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PRODUCT
GUIDE

MiContact Center Enterprise

Open Application Server – Software Configuration

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Mitel
Powering connections

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INTRODUCTION

This document explains how to configure Open Application Server (OAS), including adding, deleting and modifying the components needed for the system to operate. OAS consists of the following components:

- Basic Services
- CTI Domain
- Media Servers
- Daemon Ports
- Language Libraries
- Play Messages
- Network Resource Manager
- Packages
- Virtual Devices
- Tenant Administration
- User Administration

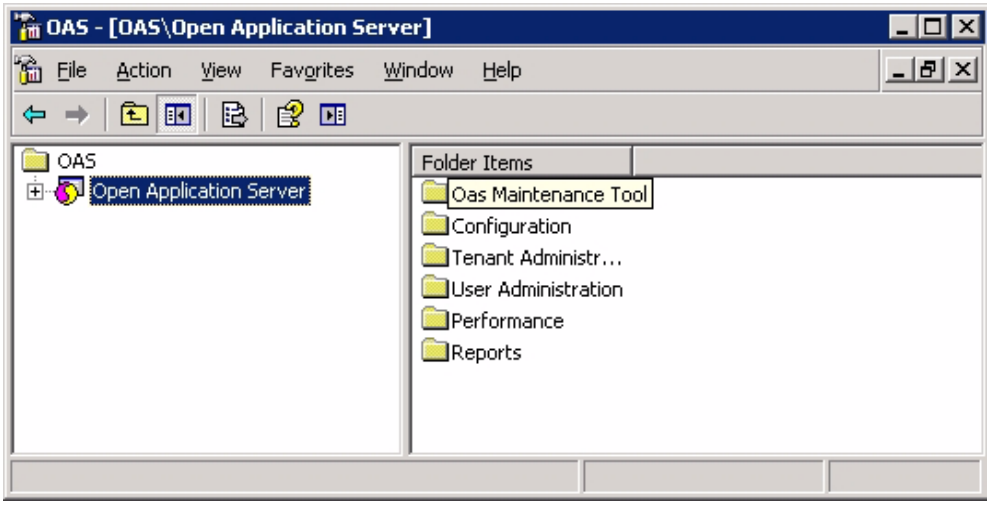
CONFIGURATION CHANGE IMPACTS

Most OAS configuration changes are updated dynamically. However, some configuration changes can require that a service is started and stopped, or that the system is rebooted. Each of the following sections discusses the impact and actions necessary to implement changes.

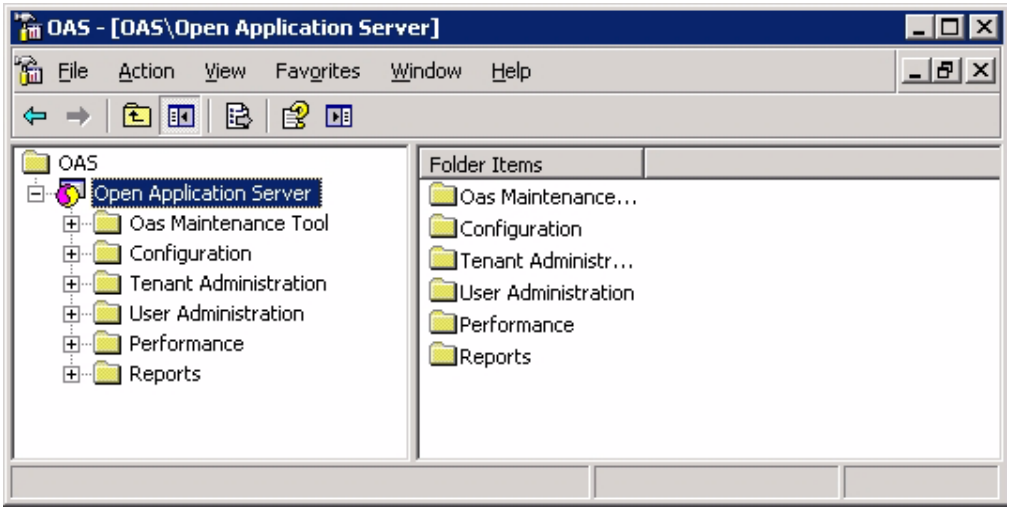
ACCESSING OAS CONFIGURATION

OAS is configured using the OAS Management Console. To access this application, do the following:

1. From the Start menu, point to **Programs**, **OAS**, and then click **Management Console**. The OAS Management Console application appears.



2. From the configuration tree, expand **Open Application Server** to display the OAS Management Console functions.



3. Expand the **Configuration** folder to display the configuration components.
4. Click the component you want to configure. Steps for configuring each component (Basic Services, CTI Domain, and so on) are provided in the following sections.

ACCESSING MENUS

This section provides step-by-step instructions for viewing, modifying, adding, and deleting OAS components. Different methods can be used to initiate each of these activities. These methods are described in the following sections.

VIEWING COMPONENTS

When selecting a component in the configuration tree, information about that component is displayed in the configuration display. Expand the configuration tree to view subcomponents by clicking the plus sign next to the component. This method is shown in Figure 1.

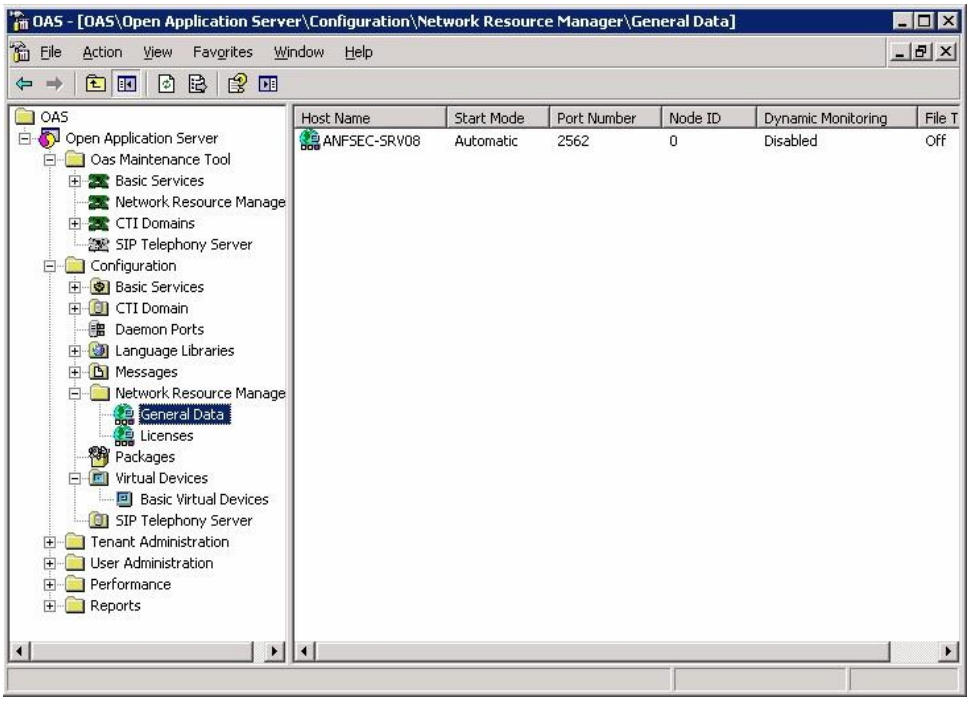


Figure 1: Viewing components

MODIFYING COMPONENTS AND SUBCOMPONENTS

If you are allowed to modify a component, you have four opportunities to do this.

1. Right-click the component to modify, point to **All Tasks**.
2. Click **Modify**. A dialog in which changes can be made will appear. See Figure 2 for an example.

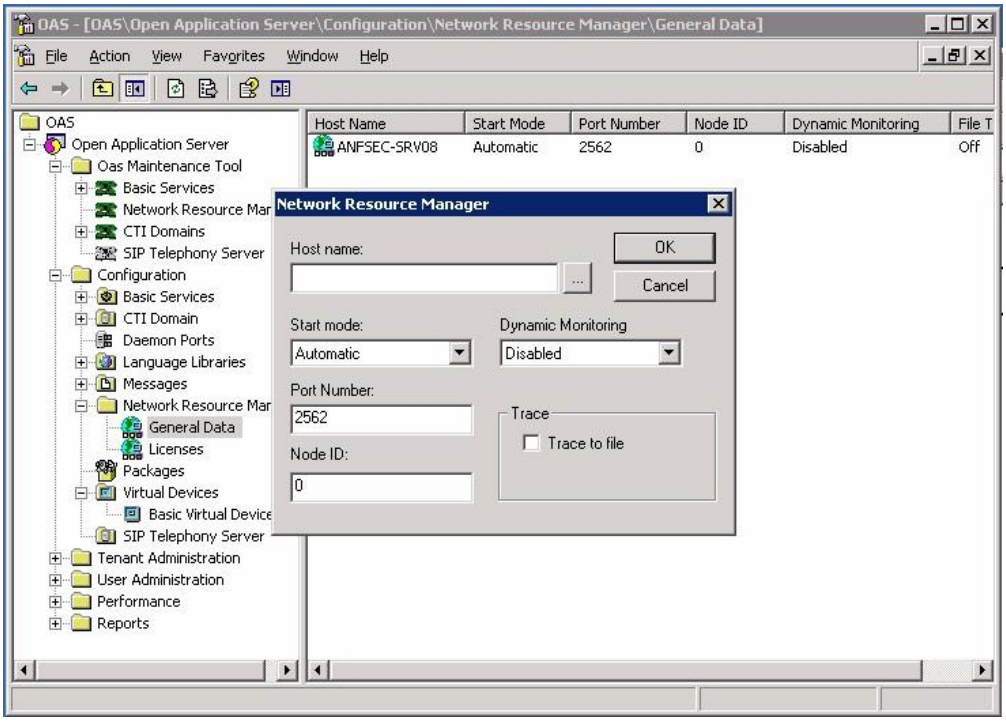


Figure 2: Modify component

OR

1. From the configuration tree, click the component.
2. On the **Action** menu, point to **All Tasks** and then click **Modify**.

OR

1. Right-click the data for the component in the configuration display, point to **All Tasks**, and then click **Modify**, see Figure 3.

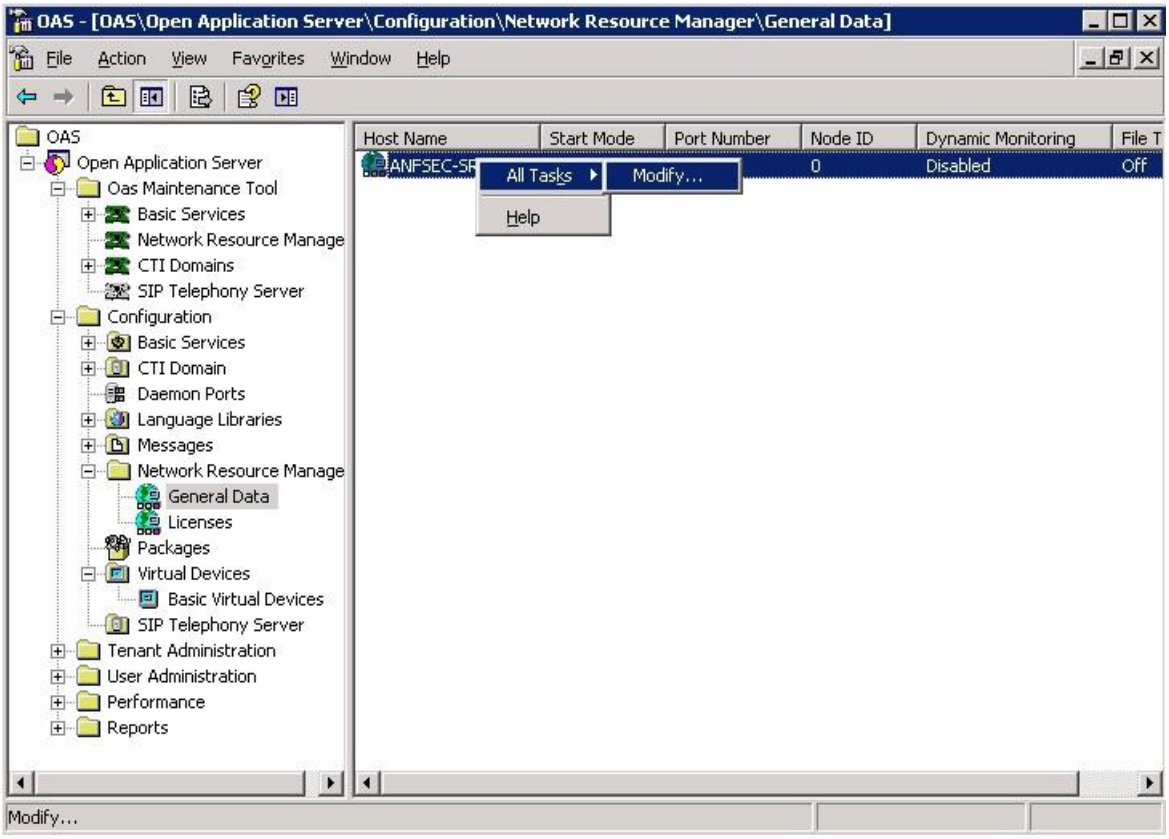


Figure 3: Modify component

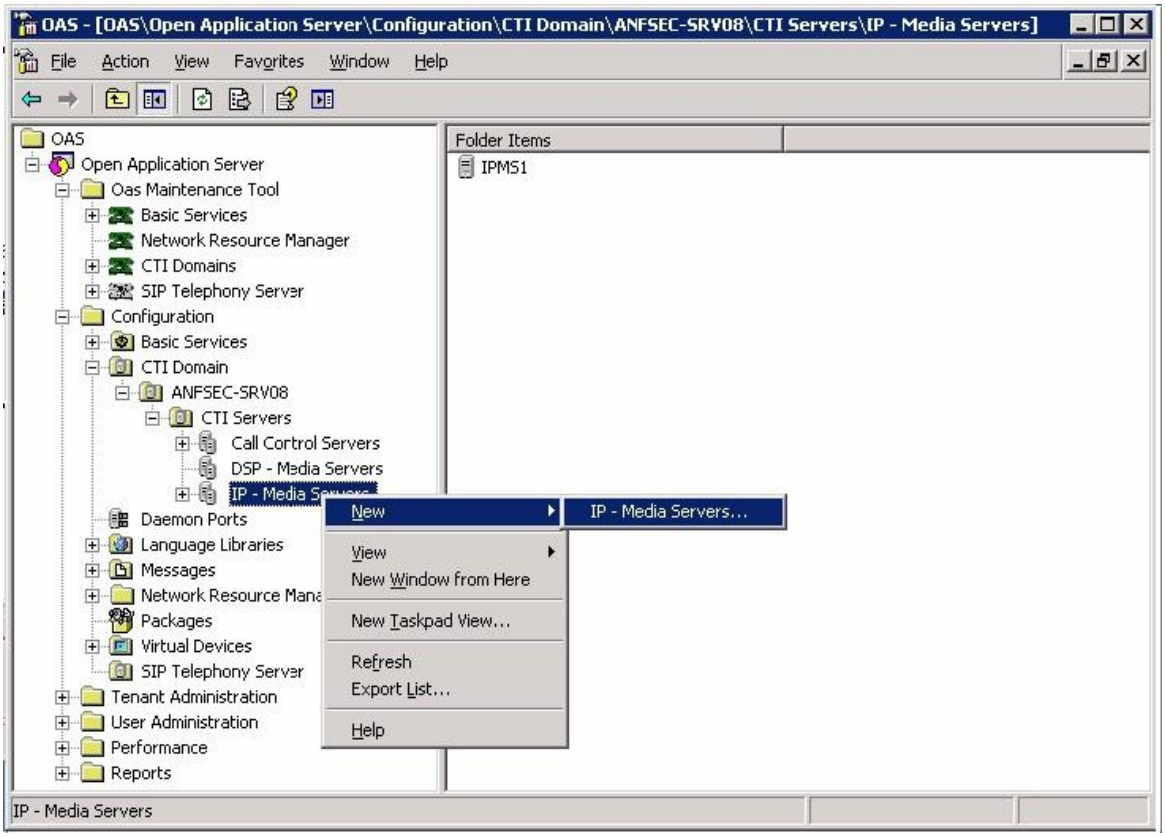
OR

Double-click the data entry on the configuration display.

ADDING SUBCOMPONENTS

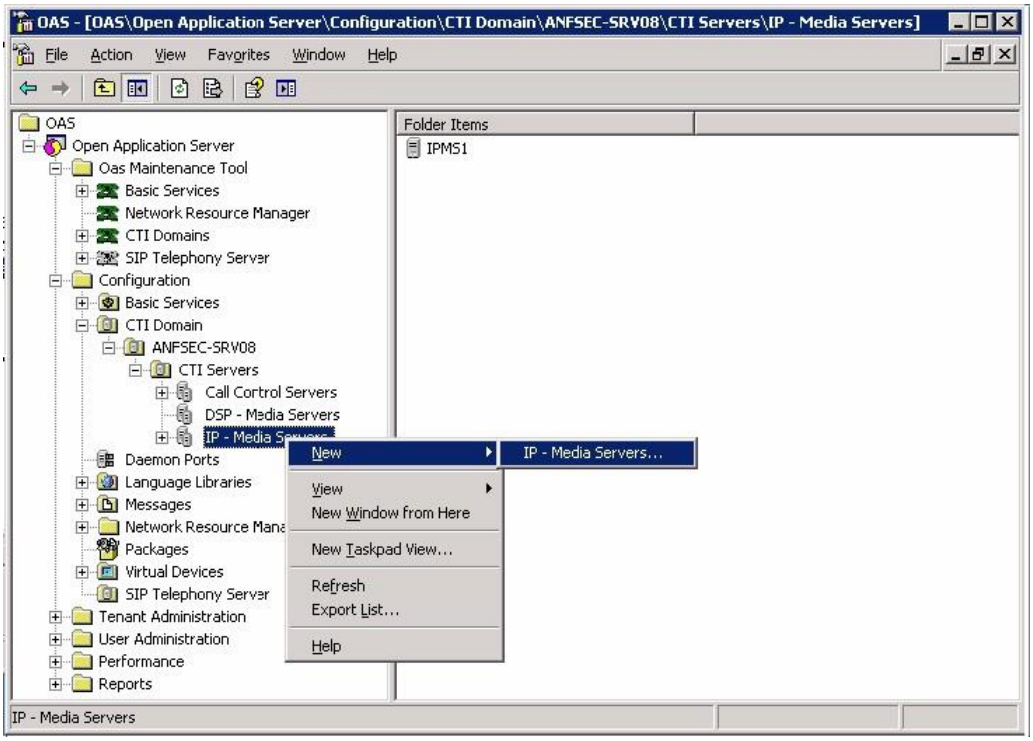
If you are allowed to add a subcomponent, you can do so in any of the following ways:

1. From the configuration tree, right-click the component, point to **New**, and then click **[subcomponent]**.



OR

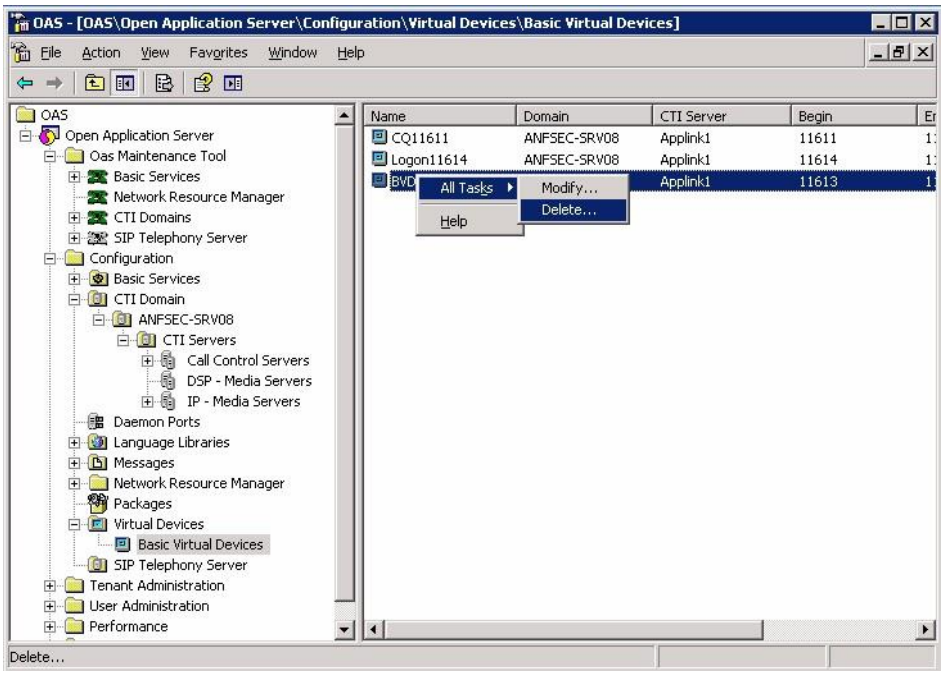
1. From the configuration tree, click the component.
2. On the **Action** menu, point to **New**, and then click **[subcomponent]**.



DELETING SUBCOMPONENTS

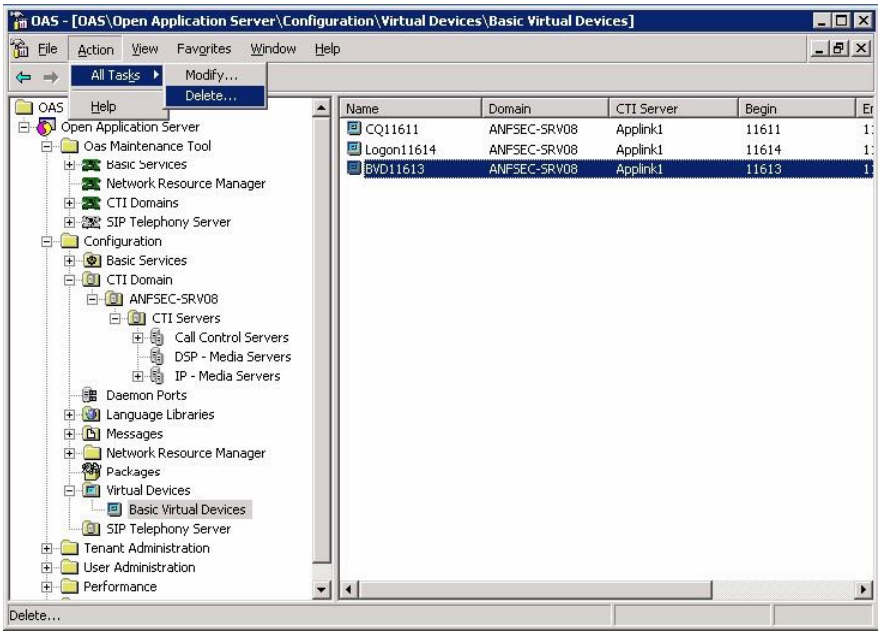
If you are allowed to delete a subcomponent, you can do so in any of the following ways:

1. From the configuration tree or configuration display, right-click the component, point to **All Tasks** and then click **Delete**.



OR

1. From the configuration tree or configuration display, click the component.
2. On the **Action** menu, point to **All Tasks**, and then click **Delete**.



TOOLBAR

Toolbar buttons allows faster and more efficient access to frequently used functions. Each button corresponds to a specific command, and these are described in Table 1 Toolbar.

Table 1 Toolbar

ICON	COMMAND	DESCRIPTION
	Back	Go back to previously selected level in the tree.
	Forward	Go forward to the previously selected level in the tree. Only enabled only after Back is executed.
	Up	Move up one level in the tree.
	Show/Hide Tree/Favorites	Toggle between showing and hiding the Tree and Favorites tabs in the display.
	Refresh Screen	Update the display.
	Export List	Export data from the Maintenance Status Display to a text file.
	Help	Obtain help for the Microsoft Management Console.

EXITING THE OAS MANAGEMENT CONSOLE

Select **File** from the menu bar and click **Exit**.

BASIC SERVICES

The Basic Services, listed below, always reside on the same host. Expand Basic Services to list the items in the configuration display, see Figure 4.

- Alarm Service
- Configuration Service
- Event Channel Service
- Performance Data Service
- Start and Stop Service
- Trace Service

Since all Basic Services must reside on the same host, it is possible to select any Basic Service to modify the host name for all Basic Services.

Note: Some of the services require that a specified port number. This number must be unique for each service on the same host.

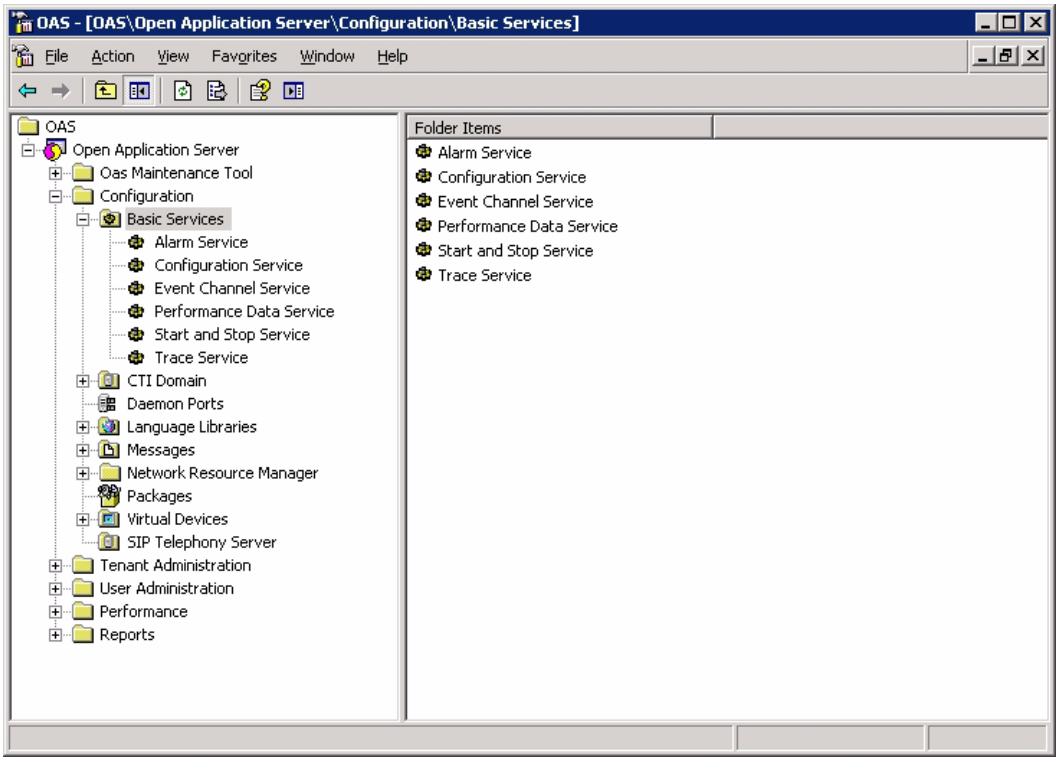


Figure 4: Basic Services

Note: Modifying the Basic Services host name renders OAS inoperable until the system is rebooted.

Note: Host name length cannot be more than 15 characters.

ALARM SERVICE

The Alarm Service logs alarm events received from different components through the alarm channel. For Alarm Service it is possible to configure:

- The host where the Alarm Service resides and logs alarms.
- The start mode of the Alarm Service.

TO VIEW THE ALARM SERVICE CONFIGURATION

From the configuration tree, click **Alarm Service**. The current values appear in the configuration display, see Figure 5.

