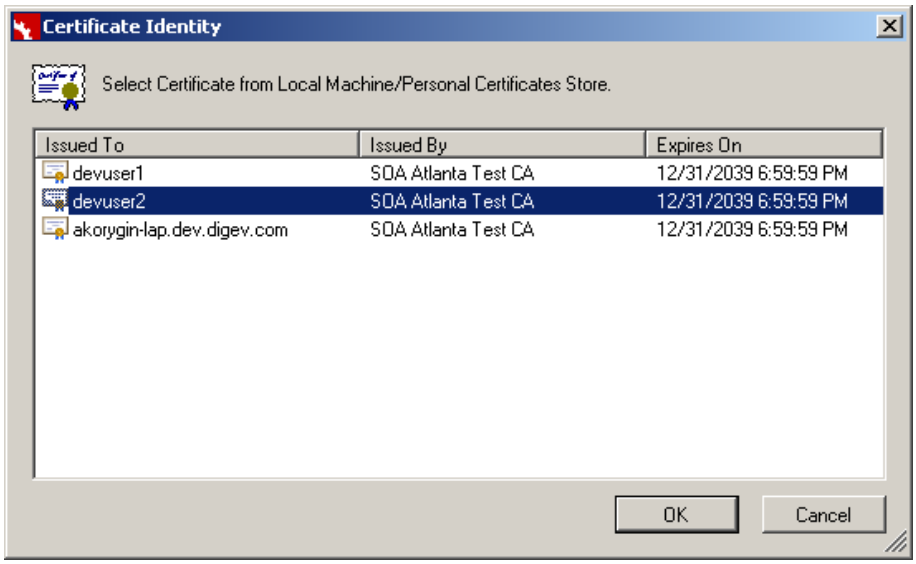


Figure 2-6: Agent for WCF Configuration Wizard—*Add Container (Certificate Identity)*

iii. You can open the "Certificate" dialog by double-clicking on any certificate in the list:

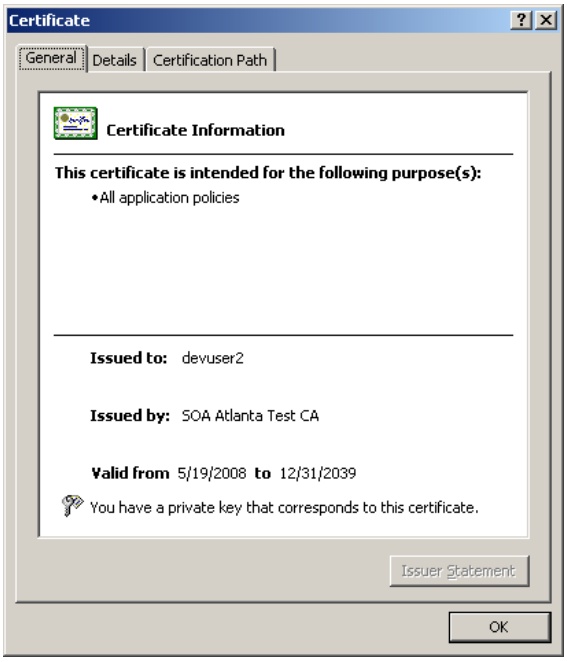
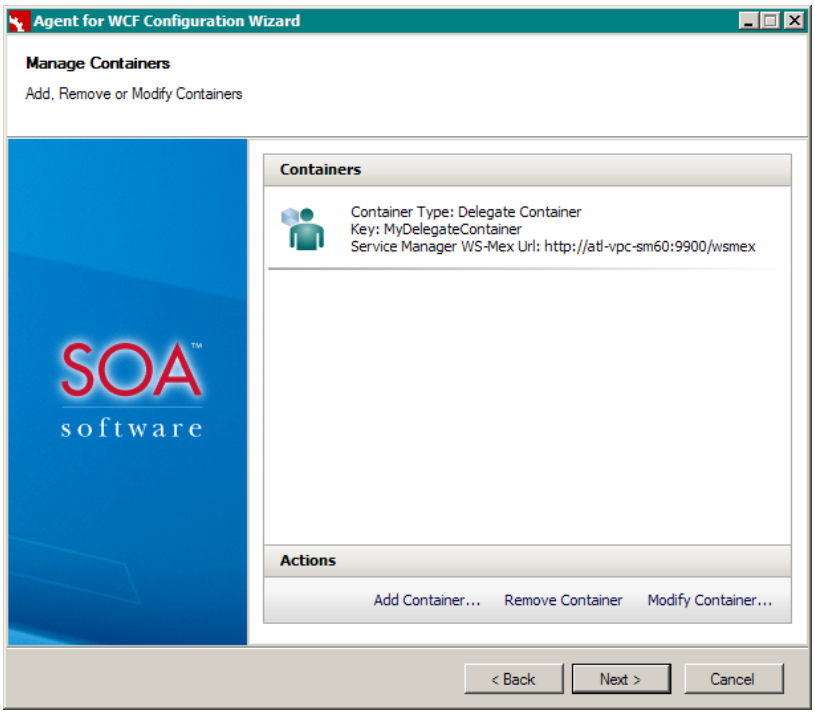


Figure 2-7: Agent for WCF Configuration Wizard—*Add Container (Certificate)*

iv. Click **OK** to associate the selected certificate with the Delegate container.

To Configure the Agent for WCF

6.	Click **OK** to continue and wait for the operation to complete.  **Figure 2-8: Agent Configuration Wizard—*Add Container (Complete Operation)***
7.	**Configuring Agent Container** In the "Add Container" window, select "Agent Container" in the "Container Type" drop-down list box, enter the "Container Key" that was registered in Policy Manager "Workbench," and provide a URL to the Workbench metadata Exchange Service. This URL uniquely identifies the Workbench instance. For the Policy Manager Version select version 6.0 (default value). The other option, Policy Manager 6.0 allows a container to be configured against a Service Manager 5.2 instance for backward compatibility.

To Configure the Agent for WCF

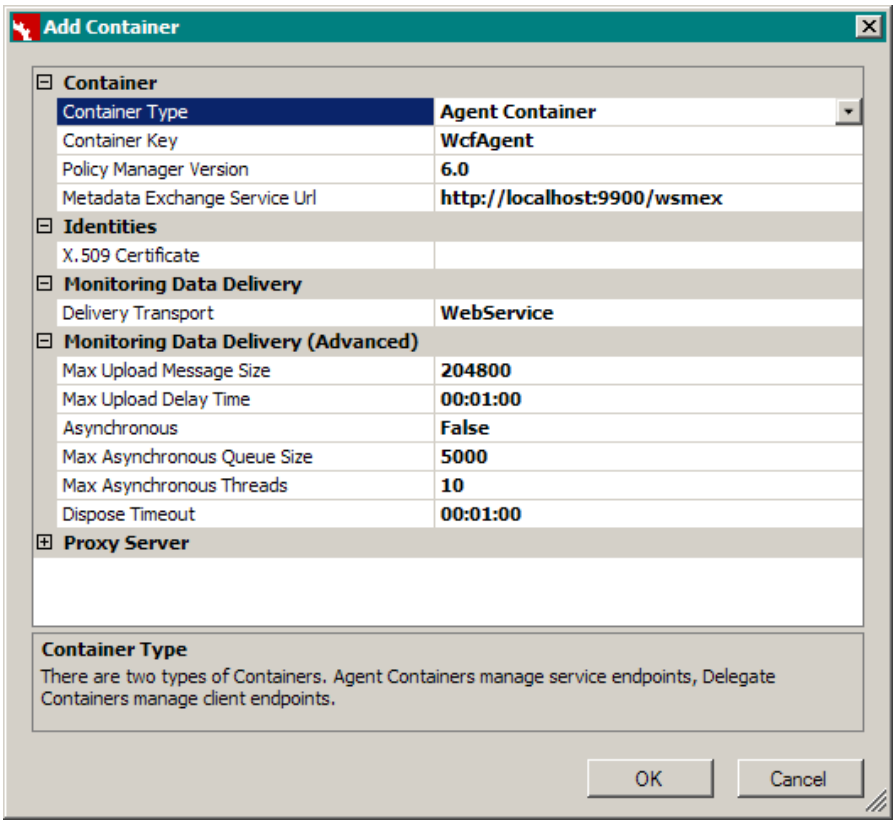


Figure 2-9: Agent for WCF Configuration Wizard—*Add Container (Configure Agent Container)*

