

# UC for Enterprise (UCE) Application Platform (UNIVERGE OW5000)

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*Network Application Middleware*

## Configuration Guide

**NEC** NEC Corporation

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## 1

# Introduction

The UNIVERGE OW5000 Configuration Guide provides the information you need to configure the OW5000 and how to operate the OAI Server, WatchDog, Log Viewer, and Database operation.

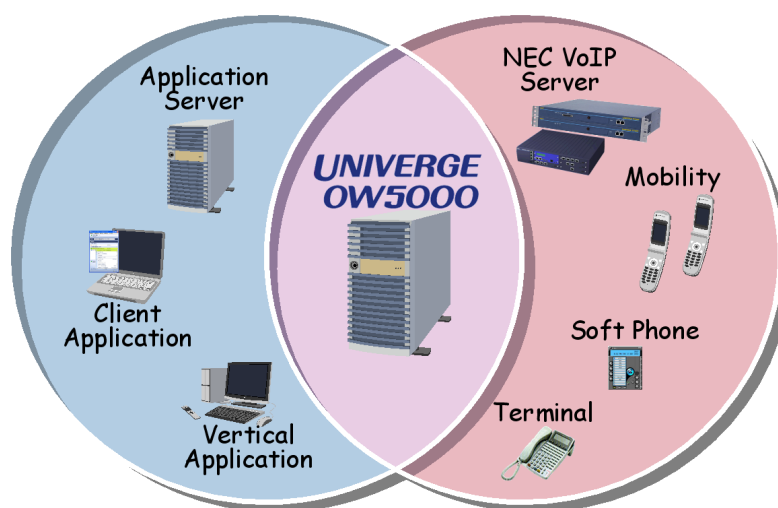
The following topics are included in this chapter:

- Chapter Topics*
- [UNIVERGE OW5000 Configuration Guide Overview](#)
  - [How This Guide is Organized](#)

## UNIVERGE OW5000 Configuration Guide Overview

OW5000 is a collaboration middleware allowing easy application development in which to communicate with the IP Telephony environment.

**Figure 1-1** OW5000 Applications



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## How This Guide is Organized

<a href="#">Chapter 1 Introduction</a>	This chapter outlines how to use the manual including the organization and chapter layout of the <i>UNIVERGE OW5000 Configuration Guide</i> .
<a href="#">Chapter 2 OW5000 Configuration</a>	This chapter describes how to operate the OW5000 Administrator component of UNIVERGE OW5000. The OW5000 Administrator is used to configure and maintain settings for OW5000 tools and applications.
<a href="#">Chapter 3 WatchDog</a>	This chapter describes how to operate the WatchDog component of OW5000. WatchDog is used to restart OW5000 applications when you have a failure.
<a href="#">Chapter 4 Log Viewer</a>	This chapter describes how to operate the Log Viewer component of OW5000. Log Viewer is used by administrators to view traces of information produced by OW5000 applications. This includes errors, warnings, OAI packets, and debug information.
<a href="#">Chapter 5 Database Operations</a>	This chapter describes how to operate the database Import Tools for OW5000. This utility is employed to import ASCII data into the database.
<a href="#">Chapter 6 OW5000-MA4000 Integration</a>	This chapter describes how OW5000 will integrate with MA4000. The fields and entities that are imported from MA4000 to OW5000 and the rules that are applied are also described.
<a href="#">Appendix A Acronyms and Descriptions</a>	This appendix describes some of the terms used in this manual.
<a href="#">Appendix B Person Database</a>	This appendix lists the name and size of each field in the Person Database.
<a href="#">Appendix C Regular Expressions</a>	This appendix defines the regular expressions for creating normalization rules.
<a href="#">Appendix D Specifications for OW5000 Admin</a>	This chapter lists the specifications for OW5000 Administrator.
<a href="#">Appendix E OW5000 Administrator Configuration Specification</a>	This chapter lists the specifications for OW5000 Administrator Configuration.