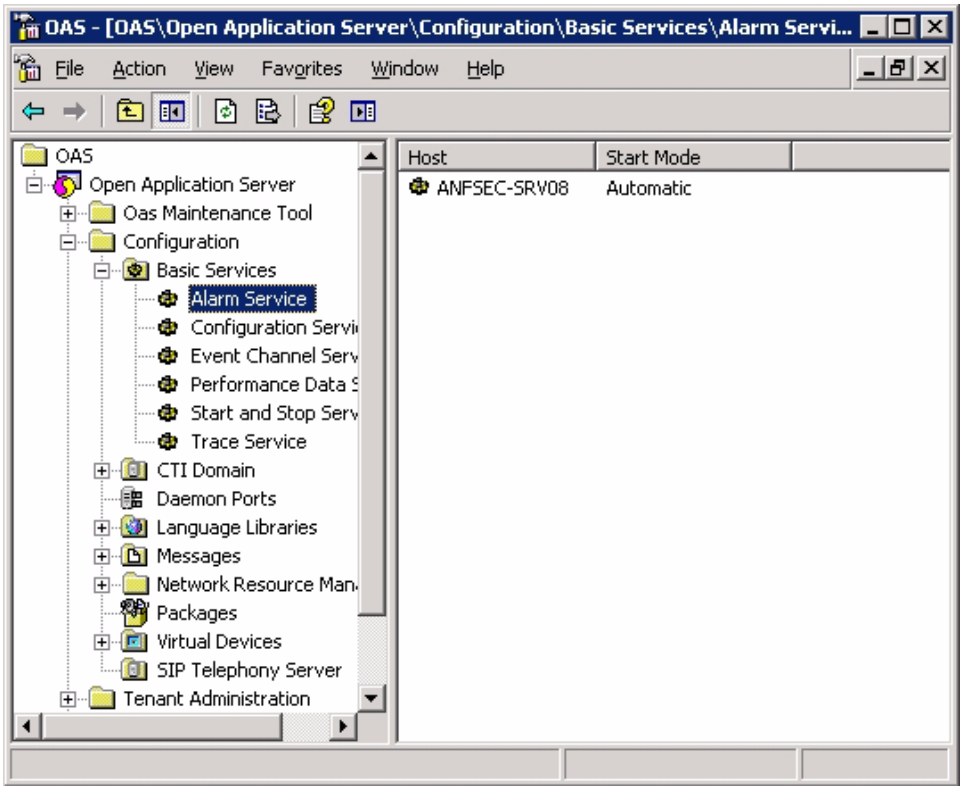
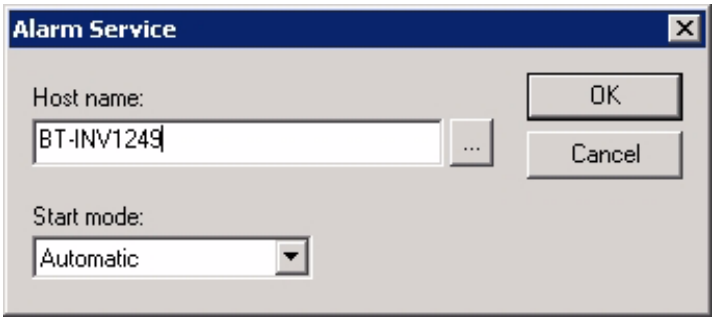


Figure 5: Alarm Service configuration

MODIFY ALARM SERVICE CONFIGURATION

1. Right-click **Alarm Service**, point to **All Tasks**, and then click **Modify**. The Alarm Service dialog appears.



2. In the **Host name** field, type or browse for the host where all Basic Services will reside.
3. Select start mode (**Automatic** or **Manual)**.
4. Click **OK** to update the OAS configuration with the values specified in the dialog.

CONFIGURATION SERVICE

The Configuration Service stores the system configuration information for OAS, and the configuration specifies the following:

- Host where the Configuration Service resides.
- Port number of the Configuration Service.

VIEW CONFIGURATION SERVICE CONFIGURATION

From the configuration tree, click **Configuration Service**. The current values appear in the configuration display.

MODIFY CONFIGURATION SERVICE CONFIGURATION

1. From the configuration tree, right-click **Configuration Service**, point to **All Tasks**, and then click **Modify**. The Configuration Service dialog appears.

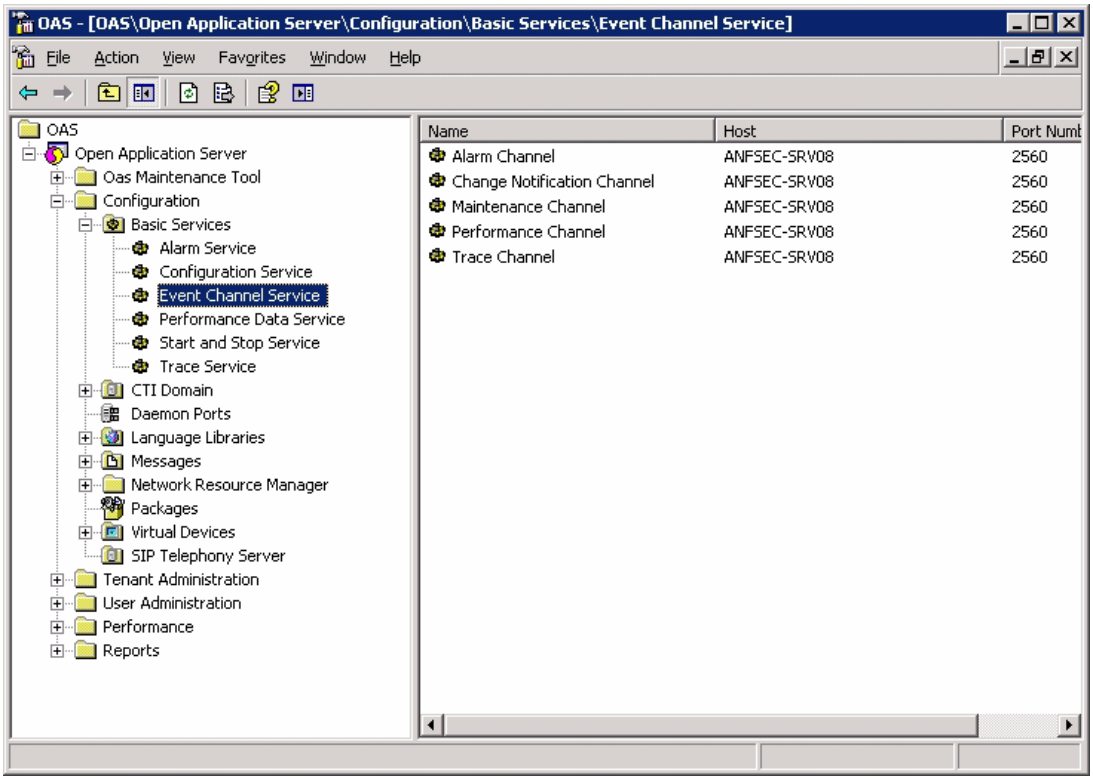
2. Enter the port number for the Configuration Service in the **Port Number** field.
3. Click **OK** to update the OAS configuration with the values specified in the dialog.

EVENT CHANNEL SERVICE

The Event Channel Service sends and receives information from various OAS components.

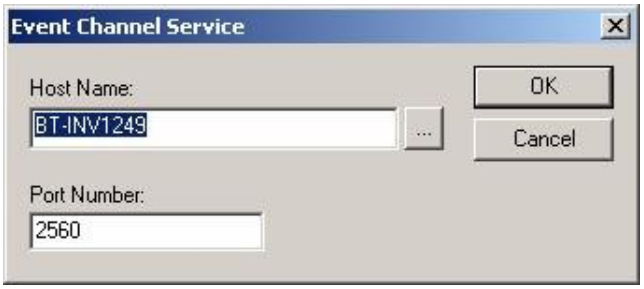
VIEW EVENT CHANNEL SERVICE CONFIGURATION

1. From the configuration tree, click **Event Channel Service**. The current values appear in the configuration display.



MODIFY EVENT CHANNEL SERVICE CONFIGURATION

1. From the configuration tree, right-click **Event Channel Service**, point to **All Tasks**, and then click **Modify**. The Event Channel Service dialog appears.



2. In the **Host Name** field, type or browse for the name of the host where all Basic Services will reside.

3. Click **OK** to update the OAS configuration with the values specified in the dialog.

PERFORMANCE DATA SERVICE

The Performance Data Service processes performance data information that it receives from different components through the Performance Channel. The Performance Data Service configuration specifies the following:

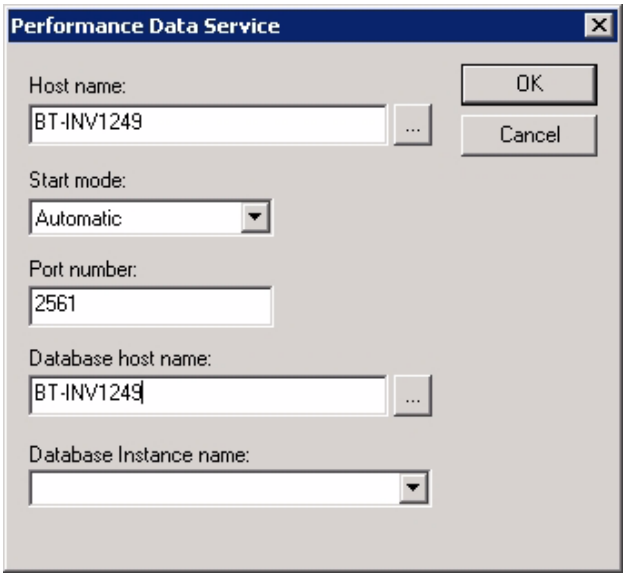
- Host where the Performance Data Service resides.
- Start mode of the Performance Data Service.
- SQL server host that contains the Performance Data Service data- base (oaspdc).

VIEW PERFORMANCE DATA SERVICE CONFIGURATION

From the configuration tree, click **Performance Data Service**. The current values appear in the configuration display.

MODIFY PERFORMANCE DATA SERVICE CONFIGURATION

1. From the configuration tree, right-click **Performance Data Service**, point to **All Tasks**, and then click **Modify**. The Performance Data Service dialog appears. The fields in this dialog are described in Table 2 Performance Data Service dialog.



2. In the **Host name** field, type or browse for the host where all Basic Services will reside.
3. Select the start mode (**Automatic** or **Manual**).
4. Type the port number for the Performance Data Service in the **Port number** field.
5. Type or browse to select the SQL Server host in the **Data- base host name** field that contains the Performance Data Service database. If an instance other than the default instance (MSSQLSERVER) is used, the name should be followed by a slash “\” then by the instance name.

6. Click **OK** to update the OAS configuration with the values specified in the dialog.

Table 2 Performance Data Service dialog

FIELD	DESCRIPTION
Host name browse list	The host where all Basic Services will reside.
Start mode drop-down list	**Automatic**. During startup, Performance Data Service is automatically started. **Manual**. During startup, Performance Data Service is not automatically started. This service must be started using the OAS Maintenance Tool.
Port number data entry field	The port number for Performance Data Service.
Database host name browse list	The SQL 2005 host and Instance Name that contains the Performance Data Service database.

START AND STOP SERVICE

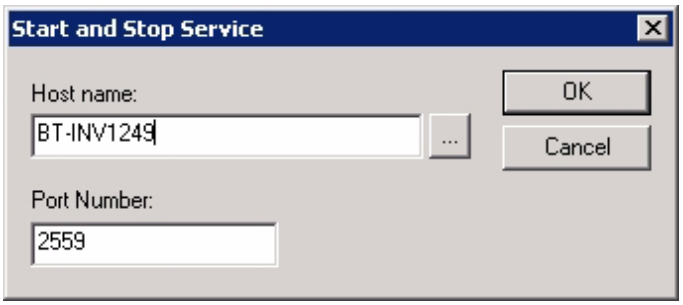
The Start and Stop Service starts and stops all OAS components, monitors the components, and restarts abnormally stopped components. The Start and Stop Service configuration specifies the host where the Start and Stop Service resides.

VIEW START AND STOP SERVICE CONFIGURATION

From the configuration tree, click **Start and Stop Service**. The current values appear in the configuration display.

MODIFY START AND STOP SERVICE CONFIGURATION

1. From the configuration tree, right-click **Start and Stop Service**, point to **All Tasks**, and then click **Modify**. The **Stop and Start Service** dialog appears. The fields in this dialog are described in Table 3 Stop and Start Service dialog.



2. Type, or browse for, the name where all Basic Services will reside in the **Host name** field.
3. Type the port number for the Start Stop Service in the **Port Number** field.
4. Click **OK** to update the OAS configuration with the values specified in the dialog.

Table 3 Stop and Start Service dialog

FIELD	DESCRIPTION
Host name browse list	The host where all Basic Services will reside.
Port Number data entry field	The TCP/IP port number for Start and Stop Services.

TRACE SERVICE

The Trace Service logs trace information that it receives from different components through the Trace Channel. The Trace Service configuration specifies the following:

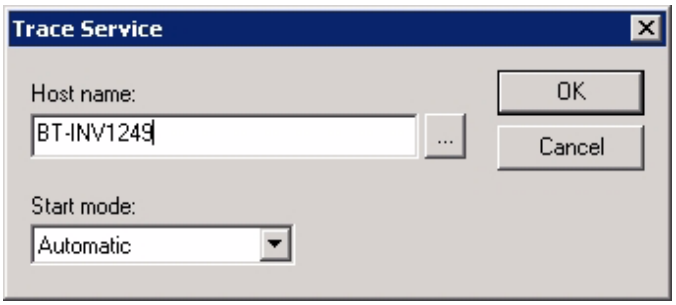
- Host where the Trace Service resides and logs the trace information.
- Start mode of the Trace Service.

VIEW TRACE SERVICE CONFIGURATION

From the configuration tree, click **Trace Service**. The current values appear in the configuration display.

MODIFY TRACE SERVICE CONFIGURATION

1. Right-click **Trace Service** from the configuration tree, point to **All Tasks**, and then click **Modify**. The **Trace Service** dialog appears. The fields in the dialog are described in Table 4 Trace Service dialog.



2. Type or browse for the host where all Basic Services will reside in the **Host name** field.
3. Select start mode (**Automatic** or **Manual**).
4. Click **OK** to update the OAS configuration with the values specified in the dialog.

Table 4 Trace Service dialog

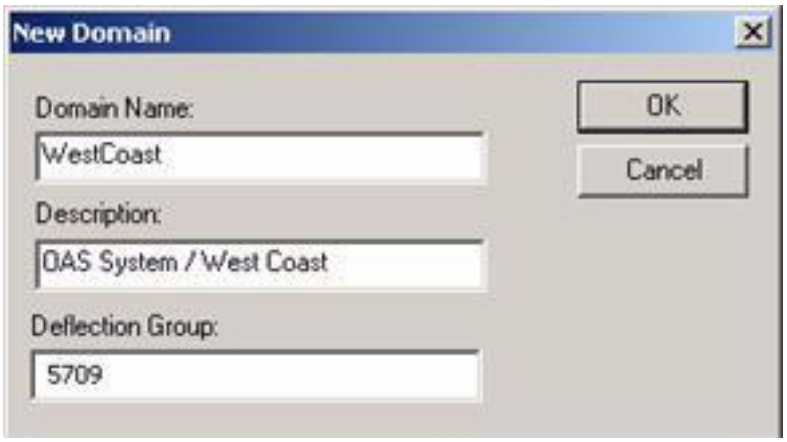
FIELD	DESCRIPTION
Host name browse list	The host where all Basic Services will reside.
Start mode drop-down list	The Trace Service's start mode. **Automatic** During startup, Trace Service is automatically started. **Manual** During startup, Trace Service is not automatically started. This service must be started using the OAS Maintenance Tool.

CTI DOMAIN

The CTI Domain consists of a collection of CTI Servers, comprising a number of Media Servers and one Call Control Server. Currently, OAS only allows one CTI Domain in the system.

A CTI DOMAIN

1. Right-click **CTI Domain** from the configuration tree, point to **New**, and then click **CTI Domain**. The **New Domain** dialog appears. The fields in this dialog are described in Table 5 New Domain dialog.



2. Enter the name of the new CTI Domain in the **Domain Name** field.
3. Enter a description for the new CTI Domain in the **Description**field.
4. Enter a deflection group for the new CTI Domain in the **Deflection Group** field. (This field is optional and is used primarily for making predictive calls.)
5. Click **OK** to update the OAS configuration with the values specified in the dialog.

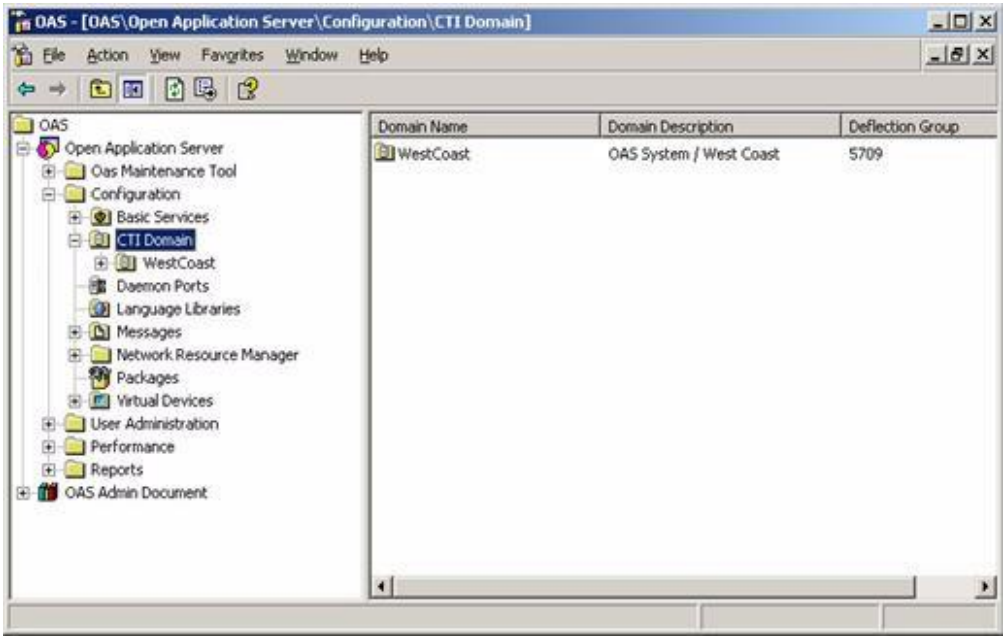
Table 5 New Domain dialog

FIELD	DESCRIPTION
Domain Name data entry field	The name of the new CTI domain.
Description data entry field	The description of the new CTI domain.
Deflection Group data entry field	A CTI group to be used by OASwhile making predictive call using the MakePredictiveCall service.

VIEW CTI DOMAIN CONFIGURATION

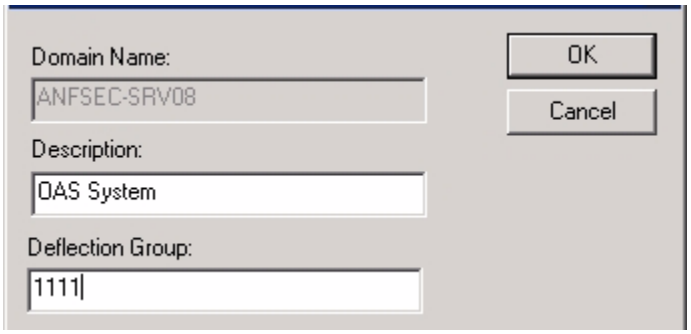
Click **CTI Domain** in the configuration tree. The name of the CTI Domain that has been configured

(if any) is displayed in the configuration display.



MODIFYING A CTI DOMAIN

1. Right-click the CTI Domain to be modified, point to **All Tasks**, and then click **Modify**. The **Modify Domain** dialog appears.



2. If needed, type a new description for the CTI Domain in the **Description** field.
3. If needed, type a new deflection group for the CTI Domain in the **Deflection Group** field.
4. Click **OK**.

DELETING A CTI DOMAIN

Note: A CTI Domain can be deleted only after all of its Media Servers and Call Control Servers have been deleted.

1. Right-click the CTI Domain to be deleted, point to **All Tasks**, and then click **Delete**.

2. Click **Yes** to confirm.

IP MEDIA SERVER

The IP Media Server is a host server that interacts with the call manager through SIP (IP Media Ports). In an IP Media Server, all media service requests are processed by server CPU.

Note: Configuration of the IP Media Server differs somewhat depending on installation type. When there are differences in the configuration procedures, this is described.

SETTING UP A NEW IP MEDIA SEVER

To set up a new IP Media Server, do the following:

1. Right-click **IP-Media Servers** from the configuration tree under CTI Servers, point to **New**, and then click **IP Media Server**. A wizard providing step-by-step instructions for configuration of IP Media Servers, launches.
2. Click **Next**. The **General Data** dialog appears.

Note: This dialog differs depending on installation type. The fields in the dialogs are described in Table 7 General Data field descriptions.

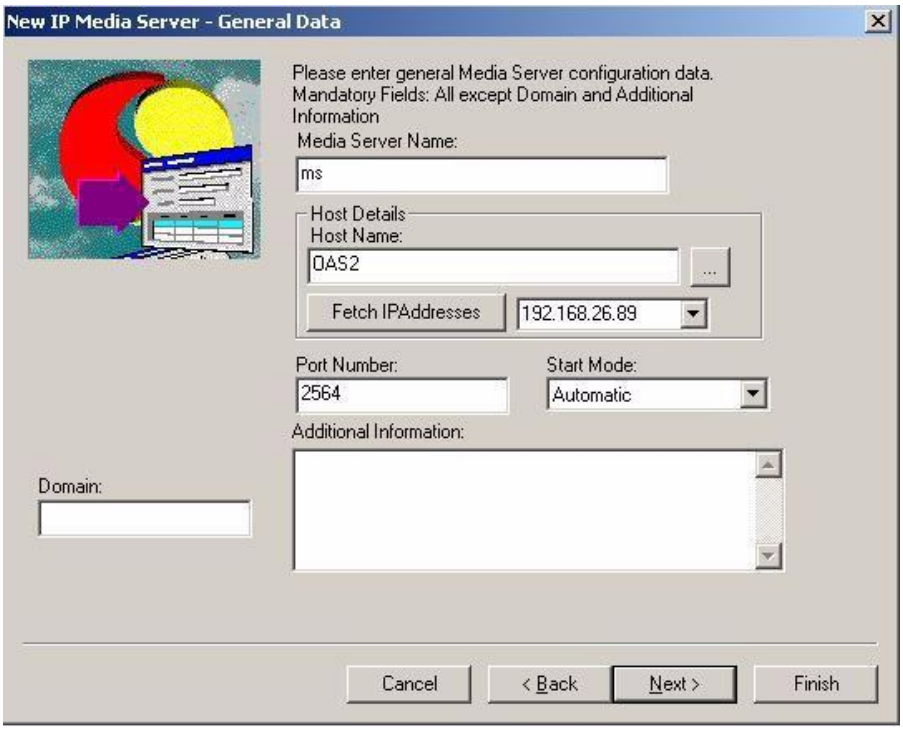


Figure 9: General Data dialog, MX-ONE (H.323) installation

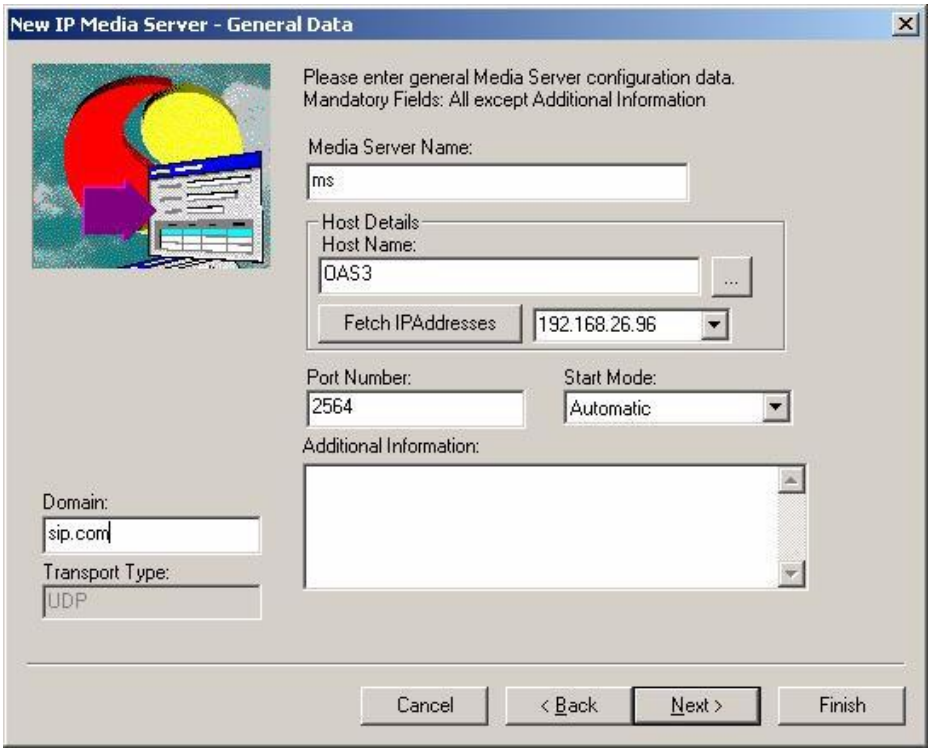


Figure 10:General Data dialog, SIP installation

Note: When using multiple Network Interface Cards (NIC), an option to fetch the IP address of the NIC to connect to is also enabled in the General Data dialog.

The following table describes the fields in the General Data dialog.

Note: For MX-ONE H.323 installation, all fields except Domain and Additional information are mandatory.

For SIP installation, all fields except Additional information are mandatory.

Table 7 General Data field descriptions

FIELD	DESCRIPTION
Media Server Name data entry field	Type a unique name for this IP Media Server. Note: This name cannot conflict with another Media Server, Call Control Server, or BVD name.
Host Details	
Host Name text field /	Type or browse for the name of the host where this IP Media Server resides.
IPAddresses combo box	Select the IP address where IPMS should run (from the list of all IP addresses of the backup node).
Port Number text field	Type the number of the port that is used for IP Media Server.
StartMode drop-down list	Select the start mode for this IP Media Server. Automatic or Manual.
Additional Information text field	For future use. Caution: This field must remain empty unless directed otherwise by OAS Technical Support
Domain text field	**MX-ONE H.323 installation**: Type the domain name of the MX-ONE Gatekeeper. The Media Server uses this name to register the media ports. Optional field (can be left empty). **SIP installation**: Type the domain name of the MX-ONE telephony server as SIP proxy. The Media server uses this name to register the media ports.
Fetch IP Address drop-down list	Select IP addresses of the configured NICs. Only enabled when using multiple NICs.
Transport Type text field	Indicate the transport type. **Note**: Only visible for SIP installations

3. Type the name of the IP Media Server in the **Media Server Name** field.

4. Type or select the name of the IP Media Server's host from the **Host Name** drop-down list.
5. Type the port number of the IP Media Server in the **Port Number** field.
6. Select Automatic or Manual start mode.
7. Type the preferred TCP port number for the Media Ports call control channels, or keep the default value. The IP Media Server will use two TCP ports for each Media Port.
8. Type the preferred UDP port number for the Media Ports RTP channels, or keep the default value. The IP Media Server will use one UDP port for each Media Port.
9. If multiple NICs, select which NIC to connect to from **Fetch IP Address** drop-down list.

Note: At this point the Finish button is enabled. Clicking Finish will end the wizard without configuring additional IP MediaServer items.

Additional items for MX-ONE H.323 installation are, for example, Gate-Keeper,resources, characteristics, and requirements.

Additional items for SIP installation are, for example, SIP Proxy, resources, characteristics, and requirements

10. Click **Next**. The Media Ports dialog appears.

Note: Media Ports dialog differs depending on type of installation. For MX-ONE H.323 installation, see Figure 12 and Table 8 Media Ports fields description. For SIP installation, see Figure 13 and Table 9 Media Ports fields description.