8. Configuring monitoring data delivery mechanism

There are currently two monitoring data delivery methods: Database and Web Service. Both methods support sending monitoring and recording data to Workbench, where the data can be examined. Both methods also support synchronous and asynchronous operations. Database transport uses a direct connection to the Workbench database (currently supported database engines are Microsoft SQL Server and Oracle Database); Web Service transport uses Workbench Web Service API.

a. To configure Database transport, select "Database" in the "Delivery Transport" drop-down list box, select the appropriate server type ("MS SQL" or "Oracle"), specify the server name, database name, database user account that has permissions to write to that database, and the user password. Note: This option does not support Windows Authentication.

To Configure the Agent for WCF

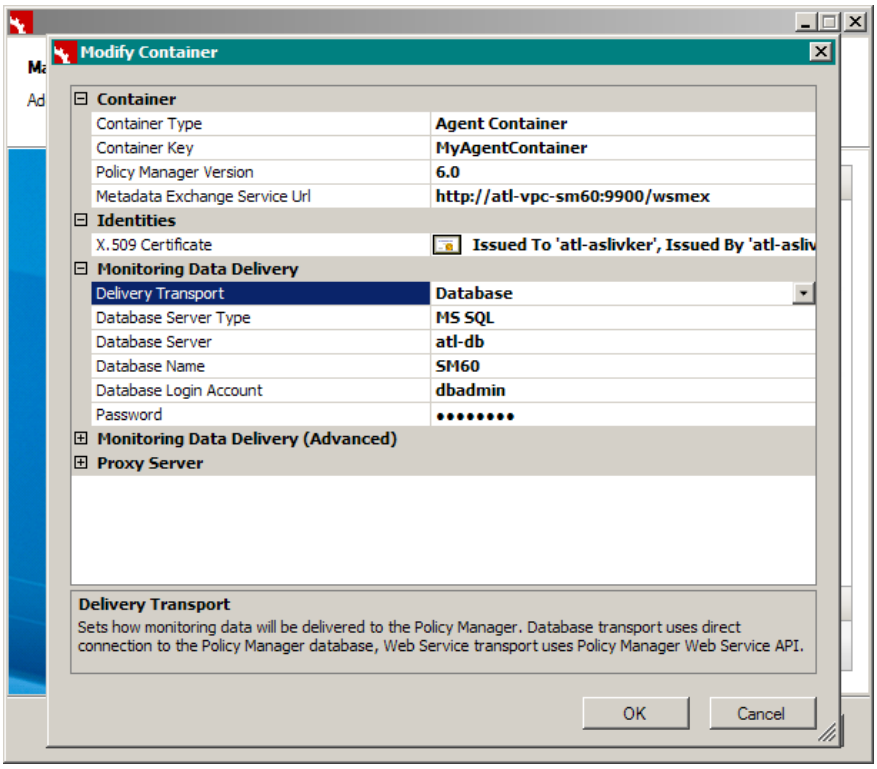


Figure 2-10: Agent for WCF Configuration Wizard—Add Container (*Configure Monitoring Data Delivery Mechanism*)

b. There are additional properties that can be tuned to control database transport behavior:

SQL Command Timeout—Sets the timeout for all database commands (statements) issued against the Workbench database.

Rollup Data Caching Time—Sets the common metrics accumulation time interval. When this interval expires, all accumulated data is written to the database.

Asynchronous—Enables monitoring data that is delivered to the Workbench asynchronously.

Max Asynchronous Queue Size—Sets the maximum number of transactions that can be accumulated in the queue before discarding new transactions. If this parameter is set to 0, the queue is limited by available memory only.

Max Asynchronous Threads—Sets the maximum number of threads that can be used for delivery operations.

Dispose Timeout—Sets the internal worker threads dispose timeout.

9. c. To configure the Web Service transport, select "Web Service" in the "Delivery Transport" dropdown. The address of the service is discovered automatically.

To Configure the Agent for WCF

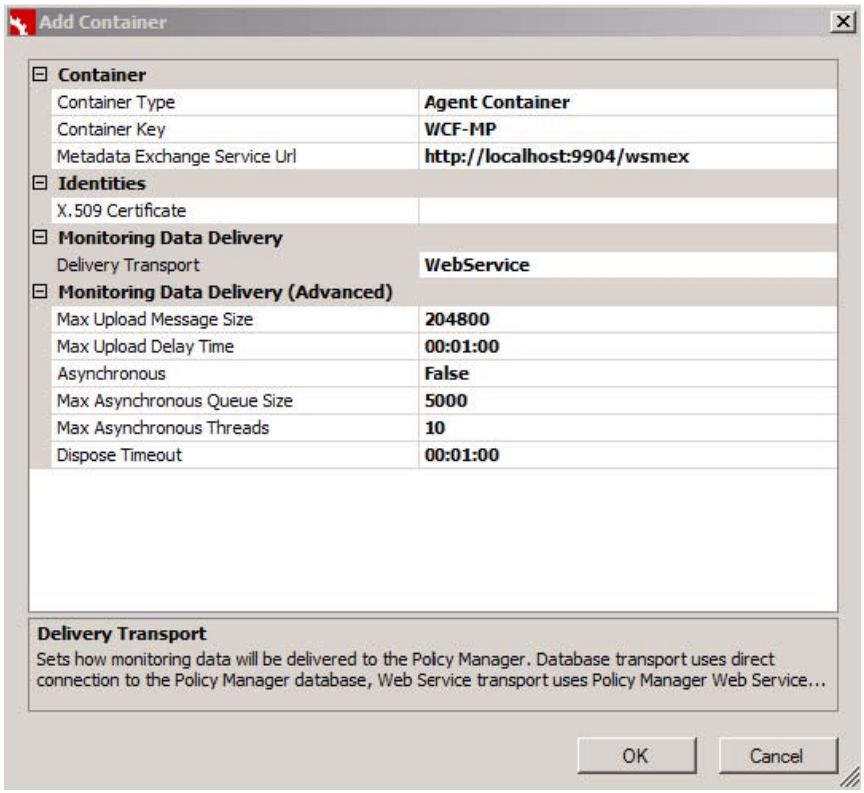


Figure 2-11: Agent for WCF Configuration Wizard—*Add Container (Configure Web Service Transport*

d. Advanced properties of the transport allow the following configuration options:

Max Upload Message Size—Sets the maximum size (KB) of a single upload message sent through the Workbench Web Service API. The data is accumulated in the service process and sent to the Workbench when a SOAP message reaches this size;

Max Upload Delay Time—Sets the maximum time to complete formation of a single upload message. The data is accumulated in the service process and sent to the Workbench when the oldest transaction is older than this value;

Note: Both "Max Upload Message Size" and "Max Upload Delay Time" parameters work simultaneously.