## 2

## OW5000 Configuration

OW5000 Administrator is a robust OW5000 tool used to configure OW5000 applications, PBX configurations, and utilities without using the Windows registry editor directly. It also provides a graphical user interface to modify OW5000 user account information, PBX configurations, and database entries. The functions and associated screen displays for configuring user account information in OW5000 Administrator are described in this chapter.

Specific OW5000 application configurations performed by OW5000 Administrator can be found in each application's installation guide.

OW5000 Administrator provides a view of application information, database information, and platform information.

The following topics are included in this chapter.

### Chapter Topics

- [Verifying the OW5000 Administrator Status](#)
- [Logging into OW5000 Administrator](#)
- [Maintaining the OW5000 Platform](#)
- [Maintaining the OW5000 Applications](#)
- [Maintaining the OW5000 Directory](#)
- [Application Data Management](#)
- [Settings Configuration](#)
- [Schedule Configuration](#)
- [Version Information](#)
- [Version Information](#)
- [Exiting OW5000 Administrator](#)



NOTE

After changing an OW5000 Configuration, it takes some time before the modification is available depending on the parameter. Refer to [Appendix B](#) for details.

---

## Verifying the OW5000 Administrator Status

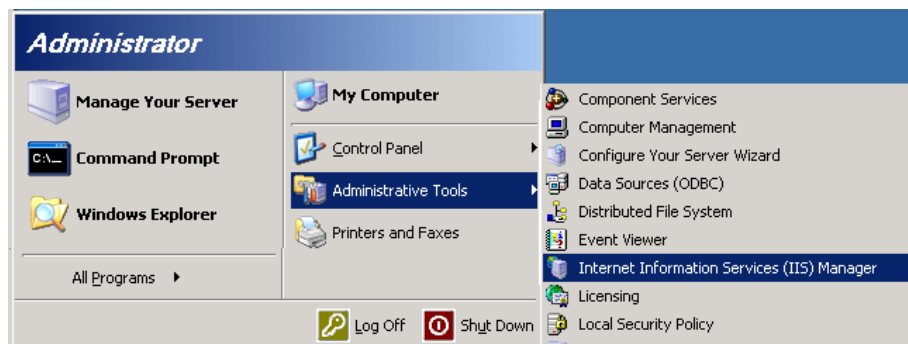
Use the following steps to check the availability of Administrator and to confirm that the Web server and OW5000 application is running.

---

### Microsoft Windows Server 2003

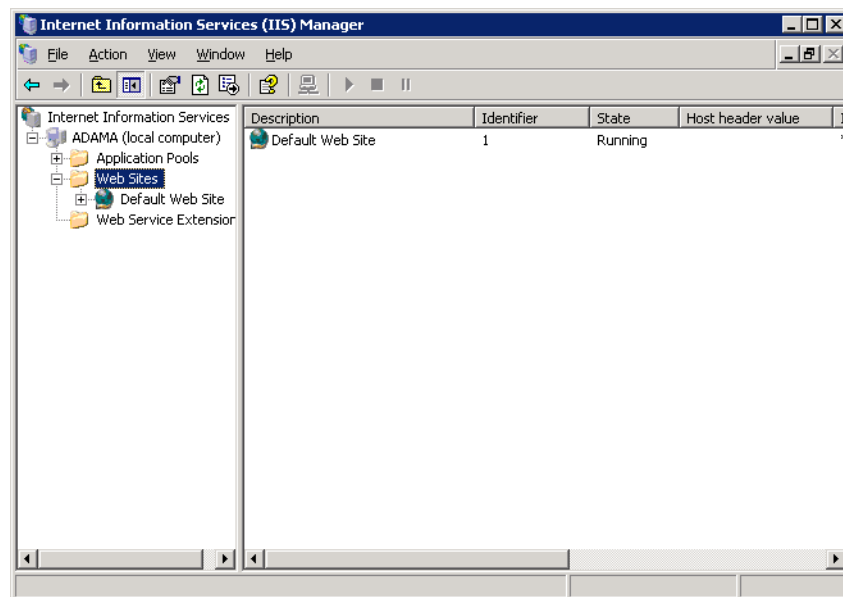
- Step 1** From the desktop, click the **Start** button and then select **Control Panel > Administrative Tools > Internet Information Services (IIS) Manager**. A Control Panel—Administrative Tools—IIS Manager window displays (Figure 2-1).