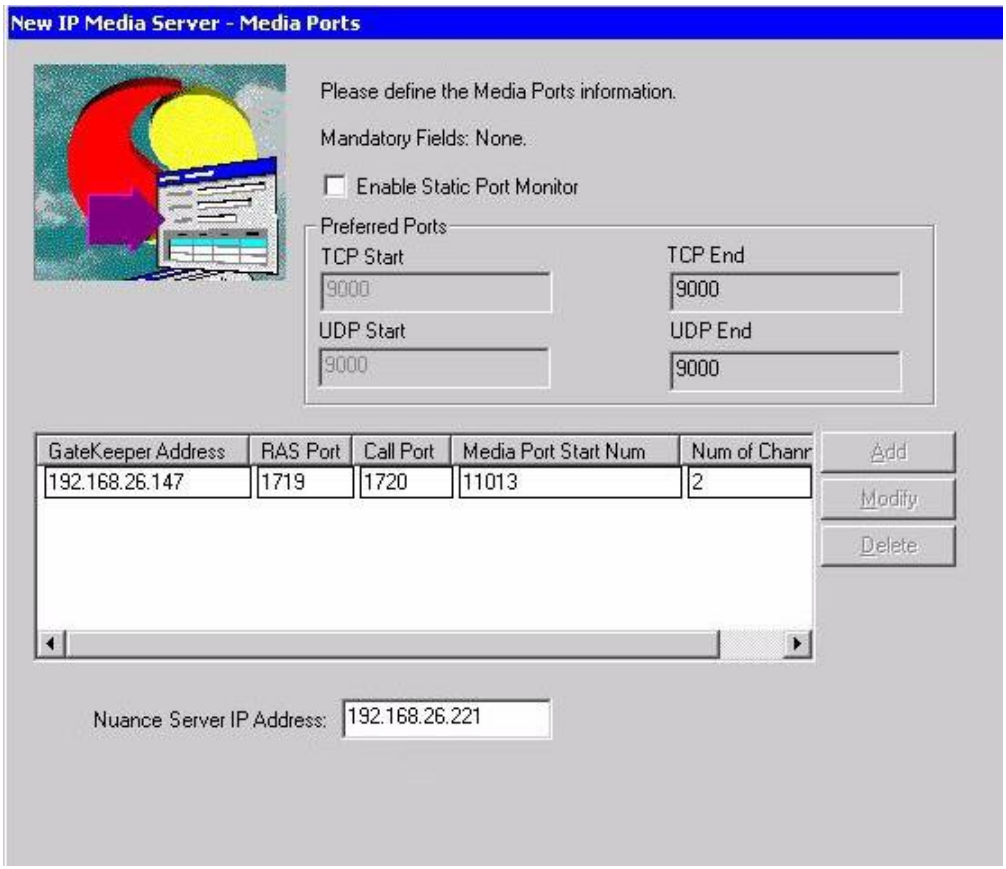


Figure 12: Media Ports Information dialog, MX-ONE H.323 installation

Table 8 Media Ports fields descriptions, MX-ONE H.323 installation

FIELD	DESCRIPTION
Enable Static Port Monitor check box	Select to enable TCP End and UDP End for input.
Preferred TCP Port Start	Type the start number for TCP ports to be used for the H.323 call control media ports. Default is 9000.
Preferred UDP Port Start	Type the start number for UDP ports to be used for the media ports' RTP channels. Default is 9000.
Preferred TCP Port End	The end number for TCP ports to be used for the H.323 call control media ports. The end value is calculated as follows: *TCP Port End = TCP Start Port +* *4* (total number of IP Media Server channels) -1*
Preferred UDP Port End non-editable field	The end number for UDP ports to be used for the media ports' RTP channels. The value is calculated as follows: *UDP Port End = UDP Start Port +*

FIELD	DESCRIPTION
	6 (total number of IP Media Server channels) -1*
GateKeeper Address data entry field	IP Address of the gatekeeper. If an EntryGateKeeper is configured in MX-ONE, specify that gatekeeper's IP address here.
RAS Port data entry field	The UDP ports to be used used when registering the IP extensions/Media port with MX-ONE.
Call Port data entry field	TCP ports used for H.323 call signaling with MX-ONE.
Media Port Start Num data entry field	The Media Port start number for this GateKeeper.
Number of Channels data entry field	The number of channels for this GateKeeper.
Nuance Server IP Address data entry field	Type the IP address the server on which Nuance Speech Server is installed.

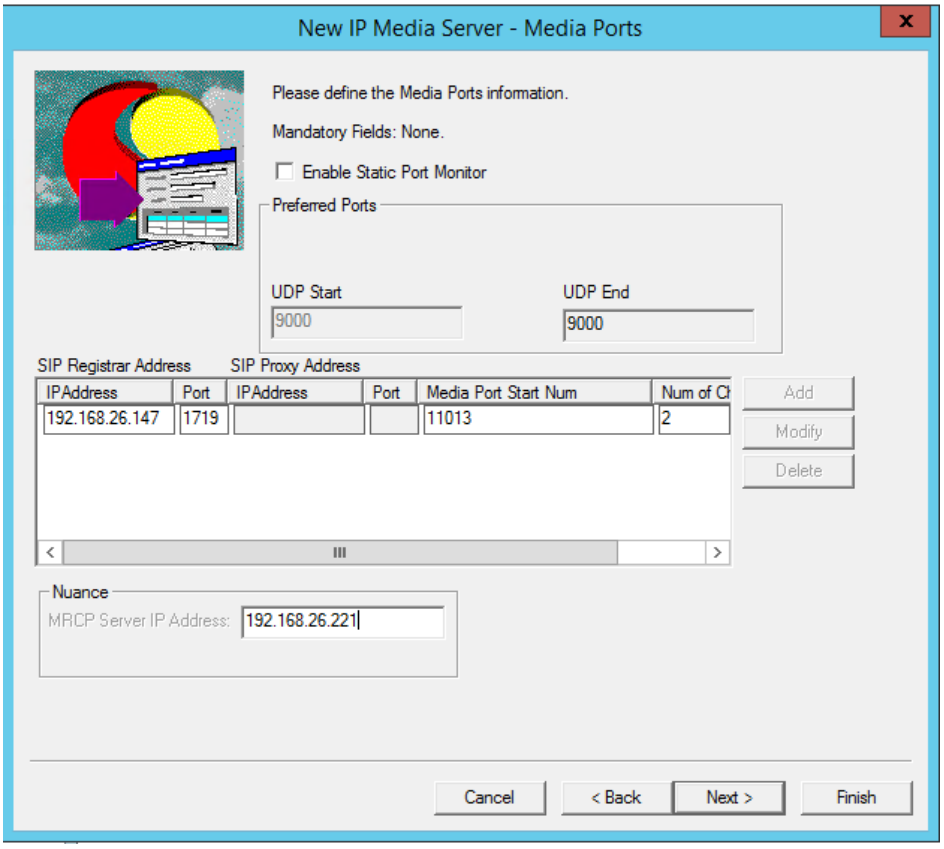


Figure 13:Media Ports Information dialog, SIP installation

Table 9 Media Ports fields descriptions, H323 and SIP installation

FIELD	DESCRIPTION
Preferred TCP Port Start data entry field	The start number for TCP ports to be used for SIP

FIELD	DESCRIPTION
	signaling. Default is 9000.
Preferred UDP Port Start data entry field	The start number for UDP ports to be used for the media ports' RTP channels. Default is 9000.
Preferred TCP Port End non-editable field	The end number for TCP ports to be used for SIP signaling. The end value is calculated as follows: *TCP PortEnd = TCP Start Port + (total number of IP Media Server* *channels) - 1*
Preferred UDP Port End non-editable field	The end number for UDP ports to be used for the media ports' RTP channels. The end value is calculated as follows: *UDP Port End = UDP Start Port +* *6* (total number of IP Media* *Serverchannels) - 1*
IP Address data entry field	IP Address of the MX-ONE.
Port data entry field	UDP ports used when registering the IP extensions (Media port) with MX-ONE.
IP Address	IP Address of the SIP Proxy.
Port	TCP ports used for SIP call signaling with MX-ONE.
Media Port StartNum data entry field	The Media Port start number for this MX-ONE.
Number of Channels data entry field	The number of channels for this MX-ONE.
Nuance Server IP Address data entry field	Type the IP address the server on which Nuance Speech Server is installed.

Table 10 Media Ports fields descriptions, H323 installation

FIELD	DESCRIPTION	EXAMPLE
Preferred TCP Port Start data entryfield	The start number for TCP ports to be used for H323 signaling. The port value can be configured. Default is 9000.	TCP Start Port = 9000
Preferred TCP Port End	The end number for TCP ports to be used for H323 signaling. The end value is calculated as follows: TCP PortEnd = TCP Start Port + 4 * (total number of IP Media Ports) - 1	Consider 2 IP Media Ports: TCP End Port = 9000 + (4* 2) - 1 TCP Ports to be configured are: 9000,9001,9002,9003,9004,9005 ,9006,9007

11. Click **Add** to enter information for a GateKeeper (MX-ONE installation) or a SIP proxy (SIP installation). Entry boxes for all data fields appear including defaults.

MX-ONE H.323 installation

a) Type a GateKeeper Address. IP Media Ports will use this address to register. One gatekeeper can be entered more than once as long as the Media ports specified in those entries are different.

b) Type the GateKeeper RAS port Number. (Use the default value unless it has been changed in the GateKeeper).

c) Type the Call Port Number. (Use the default value unless it has been changed in the GateKeeper)

d) Type the IP extension number of the first Media Port to register with the GateKeeper. Each GateKeeper added to an IP Media Server will have a number of channels (Media Ports) that are to be connected to the MX-ONE. These channels will be used to provide the Media Services. A unique Media Port number will identify each Media Port.

e) Type the number of IP Media Ports to register with that Gate- Keeper into the **Number of Channels** field. The extension numbers for those Media Ports must be consecutive, starting with the number specified in the **Media Port Start Number** field.

f) Press ENTER to accept the data. The boxes disappear.

Note: Pressing Esc will cause the boxes to disappear without accepting the data.

g) Repeat a through f for each series of Media Ports that register with a GateKeeper.

h) Continue to Step 14.

SIP installation

a) Type the SIP Proxy Address. IP Media Ports will use this address to register. One SIP proxy address can be entered more than once as long as the Media ports specified in those entries are different.

b) Type the Port Number.

c) Type the IP extension number of the first Media Port to register with the SOP proxy. Each SIP proxy address added to an IP Media Server will have a number of channels (Media Ports) that are to be connected to the MX-ONE. These channels will be used to provide the Media Services.

d) Enter the number of IP Media Ports, to register with SIP proxy, in **Number of Channels** field. IP Media Server use consecutive Media Ports, starting with the number specified in the **Media Port Start Number** field.

e) Press ENTER to accept the data. The boxes disappear.

Note: Pressing Esc will cause the boxes to disappear without accepting the data.

1. Repeat a to e for each series of Media Ports that register with a SIP proxy.

12. Click **Next**.

The **Additional Info** dialog is displayed. The fields in this dialog are described in Table 11 Additional

Info fields description.

Note: This dialog appears only for SIP installation.

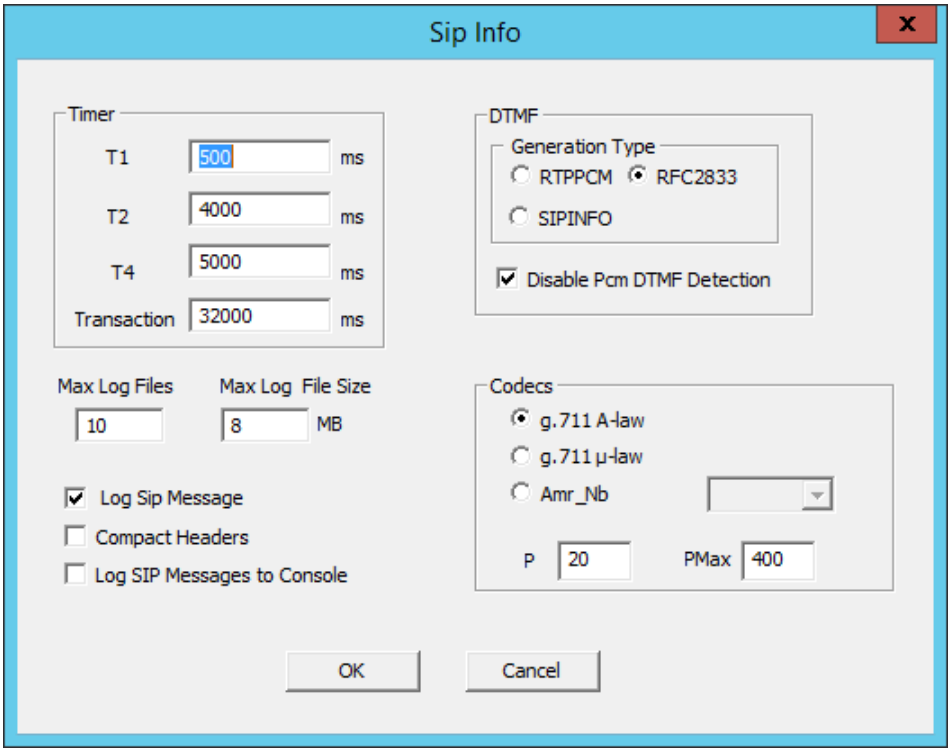


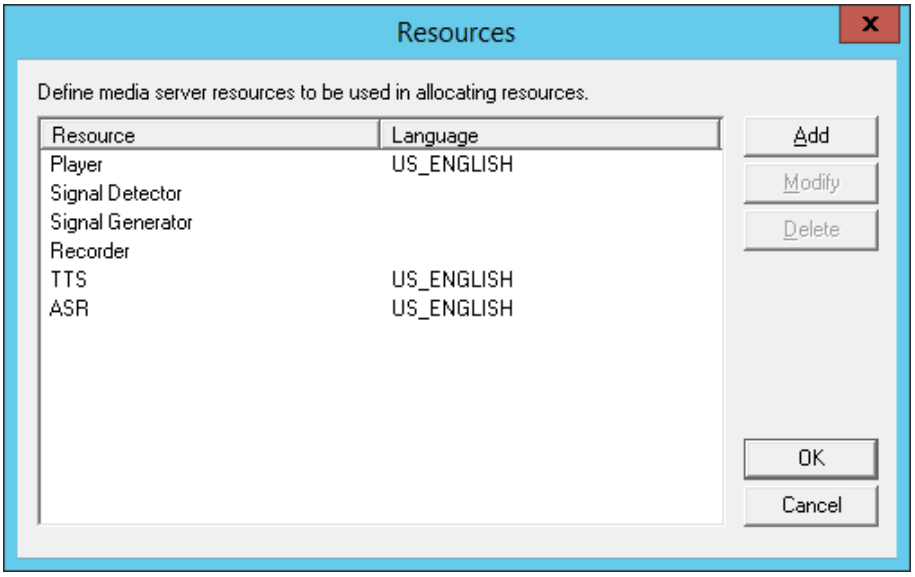
Table 11 Additional SIP Info fields description

FIELD	DESCRIPTION
SIP Timer data entry fields	**T1**,**T2**, **T2**,**Transaction** are SIP timer for sending signals which are SIP specific default attributes.
DTMF[1]	The following DTMF features are supported: RtpPcm: in band DTMF Rfc 2833: also in band DTMF with different Payload Type (Rfc 2833 has been superseded by Rfc 4733, which is out of band) SipInfo: out band DTMF over SIP signal.
Codecs	Supported Codecs are: g.711 alaw, g.711 ulaw or AMR with amr_Nb with field to specify modes ranging from 0-7
Max Log Files	Number of log files to be created. Default value is 10.
Max Log File Size	Size of log files created. Default value is 8.
Log SIP Message	A separate trace file can be created for SIP related trace file along with OAS trace file.
Disable Pcm DTMF Detection	Disable in-band tone detection in the OAS media

FIELD	DESCRIPTION
	server. If DTMF tones are sent both in-band and as e.g. SIPO Info then if this is not turned off it will result in tat each DTMF digit is detected twice

[1] **Note**: The registry key “InbandDTMF” introduced in an previous release has been discontinued. Instead the logic has been changed to be handled dynamically on a call-by-call basis. If the DTMF negotiation results in Rfc 4733 then in-band detection will be disabled in order to prevent double detection. If no Rfc 4733 is negotiated butt he “Allow:INFO” is reported then INFO will be used and in-band detection disabled.

13. Click **Next**. The **Resource List** dialog appears.



The fields on this wizard page are described in Table 12 New IP Media Server Resource List dialog.

Table 12 New IP Media Server – Resource List dialog

FIELD	DESCRIPTION
Resource drop-down list	An IP Media Server resource such as ASR, Player and so on. **Note**: To make the IP Media Server useful, at least one resource should be allocated.
Language Library drop-down list	The language library for selected resource (for example English or Belgian French). A Language Library is only needed for ASR, TTS Player, and Player resources.

14. Click Add. Drop-down fields for the resource and language library appear.

a) Select the desired resource from the Resource drop-down list.

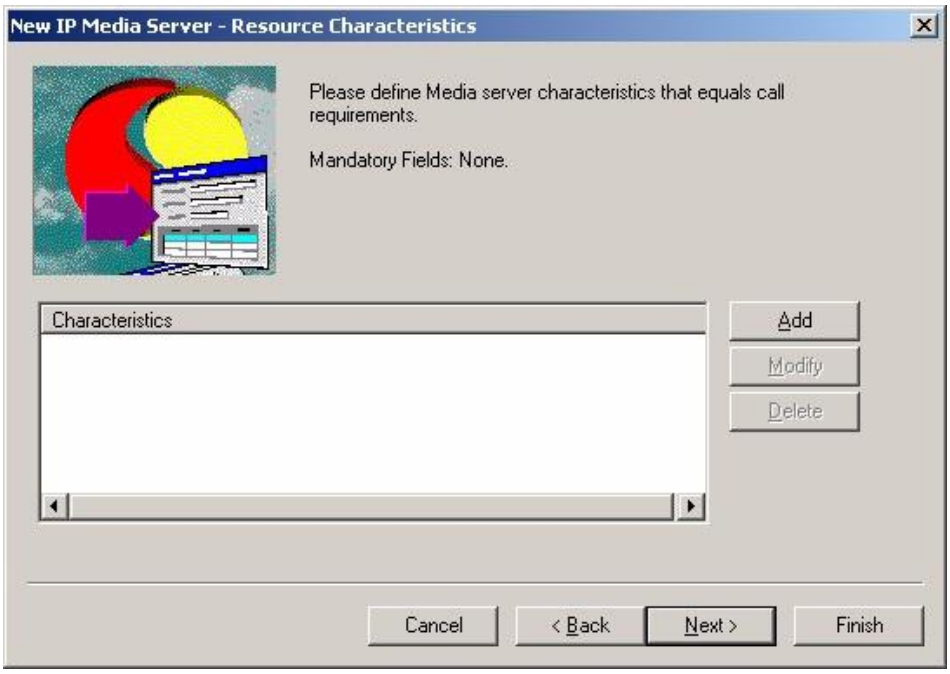
b) Select the desired language library from the **Language Library** drop-down list.

c) When finished, press ENTER to accept the data. The drop-down boxes disappear.

Note: Pressing Esc will cause the boxes to disappear without accepting the data.

d) Repeat steps a through c for each resource in the IP Media Server.

15. Click Next. The Characteristics dialog appears.



The field in this dialog is described in Table 13 Characteristics dialog.

Table 13 Characteristics dialog

FIELD	DESCRIPTION
Characteristics data entry field	The Media Server Characteristic. String with up to 64 characters.

16. Click **Add**. A data entry box for the characteristics appears.

a) Enter the characteristics in the **Characteristics** field.

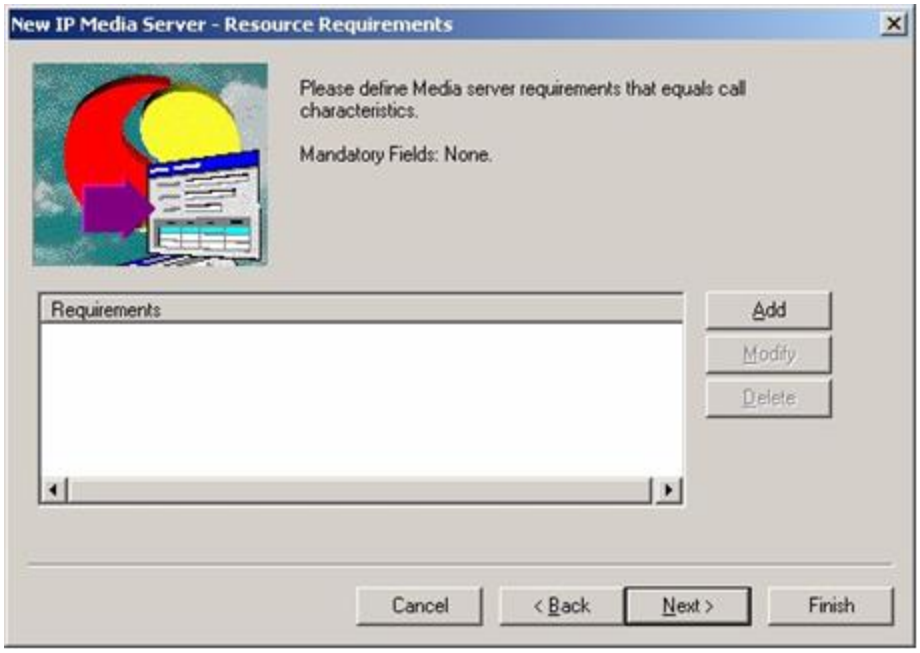
Note: For detailed information on characteristics, see document Resource Allocation Algorithm.

b) When finished, press ENTER. The data entry box disappears.

Note: Pressing Esc will cause the box to disappear without accepting the data.

c) Repeat for additional characteristics.

17. Click **Next**. The **Resource Requirements** dialog appears.



18. Click **Add**. A data entry box for the requirements appears.

a) Enter the requirements in the **Requirements** data entry box, up to 64 characters.

Note: See document Resource Allocation Algorithm for detailed information on requirements.

b) When finished, press ENTER. The data entry box disappears.

Note: Pressing Esc will cause the box to disappear without accepting the data.

c) Repeat for additional requirements.

19. Click **Finish** to close the wizard.

Note: QoS for OAS should be implemented in Windows natively.

Use the local group policy editor to configure the QoS policy for the mediaservers in OAS by running gpedit.msc

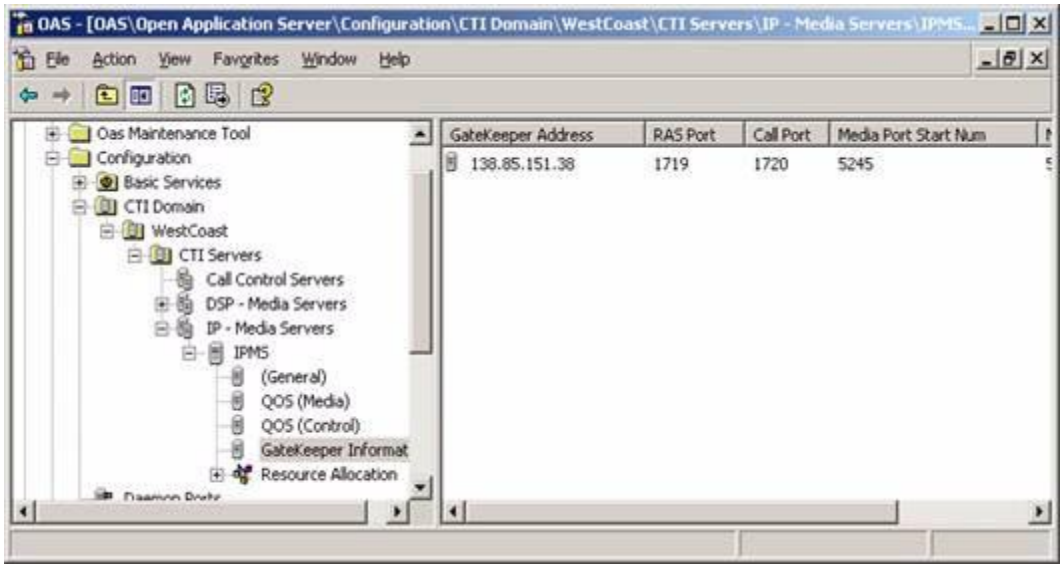
In the Local Group Policy Editor navigate to Local Computer Policy > Computer Configuration > Windows Settings

1.Right click on Policy-based QoS and create new policy
2.Name as desired, for example- OAS_QoS
3.Specify DSCP Value as 46 and click Next
4.Specify a specific application name as the path to the hlink.exe executable, click next
5.On the page allowing to and from any source and destination IP address, click next
6.Select UDP as the protocol the policy applies to and finish

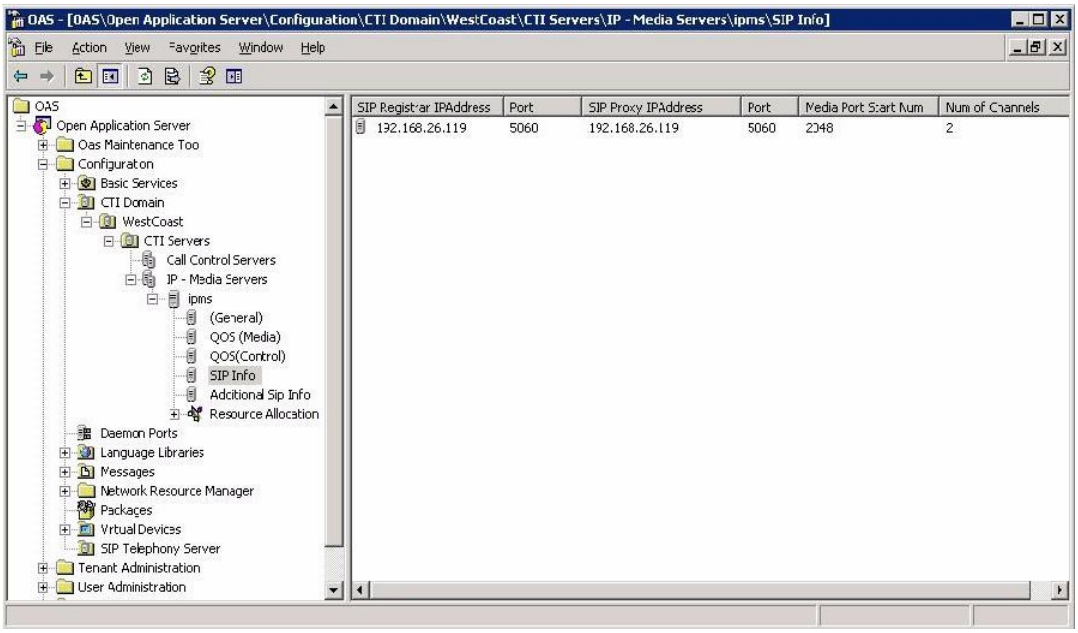
The application name should be "C:\Program Files (x86)\Mitel\Oas\Bin\hlink.exe".

VIEW IP MEDIA SERVER CONFIGURATION

1. Click **IP - Media Servers** from the configuration tree to display the names of the IP Media Server(s) that have been configured.
2. Select the IP Media Server of your choice.
3. Click the component (for example **GateKeeper** Information for MX-ONE H.323 installation or **SIP info** for SIP installation) from the configuration tree. The information appears in the configuration display as shown in the following figures.



MX-ONE installation



SIP installation

MODIFYING IP MEDIA SERVER COMPONENT CONFIGURATIONS

The following IP Media Server components configurations can be modified:

- General IP Media Server information
- Media Signal Priority Handling
- Call Control Signal Priority Handling
- GateKeeper information or SIP information (depending on
- MX-ONE H.323 or SIP installation)
- Resource Allocation

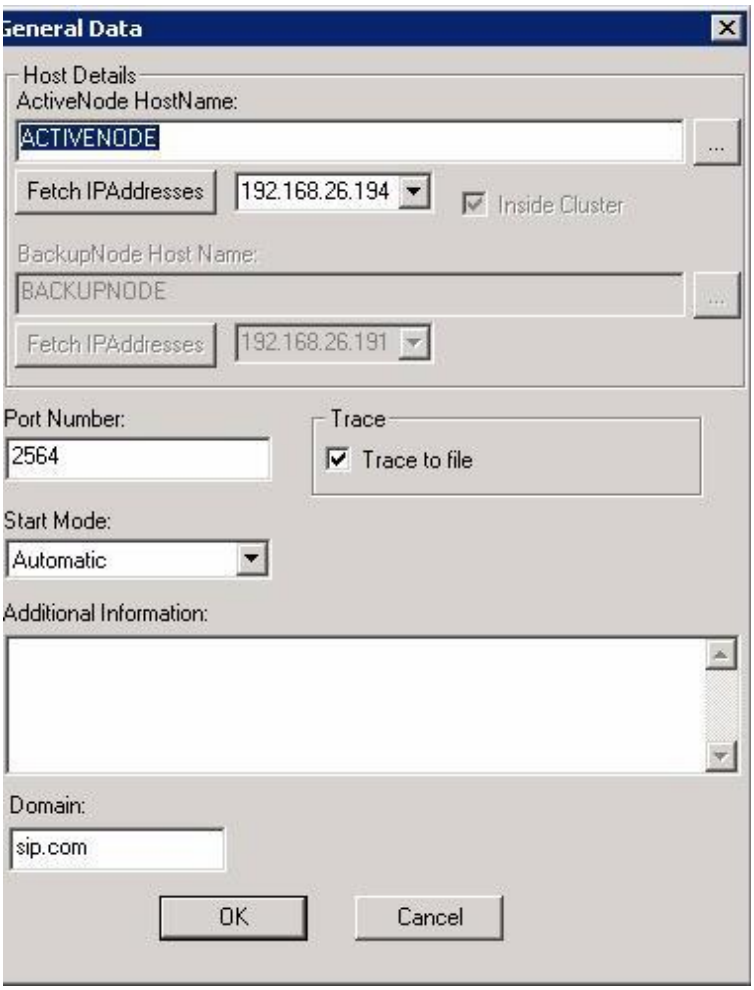
To modify IP Media Server components configurations, do the following:

1. Click **IP - Media Servers** from the configuration tree, then click the IP Media Server to be modified.
2. Follow the procedures below for each component that you want to modify.