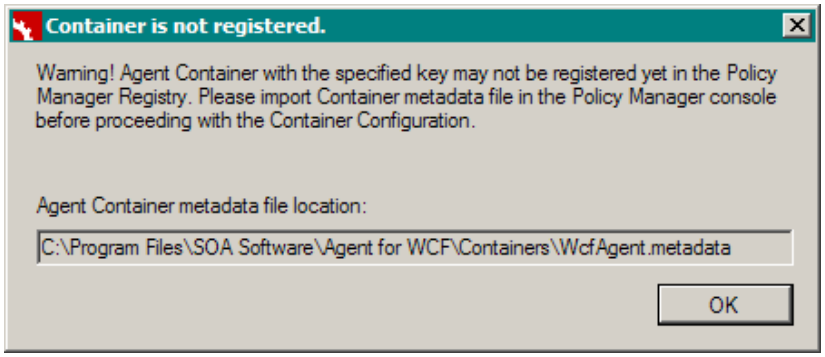
Asynchronous—Enables monitoring data to be delivered to the Workbench asynchronously;

Max Asynchronous Queue Size—Sets the maximum number of transactions that can be accumulated in the queue before starting discarding new transactions. If this parameter is set to 0, the queue is limited by available memory only;

Max Asynchronous Threads—Sets the maximum number of threads that can be used for delivery operations;

Dispose Timeout—Sets the internal worker threads dispose timeout.

To Configure the Agent for WCF

10.	The "Agent for WCF" requires that an X.509 certificate identity be assigned to the Agent type of a container. This is because communication between the Agent and Policy Manager is secured using X.509 certificates of both the Agent and Policy Manager. When the "Agent for WCF Configuration Wizard" is run for the first time, the same steps as described above for the Delegate type of container must be followed to assign the required X.509 certificate to the Agent type of container.
11.	Click **OK**. When the "Agent for WCF Configuration Wizard" is run for the first time the Agent container is not yet registered in Policy Manager. The configuration wizard identifies the registration status through communication with Policy Manager and presents the following warning:  **Figure 2-12: Agent for WCF Configuration Wizard—*"Container is not registered" Warning*** The warning shows a local path to a container metadata file that must be imported in the Policy Manager "Management Console" to complete the container registration.
12.	Copy the metadata file path in the clipboard. Launch the Policy Manager login screen and log into the Policy Manager "Management Console." Expand the Organization Tree and select the "Containers" folder. The "Containers Summary" screen displays.

To Configure the Agent for WCF

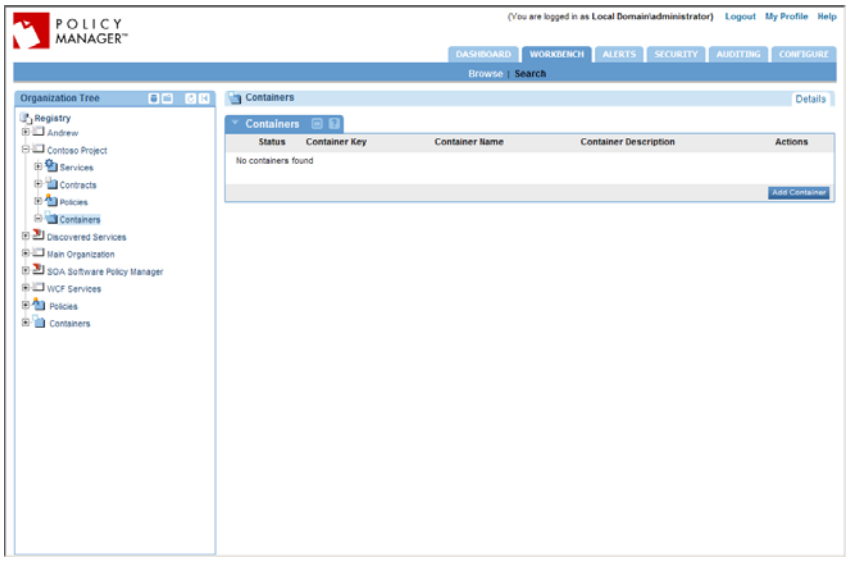


Figure 2-13: Agent for WCF Configuration Wizard—*Containers Summary*

13. Click "Add Container." The "Select Container Type" screen displays.

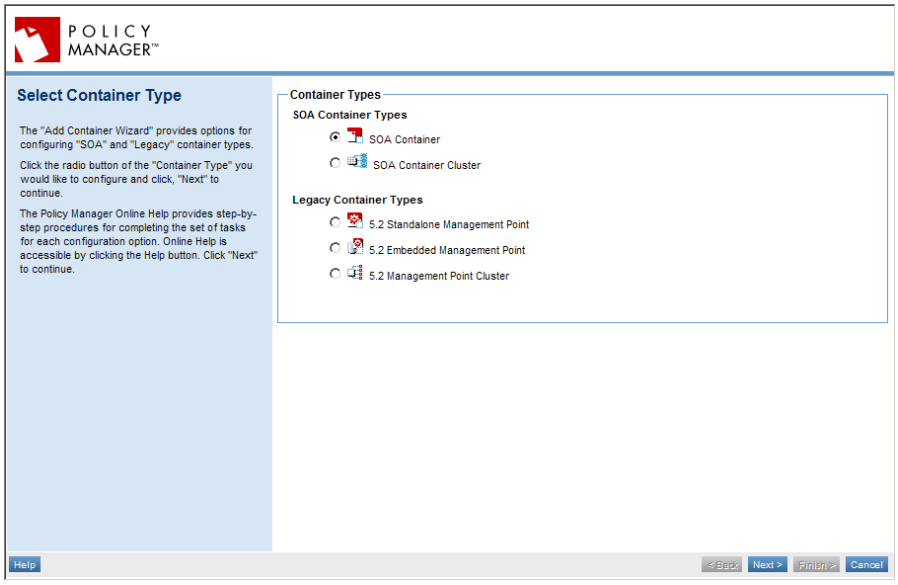


Figure 2-14: Agent for WCF Configuration Wizard—*Select Container Type*

Select the "SOA Container" option and click **Next** to continue.

14. The "Specify Metadata Import Options" screen displays.

To Configure the Agent for WCF

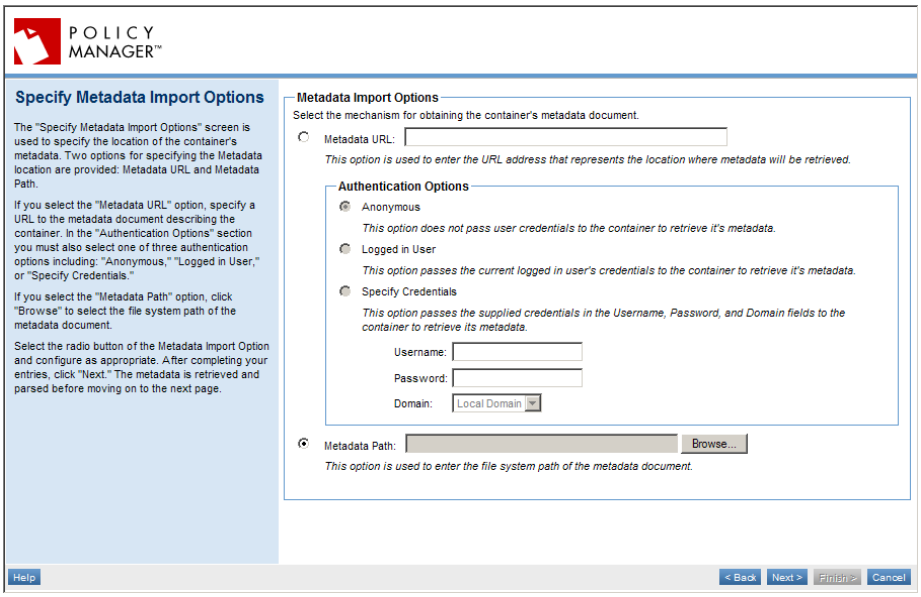


Figure 2-15: Agent for WCF Configuration Wizard—*Specify Metadata Import Options*

Click the "Metadata Path" radio button, and then "Browse." On the "Chose File to Upload" screen paste the full path to metadata file copied in the clipboard from Step 12 into the "File name" text box and click **Next**.