*Figure 2-1 Control Panel—Administrative Tools—IIS Manager window*



- Step 2** Select **Web Sites** under the (IIS) Manager. A Web Sites Window displays (Figure 2-2).

**Figure 2-2** Web Sites Window



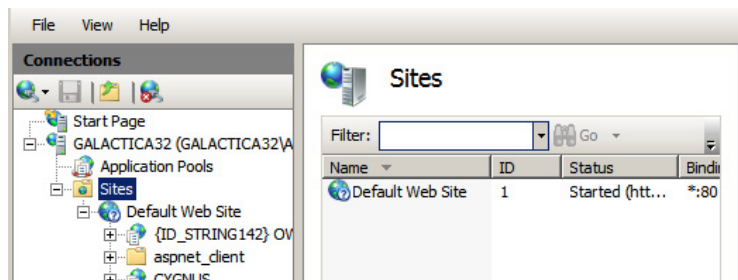
**Step 3** If the **Default Web Site** is not Running, select **Start** from the right-click menu.

## Microsoft Windows Server 2008

**Step 1** From the desktop, click the **Start** button and then select **Control Panel > Administrative Tools > Internet Information Services (IIS) Manager**.

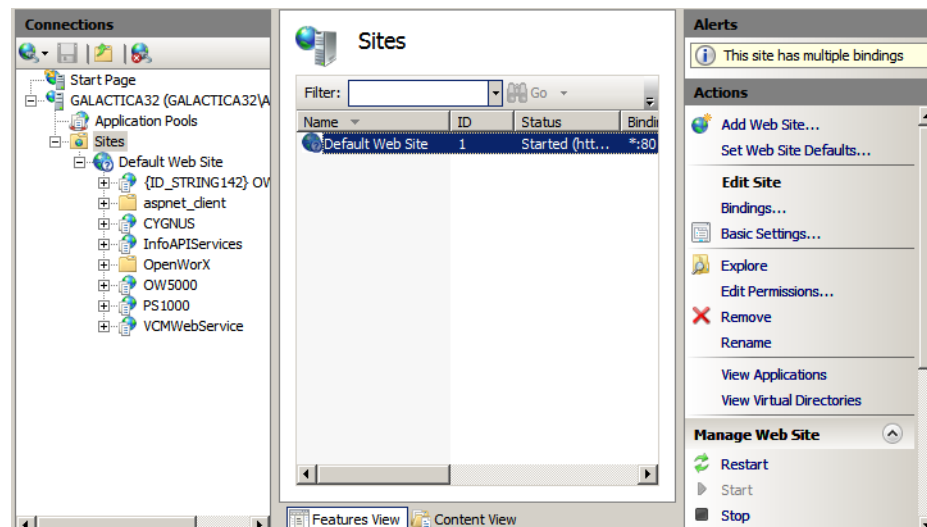
**Step 2** Select **Sites** from the (IIS) Manager. [Figure 2-3](#) displays.

**Figure 2-3** Sites Window



**Step 3** If the Default Web Site is not Started, select **Default Web Site** and click **Start** on the right pane under **Manage Web Site** ([Figure 2-4](#)).

Figure 2-4 Sites Window—Start



## Logging into OW5000 Administrator

Each time you work with OW5000 Administrator, log in with your OW5000 login ID and password. If this is the first time you are logging in to the OW5000 Administrator, use the default login ID **admin** and the default password for admin is **admin**.