Note: Some changes made to an IP Media Server that is running will not take effect until the IP Media Server is stopped and restarted. A message is shown if the IP Media Server needs to be restarted. Instructions for stopping and restarting an IP Media Server are provided in the document OAS Maintenance Tool.

MODIFYING GENERAL DATA CONFIGURATION

1. Right-click **General** and point to **All Tasks**, then click **Modify**. The General Data dialog appears.



The fields in this dialog are described in Table 14 IP Media Server General Data.

Note: When configuring IP Media Server in a MX-ONE H.323 installation, Transport Type field is not included. The Fetch IPAddresses field is only enabled when using multiple NICs. This field allows configuration of which NIC to connect to.

2. Type or click the name of the IP Media Servers host from the **Host Name** field. Only one IP Media Server is allowed per host.
3. Type the port number of the IP Media Server in the **Port Number** field.
4. If using multiple NICs, select the IP Address of the NIC to connect to from **Fetch IP Address** drop-down list.
5. Select **Automatic** or **Manual** start mode.
6. Select **Trace to file** if you want the IP Media Server to log its output to a file. Changes made will not take effect until the system is restarted.
7. Click **OK**.

Table 14 IP Media Server General Data

FIELD	DESCRIPTION
Active Node	The name of the host where the IP Media Server resides. There can be only one IP Media Server per host.
Port Number data entry field	The TCP/IP port number of the IP Media Server.
Start Mode drop-down list	The IP Media Server start mode, either **Automatic** or **Manual**.
Trace To File check box	Indicates if the IP Media Server will log its output to a file.
Transport Type	Indicates the transport type. Only configurable for SIP installations.
Additional Information data entry field	For future use.
Domain data entry field	**MX-ONE H.323 installation**: The Domain name of the MX-ONE GateKeeper. The Media Server uses this name to register the media ports. This field is optional (that is, it can be left blank). **SIP installation**: The Domain name of the MX-ONE Telephony server as SIP proxy. The Media server uses this name to register the media ports.
Fetch IP Address drop-down list	The NIC connected. Only enabled for multiple NIC.

SIGNAL PRIORITY HANDLING CONFIGURATION

Media Signal Priority Handling specifies how the computer network handles Media Packets (RTP Stream) in terms of priority. Media Packets need to have high priority in order to reduce jitter, which affects the sound quality. Media packets however, do not require high reliability. If the network drops (loses) a packet, this would not jeopardize the integrity of the sound that is being transmitted. However if the network drops too many packets, the sound quality would become unacceptable.

The configuration of this information is optional. It can be configured in two different manners depending on the computer network equipment:

- If the computer network equipment supports Type of Service (TOS) configuration select the **Type Of Service** method for configuring this data.
- If the computer network equipment supports DiffServ Code Points configuration, select the **Differential Server** method for configuring this data.

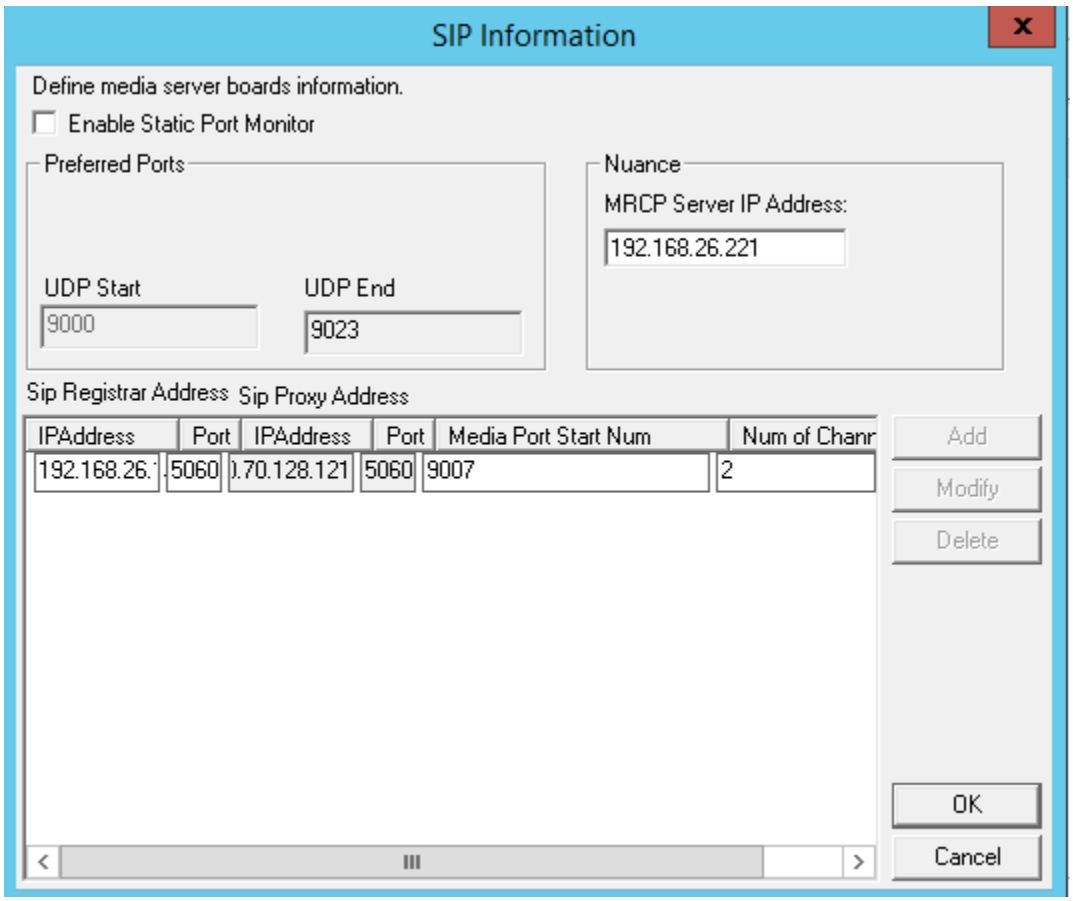
MODIFYING MEDIA GATEKEEPER OR SIP INFORMATION

Media GateKeeper or SIP information can be modified by adding an additional GateKeeper or SIP proxy, modifying the field contents for an existing GateKeeper or SIP proxy, or deleting an existing GateKeeper or SIP proxy.

MODIFYING GATEKEEPER INFORMATION

To modify GateKeeper information, do the following:

1. Right-click **GateKeeper Information** for this IP Media Server from the configuration tree or display.
2. Point to **All Tasks**, and then click **Modify**. The **Media Ports** dialog appears.



The above dialog is shown for both H.323 and SIP media servers in all OAS installations.

The fields in this dialog are described in Table 17 Media Ports field descriptions. All fields are required.

Table 17 Media Ports field descriptions

FIELD	DESCRIPTION
Enable Static Port Monitor check box	Select to enable TCP End and UDP End for input.
Preferred TCP Port Start data entry field	The start number for TCP ports to be used for the H.323call control media ports. Default is 9000.
Preferred UDP Port Start data entry field	The start number for UDP ports to be used for the mediaports' RTP channels. Default is 9000.
Preferred TCP Port End	The end number for TCP ports to be used for the H.323 call control media ports. The end value is calculated as follows: *TCP End Port = TCP Start Port* *+ 2* (totalnumber of IP Media* *Server channels) -1*
Preferred UDP Port End	The end number for UDP ports to be used for the mediaports' RTP channels. The end value is calculated as follows: *UDP EndPort = UDP Start Port* *+ 6* (total number of IP Media* *Server channels) -1*
GateKeeper Address data entry field	MX-ONE IP extensions GateKeeper.
RAS Port data entry field	UDP ports used when registering the IP extensions/Mediaport with MX-ONE.
Call Port data entry field	TCP ports used for H.323 call signaling with MX-ONE.
Media Port Start Num data entry field	The Media Port start number for this GateKeeper.
Number of Channels data entry field	The number of channels for this GateKeeper.
Nuance Speech Server Address data entry field	Type the address of the server where Nuance is installed.

To modify SIP information, do the following:

1. Right-click **SIP Information** for this IP Media Server from the configuration tree or display.
2. Point to **All Tasks**, and then click **Modify**. The **Media Ports** dialog appears.

ADD GATEKEEPER OR SIP INFORMATION

To add GateKeeper or SIP information, see the following descriptions.

Adding GateKeeper Information

To add GateKeeper information, do the following:

1. Click **Add**.
2. Enter the IP address into the **GateKeeper Address** field.
3. Enter the GateKeeper RAS port Number.
4. Enter the Call Port Number.
5. Enter the IP extension number of the first Media Port to register with the GateKeeper.
   Each GateKeeper added to an IP Media Server has a number of channels (Media Ports) that can be connected to the MX-ONE. These channels will be used to provide the Media Services. A unique Media Port number identifies each Media Port.
6. Enter the number of IP Media Ports to register with that Gate- Keeper into the **Number of Channels** field. The extension numbers for those Media Ports must be consecutive, starting with the number specified in the **Media Port Start Number** field.
7. Click **OK**.

Adding SIP Information

To add SIP information, do the following:

1. Click **Add**.
2. Enter the IP address in the **SIP Proxy Address** field.
3. Enter the Port Number.
4. Enter the IP extension number of the first Media Port to register with the SIP proxy.
   Each SIP proxy added to an IP Media Server has a number of channels (Media Ports) that can be connected to the MX-ONE. These channels will be used to provide the Media Services. A unique Media Port number identifies each Media Port.
5. Enter the number of IP Media Ports to register with that SIP proxy in the **Number of Channels** field. The extension numbers for those Media Ports must be consecutive, starting with the number specified in the **Media Port Start Number** field.
6. Click **OK**.

MODIFYING EXISTING GATEKEEPER OR SIP PROXY

An existing GateKeeper or SIP proxy can be modified, see the following descriptions.

Modifying Existing GateKeeper

To modify an existing GateKeeper, do the following:

1. Click the GateKeeper Information.
2. Click **Modify**.
3. Edit the data in any of the fields.
4. Click **OK**.

Note: If you double-click a specific GateKeeper from the configuration window, the Board Information dialog appears with the selected GateKeepers information ready to modify.

Modifying Existing SIP Proxy

To modify an existing SIP proxy, do the following:

1. Click the SIP proxy Information.
2. Click **Modify**.
3. Edit the data in any of the fields.
4. Click **OK**.

Note: If you double-click a specific SIP proxy from the configuration window, the Board Information dialog appears with the selected SIP proxy information ready to modify.

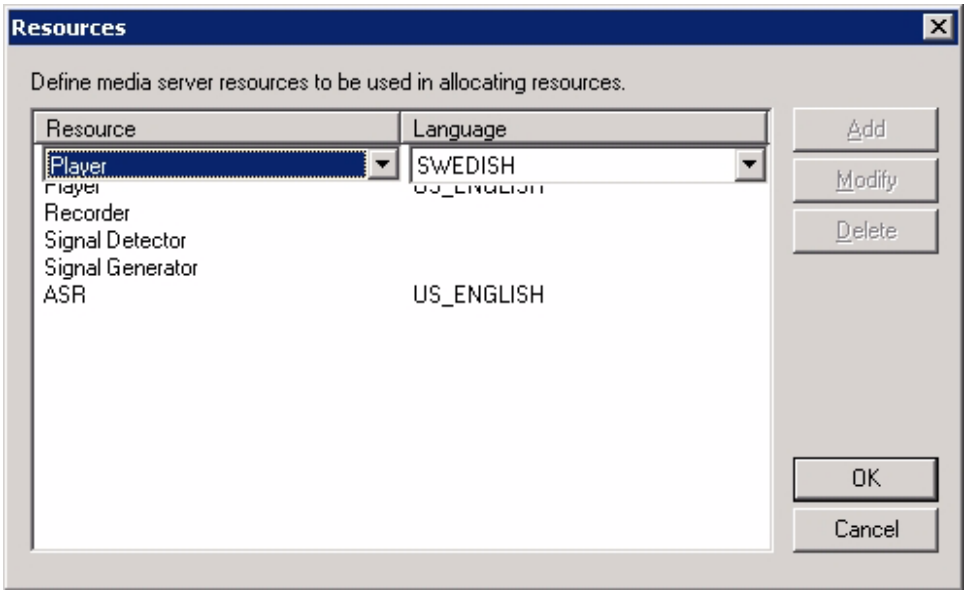
DELETING EXISTING GATEKEEPER OR SIP PROXY ENTRY

1. Click the GateKeeper (for MX-ONE installation) or SIP proxy (for SIP installation).
2. Click **Delete**.
3. Click **OK**.

MODIFYING RESOURCES

You can modify the resources by adding an additional resource, modify the field contents for an existing resource, or delete an existing resource.

Right-click **Resources** for this IP Media Server, point to **All Tasks**, and then click **Modify**. The **Resources** dialog appears.



The fields in the **Resources** dialog are described in Table 19 Resources field descriptions.

Table 19 Resources field descriptions

FIELD	DESCRIPTION
Resource drop-down list	An IP Media Server resource such as ASR, player and so on.(At least one resource must be allocated to utilize the IP Media Serverl.)
Language Library drop-down list	The language library for selected resource (such as English or Belgian French). A language library is only needed for ASR, TTS Player, and Player resources.

ADDING ADDITIONAL RESOURCE

1. Click **Add**. Drop-down boxes for the resource and Language Library appear.
2. Click the desired resource in the **Resource** drop-down list.
3. Click the desired Language Library in the **Language Library** drop-down list.
4. When finished, press ENTER. The drop-down boxes disappear.

Note: Pressing Esc will close the boxes without accepting the data.

5. Click **Add** to add more resources or click **OK** when done.

MODIFY EXISTING RESOURCE

1. Click the resource.
2. Click **Modify**.
3. Edit the resource.

4. Click **OK**.

Note: If you double-click a specific resource from the configuration window, the Resources dialog will display with that resources information ready to modify.

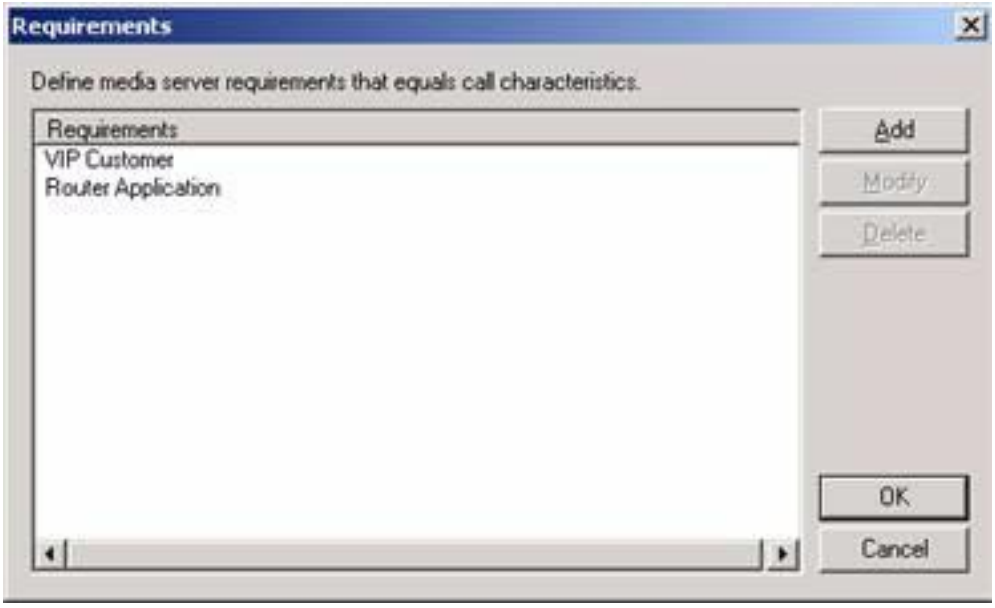
DELETE EXISTING RESOURCE

1. Click the resource.
2. Click **Delete**.
3. Click **OK**

MODIFY REQUIREMENTS

You can modify the requirements by adding an additional requirement, modifying the field contents for an existing requirement, or deleting a requirement.

- Right-click **Requirements** for this IP Media Server, point to **All Tasks**, and then click **Modify**. The **Requirements** dialog appears.



The field in this dialog is described in Table 20 Requirements.

Table 20 Requirements

FIELD	DESCRIPTION
Requirements data entry field	Type one IP Media Server requirement. The requirement can contain up to 64 characters.

Add Additional Requirement

1. Click **Add**. A data entry box for the requirements appears.

2. Enter the requirements in the data **Requirements** entry box.
3. When finished, press ENTER. The data entry box disappears.

Note: Pressing Esc will close the box without accepting the data

4. Click **Add** to add more **Requirements** or click **OK** when done.

Modify Existing Requirement

1. Click the requirement.
2. Click **Modify**.
3. Edit the requirement.
4. Click **OK**

Note: If you double-click a particular requirement from the configuration window, the Requirements dialog will display with that requirements information ready to modify.

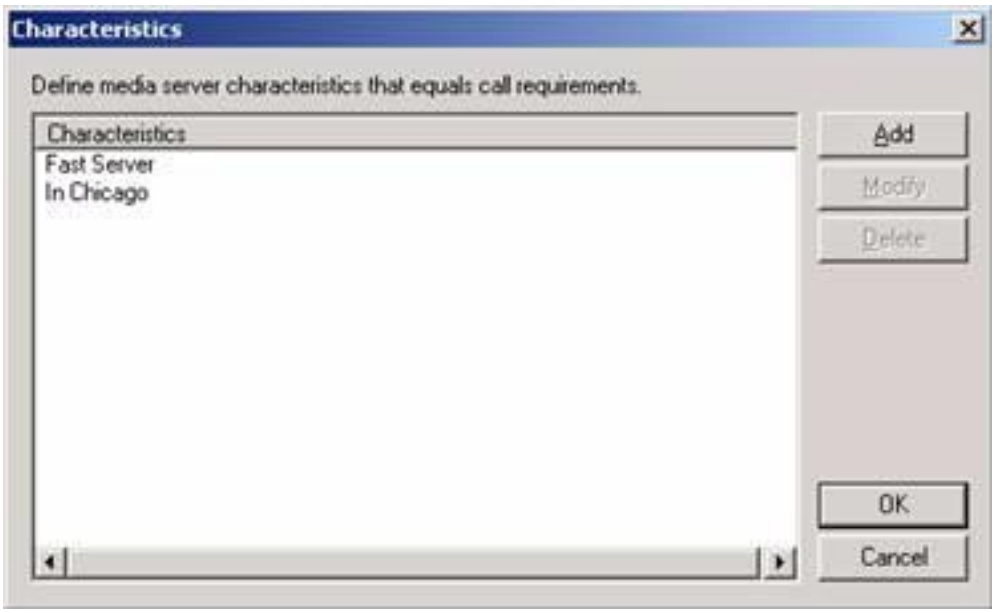
Delete Existing Requirement

1. Click the requirement.
2. Click the requirement.
3. Click **Delete**.
4. Click **OK**

MODIFY THE CHARACTERISTICS

Characteristics can be modified by adding an additional characteristic, modifying the field contents for an existing characteristic, or deleting an existing characteristic. This operation consists of the following steps:

1. Right-click **Characteristics** for this IP Media Server, point to **All Tasks**, and then click **Modify**. The **Characteristics** dialog appears, see Figure 41.



2. Enter the characteristics for the IP Media Server (maximum 64 characters).

To add an additional characteristic, do the following:

1. Click **Add**, a data entry box for the characteristics appears.
2. Enter the characteristics in the **Characteristics** field.
3. When finished, press ENTER. The box disappears.

Note: Pressing Esc will close the box without accepting the data.

4. Click **Add** to add more **Requirements** or click **OK** when done.

To modify an existing characteristic, do the following:

1. Click the characteristic.
2. Click **Modify**.
3. Edit the characteristic.
4. Click **OK**.

Note: If you double-click a particular characteristic from the configuration window, the Characteristics dialog will display with that characteristic ready to modify.

To delete an existing characteristic, do the following:

1. Click the characteristic.
2. Click **Delete**.
3. Click **OK**.

CONFIGURING CALL CONTROL SERVERS

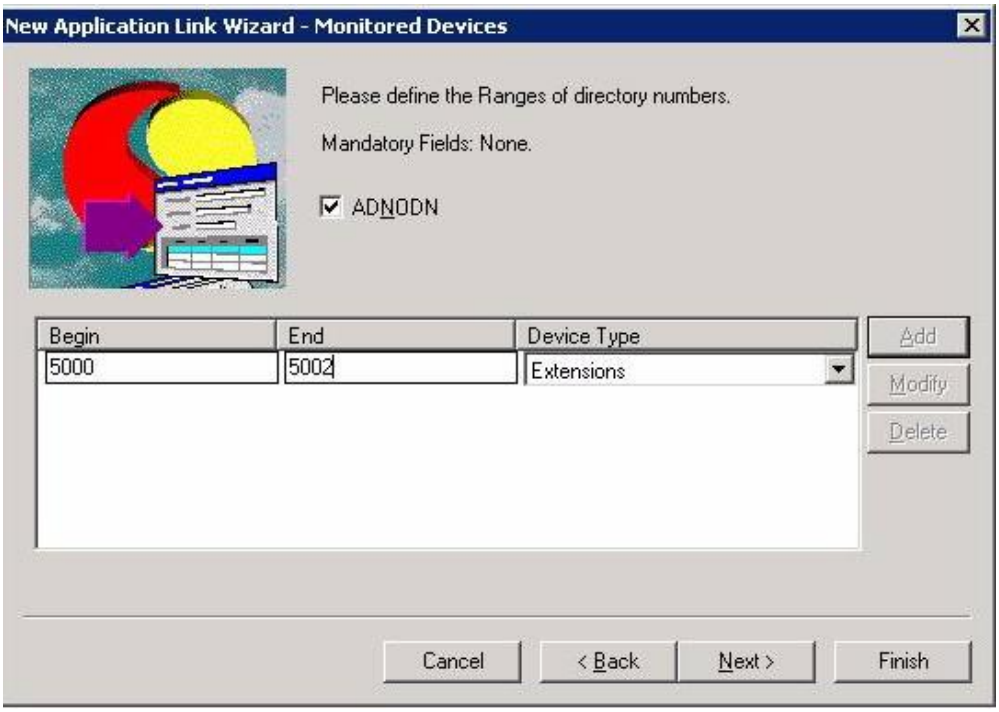
A Call Control Server provides an interface to the MX-ONE. This interface provides control services, switching function services, status reporting services, and escape and maintenance services. Only one Call Control Server is allowed.

CREATE CALL CONTROL SERVER, APPLICATION LINK

1. Right-click **Call Control Servers** from the configuration tree, under **CTI Servers**, point to **New**, and then click **Application Link**. The **New Application Link Wizard** launches. This wizard provides step-by-step instructions for configuring a new call control server.

   Note: The length of the call control server name cannot be more than 16 characters.

2. Click **Next**.
   The Monitored Devices dialog appears.



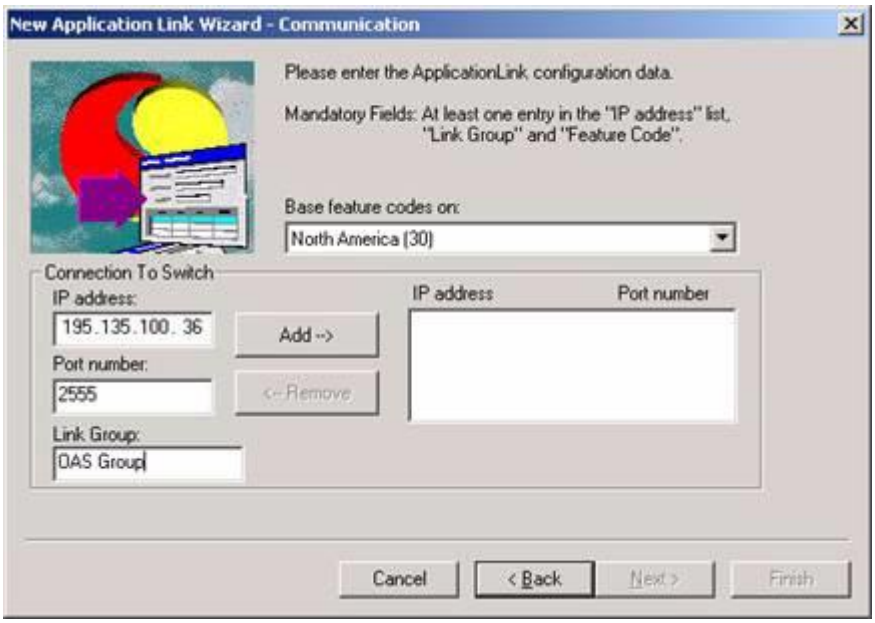
The fields in this dialog are described in Table 21 Monitored devices description. None of the fields are mandatory.

Table 21 Monitored devices description

FIELD	DESCRIPTION
ADNODN checkbox	Enables ADN/ODN monitoring in OAS. For further description see section 7.6.2 Monitored Devices Tab.
Begin data entry field	The starting directory number for the monitored device.

FIELD	DESCRIPTION
End data entry field	The ending directory number for the monitored device.
Device Type drop-down list	The type of device.

3. Select if you want to enable ADN/ODN monitoring for devices.
4. Enter the range for the monitored devices and the type of device.
5. Click **Next**.
   The **Communication** wizard page dialog appears.



The fields in this dialog are described in Table 22 Communication. All fields are required.

Table 22 Communication

FIELD	DESCRIPTION
Base feature codes on drop-down list	The application code of the switch on which the features codes are based.
IP Address data entry field	The IP address of the switch.
Port Number data entry field	The port number of the switch.
Link Group data entry field	The link group of the Call Control Server.

6. Select the appropriate feature code in the **Base feature codes on** field.
7. Type an IP address in the **IP address** field.

8. Type a corresponding port number for the switch in the **Port number** field.
9. Click **Add** to add the switch IP address and port number information to the list.
10. Repeat steps 8 through 11 as many times as needed.
11. Enter the link group in the **Link Group** field.
12. Click **Next**.
    The **Monitored Devices** wizard dialog appears.

The fields in this dialog are described in Table 23 Monitored devices. All fields are required.

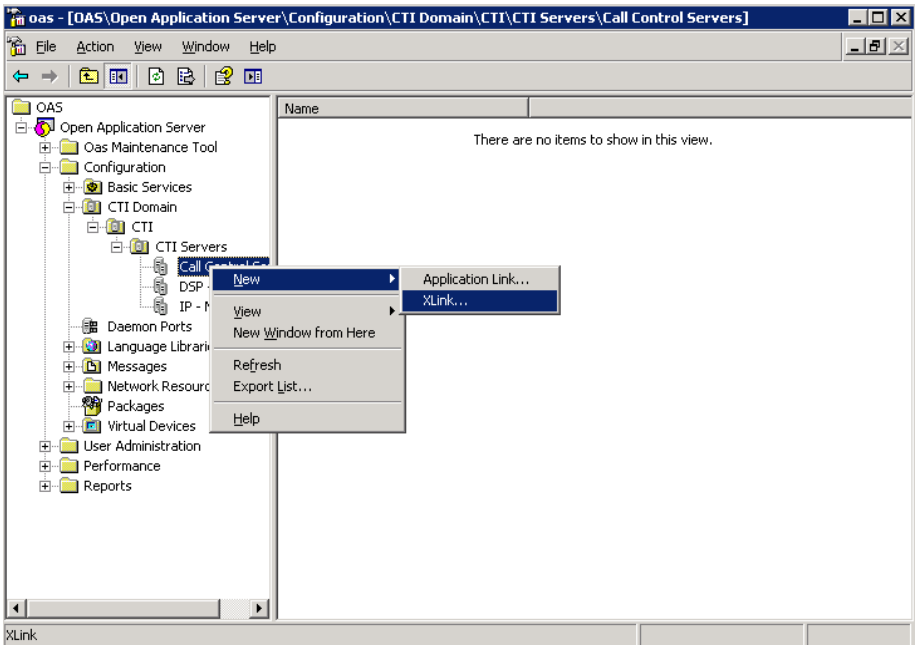
Table 23 Monitored devices

FIELD	DESCRIPTION
Begin data entry field	The starting directory number for the monitored device
End data entry field	The ending directory number for the monitored device.
Device Type drop-down list	The type of device.