15. If the container certificate is not trusted by Policy Manager the "X.509 Certificate is Not Trusted" screen displays.

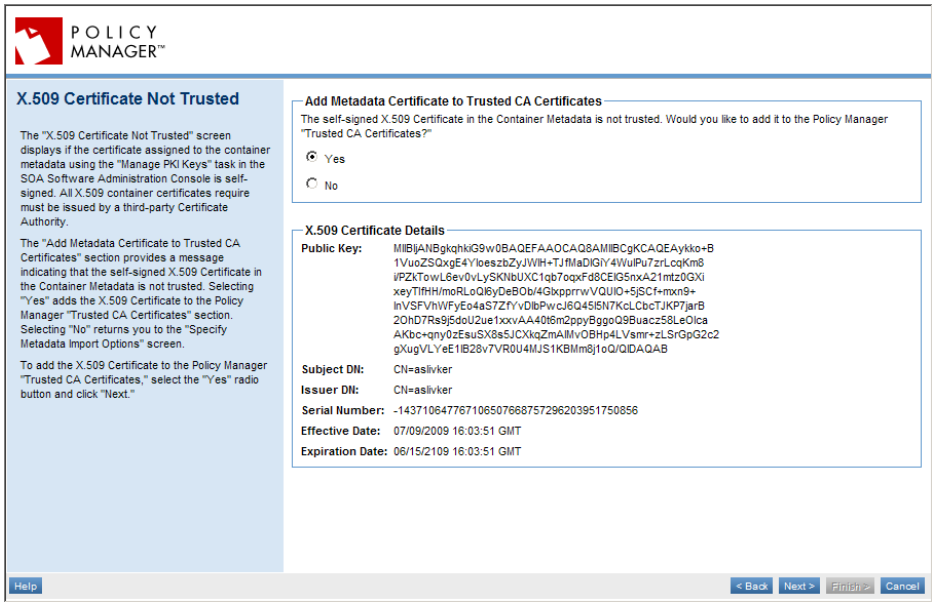
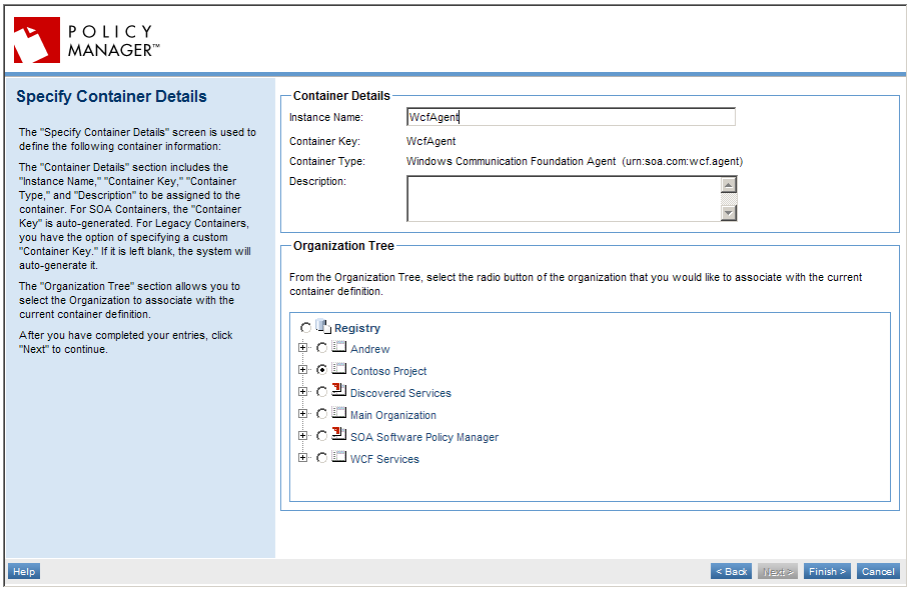
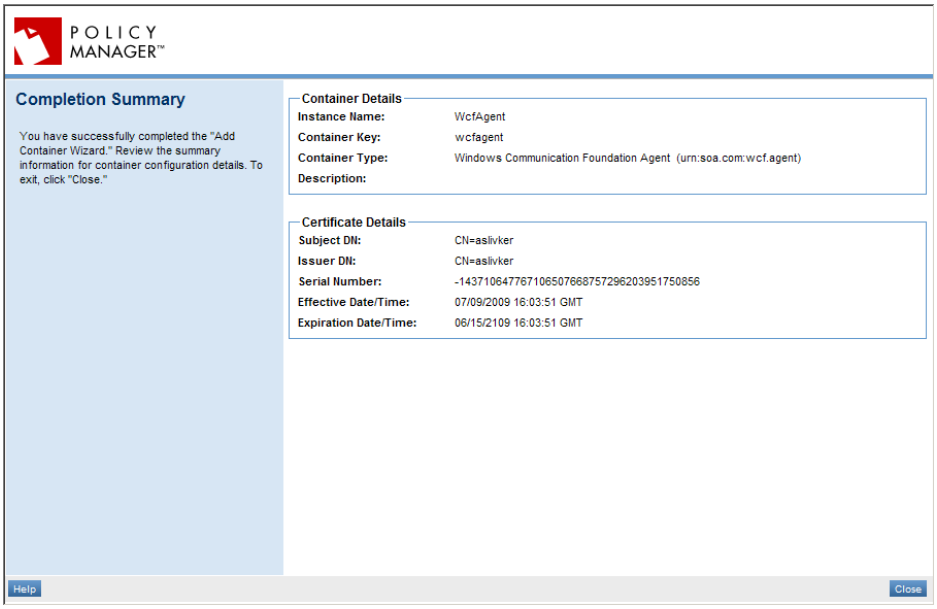