When you have finished using the application, you can either log out or just close your browser.

**Step 1** From the desktop, click the **Start** button and then select **All Programs > NEC OW5000 > Runtime Platform > OW5000 Admin**. An OW5000 Admin Login screen displays (Figure 2-7).



### REFERENCE

If the screen shown in Figure 2-7 does not display, refer to “[Verifying the OW5000 Administrator Status](#)” on page 2-2, to confirm that the proper services are running.



### NOTE

The following security settings for Internet Explorer 6 and 7 are required to use OW5000 Administrator. The default is *Enable* for all items.

- ActiveX controls and plug-ins - Binary and script behaviors: *Enable*
- Miscellaneous - Submit non-encrypted form data: *Enable*
- Scripting - Active scripting: *Enable*



NOTE

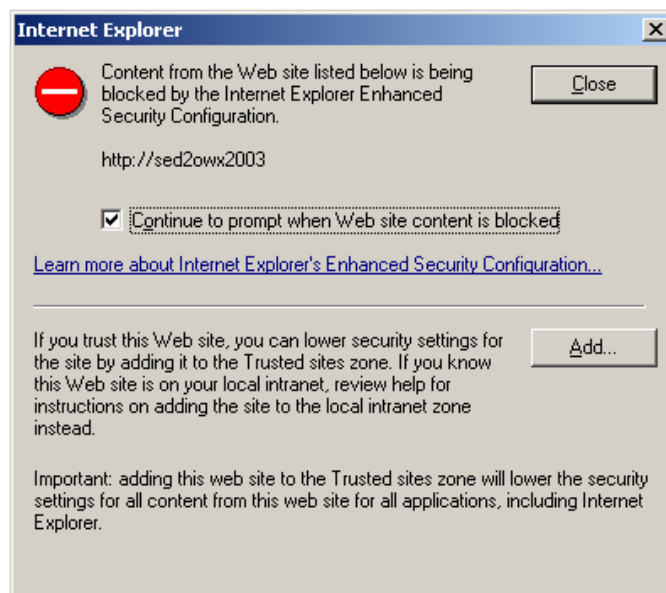
If you are using Internet Explorer version 8.0, please use the **Compatibility View** feature when logged into the OW5000 Administrator.



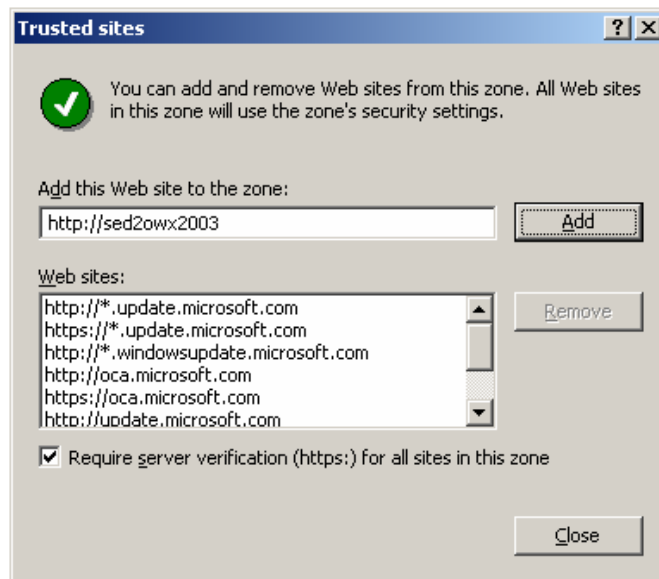
IMPORTANT

If you are running Microsoft Windows Server 2003, and you have not added your OW5000 Server to the Trusted sites zone, a Website Blocked dialog box displays (Figure 2-5).