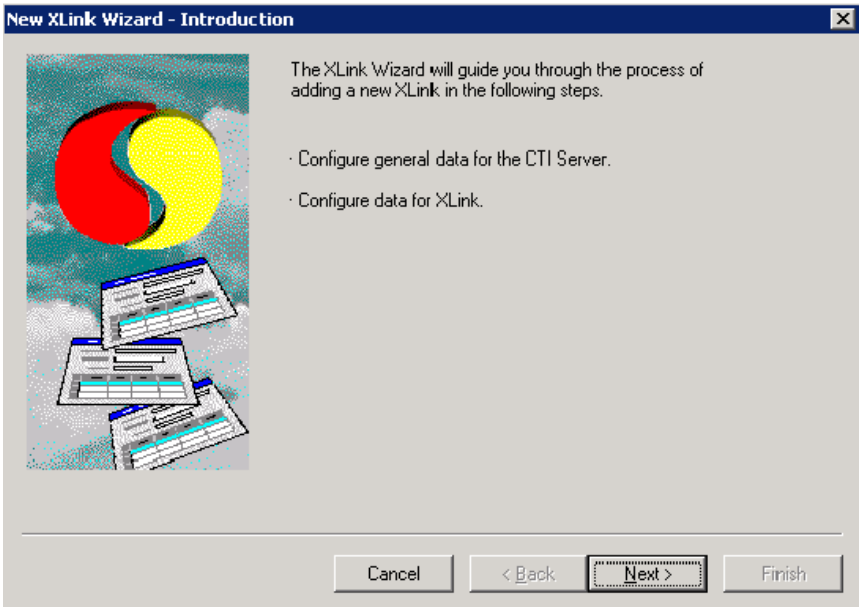
13. Click **Add**.
14. Enter the starting directory number for the monitored device in the **Begin** field.
15. Enter the ending directory number for the monitored device in the **End** field. The device range cannot overlap with the Domain Deflection group, Media Servers media port numbers, or the BVD range.
16. Select the device type in the **Device Type** field.
17. Press **ENTER**.
18. Repeat to add more monitored devices.
19. Click **Next** to reach Finish dialog.
20. Click **Finish** to close the New Application Link Wizard.

CREATE CSTA PHASE III, XLINK CALL CONTROL SERVER

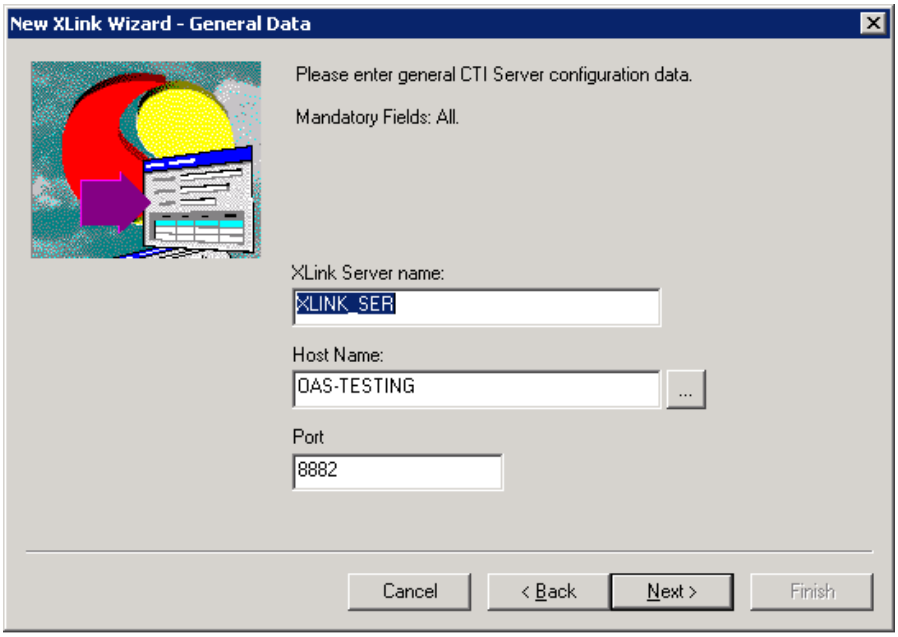
1. Right-click **Call Control Servers** from the configuration tree, under CTI Servers, point to New, and then click X-LINK. The New X-LINK Wizard launches. This wizard provides step-by-step instructions for configuring a new call control server.



2. The New X-LINK wizard-Introduction page dialog appears.



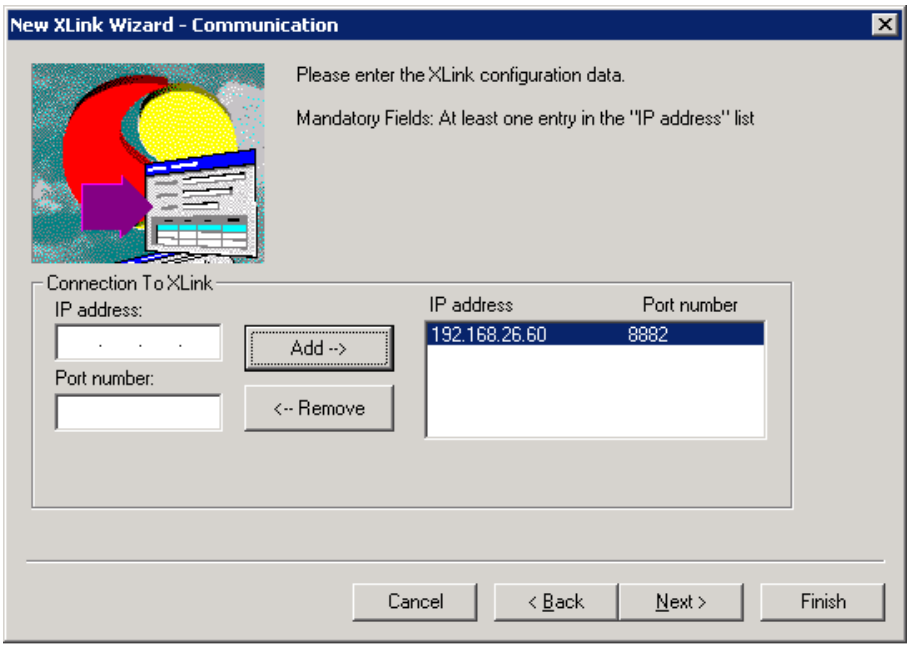
3. Click **Next**.
The General Data wizard page dialog appears.



Note: The default port number is 8882.

4. Type the X-LINK Server name in the X-LINK Server name field.

5. Type the IP address in the IP address field.



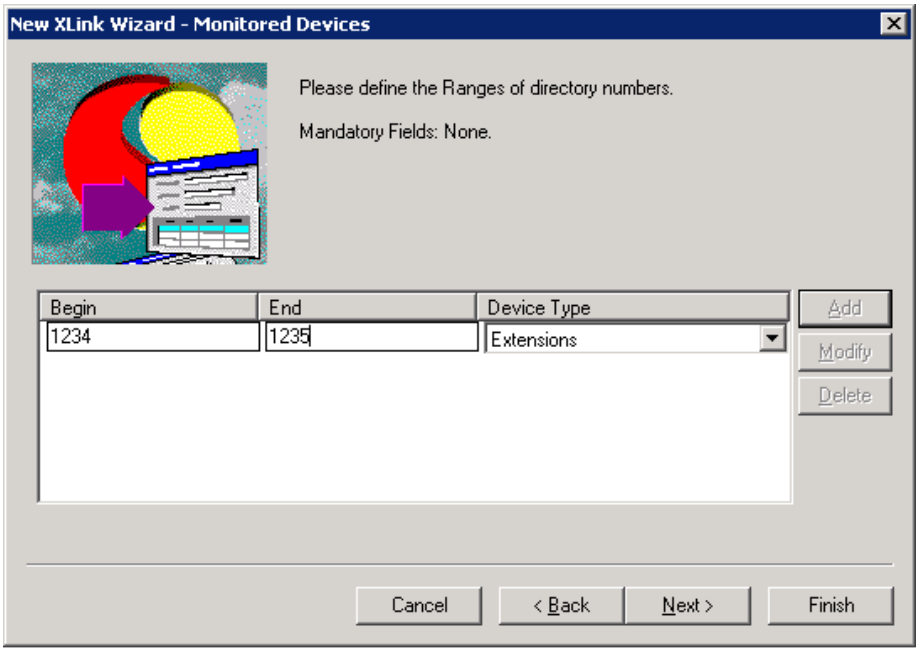
Note: The port number can be configured in MX-ONE Telephony Server. If no port number is specified during MX-ONE Telephony Server configuration, the default Port Number 8882 will be used.

Note: For the complete command description of the CSTA Phase III refer to the document Command Description, CSTA Phase III (137/190 82-ANF 901 14 in the MX-ONE CPI library

The fields in this dialog are described in the table below. All fields are required.

FIELD	DESCRIPTION
IP Address data entry field	The IP address of the MX-ONE Telephony Server.
Port Number data entry field	The port number of the MX-ONE Telephony Server.

6. Click Add to add the switch IP address and port number information to the list.
7. Click Next.
   The Monitored Devices wizard dialog appears.



The fields in this dialog are described in the table below. All fields are required.

FIELD	DESCRIPTION
Begin data entry field	The starting directory number for the monitored device.
End data entry field	The ending directory number for the monitored device.
Device Type drop-down list	The type of device.

FIELD	DESCRIPTION

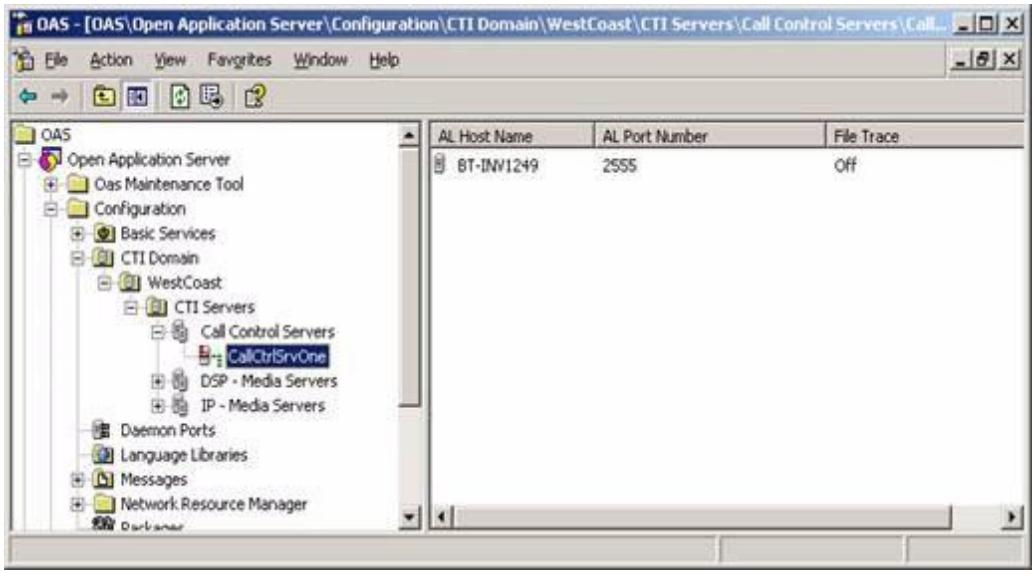
8. Click **Add**.
9. Enter the starting directory number for the monitored device in the **Begin** field.
10. Enter the ending directory number for the monitored device in the **End** field. The device range cannot overlap with the Domain Deflection group, Media Servers media port numbers, or the BVD range.
11. Select the device type in the **Device Type** field.
12. Press **ENTER**.
13. Repeat to add more monitored devices.
14. Click **Next** to reach Finish dialog.
15. Click **Finish** to close the New X-LINK wizard

Note: When you use MX-ONE 6.2 or above with Xlink, you have to set UseXmlPrivateData as 1 in the registry key under: HKEY_LOCAL_MACHINE\SOFTWARE\Mitel \OAS\NRM

It is necessary to restart the OAS services.

TO VIEW THE CALL CONTROL SERVERS CONFIGURATION

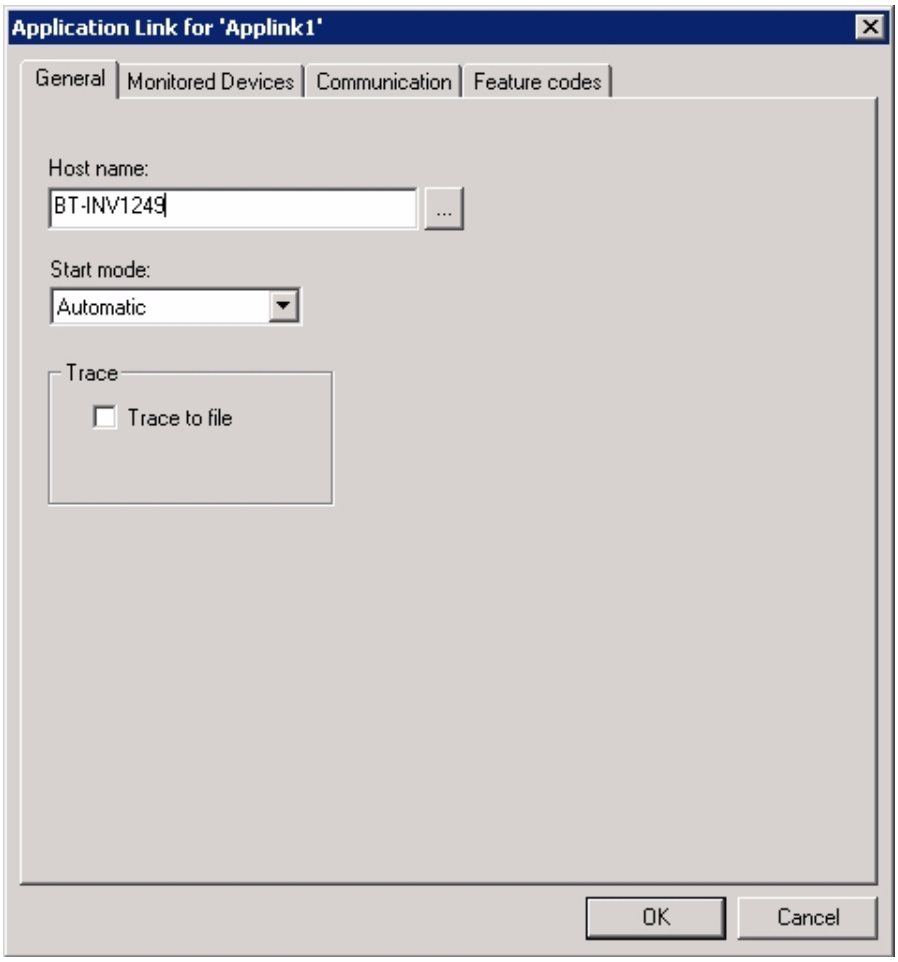
1. From the configuration tree, expand **Call Control Servers**. The name of the Call Control Server that has been configured (if any) is now displayed beneath the Call Control Servers node.
2. From the configuration tree, click the Call Control Server you want to view. The information appears in the configuration display.



MODIFYING THE CALL CONTROL SERVER CONFIGURATION

Note: Changes made to a Call Control Server that is running will not take effect until the server is stopped and restarted. For instructions on stopping and restarting the Call Control Server, see document OAS Maintenance Tool.

1. From the configuration tree, expand **Call Control Servers**. The tree expands to display the name of the Call Control Server that has been configured (if any).
2. From the configuration tree, right-click **Call Control Server**, point to **All Tasks**, and then click **Modify**. The Application Link dialog appears, with the name of the Call Control Server in the title bar. The dialog contains four tabs (described in the following sections). Click each of the tabs and change the data as needed.
3. When you are finished making updates, click **OK**.



GENERAL TAB

The fields in the **General** tab are described in Table 24 General tab.

Table 24 General tab

FIELD	DESCRIPTION
Host Name browse list	The name of the host where the Call Control resides.
Start Mode drop-down list	The start mode for the Call Control Server. Values are **Automatic** or **Manual**.
Trace To File check box	Indicates if the Call Control server will log its output to a file.

MONITORED DEVICES TAB

See Figure 14 for a view of the Monitored Devices tab.

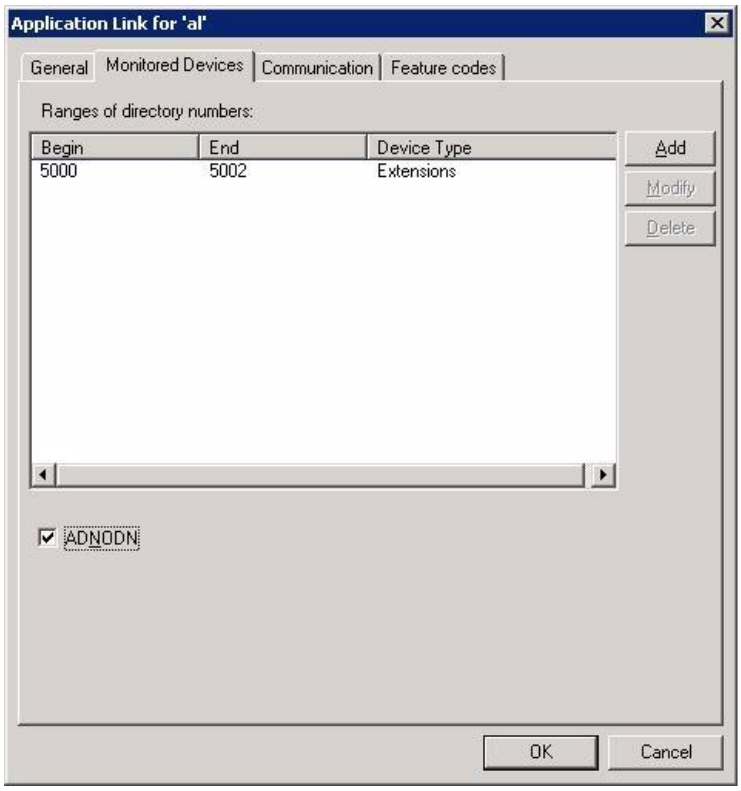


Figure 14: Monitored Devices tab in the Application Link dialog

The fields in the **Monitored Devices** tab are described in Table 25 Monitored device tab.

Table 25 Monitored device tab

FIELD	DESCRIPTION
Begin data entry field	The starting directory number for the monitored device.
End data entry field	The ending directory number for the monitored device.
Device Type drop-down list	The type of device.
ADNODN checkbox	Enables ADN/ODN monitoring in OAS.

Add, **Modify** and **Delete** buttons in the **Monitored Devices** tab can be used to add ranges or to modify or delete existing ranges.

When ADN/ODN monitoring is enabled, Application Link treats the ADNs and ODNs on the same DTS as independent line appearances, that is, events will be reported for ADNs with the ADN directory number and events for ODNs with the ODN directory number.

The Licensing mechanism is not affected by the ADN/ODN monitoring. The first monitor started on a device (ADN or ODN) will consume a license, and additional monitors on the device (for example

another ADN) will be started without consuming a License and vice versa.

COMMUNICATION TAB

The fields in the **Communication** tab are shown in Figure 15 and described in Table 26 Communication tab.

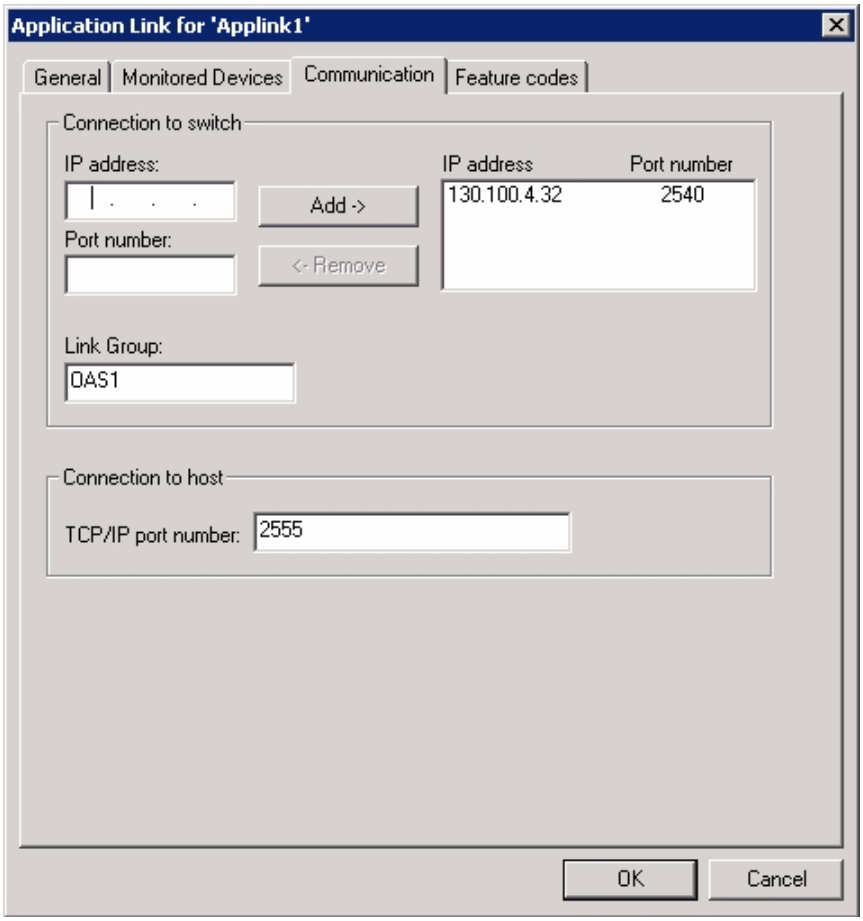


Figure 15: Communication tab in the Application Link dialog

Table 26 Communication tab

FIELD	DESCRIPTION
IP address data entry field	IP address of the NIU board in the switch.
Port number data entry field	Port number of the NIU board in the switch.
Link Group data entry field	Name of the link group configured in MX-ONE.
TCP/IP port number data entry field	Port number for the Call Control Server.

Click **Add** to enter new, and click **Remove** to remove existing IP Address/Port Number pairs.

FEATURE CODES TAB

The fields in the **Feature Codes** tab are shown in Figure 16 and described in Table 27 Application link dialog.

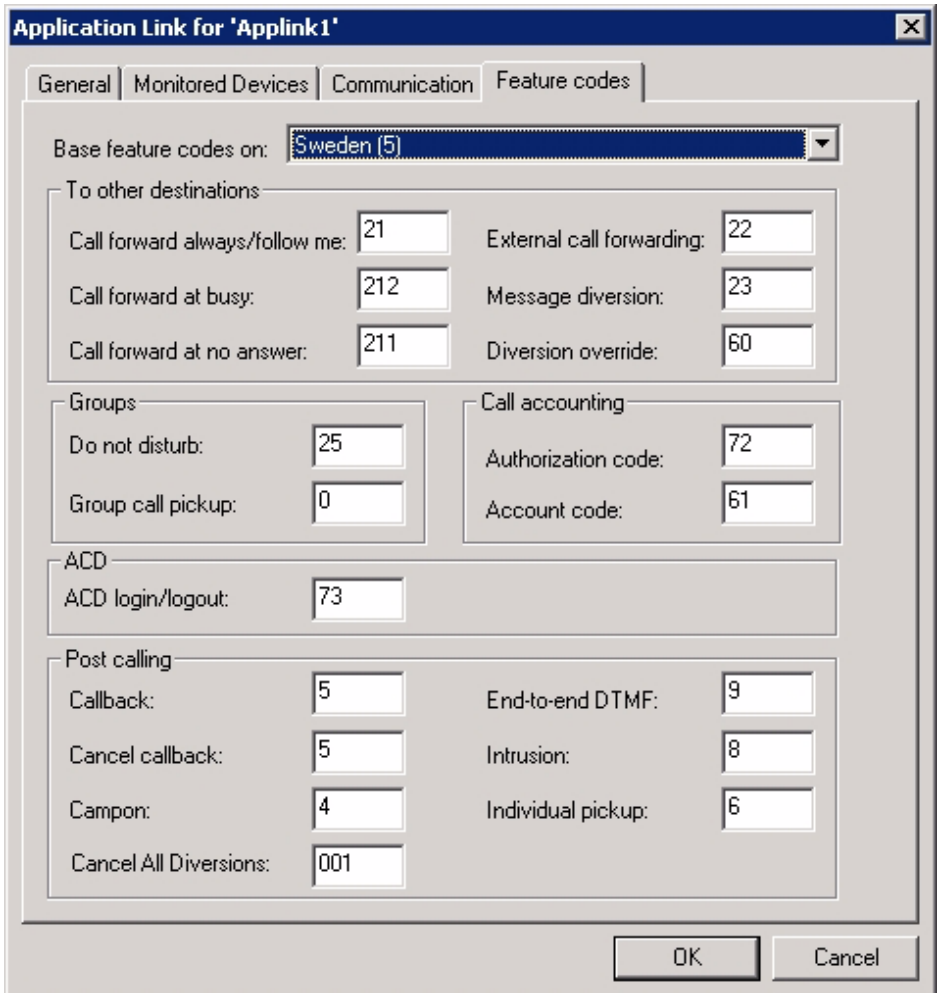


Figure 16: Feature Codes tab in the Application Link dialog

Table 27 Application link dialog

FIELD	DESCRIPTION
Base feature codes on drop-down list	Select the application code of the switch on which the feature codes are based.
Individual feature codes text fields	Type the code for each feature.

SYNCHRONIZATION

Synchronization is used to improve the performance of IP Media Server during high capacity traffic in OAS.

Synchronization in OAS is between the root container folders of stand alone IP Media server system and Basic Services system. After synchronization each IP media server machine will have its own root container folder synchronized with the root container folder of the Basic server machine.

For file synchronization, the third party binary `unison.exe` is used. When the two folders have been synchronized, the unison updates the folders based on the latest time stamp of the files inside the folder.

The IP Media Server maps the root container folder of Basic Services to a drive of the standalone media server. Drive letter (Q:) is used for this purpose and needs to be available on the standalone media server. Any updates made to the Q-drive on the IP Media Server will reflect in the Basic Service root container.

Note: By default, synchronization will be disabled (0). It is enabled by setting the registry key Enable_Synchronization to 1 under the path: HKEY_LOCAL_MACHINE\SOFTWARE\Eric- sson\OAS\Media_Server on the standalone media server.

For synchronization to work efficiently, install the same set of languages in both Basic services machine and IP Media Server machines.

ENABLING IP MEDIA SERVER LOCAL LOGGING

The following sections describe how to enable IP Media Server local logging.

ENABLING IP MEDIA SERVER LOCAL TRACE

A control parameter is defined in IPMS configuration file (HLink.cfg) to set IPMS local logging.

Configure the setting in the IMPS configuration file the following way:

1. Open **Hlink.cfg** from the \Mitel\OAS\bin directory with a text editor
2. Set the LocalTrace value to `LocalTrace=1`
   (Possible values are 0/1 were 1 enables IPMS local logging)
3. Restart IP Media Server to start local logging

   The IP Media Server local logging traces can be found at the \Mitel\OAS\Trace directory in the file named **IpmsLocalTrace**.

LIMITATIONS

The Media Port monitor tool will not work if local IPMS logging is enabled.

RECOMMENDATIONS

It is recommended to enable IPMS local trace for high capacity systems where high call traffic is generated.

NUMBER OF ASR AND TTS OBJECTS

A control parameter **AsrTtsObjects** defined in IPMS configuration file (HLink.cfg) is used by media server to create number of ASR and TTS objects to process ASR and TTS requests.