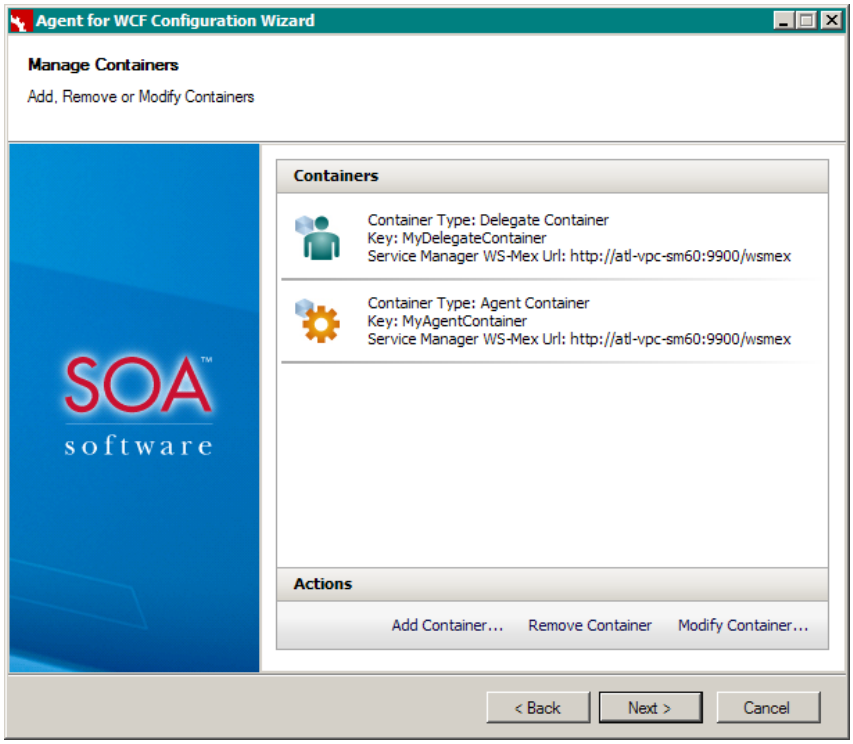
Figure 2-16: Agent for WCF Configuration Wizard—*X.509 Certificate Not Trusted*

The "Yes" option is selected by default. Click **Next** to continue. The "Specify Container

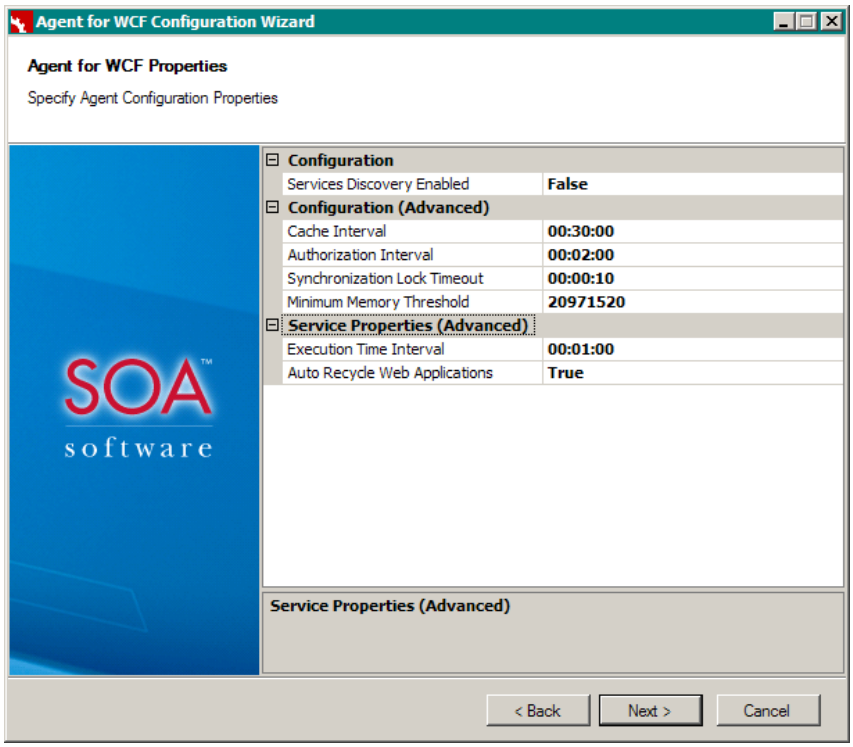
To Configure the Agent for WCF

	Details" screen displays.  **Figure 2-17: Agent for WCF Configuration Wizard—*Specify Container Details*** Enter the container "Instance Name" and optional "Description." Click **Finish** to continue.
16.	The "Completion Summary" screen displays. Click **Close**.  **Figure 2-18: Agent for WCF Configuration Wizard—*Completion Summary***

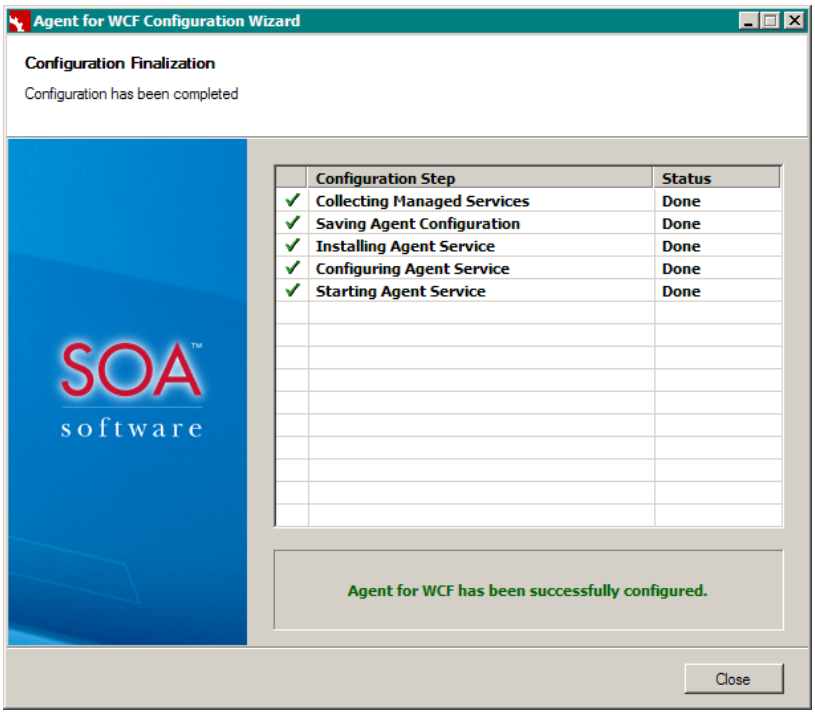
To Configure the Agent for WCF

17.	Return to the "Agent for WCF Configuration Wizard" (Step 12) and click **OK**. . No warning is presented because the container is now registered in Policy Manager and the configuration wizard returns to the "Manage Containers" screen.
18.	 **Figure 2-19: Agent for WCF Configuration Wizard—*Add Container (Save Container Configuration)*** **Figure 2-19: Agent for WCF Configuration Wizard—*Add Container (Save Container Configuration)***
19.	You have successfully created one Delegate and one Agent Container. Click **Next** to continue the "Agent for WCF Configuration Wizard."

To Configure the Agent for WCF

20.	To configure the "Agent for WCF" installation with service discovery runtime, select "True" for the "Services Discovery Enabled" option located in the "Configuration" section. *Note that Service Discovery must also be enabled in the "Containers" section of the Policy Manager "Management Console" for this function to be operational.*  **Figure 2-20: Agent for WCF Configuration—*Agent for WCF Properties*** 21. Advanced Configuration Options The following advanced configuration options are available: Cache Interval—Sets a time interval for retaining endpoint configurations in the memory cache before triggering auto update; Authorization Interval—Sets a time interval for retaining authorization results in the memory cache; Synchronization Lock Timeout—Sets a time interval to wait for a lock on the common configuration file before throwing error; Minimum Memory Threshold—Sets a minimum amount of available physical memory (bytes) that allows queuing of asynchronous operations. Service mode exposes the following additional configuration options: Execution Time Interval—Sets how often the Agent Service checks for endpoint configuration updates; Auto Recycle Web Applications—A flag that permits the Agent Service to

To Configure the Agent for WCF

	automatically restart Web Applications if an endpoint configuration changed.
22.	Complete Configuration When the "Agent for WCF" configuration is complete, click **Next** to continue, then **Finish** on the "Configuration Finalization" screen. Verify that all steps completed without errors.  **Figure 2-21: Agent For Configuration Wizard—*Add Container (Configuration Finalization)*** Click **Close** to exit the "Agent for WCF Configuration Wizard." The "Agent for WCF" is now fully configured and operational.
23.	If the "Services Discovery Enabled" option was set to "True" in Step 20, proceed to the "Container Details" screen in the Policy Manager "Management Console." Click the "Modify Service Discovery Options" and click the "Discover services only" radio button. The "Agent for WCF" does not support the "Discover and automatically manage services" option.