**Figure 2-5** Website Blocked dialog box



**Step 2** Click **Add**. A Trusted Sites dialog box displays (Figure 2-6).

**Figure 2-6** Trusted Sites dialog box

- Step 3** Uncheck **Require server verification (https:) for all sites in this zone** and then click **Add** to include this Web site in the Trusted sites zone.
- Step 4** Click **Close**. An OW5000 Administrator Login dialog box displays (Figure 2-7).

**Figure 2-7** OW5000 Admin Login screen

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- Step 5** Enter your login ID in the **Login ID** field.

**NOTE**

The login ID is **admin**.

- Step 6** Enter your password in the **Password** field.

**NOTE**

The password for admin is **admin**. This password can be changed. Refer to “[User Management Configuration](#)” on page 2-100.



**Step 7** Click **Login**. An OW5000 Administrator Control Panel displays (Figure 2-8).



If an error message describing a problem connecting to the OW5000 Administrator Service displays, refer to “[Verifying the OW5000 Administrator Status](#)” on page 2-2, to confirm that the proper services are running.



If there is no activity for 15 minutes (default), the Administrator login page displays and re-login is required. After login, a pre-configured page displays.

**Figure 2-8** OW5000 Administrator Control Panel



### Trial Period

Selecting **OW5000** from the OW5000 Administrator Control Panel displays an OW5000 Options dialog box (Figure 2-10).

After installing the OW5000, almost all of the licenses are available on a trial basis for 90 days after adding the first extension information in OW5000 Administrator. The following applies to the trial license.

- The expiration date is displayed beside the OW5000 Administrator Control Panel (Figure 2-9).
- All trial licenses are inactivated once the expiration date has passed.
- All trial licenses are inactivated once the official license is installed.

**Figure 2-9** Trial Period dialog box



**Figure 2-10** OW5000 Options dialog box

If your sales region is outside the U.S., [Figure 2-10](#) may look different for your sales region.

Refer to the following sections for more information on configuring OW5000.



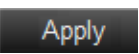








- [Maintaining the OW5000 Platform](#)
- [Maintaining the OW5000 Applications](#)
- [Maintaining the OW5000 Directory](#)
- [Application Data Management](#)
- [Settings Configuration](#)
- [Schedule Configuration](#)
- [Version Information](#)
- [Exiting OW5000 Administrator](#)



The parameters described in OW5000 Administration may be different depending on your sales region settings.

The table below describes icons used in the OW5000 Administrator ([Table 2-1](#)).

**Table 2-1** Icon Descriptions

Icons	Description
	Edit the current data
	Delete the current data
	Assign/Update the data without leaving the current page.
	Assign/Update the data and continue to assign another entry without leaving the current page.
	Cancel all non-updated data and return to the list page
	Assign/Update the date and return to the list page
	Sort by ascending order for the parameter
	Sort by descending order for the parameter
	Sets the display page number/display lines in a page.
	Up priority.
	Down priority



Do not use the Back, Forward, Refresh button, or the Enter key after logging into OW5000 Administrator.



If an error displays while using OW5000 Administrator, read the information carefully. If necessary, please go back to the login window and log in again.



NOTE

An asterisk (\*) indicates a mandatory parameter.



NOTE

By default, 20 items are listed on one page. This can be increased to a maximum 100 items per page.

Only the Version Information page can show a maximum of 600 items.

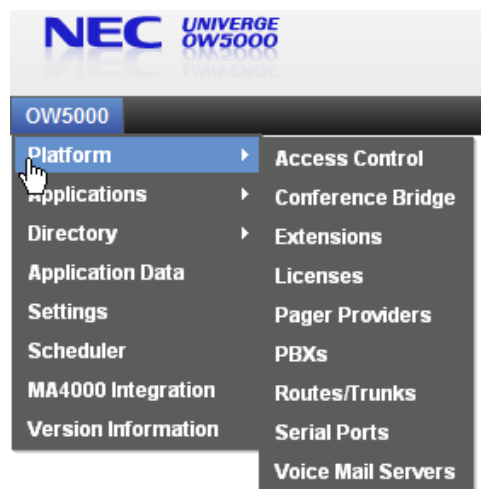
## Maintaining the OW5000 Platform

Selecting **Platform** from the OW5000 Options dialog box (Figure 2-10), displays an OW5000 Platform Configuration dialog box (Figure 2-11).