If the value of **AsrTtsObjects** is 10 then media server initializes 10 ASR and 10 TTS objects.

Default value of **AsrTtsObjects** is 10. User can increase the value based on usage/traffic and available licenses.

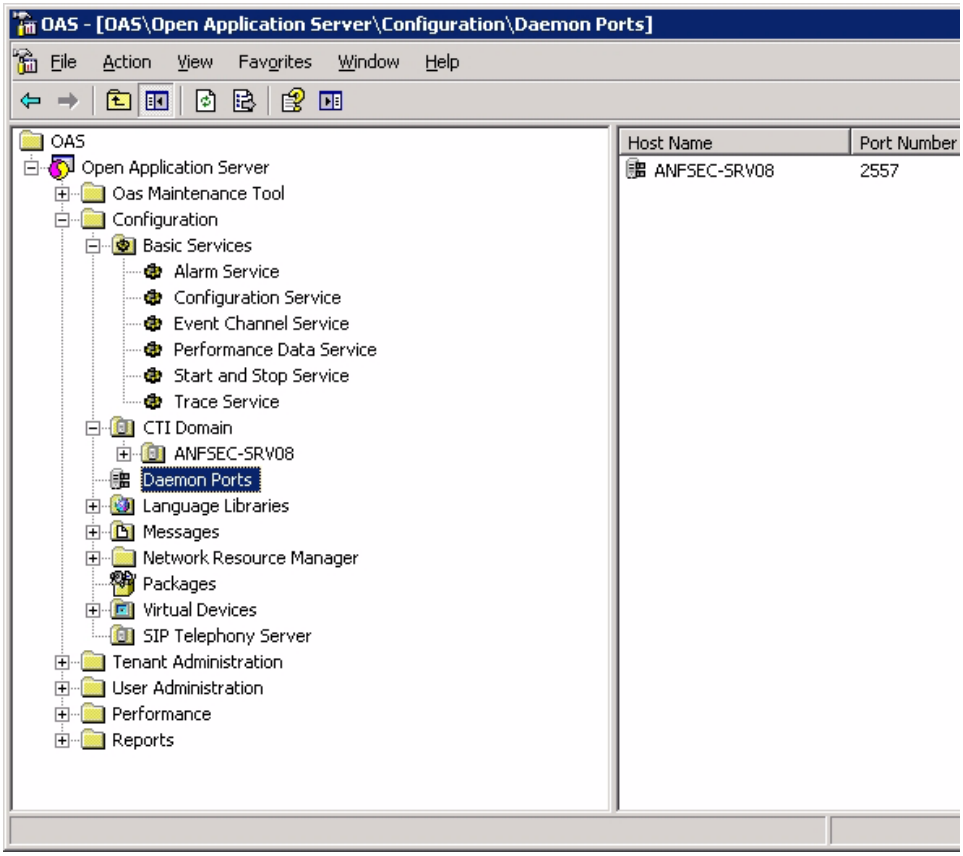
Note: When OAS is configured with Nuance 9.0, Media server creates ASR and TTS objects during startup. If nuance server goes down after Media server startup, it creates ASR and TTS objects automatically when the Nuance server has been reconnected.

DAEMON PORT

Each host that runs Basic Services, NRM, or a CTI Server has a port number where the Mitel Daemon is running. This port number can be modified by using OAS Management Console. Changing the port number will affect all servers, provided you have local administrative privileges on each server. If not, a warning is displayed alerting you to logon to each server as a local administrator and make the changes. Each server that was changed must be rebooted.

VIEW THE DAEMON PORT NUMBER

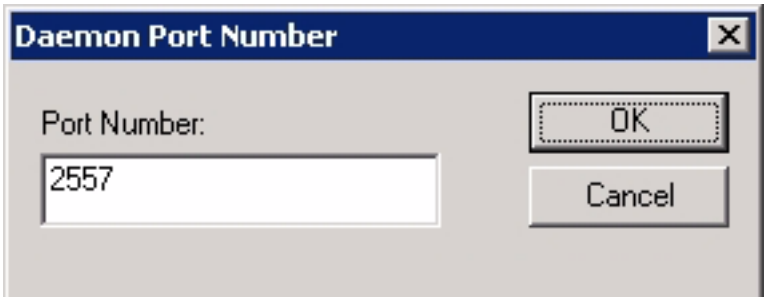
1. Click **Daemon Ports** from the configuration tree. The current values of the Daemon port for each host appear in the configuration display.



Note: It is not possible to view the Daemon Port Information for the servers for which you are not a local administrator. For each of those servers, an error message will show.

MODIFYING THE NUMBER OF THE DAEMON PORT

2. Right-click **Daemon Ports** (or Daemon port entry), point to **All Tasks**, and then click **Modify**. The **Daemon Port Number** dialog appears.



3. Type the desired port number in the **Port Number** field. This will change the port number for all hosts.
4. Click **OK**. The confirmation dialog appears.

5. Click **Yes** to confirm.

Note: It is only possible to see Daemon Port Information for the servers for which you are local administrator. An error message is displayed if you are not local administrator.

LANGUAGE LIBRARY INFORMATION

The Network Resource Manager and Media Servers use language library information while playing numbers, dates, time of day, time durations, character strings, and TTS strings. The OAS Configuration provides a user interface to add and configure user-defined language libraries. There is no system language with a fresh installation. Users are given options to create a language library in one of the following ways:

- System Language Library
- User defined Language Library

If selecting system language library, the system language ID is given by default (non-editable) and has an ID between 0 to 99. User-defined language libraries must have an ID greater than 99.

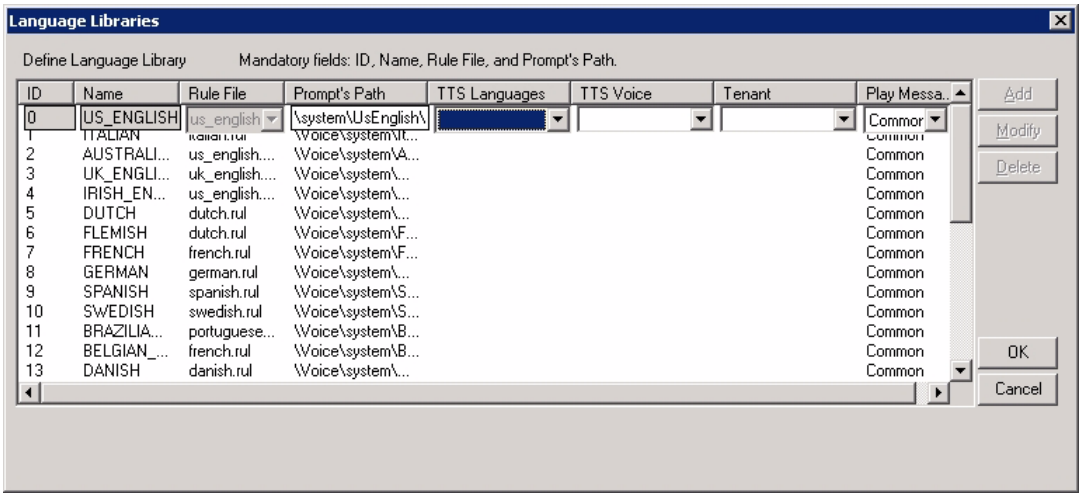
Note: When the OAS system is upgraded to a later version, all the language libraries are retained.

VIEWING LANGUAGE LIBRARY INFORMATION

To view the language library information, expand **Language Libraries** and click **Languages** in the configuration tree. The currently configured language libraries appear in the configuration display.

ADDING LANGUAGE LIBRARY

1. Right-click Language Libraries, point to New, and then click System Language Library or User Language Library. The Language Libraries dialog appears.



The fields in this dialog are described in Table 28 Language Libraries.

Note: When selecting System Language Library, the system language is given by default, and only the TTS Language, TTS Voice and Play Message fields can be

edited.

2. Type the Language Library ID.

Note: The System Language Library has an ID between 0-99 and cannot be changed.

3. Type the name of the language library.
4. Type the name of the rule file.
5. Type the path where the prompt files are stored.
6. In the **TTS Language** field, click the name of the TTS language to use for this Language Library. If this field is left blank, OAS will function without TTS capabilities for the Language Library.
7. In the **TTS Voice** field, click the name of the voice to be used with this Language Library. If this field is left blank, OAS will function without TTS capabilities for the Language Library.
8. Select the **Tenant Name**. Only visible if used in a tenanted system.

Note: Only applicable if the OAS installation is multi tenanted or at least one tenant is available in the system.

9. Select the **Output Code** type to use with this Language Library.
10. Select the **Play Messages List** to be associated with this Language Library.
11. Press ENTER.
12. Click **OK** if done or click **Add** to enter additional Language Library information.

Note: In order for OAS to use the newly added Language Library, a media resource with this Language Library (for example Player) must be added, and OAS system has to be restarted.

Table 28 Language Libraries

FIELD	DESCRIPTION
ID data entry field	The ID number of the Language Library. This must be greater than 99 and less than or equal to 65535.
Name data entry field	The name of the Language Library. The Language Library name must be unique and cannot contain spaces.
Rule File data entry field	The name of the Rule file for this Language Library. Rule files define the algorithm to play numbers, dates and time values for each Language Library. To develop Rule files, consult Mitel Professional Services. This file must be located in the `Mitel\OAS\root_container\Data` directory.
Prompt's Path data entry field	The path where the prompts to be used for this Language Library are located. The path must be relative to the `Mitel\OAS\root_container`

FIELD	DESCRIPTION
	path.
TTS Language drop-down edit list	The name of one of the available TTS languages to use with this Language Library, or a value can be typed in..
TTS Voice drop-down edit list	The name of voice to use with this Language Library. The values will vary depending on the TTS language that was selected, or a value can be typed in.
Tenant	The name of the Tenant the Language Library belongs to. This field is applicable only if the OAS installation is multi tenanted or at least one tenant is available in the system.
Output Code drop-down list	The output codec to use with this TTS voice. The values vary depending on the TTS voice that was selected.
Play Message	The name of the Play Message List associated with this Language Library.

MODIFYING LANGUAGE LIBRARY INFORMATION

1. Right-click **Language Libraries**, point to **All Tasks**, and then click **Modify...**.
   The **Language Libraries** dialog appears. The fields in this dialog are described in Table 28 Language Libraries.
2. Select the language to edit, and click **Modify**.
3. If the Language Library to be modified is a system Language Library (ID 0–99), only the **TTS Language**, **TTS** Voice and **Play Message** fields can be edited. If the Language Library to be modified is a user-defined Language Library (ID 100 – 65535), all fields can be changed.
4. Update the fields as needed.
5. Press ENTER.
6. Click **OK** if done, or select another Media Library and click **Modify** to change the media library information.
   Repeat steps 2 through 4 for each Language Library to be modified.

Note: Language Library modifications take effect only after the OAS System is restarted.

DELETING LANGUAGE LIBRARY INFORMATION

Users are only allowed to delete user-defined Language Libraries. To delete a Language Library do the following:

1. Right-click **Language Library Information** from the configuration display, point to **All Tasks**, and then click **Delete**.
   A confirmation dialog appears.

2. Click **Yes** to confirm.
3. Repeat for each Language Library that you want to delete.

Note: Language Library deletions will take affect only after the OAS System is restarted.

CONFIGURING MESSAGES

Messages consist of the Play Messages component. OAS allows you to have a list of pre-configured play messages. Each play message consists of a sequence of media objects. This section discusses how to view, create and modify play messages.

PLAY MESSAGE LISTS

OAS allows you to configure multiple Play Message Lists in addition to the Common Play Message List.

Each Language Library can be associated with one Play Message List. When Resources have been allocated to a call and a Language Library has been specified (as the Resource Characteristics in the Allocate Resource Request), then a Play media service can be requested. If the Play media service request includes a Play Message ID, then OAS will select the Play Message with the corresponding message ID from the Play Message List which is configured for the Language Library specified in the Allocate Request. If that message was not configured in the Play Message list then OAS will select the message with the same message ID from the Common Play Message List. If this one does not exist then the Play Media request will fail.

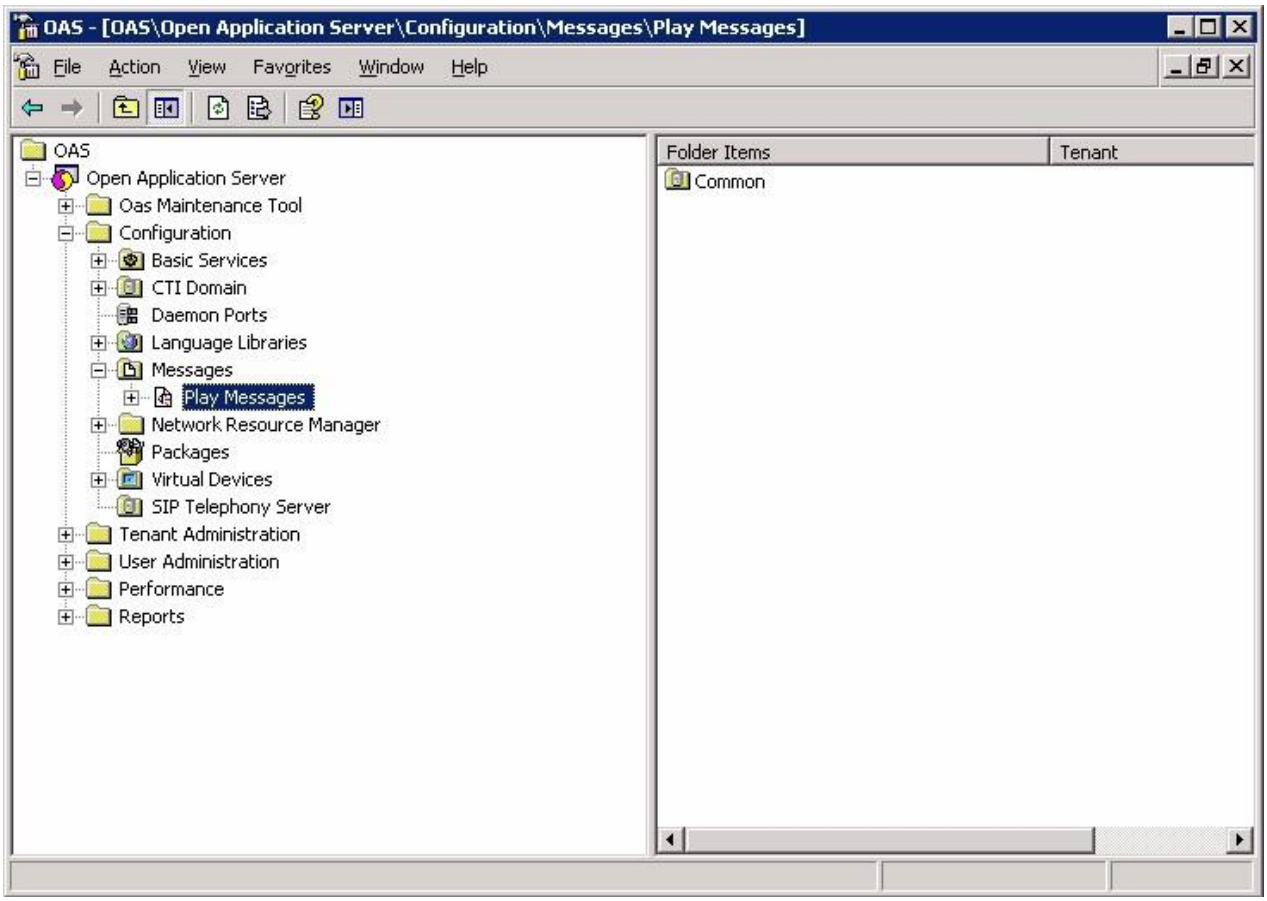
The Play Messages configuration specifies the following:

- Play Message List name (up to 50 characters).
- Description

VIEW THE PLAY MESSAGE LISTS

To view the available play message lists and descriptions:

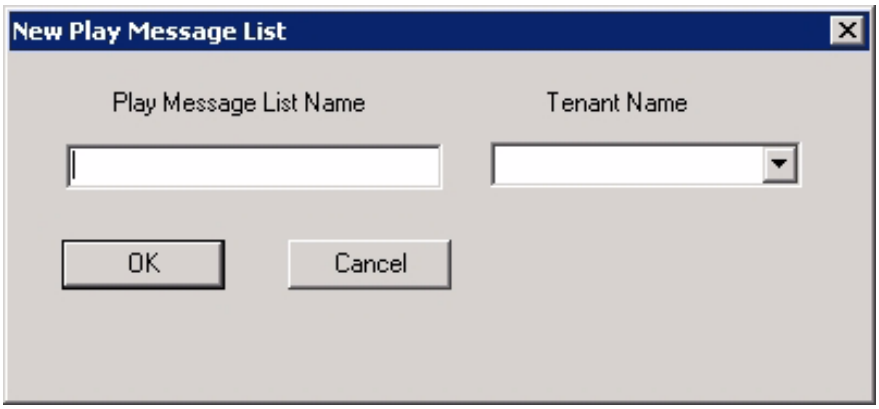
- Click **Messages** from the configuration tree. Click **Play Messages**. The information about Play Messages appears in the configuration display.



To view all of the configuration information for each message, use the modify procedures (see section 10.2.3 Modifying Play Messages for details).

ADD A PLAY MESSAGE LIST

- Right-click **Play Messages** from the configuration tree, point to **New**, and then click **Play Message List**. The New Play Message List dialog appears.



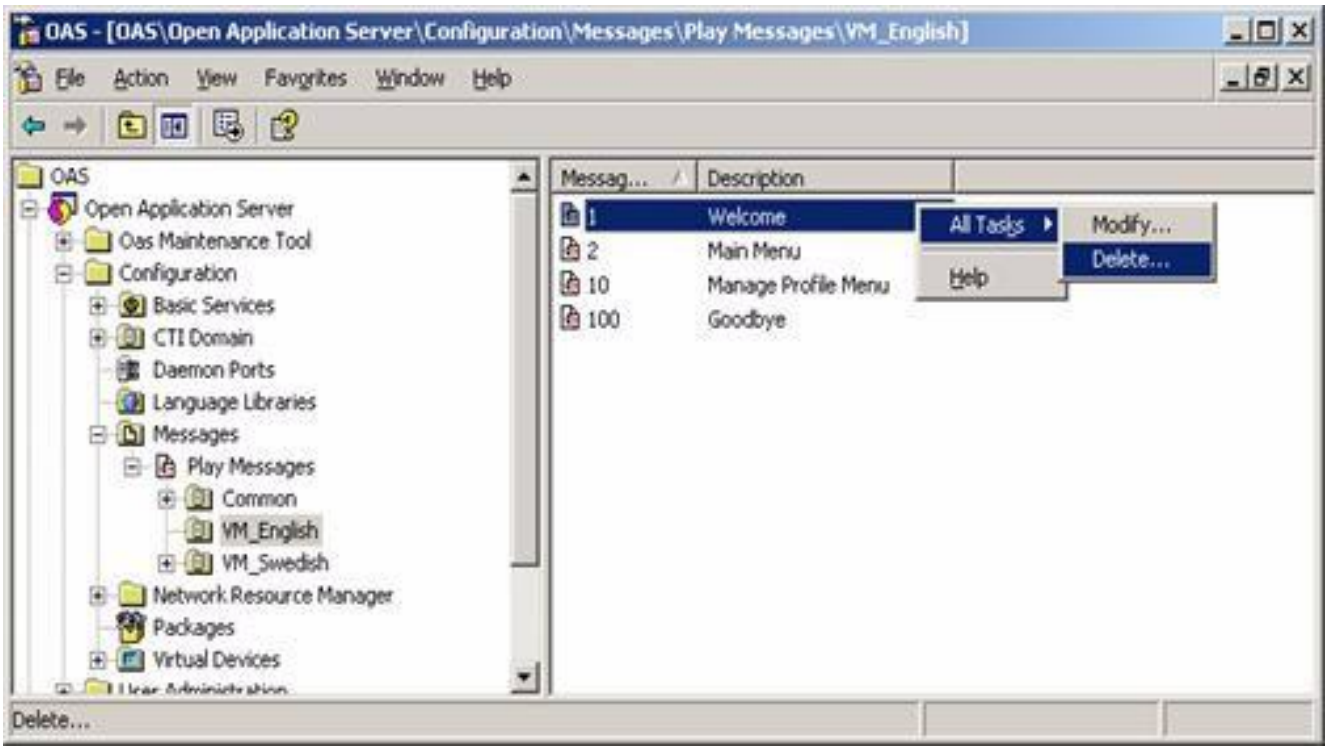
The fields in this dialog are described in Table 29 New Play Message field descriptions.

Table 29 New Play Message field descriptions

FIELD	DESCRIPTION
Name	The Play Message List name. Required.
Tenant Name	The Tenant Name. This field is applicable only if the OAS installation is multi tenanted or at least one tenant is available in the system.

DELETE A PLAY MESSAGE LIST

1. Click **Play Messages** in the configuration tree. Configured Play Messages appear in the configuration display.



2. Right-click the message to be deleted from the configuration display, point to **All Tasks**, and then click **Delete**.

PLAY MESSAGES

Each play message consists of a sequence of static and dynamic media objects. The Play Messages configuration specifies the following:

- ID
- Description
- Sequence of media objects

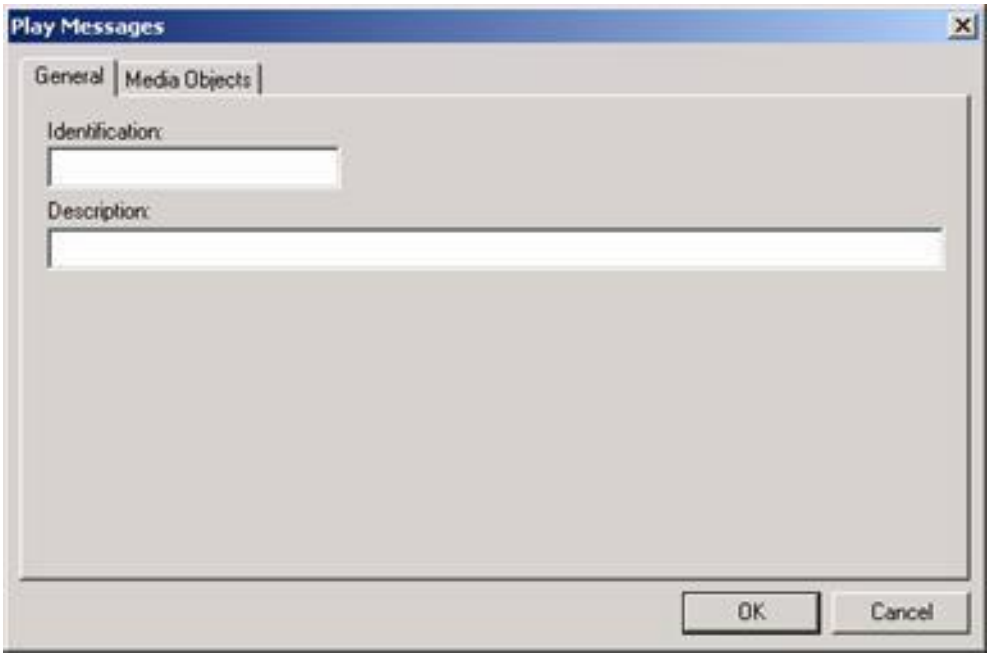
VIEW THE PLAY MESSAGES CONFIGURATION

To view the available play message IDs and descriptions:

- Click **Messages** from the configuration tree, then click **Play Messages**. The information about Play Messages appears in the configuration display. To view all of the configuration information for each message, use the modify procedures (see section 10.2.3 Modifying Play Messages).

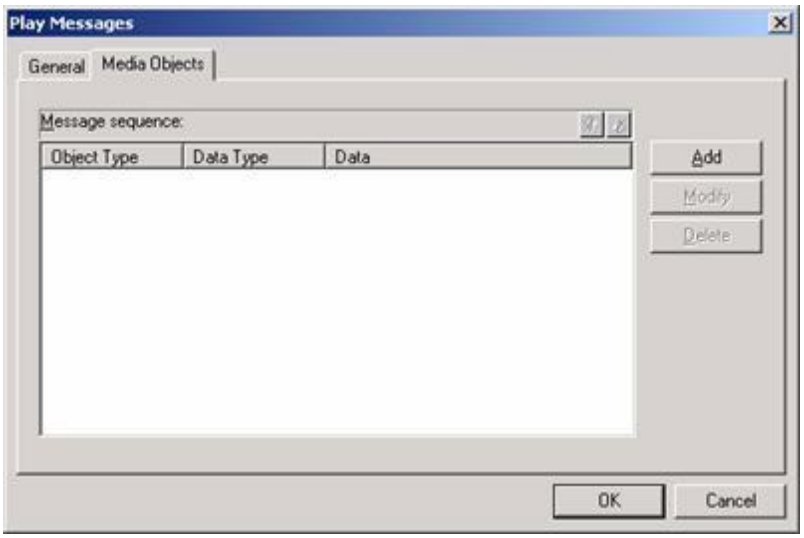
ADD A PLAY MESSAGE

1. Right-click the **Play Message List** that you want to add the play message to, point to **New**, and then click **Play Messages**. The Play Messages dialog appears.



2. Click the **General** tab to enter the play message Identification and description. The fields in the **General** tab are described in Table 30 Play Messages General.
3. Type the play message ID in the **Identification** field.

4. Type the play message description in the **Description** field.
5. Click the **Media Objects** tab, to specify a list of static (value) and dynamic (parameter) media objects.



The fields in this tab is described in Table 31 Play Messages Media Objects.

6. Click **Add**.
7. Click the type of media object in the **Object Type** drop-down list.
8. Click the media object data type (**Value** or **Parameter**) from the **Data Type** drop-down list.
9. Enter the name, value, or parameter number of the media object in the **Data** field.
10. Press ENTER.
11. Repeat steps 6 through 10 for each media object.

Table 30 Play Messages General

FIELD	DESCRIPTION
Identification data entry field	The message ID (1 – 65535) for this play message. Once the play message has been created, the ID cannot be modified. Required.
Description data entry field	The description that identifies the play message contents.

Table 31 Play Messages Media Objects

FIELD	DESCRIPTION
Object Type drop-down list	The media object type, for example **SoundMediaObject**.
Data Type drop-down list	The media object data type, either **Value** or **Parameter**.

FIELD	DESCRIPTION
Data data entry field	The media object value. If **Data Type** is **Value**, then specify the name or value. If **DataType** is **Parameter**, then specify the parameter number (1 –20) of the media object.
Message sequence control arrows	Select a media object and use the arrows to change its position in the list.

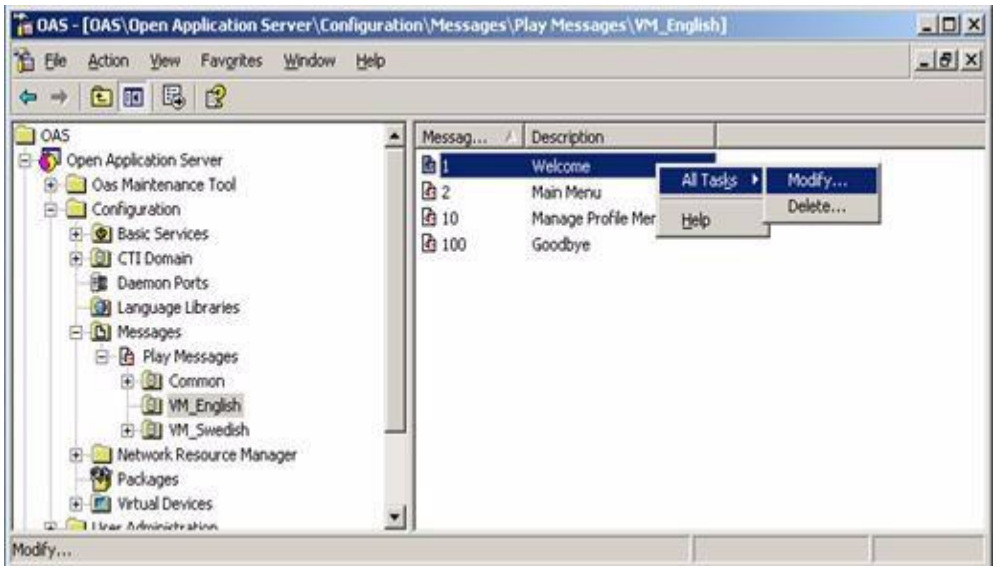
To modify the sequence of a Media Object, do the following:

1. Click the row that you want to move up or down the list.
2. Click the **up arrow** or **down arrow** until the row is in the correct sequence.
3. Click **OK** when finished with both General and Media Objects tabs.