To Configure the Agent for WCF

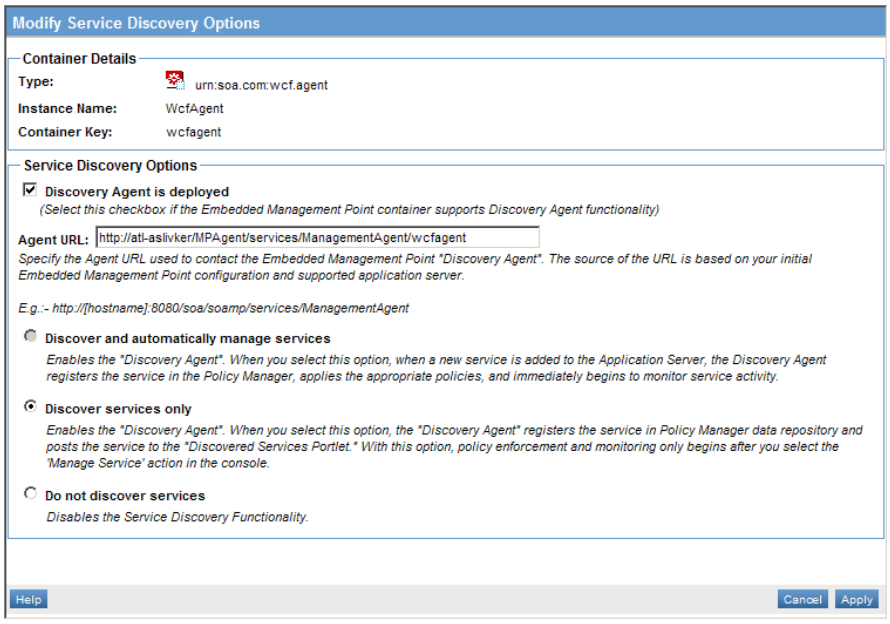


Figure 2-22: Modify Service Discover Options

AGENT METABASE FILE

The "Agent for WCF" stores its configuration in the `Soa.WcfMP.config` metabase file. By default this file is located in the Agents installation folder. The path to this file is controlled via the registry setting at `HKLM\SOFTWARE\SOA Software, Inc\WCFMP\InstallDir`. Sometimes it may be necessary to store the metabase file at another (i.e., more secure) location. This can be done by moving the `Soa.WcfMP.config` file to another folder and updating this registry setting.

Note: Always make a backup of the computer's registry before making any changes.

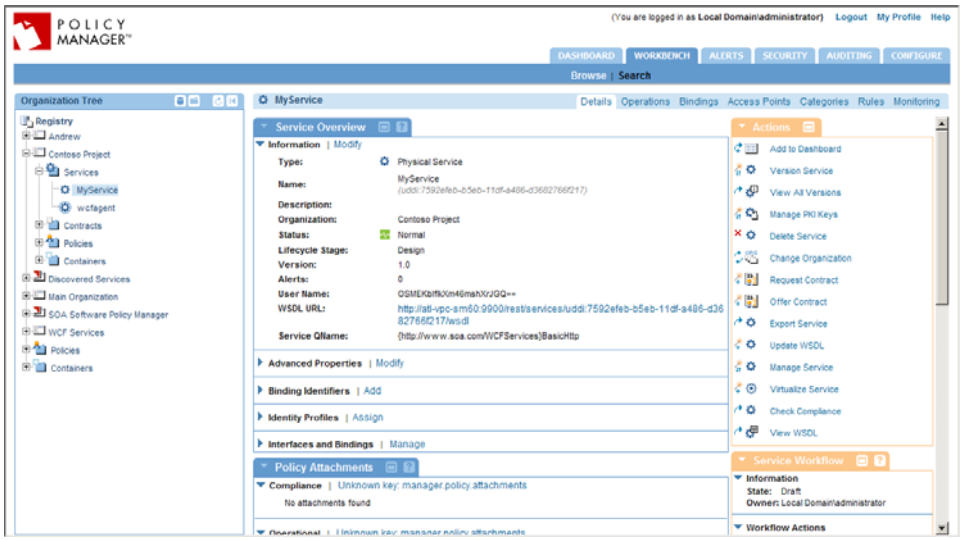
CONFIGURING SERVICE AND CLIENT ENDPOINTS WITH SOA BINDING

To make an existing WCF client or service endpoint managed by Workbench within an "Agent for WCF" container, the binding on that endpoint must be replaced with an SOA Binding. The binding extension is registered in the `machine.config` file as "`soaBinding`." The following procedure assumes that the client or service application uses a configuration file to configure its WCF endpoints.

Configure Service and Client Endpoints with SOA Binding

Step	Procedure
1.	Open the application or web configuration file using any text editor (e.g., Notepad, Visual Studio, etc).

2.	Find the endpoint that will be managed by the "Agent for WCF."
	
	`<system.serviceModel>`
	`  <services>`
	`  <service name="MyService">`
	`  <endpoint binding="basicHttpBinding"`
	`  contract="IMyService"`
	`  bindingConfiguration="MyBinding"`
	`  address="http://mycomputer/myservice">`
	`  </endpoint>`
	`  </service>`
	`  </services>`
	`  <bindings>`
	`  <basicHttpBinding>`
	`  <binding name="MyBinding"/>`
	`  </basicHttpBinding>`
	`  </bindings>`
	`</system.serviceModel>`

3.	Find the "Service QName" and "Endpoint Name" in the Policy Manager "Management Console." a. Open the Policy Manager "Management Console." b. Find a web service that is associated with your physical endpoint. c. Find the service QName on "Details" tab.  **Figure 2-23: Configure Service and Client Endpoints with SOA Binding—*Service QName*** d. Click on the "Access Points" tab and find the endpoint that you want to

Configure Service and Client Endpoints with SOA Binding

manage.

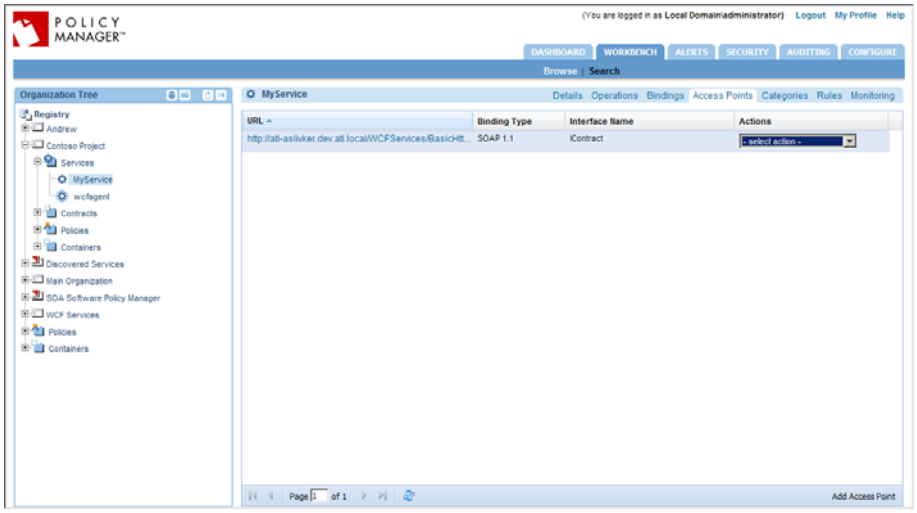


Figure 2-24: Configure Service and Client Endpoints with SOA Binding—*Modify Access Point*

e. From the "Actions" drop-down list box, select "View Access Point Details."

f. In the Access Point "Details" tab find the "WSDL Port Name" property which is the endpoint name.