The following topics are included in this section:

- [Access Control Management](#)
- [Conference Bridge Management](#)
- [Extension Management](#)
- [License Management](#)
- [Configuring the Pager Providers](#)
- [PBX Configuration](#)
- [Routes/Trunks Configuration](#)
- [Serial Ports Configuration](#)
- [Configuring Voice Mail Servers](#)

**Figure 2-11** OW5000 Platform Configuration dialog box



NOTE

The parameters described in OW5000 Administration may be different depending on your sales region settings.

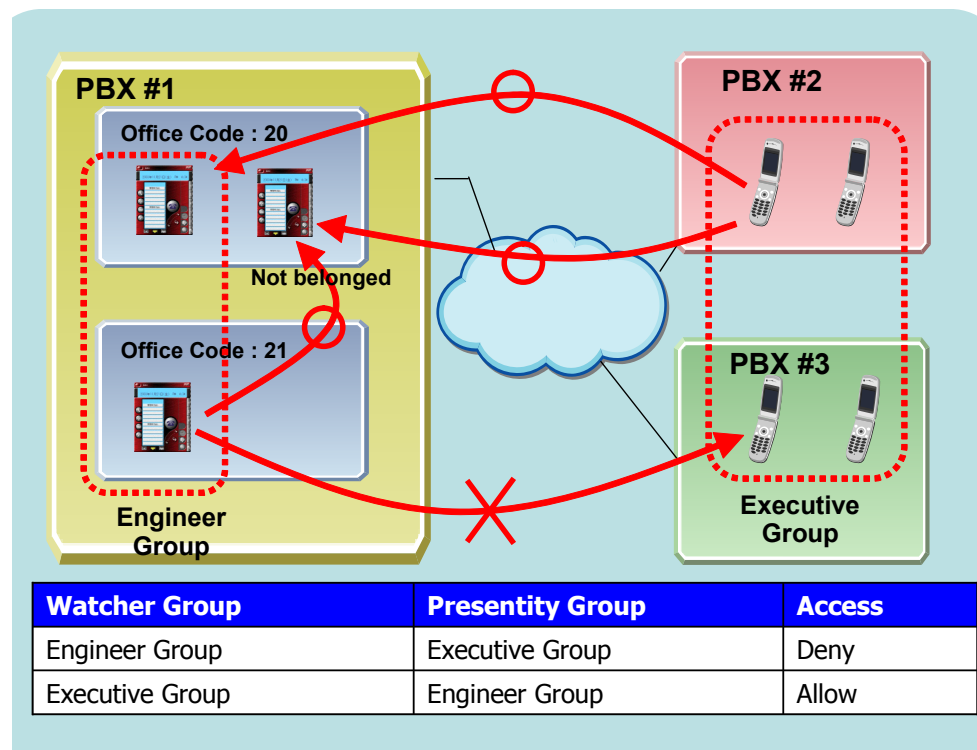
## Access Control Management

Selecting **Access Control** from the OW5000 Platform Configuration dialog box (Figure 2-11) displays an Access Control dialog box (Figure 2-13).

Use this option to configure or add a SIPUA Group, to configure Group Access Control, and to configure PBX Access Control. This functionality is available only for the SIP Presence feature. By using this configuration, the access control of presence can be assigned per SIPUA group or PBX(Office Code).

An example of SIP Group Access Control is shown in Figure 2-12.