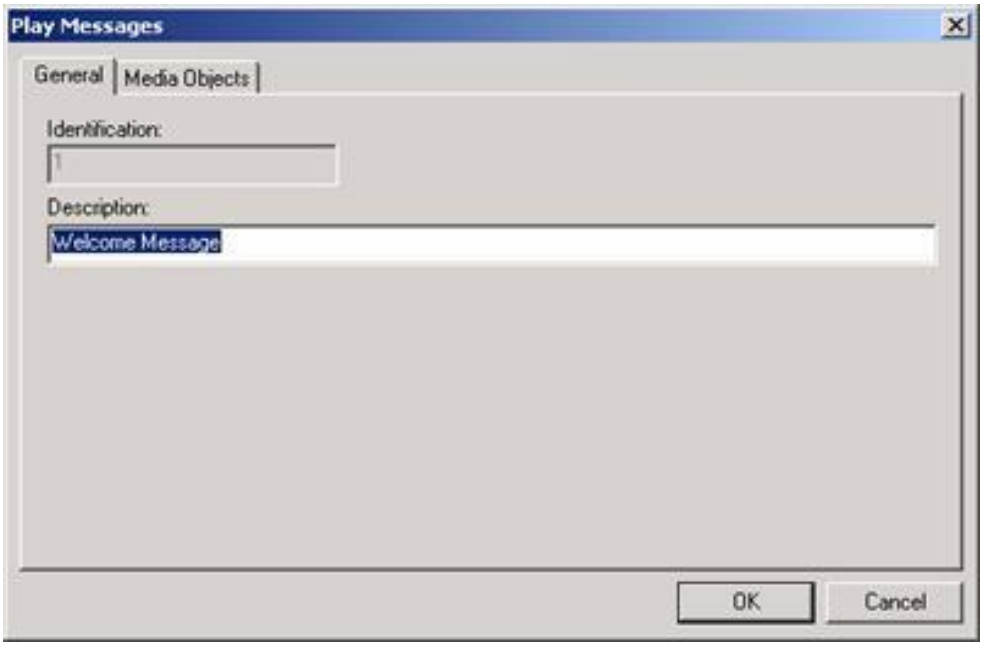
MODIFYING PLAY MESSAGES

To modify Play Messages, do the following:

1. Click **Play Messages**. Configured Play Messages appear in the configuration display.



2. From the configuration display, right-click the message to be modified, point to **All Tasks**, and then click **Modify**. The **Play Messages** dialog appears.

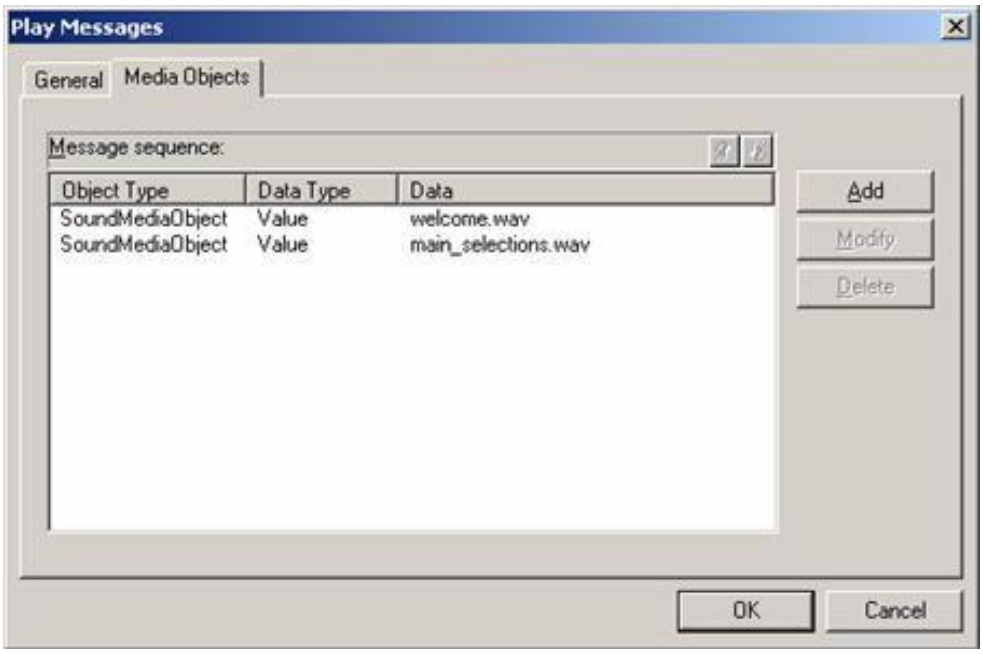


3. Click the **General** tab, to modify the play message description. The fields in this tab are described in Table 32 General tab. The **Identification** field provides the play message ID and cannot be modified.

Table 32 General tab

FIELD	DESCRIPTION
Description data entry field.	Description of the play message.

4. Modify the description for the play message in the **Description** field as needed.
5. Click the **Media Objects** tab to modify a list of static (value) and dynamic (parameter) media objects. The fields in this tab are described in Table 33 Play Messages Media Objects.



Note: At least one media object is required.

Table 33 Play Messages Media Objects

FIELD	DESCRIPTION
Object Type drop-down list	The media object type (such as **SoundMediaObject**).
Data Type drop-down list	The media object data type, either **Value** or **Parameter**.
Data data entry field	The media object value. If **Data Type** is **Value**, then specify the name or value. If **DataType** is **Parameter**, then specify the parameter number (1 –20) of the media object.
Message sequence control arrows	Select a media object and use the arrows to change its position in the list.

To add a Media Object, do the following:

1. Click **Add**. New selectable fields appear.
2. Select the type of media object (character string, sound media object, number, and so on) from the **Object Type** drop-down list.
3. Select if the media object is a **Value** or **Parameter** from the **Data Type** drop-down list.
4. Enter the name, value, or parameter number of the media object in the **Data** field.
5. Press **Enter**.

6. Repeat steps 1 through 5 for all media objects to be added.

To modify a Media Object, do the following:

1. Click the row that you want to modify.
2. Click **Modify**.
3. Edit the media object configuration data.
4. Press ENTER.

To delete a Media Object, do the following:

1. Click the row that you want to delete.
2. Click **Delete**.

To modify a Media Object sequence, do the following:

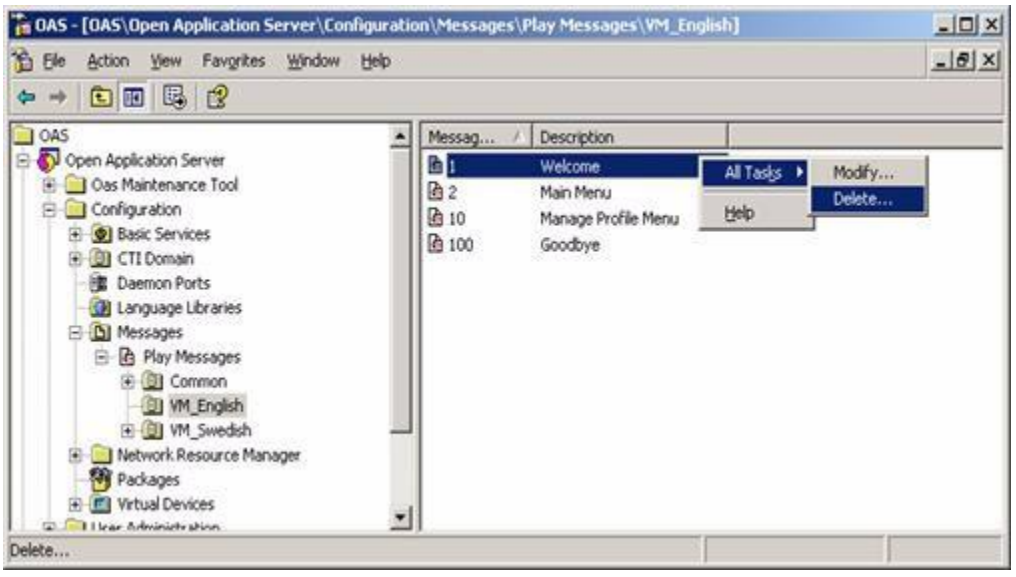
1. Click the row that you want to move up or down the list.
2. Click the **up arrow** or **down arrow** until the row is in the correct sequence.

When finished with both the **General** and **Media Objects** tabs, click **OK**.

DELETE A PLAY MESSAGE LIST

To delete a play message list, do the following:

1. From the configuration tree, click **Play Messages**. **Configured Play Messages** appear in the configuration display.



2. From the configuration display, right-click the message to be deleted, point to **All Tasks**, and then click **Delete**.

NETWORK RESOURCE MANAGER

The OAS system can contain only one Network Resource Manager (NRM). The Network Resource Manager configuration specifies the following:

- Network Resource Manager general information
- License configuration

NETWORK RESOURCE MANAGER GENERAL DATA CONFIGURATION

The Network Resource Manager General Data configuration specifies the following:

- The host where the Network Resource Manager is located
- The start mode of the Network Resource Manager.
- The port of the Network Resource Manager.

VIEWING THE NETWORK RESOURCE MANAGER GENERAL DATA CONFIGURATION

Click **General Data** under **Network Resource Manager**, from the configuration tree. The values appear in the configuration display, see Figure 17.

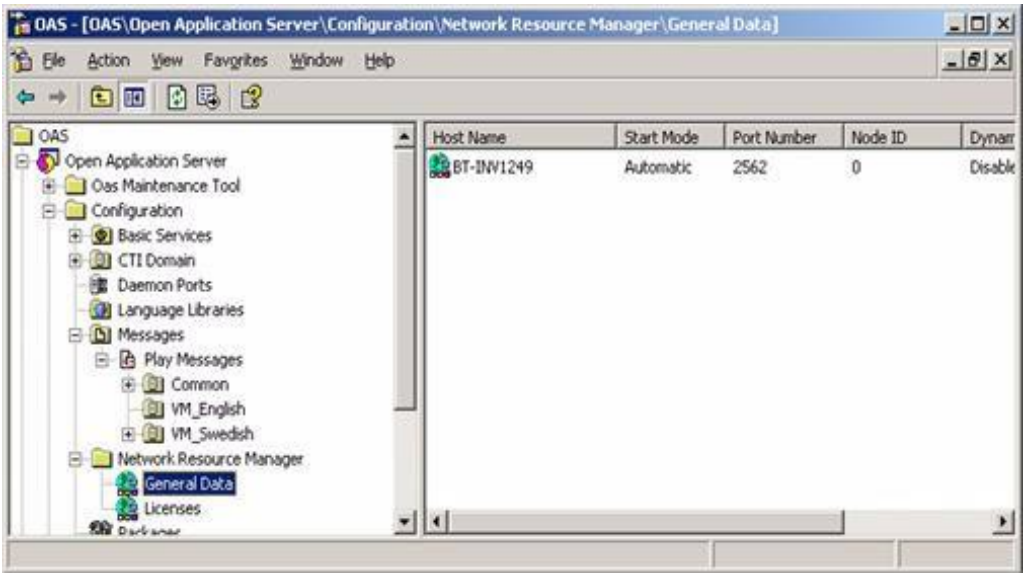
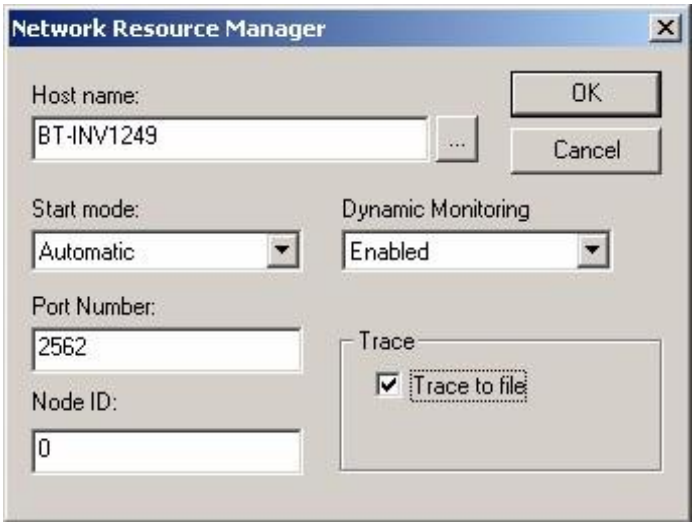


Figure 17:Viewing the Network Resource Manager Configuration

MODIFY NETWORK RESOURCE MANAGER GENERAL DATA CONFIGURATION

1. Right-click **General Data** under **Network Resource Manager** from the configuration tree. Point to **All Tasks**, and then click **Modify**. The **Network Resource Manager** dialog appears.



See Table 34 Network Resource Manager for a description of each of the fields in the **Network Resource Manager** dialog.

2. In the **Host name** field, enter or select the host where the Network Resource Manager resides.
3. Select the start mode (**Automatic** or **Manual**) from the **Start mode** drop-down list.
4. Type the port number of the Network Resource Manager in the **Port Number** field.
5. **Enabled** or **Disabled** in the **Dynamic Monitoring** field to indicate if dynamic monitoring should be enabled or disabled.

Note: If NRM is configured with Dynamic Monitoring enabled, and if the already configured Call Control licenses for Tenant(s) have a mismatch between dedicated and maximum licenses, then user is prompted to make the license counts equal before changing the monitoring type.

6. Type a numerical value between 0 and 31 to identify this instance of OAS in a Multiple OAS environment (for example when one Call Center handles multiple MX-ONE nodes, and when an OAS system is connected to each MX-ONE node). When only one OAS system is installed, type 0 in this field.
7. To set NRM to trace its output to a file, select **Trace to file**. This will not happen until NRM is stopped and restarted.
8. Click **OK**. A warning dialog appears if the host name has been changed. Click **Yes** to continue.

Table 34 Network Resource Manager

FIELD	DESCRIPTION
Host name browse list	The host where the Network Resource Manager resides.
Start mode drop-down list	The Network Resource Managers start mode. **Automatic** During startup, the Network Resource Manager is automatically started. **Manual** During startup, the Network Resource Manager is not automatically

FIELD	DESCRIPTION
	started. This service must be started using the OAS Maintenance Tool.
Port Number data entry field	The TCP/IP port number of the Network Resource Manager.
Dynamic Monitoring drop-down list	Specifies whether dynamic monitoring is enabled or not.
Node ID data entry field	In a multi OAS environment, the Node ID is used to identify individual OAS installations and must be unique within the system
Trace to file check box	Indicates if NRM will log traces to a file.

CONFIGURING OAS LICENSES

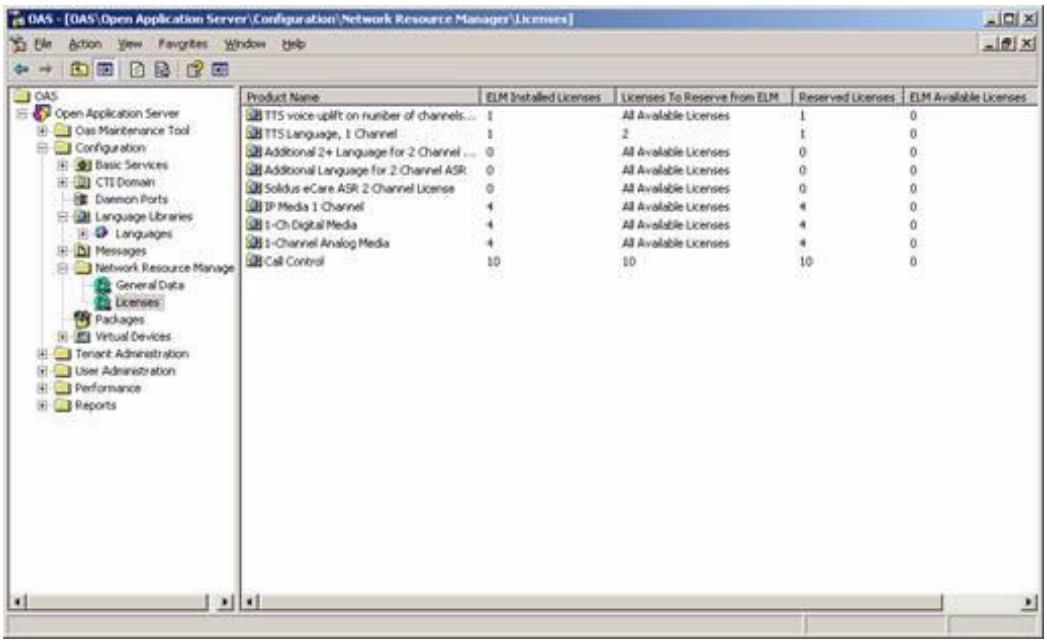
OAS licenses are managed by the Enterprise License Manager (ELM). Multiple OAS Systems can share licenses installed on one ELM server.

Due to the real time nature of OAS, each OAS system caches a number of licenses for its own use, instead of requesting a license for each call. Because of this, the number of licenses to be reserved in each OAS system needs to be configured.

VIEW THE NETWORK RESOURCE MANAGER LICENSE CONFIGURATION

1. Expand **Network Resource Manager** in the configuration tree.
2. Click **Licenses**.

The values appear in the configuration display.



The columns in the license view pane are described in Table 35 License view.

Table 35 License view

FIELD	DESCRIPTION
Product Name	Name of the license
ELM Installed Licenses	Number of licenses installed on the ELM Server.
Licenses to Reserve from ELM	Number of licenses that can be reserved for this OAS Systems
Reserved Licenses	Number of licenses reserved by this OAS System. The number of reserved licenses does not have to be equal to the number of configured licenses. This is true if the number of installed licenses is less than the number of configured licenses, or if the number of licenses configured in all OAS systems that share one ELM server exceeds the number of installed licenses.
ELM Available Licenses	Number of licenses which are not currently reserved by this or other OAS systems sharing one ELM server.

1. Right-click **Licenses** under **Network Resource Manager** from the configuration tree, point to **All Tasks**, and then click **Modify**.
2. The **License Configuration** dialog appears.
3. Double click the license to modify and change the value in the **Licenses to Reserve** field.

Note: Enter All to configure the value so that OAS will reserve all avail- able licenses for any of the licensed products.

NRM CALLID GENERATION

The process of generating CallId in NRM is such that it depends upon two registry key values: “uCall” and “Running”.

These registry keys can be found under the registry path

`(HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432NODE\MITEL\OAS\NRM).`

CALLID GENERATION LOGIC:

1. **New OAS installation:**
   Initially when the OAS installation is completed, the value of “uCall” and “Running” is set to 1 and 0. After installation of OAS, the system is restarted and the value of “uCall” and “Running” is set to 1 and 1.
   Once OAS configuration is completed (that is, in order to enable NRM traces), OAS services must be restarted. If the value of registry key “Running” is set to 1 when NRM starts up, then the initial CallId is configured as 5000000 +. This value is stored in registry key “uCall” and the final sum is stored into the registry key CallId (5000001).

   If the value of registry key “Running” is set to 1, and a OAS shut- down is called followed by a restart of OAS, then the NRM starts CallId with “5000001 + 5000000”, that is, CallId(10000001). The process of adding 5000000 again after restarting OAS is to avoid any duplicating of CallId to be sent to NRM Clients. It can also provide information of how many times OAS have restarted.

Note: The initial CallId value is set to 5000000 in order to avoid any confusion with other components CallId, for example, AppLink which starts generating CallId from 1.

Note: To make small changes, that is, to fine tune the registry value will lead to an undesired behavior in CallId generation.

2. NRM will generate the maximum CallId of value 4227858432. If CallId reaches this value, the NRM CallId is reset to 1. If the registry key “Running” value is set to 1, the CallId will then be started from 5000000.
3. **Upgrade OAS Installation (OAS from one SPx to another SPx):**
   After the upgrade of OAS Installation is completed, the value of “uCall” and “Running” is reset to 1 and 0. Once the system is restarted, the value of “uCall” and “Running” is set to 1 and 1. The OAS services must thereafter be restarted so that the initial CallId is configured as 5000000 +. The value is stored in the registry key “uCall” and the final sum is saved into the

registry key CallId (5000001). If the OAS services are not restarted, NRM will generate CallId from 1, 2, 3, 4, 5 and so on.

CONFIGURING VIRTUAL DEVICES

In this section, a virtual device is described, as well as explanations on how to view, add, modify and delete a virtual device.

BASIC VIRTUAL DEVICES

Currently, the only type of a virtual device is a Basic Virtual Device (BVD). A BVD is an extension to the concept of physical and logical devices. A BVD has call control as well as media service capabilities. OAS allows monitoring and controlling of a BVD like any other physical or logical device.

A BVD has the following characteristics:

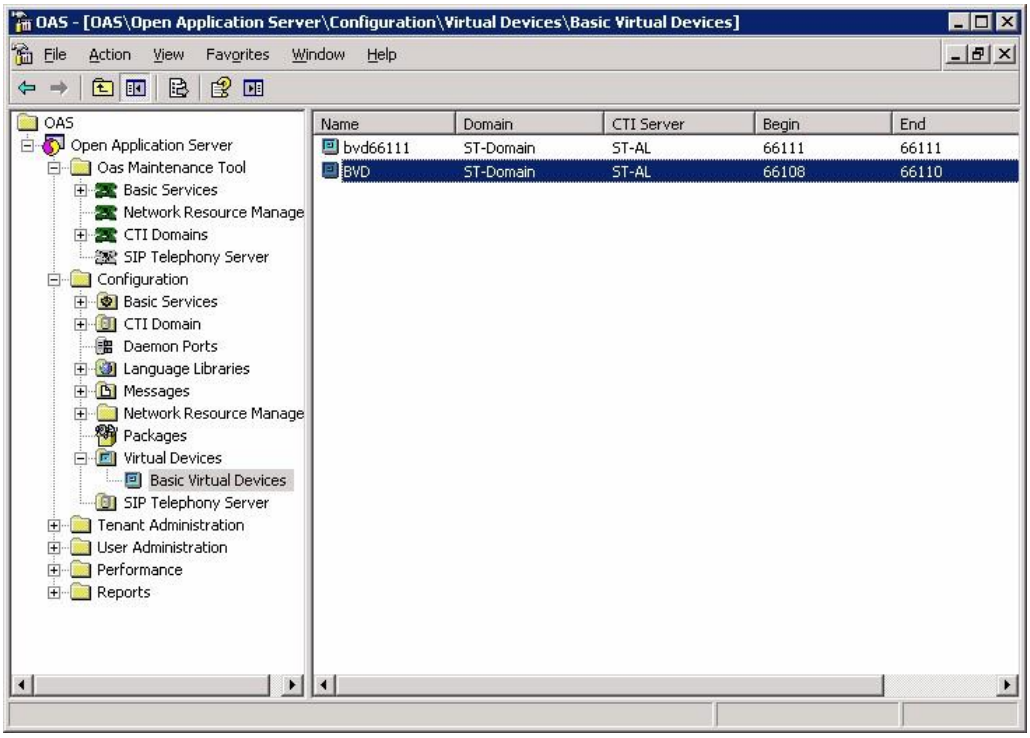
- Service entry point into the application
- Not associated with any physical devices
- To the application, a BVD is identified by a unique OAS wide alpha- numeric name, such as CUSTOMER_SERVICE.
- One CTI group must be configured for each BVD and for each CTI Server from which the virtual device is to be accessed (that is, dialed).
- Media enabled

The configuration of a BVD specifies the following:

- Name of the BVD (device identification)
- CTI Server associated with the BVD
- For each CTI Server, a CTI Group associated with the BVD

VIEW THE BASIC VIRTUAL DEVICE CONFIGURATION

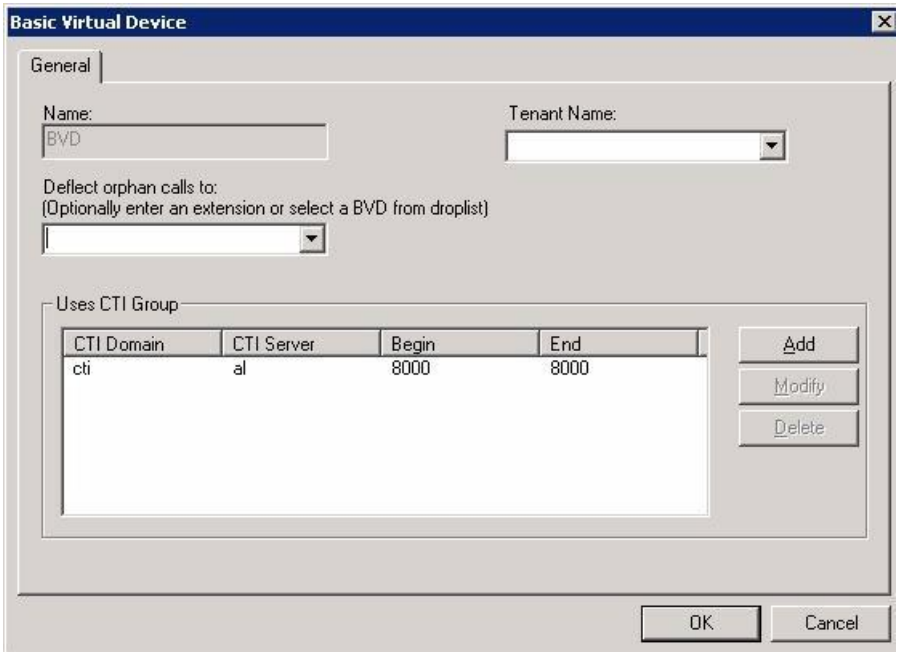
1. Expand **Virtual Devices** in the configuration tree.
2. Click **Basic Virtual Devices**.
   The Basic Virtual Device Name, Domain, CTI Server and a range of CTI Groups (Begin/End) appear in the configuration display.



CREATING A BASIC VIRTUAL DEVICE

The following procedure applies for a CTI installation.

1. Expand Virtual Devices, right-click Basic Virtual Devices, point to New, and then click Basic Virtual Devices.
   The Basic Virtual Device dialog appears.



The fields in the dialog are described in Table 37 Basic Virtual Device dialog field descriptions.

2. Type the unique identifier for the BVD in the **Name** field.
3. Type the destination number or select a Virtual Device from the **Deflect orphan calls to** drop-down list.
4. Click **Add** to add CTI Groups. New fields appear, in these fields:
   - Select the CTI Domain to be associated with this Basic Virtual Device from the **CTI Domain** drop-down list.
   - Select the CTI Server to be associated with this Basic Virtual Device from the **CTI Server** drop-down list.
   - Enter the beginning and ending CTI Group numbers in the **Begin** and **End** fields, respectively.
5. Click **OK** to save the settings.

Table 37 Basic Virtual Device dialog field descriptions

FIELD	DESCRIPTION
Name data entry field	The name of the BVD. The name must be unique and cannot conflict with any other BVDs, Media Servers or Call Control Servers.
Deflect orphan calls to drop-down list	Indicates the virtual device where calls will be directed when no applications are monitoring this Basic Virtual Device.
Tenant Name drop-down list	The Name of the Tenant. This field is applicable only if the OAS installation is multi tenanted and at least one tenant is available in the system.
CTI Domain drop-down list	The CTI domain associated with this Basic Virtual Device.
CTI Server drop-down list	The CTI server associated with this Basic Virtual Device.
Begin/End data entry fields	The CTI group number range. If there is only one group number, type the same number in both fields.

MODIFYING A BASIC VIRTUAL DEVICE

It is possible to modify the location to which orphan calls are deflected, as well as modifying the CTI Servers and the CTI Group Number range associated with the selected BVD.

1. Expand **Virtual Devices**, and click **Basic Virtual Devices**. A list of configured Basic Virtual Devices appears in the configuration display.
2. Right-click the device to be modified, point to **All Tasks**, and then click **Modify**. The **Basic Virtual Device** dialog appears.
3. Edit the fields as needed and click **OK**.

DELETE A BASIC VIRTUAL DEVICE

1. Expand **Virtual Devices**, right-click **Basic Virtual Devices**, point to **All Tasks**, and then click **Delete**.
   A confirmation dialog appears.