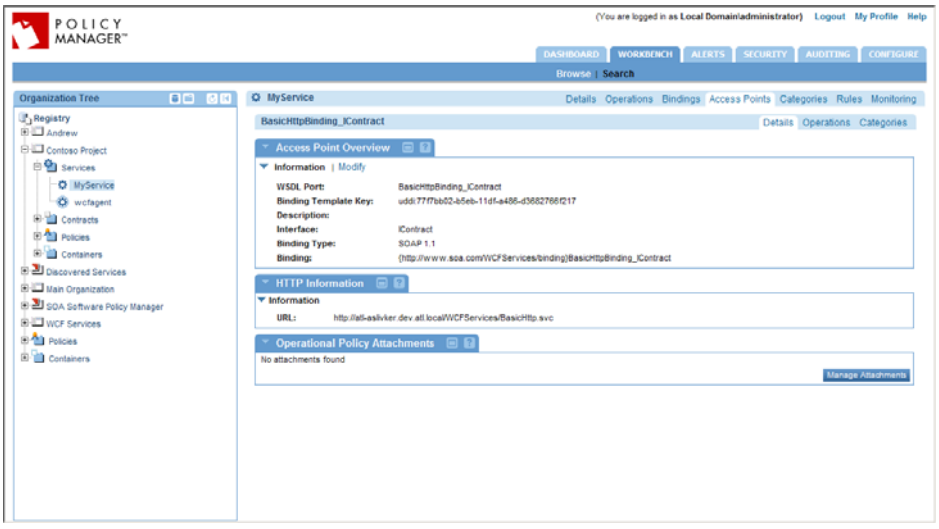


Figure 2-25: Configure Service and Client Endpoints with SOA Binding—*WDSL Port Name*

4.	Replace standard binding with "`soaBinding`" and add the configuration for the new binding.

Configure Service and Client Endpoints with SOA Binding

```
<system.serviceModel>
  <services>
    <service name="MyService">
      <endpoint binding="soaBinding"
                contract="IMyService"
                bindingConfiguration="MySoaBinding"
                >
      </endpoint>
    </service>
  </services>
  <bindings>
    <soaBinding>
      <binding name="MySoaBinding"
               containerId="WCF-MP"
               serviceQName="{http://www.soa.com/Samples/myService}MyService"
               portName="MyService_MyEndpoint" dynamicRouting="true" />
    </soaBinding>
  </bindings>
</system.serviceModel>
```

The following information is required by an SOA Binding to operate properly:

`containerId`—Specifies container that manages that endpoint. Remember that service endpoints must be managed by an Agent container and client endpoints must be managed by a Delegate container.

`serviceQName`—QName of the service as it was registered in the Policy Manager "Workbench."

`portName`—Service endpoint name as it was registered in the Policy Manager "Workbench."

5. In addition to the required properties listed above, the following advanced properties can be configured for an SOA Binding:

   `openTimeout`, `closeTimeout`, `sendTimeout`, `receiveTimeout`—Set standard timeouts for communication channel.

   `dynamicRoutingEnabled`—A flag that enables the dynamic routing feature for a client endpoint. When the flag is enabled this allows the client endpoint to dynamically assign a physical address of the service from the Workbench registry (Default is True).

   `useDefaultWebProxy`—A flag that instructs HTTP and HTTPS transports to use the system proxy configuration (Default is True).

   `maxBufferSize`—Sets the maximum size of any buffer pools used by the transport.

   `maxReceivedMessageSize`—Sets the maximum allowable message size that can be received.

   `maxBufferPoolSize`—Sets the maximum size of any buffer pools used by the transport.

   `readerQuotas` element—A standard Reader Quotas configuration element that allows the configuration of constraints on the complexity of SOAP messages that can be processed by endpoint.

   The following example illustrates an explicitly configured binding:

Configure Service and Client Endpoints with SOA Binding

```
<soaBinding>
      <binding name="MySoaBinding"
            closeTimeout="00:01:00"
            openTimeout="00:01:00"
            receiveTimeout="00:10:00"
            sendTimeout="00:01:00"
            containerId="WCF-MP"
            serviceQName="{http://www.soa.com/myservice}MyService"
            endpointName="MyService_MyEndpoint"
            dynamicRouting="true"
            useDefaultWebProxy="true"
            maxBufferPoolSize="524288"
            maxReceivedMessageSize="65536"
            maxBufferSize="65536">
            <readerQuotas
                  maxDepth="32"
                  maxStringContentLength="8192"
                  maxArrayLength="16384"
                  maxBytesPerRead="4096"
                  maxNameTableCharCount="16384" />
      </binding>
</soaBinding>
```

Figure 2-26: Explicitly Configured Binding

Note: Bindings can also be configured using Microsoft Service Configuration Editor included in Microsoft Windows SDK for .NET Framework 3.5 (http://www.microsoft.com/downloads/details.aspx?FamilyId=F26B1AA4-741A-433A-9BE5-FA919850BDBF&displaylang=en). Refer to the Microsoft documentation for details.

The following figure illustrates the MSCE Tool configuring an SOA Binding:

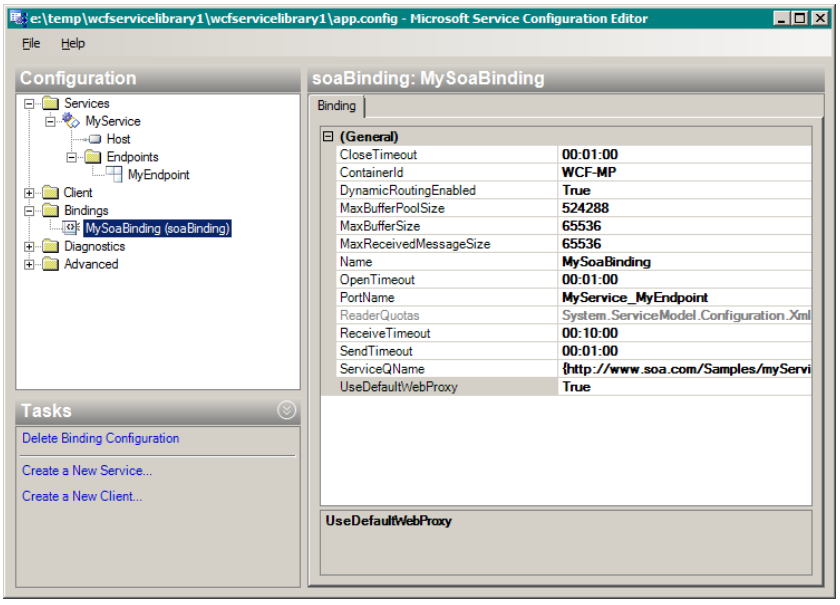


Figure 2-27: Microsoft Service Configuration Editor—*Configure SOA Binding*

Chapter 3: Troubleshooting an Agent for WCF Installation

OVERVIEW

This chapter provides troubleshooting information to assist in the configuration and maintenance of the "Agent for WCF."