**Figure 2-12** SIP Group Access Control



- Watcher means the user who refers to the presence of others. Presentity (Presence Entity) means the user who provides its presence. As shown in Figure 2-12, the presence of users belonging to the Executive Group cannot be seen from the Engineer group users.
- All access between each person is available if they are in the same SIPURI Group.
- If access is set to **denied** as the Office Code based access control, the user cannot see the presentity, even if the Group based access control is set to **allow**.
- If the terminal does not belong to a group, the terminal accepts reference from all other terminals.
- If access is set to **denied** as the Group based access control, the user cannot see the presentity, even if the Office Code based access control is set to **allow**.



- If the terminal does not belong to a group, the terminal accepts reference from all the other terminals.
- In federation environment, all OW5000 systems should have the following settings. If not, Access Control may not work correctly.
  - Use same SIPUA group name
  - Access Control between SIPUA group should be the same
  - Do not use PBX Access Control

## SIPUA Group

**Figure 2-13** Access Control dialog box

- Step 1** To add a new SIPUA Group, click **Add New Group**. A SIPUA Group—Add New dialog box displays (Figure 2-14).

**Figure 2-14** SIPUA Group—Add New dialog box

- Step 2** Type the **Group Name** in the text box.
- Step 3** Click the checkbox to select **Deny as Default** if you do not want to display the presence of the user who belongs to this group.
- Step 4** Click **Apply** to accept the new group or **Cancel** to exit without adding a new group.
- Step 5** To edit or delete a SIPUA Group, click the **Pencil**  icon or the **Trashcan**  icon. A delete confirmation dialog box displays to confirm deletion.

Group Access Control

Selecting **Group Access Control** from the Access Control dialog box displays a Group Access Control dialog box (Figure 2-15).

Figure 2-15 Group Access Control dialog box

SIPUA GroupGroup Access ControlPBX Access Control

Show Allow ListShow Deny List

1 - 10 of 12 records10Results per pagePage:1of 2>>

Trashcan	Watcher Group Name ▲	Presentity Group Name
Trashcan	Barney	Service King
Trashcan	Barney	Not Assigned
Trashcan	Barney	Jenny
Trashcan	Jenny	Service King
Trashcan	Jenny	Not Assigned
Trashcan	Jenny	Barney
Trashcan	Not Assigned	Service King
Trashcan	Not Assigned	Jenny
Trashcan	Not Assigned	Barney
Trashcan	Service King	Not Assigned

1 - 10 of 12 records10Results per pagePage:1of 2>>

- Step 1
- Select the desired radio button to **Show Allow List** or **Show Deny List**.
- Step 2
- To delete a Group Access, click the **Trashcan** icon next to the desired group. Confirm the deletion when the dialog box displays. If a watcher group is deleted in the Allow List, the group moves to the Deny List. If a watcher group is deleted in the Deny List, the group moves to the Allow List.

PBX Access Control

Selecting **PBX Access Control** from the Access Control dialog box displays a PBX Access Control dialog box (Figure 2-16).

Figure 2-16 PBX Access Control dialog box

SIPUA GroupGroup Access ControlPBX Access Control


Show Allow ListShow Deny List

1 - 2 of 2 records20Results per pagePage:1of 1

Trashcan	Watcher PBX Name ▲	Presentity PBX Name
Trashcan	Dallas PBX	SV7K-44
Trashcan	SV7K-44	Dallas PBX

1 - 2 of 2 records20Results per pagePage:1of 1

- Step 1
- Select the desired radio button to **Show Allow List** or **Show Deny List**.

- Step 2** To delete a PBX Access Control, click the **Trashcan**  icon next to the desired PBX Name (Figure 2-16). Confirm the deletion when the dialog box displays. If a watcher PBX is deleted which is in the Allow List, the PBX moves it to the Deny List. If a watcher PBX is deleted which is in Deny List, the PBX moves it to the Allow List.

---

## Conference Bridge Management

Selecting **Conference Bridge** from the OW5000 Applications Options dialog box (Figure 2-11) displays a Conference Bridge Management dialog box (Figure 2-17).

A conference bridge allows users to conference with more than three parties. The conference bridges are typically 8 or 16 ports and one caller can be on each port.