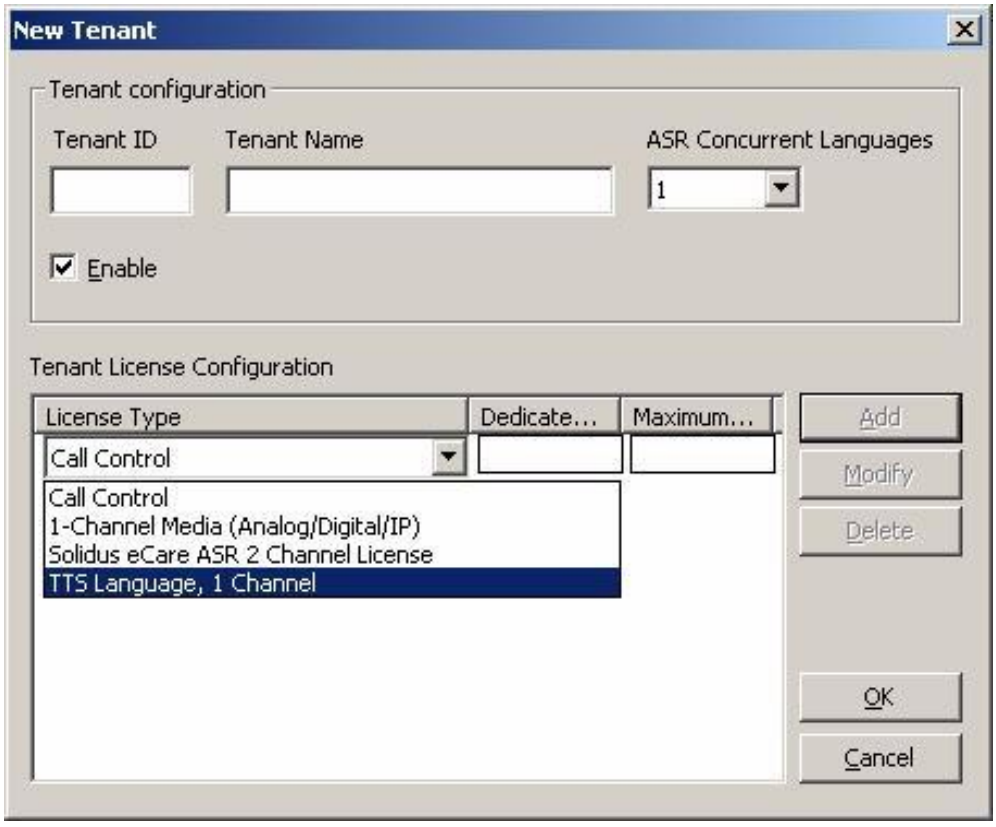
2. Click **Yes** to confirm. Repeat for each BVD to be deleted.

CONFIGURING TENANT

This section explains how to add, delete and modify a tenant.

ADDING A NEW TENANT

1. Go to Open Application Server and Tenant Administration.
2. Right click Tenant Administration, point to New and click Tenant, to open the New Tenant dialog box.



The fields in this dialog are described in Table 38 Field description New Tenant dialog box.

Table 38 Field description New Tenant dialog box

FIELD NAME	MANDATORY	DESCRIPTION
Tenant ID text box	Yes	Tenant ID, range 1 to 9999
Tenant Name text box	Yes	Tenant Name can be Alphanumeric with space and the following special characters; , - & _
ASR Concurrent Languages drop-down list	Yes	Number of simultaneous ASR languages: 1, 2 or A (all)
Enable check box	Yes	Select to enable, clear to disable. Default is selected.

MODIFYING A TENANT

*Tenant Information is divided in the categories **General Data** and **License**, see Figure 18.*

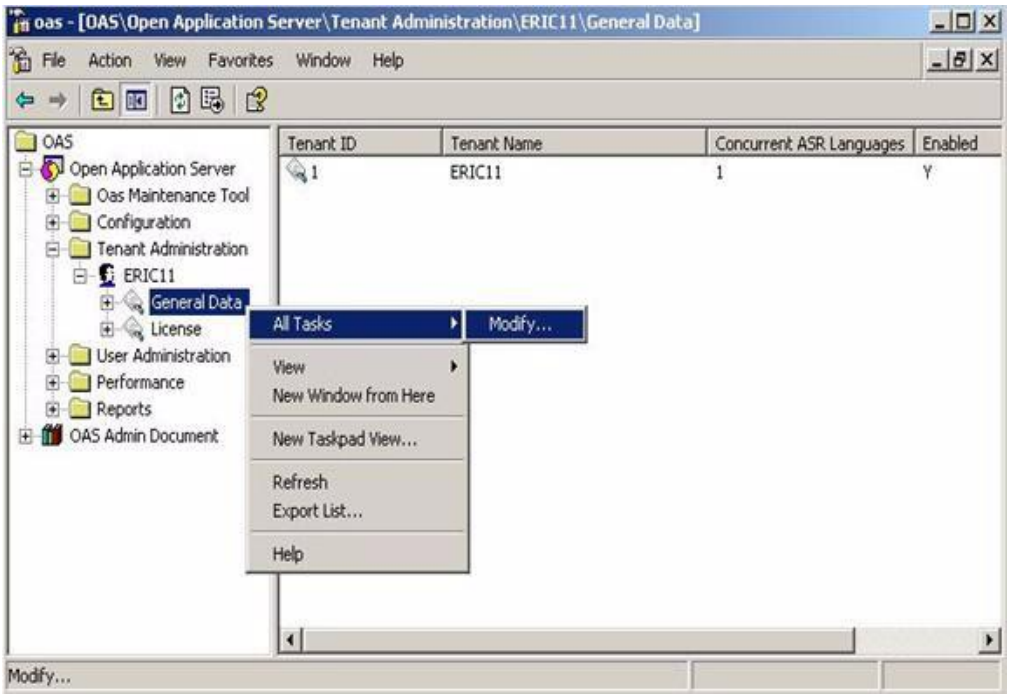
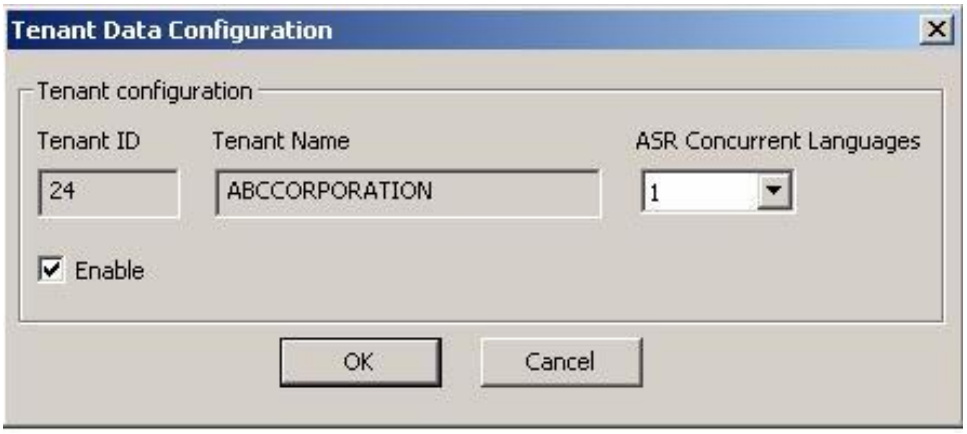


Figure 18:Tenant Data

MODIFY GENERAL DATA

1. Right-click General Data.
2. Point to All Task.
3. Click Modify.
   The Tenant Data Configuration dialog box appears.



The fields in this dialog are described in 39 Tenant Data Configuration field descriptions.

Table 39 Tenant Data Configuration field descriptions

FIELD NAME	MANDATORY	DESCRIPTION
Tenant ID non-editable text box	Yes	ID of the tenant
Tenant Name non-editable text box	Yes	Name of the tenant
ASR Concurrent Languages drop-down list	Yes	Number of simultaneous ASR languages: 1, 2 or A (all).
Enable check box	Yes	Select Enable or Disable (default is Enable).

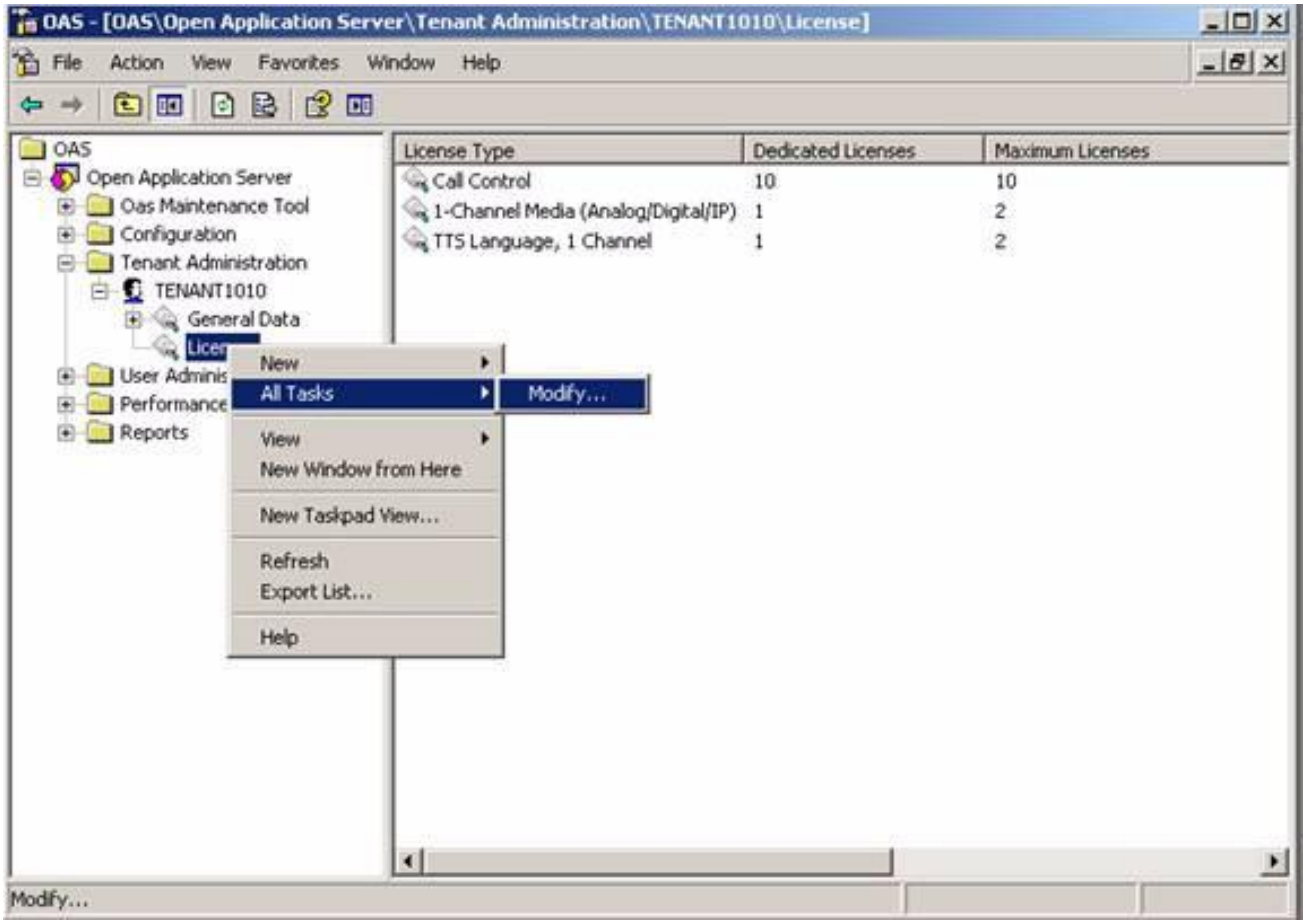
MODIFYING RESOURCE LICENSE

To modify a resource license, do the following:

- Point to **All Tasks** and click **Modify**.

OR

- Right click on any license listed in result pane, point to **All Tasks** and click **Modify**.



See Figure 19 and Figure 20 for modification of licenses. The fields in the dialogs are described in Table 40 Tenant License Configuration field descriptions.

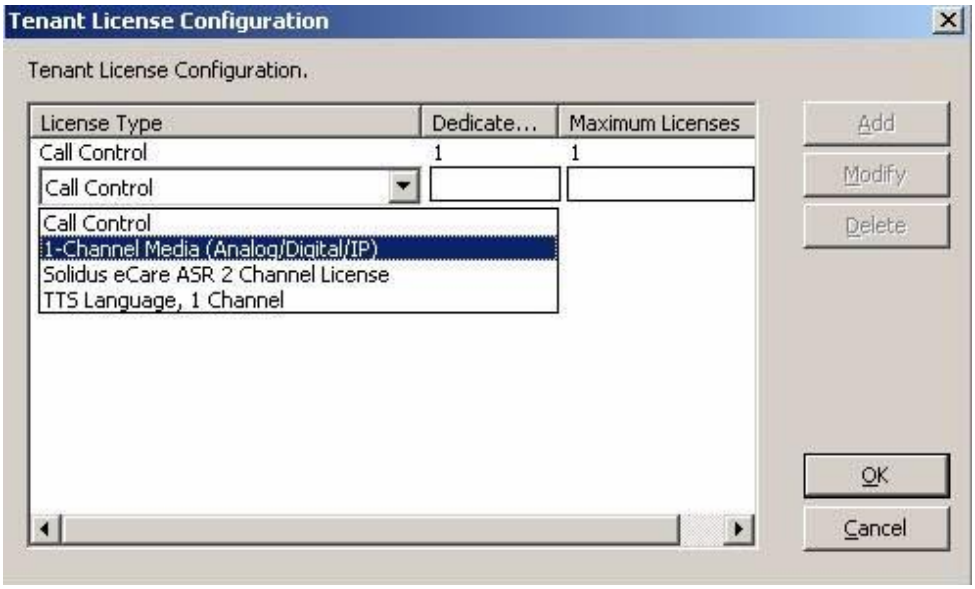


Figure 19:Tenant License Addition

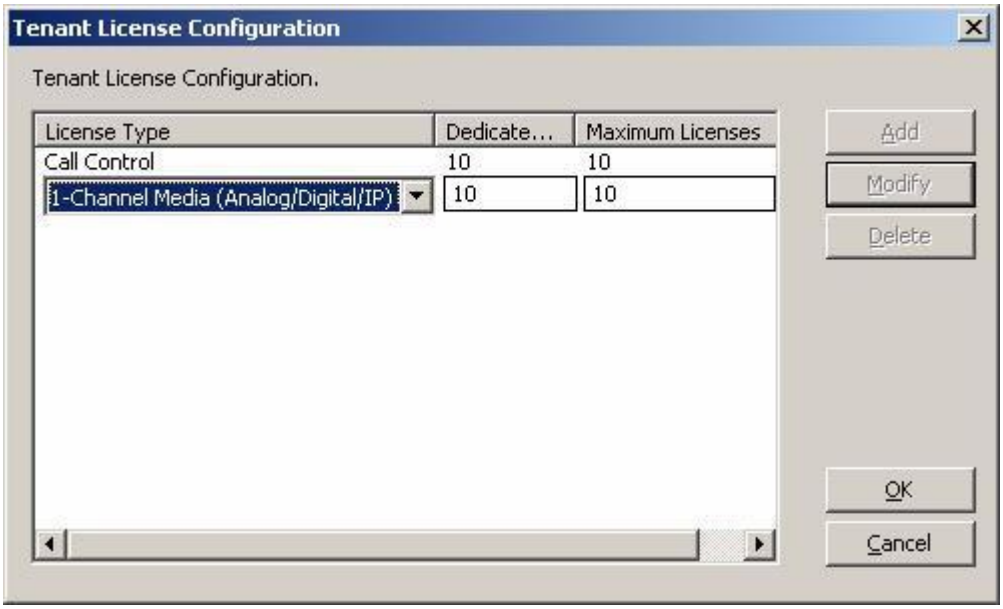


Figure 20: Tenant License Configuration dialog

Table 40 Tenant License Configuration field descriptions

FIELD NAME	MANDATORY	DESCRIPTION
License Type	Yes	Type of Resources (Call Control, MediaPorts, ASR, TTS)
Dedicated Licenses	Yes	Enter the value which indicates Dedicated (or guaranteed) Licenses of that resource type. Value entered must be less than or equal to Maximum License value. Call Control requires Dedicated licenses to be equal to Maximum license if Dynamic Monitoring is disabled for NRM.
Maximum Licenses	Yes	Maximum resource type licenses. The value entered must be greater then or equal to Dedicated licenses and also less than or equal to number of available Reserved licenses.

DELETING A TENANT

To delete a tenant, right click on the tenant you wish to delete, point to **All Tasks** and click **Delete**.

A confirmation dialog appears, see Figure 21. Click **Yes** to delete the selected tenant and its related languages, play messages and virtual devices. Click **No** to cancel the operation.

Figure 21: Confirmation dialog

Note: Deleting a tenant while calls are being handled for that tenant will not automatically drop calls. BVDs assigned to the tenant will become inaccessible, and callers will need to drop on their own. The recommended actions to remove a currently active tenant are described in section 17 Disabling or Enabling a Tenant.

DISABLING OR ENABLING A TENANT

A tenant can be disabled or enabled by modifying Tenant Data Configuration. There are a number of reasons for disabling a tenant:

- Adding a new tenant that is not yet scheduled to use the system.
- Placing a tenant on-hold pending the result of an issue regarding their account.
- Preparing a tenant for deletion from the system.

A disabled tenant does not reserve and cannot acquire licenses. However they can be configured with a set of licenses. If an enabled tenant is consuming licenses, disabling that tenant does not immediately release those licenses. Licensed media must clear before those licenses are released. In addition, any monitored extensions will need to stop monitoring.

A disabled tenant, will not be able to acquire new licenses for media allocation or call control. When a tenant is disabled, it will release all licenses not currently consumed.

Before deleting a tenant it must first be disabled. Removing a tenant is done as follows:

1. Disable the tenant through the Tenant Data Configuration window.
2. Change the tenant ownership of any BVDs owned by the tenant to the System (blank tenant ID).
3. Change the tenant ownership of any physical devices for the CTI server to the System.
4. Wait for calls to clear that are still attached to media and are consuming licenses for the tenant.
5. Delete the tenant once the licenses are released.

This method of will assure a smooth removal of the tenant from the system.

EDITING USER GROUP NAMES

Two kinds of Windows Global User Groups are possible to configure:

- OAS Administrator Group
- OAS Client Group

VIEW THE NAMES OF USER GROUPS

Expand **User Administration** from the configuration tree, and click **User Groups**. The current values of these groups appear in the configuration display, see Figure 22.

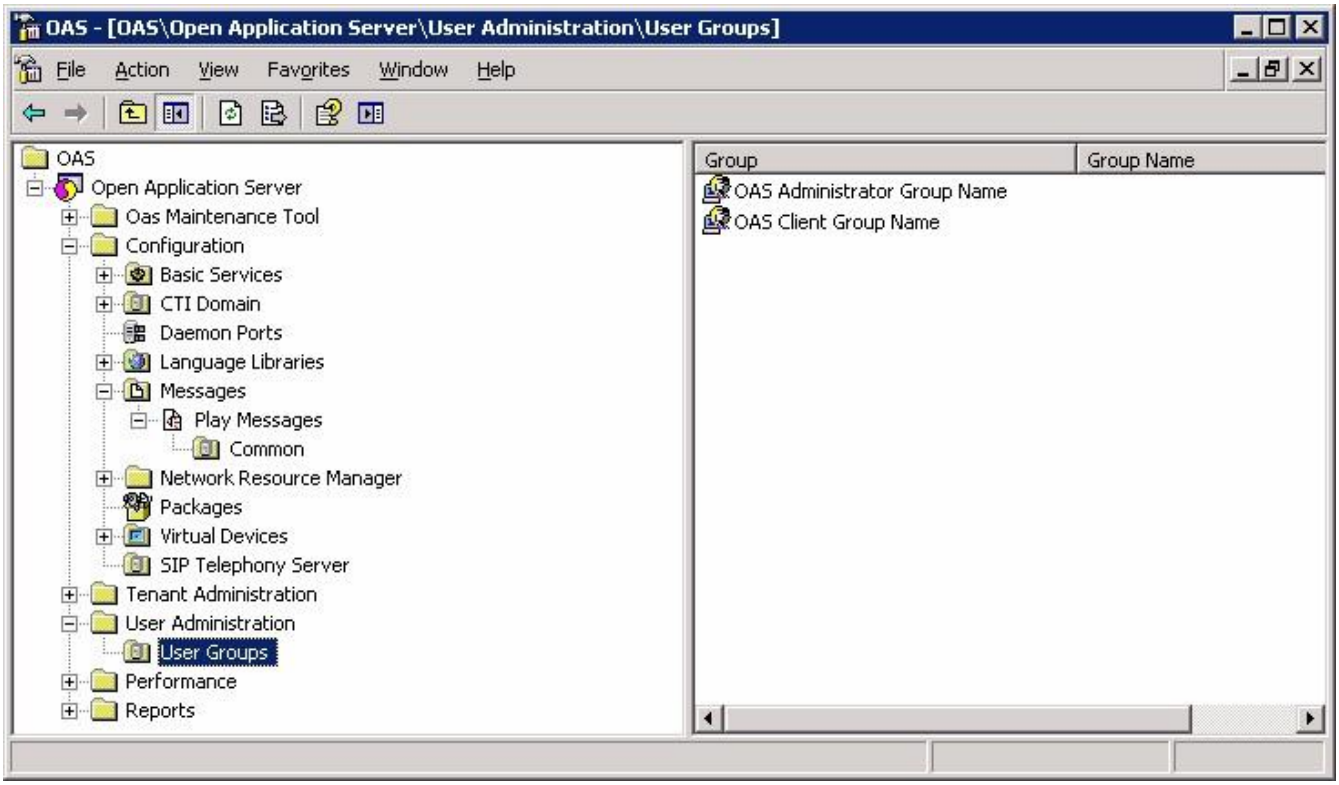


Figure 22: Viewing the Names of User Groups

MODIFY THE NAME OF USER GROUPS

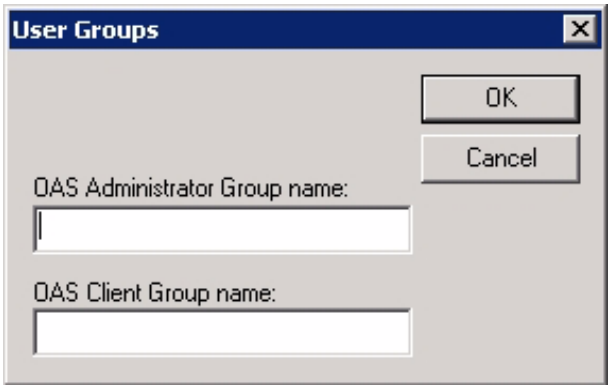
OAS restricts Configuration tool users to those with local administrative privileges on the host where OCS is installed and those who are members in the Windows Global Domain group, which is entered in the OAS Administrator Group Name field. If that field is left blank OAS does not impose restrictions on Configuration tool users.

Similarly, OAS restricts Client Applications to those with a User ID, who is a member of the Windows Global Domain Group that is entered in the OAS Client Group name field. If the field is left blank,

OAS will allow any client application to connect to it.

MODIFY USER GROUP NAMES

1. Log on to the server where the OAS Basic Services are installed (host server).
2. From the configuration tree, right-click **User Groups**, point to **All Tasks**, and then click **Modify**. The **User Groups** dialog appears.



3. Edit the name of the desired group. If both are left blank, no security is enforced in OAS.
4. Click **OK**.

BACKING UP THE OAS CONFIGURATION

The OAS system is automatically backed up each time a change is made. However, it can be of value to manually save a set of configuration files once the OAS system has been configured in a way you want it.

To manually save a set of configuration files, do the following:

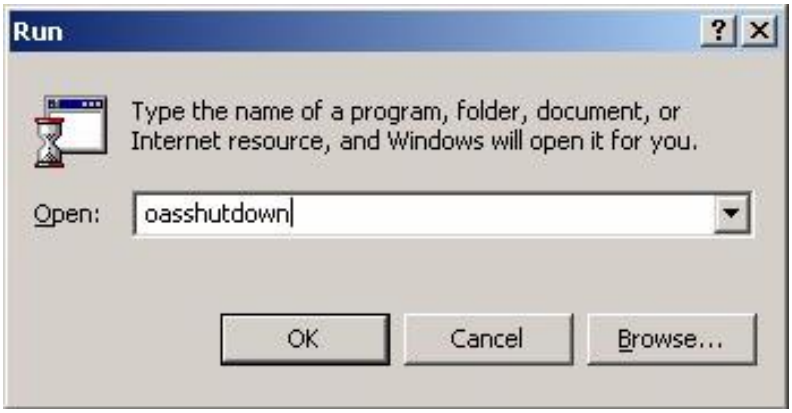
- Copy the files with a `.rep` extension from the OCS Repository directory (default is `\Mitel\OCSRepository`) to a directory of your choice for safe keeping (preferably outside of the current `Astra\OAS` directory).

These files can be used later to manually restore the system to the state it was when the files were saved.

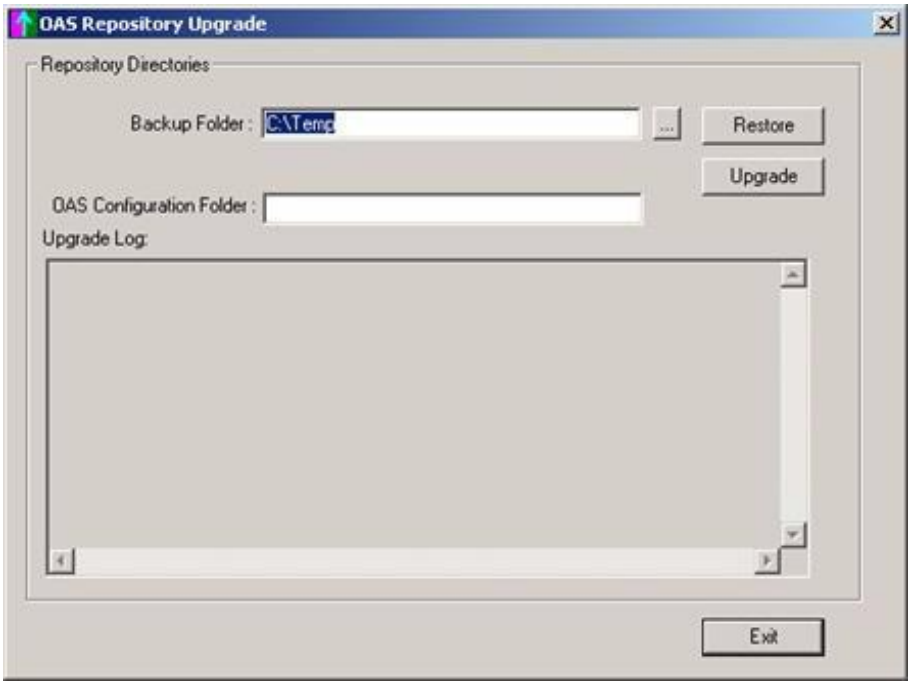
RESTORING THE OAS CONFIGURATION

To avoid having to manually re-configure the OAS system to a previously configured system, do the following:

1. Select **Run** from the Start menu, type **oasshutdown** and click **OK**.
   This will shut down all OAS services currently running on the local OAS system.



2. Run OcsUpgrade.exefrom the \Astra\OAS\bindirectory.



3. Type, or browse for, the path that contains the backed up files in the **Backup Folder** field. The path to where the OAS configuration files will be restored is shown in the **OAS Configuration Folder** field.
   This value is read from the Windows Registry and should only be changed if incorrect.

4. Click **Restore** to restore the files from a previous OAS 7.0 system or **Upgrade** to upgrade the files from a previous OAS 6.0 system. A dialog is displayed after upgrading or restoring the configuration, saying that the OCS repository files have been restored. Click **OK**. An

`OcsUpgrade.log` file, containing the status of the restoration or upgrade, is stored in the `OAS\OcsRepository` folder.

Note: If the application fails to restore the configuration an error message box is displayed. Error messages are logged in the UpgradeLog window.

LIMITATIONS WHEN UPGRADING TO NEW SERVER

When upgrading OAS to a new server, the following fields in the oasXX.rep file don't get updated with the new server name or address and have to be manually edited using e.g. Notepad.exe:

- OCS Repository
- Root_container
- UserPromptPath

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