TROUBLESHOOTING CONFIGURATION WIZARD ERRORS

The "Agent for WCF Configuration Wizard" writes errors that occurred during the configuration process to a text log file. The log file is located in the "Agent for WCF" Installation folder. The log filename starts with `Soa.WcfMP.ConfigurationWizard.exe` and is prefixed with the date and time of an error. Common scenarios that could cause the configuration process to fail include:

- The "Agent for WCF" fails to update the "Agent for WCF" metabase because the file does not exist at the specified location or the current user does not have permissions to perform updates.
- Incorrect database connection credentials are specified for the database delivery adapter.
- An invalid Metadata Exchange Service URI has been provided.

In case of an error, examine the log file and attempt to mitigate the problem (i.e., by providing a valid Metadata Service URI or database user credentials).

TROUBLESHOOTING AGENT FOR WCF DURING RUNTIME OPERATION

The "Agent for WCF" utilizes the standard tracing features of the .NET Framework. The trace source information is stored in the `system.diagnostics` section of the `machine.config` file.

```
<system.diagnostics>
  <sources>
    <source name="Soa.Core.Diagnostics.TraceSource"
            switchType="System.Diagnostics.SourceSwitch"
            switchValue="All">
      <listeners>
        <clear />
        <add name="EventLog" initializeData="SOA WCF Management Point"
             type="System.Diagnostics.EventLogTraceListener...">
          <filter type="System.Diagnostics.EventTypeFilter"
          initializeData="Information" />
        </add>
      </listeners>
    </source>
  </sources>
</system.diagnostics>
```

Figure 3-1: `system.diagnostics` section of the `machine.config` file

By default, the "Agent for WCF" is configured to write messages with severities of Information, Warning, and Error into the application event log. You can reduce the number of messages and the size of the log file by restricting severity level to "Warning" or "Error."

At times it may be necessary to collect a higher volume of information about an error. In this case, the severity level of a listener can be switched to "Verbose." Because this change can produce a larger volume of data, changing the trace listener from "Event Log" to "Text File" is recommended. The following example illustrates how to enable the "Verbose" trace mode.

```
<system.diagnostics>
  <sources>
    <source name="Soa.Core.Diagnostics.TraceSource"
            switchType="System.Diagnostics.SourceSwitch"
            switchValue="All">
      <listeners>
        <add name="TextFile" initializeData="c:\temp\trace.log"
             type="System.Diagnostics.TextWriterTraceListener...">
          <filter type="System.Diagnostics.EventTypeFilter"
            initializeData="Verbose" />
        </add>
        <remove name="Default" />
      </listeners>
    </source>
  </sources>
  <trace autoflush="true" />
</system.diagnostics>
```

Figure 3-2: Enable "Verbose" Trace Mode

UNINSTALLING AGENT FOR WCF

To Uninstall the Agent for WCF

Step	Procedure
1.	To uninstall the "Agent for WCF" from your computer, open the Windows Control Panel (**Start > Settings > Control Panel**).

To Uninstall the Agent for WCF

2. Click on the "Program and Features" icon in Windows Server 2008 or "Add/Remove Programs" in Windows Server 2003.

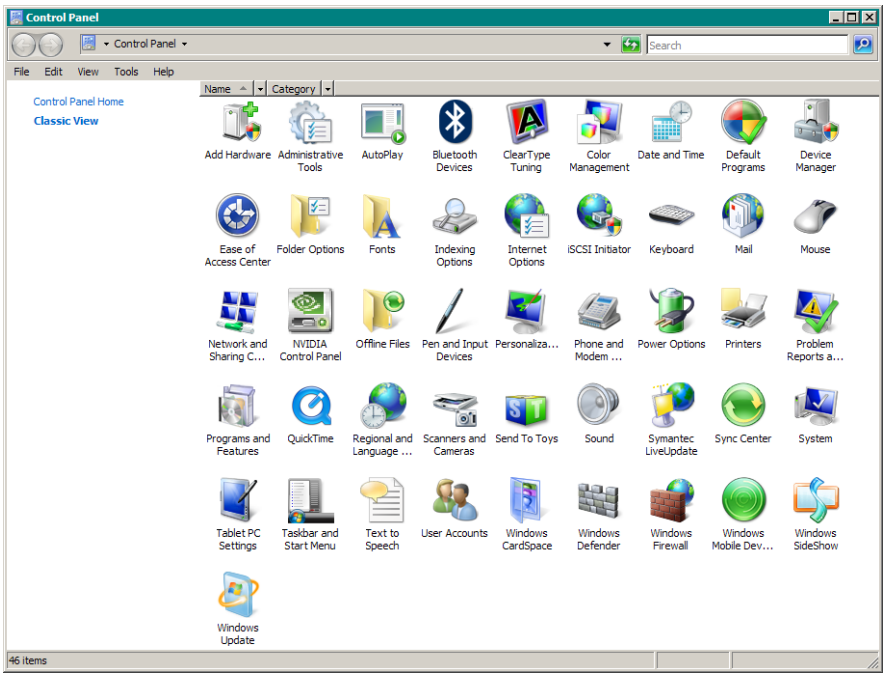


Figure 3-3: Control Panel—*Add or Remove Programs (Select)*

3. Select the "Agent for WCF" program and click **Remove**.

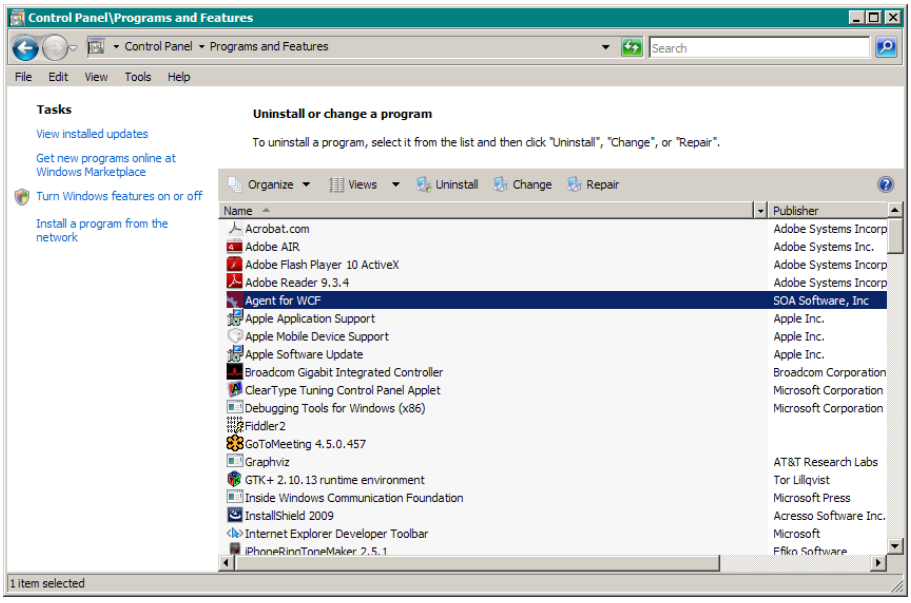


Figure 3-4: Control Panel—*Add or Remove Programs (Change/Remove)*

To Uninstall the Agent for WCF

4.	Click **Yes** to uninstall the "Agent for WCF" from your computer.