### Special Conditions of Conference Server

Please note the conditions below for Conference Server when programming the PBX to conference with four or more parties.

There are several ways to configure the bridges for conference, but these are the operations the Conference Manager requires and the conditions it expects them to work under.

- Do not allow the PBX to move a caller to another port when the port is busy.
- Turn off the ringback suppression feature of the PA-CFTB conference card by setting Element 3 to the off position on Switch 1.

If the PBX is programmed for four or more parties to be used for OW5000 UC Conference Server, the application must be used; it cannot be done manually. If the bridge is not setup this way, the Conference Server will not work for a conference of four or more parties. For more information on how to program the PBX for four or more parties, please refer to the PBX programming guide for each PBX type.

Follow the steps below to configure Conference Bridges:



**Figure 2-17** Conference Server Options dialog box



Conference Server

PBX:

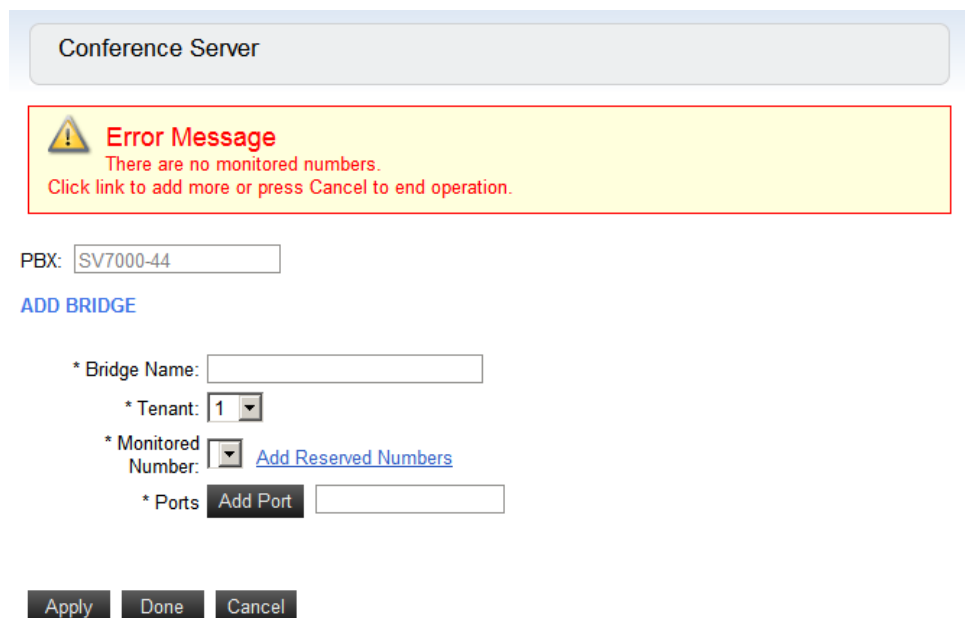
**BRIDGES:**

There are no bridges for this PBX.


## Conference Bridges

- Step 1** To add a bridge, click **Add New Bridge**. If monitored numbers have not been configured for Conference Server, a Conference Server—Error Message dialog box displays (Figure 2-18). At least one Monitored Number must be configured before performing the following steps.

**Figure 2-18** Conference Server—Error Message dialog box



Conference Server

 **Error Message**  
There are no monitored numbers.  
Click link to add more or press Cancel to end operation.

PBX:

**ADD BRIDGE**

\* Bridge Name:

\* Tenant:

\* Monitored Number:  [Add Reserved Numbers](#)

\* Ports

- Step 2** Click **Add Reserved Numbers** to configure a monitored number. Refer to “Reserved Numbers” on page 2-39 for more information.

**Figure 2-19** Conference Bridges dialog box

Conference Server

PBX:

[ADD BRIDGE](#)

\* Bridge Name:

\* Tenant:

\* Monitored Number:

Is Host Controlled: ☐

\* Ports

**Step 3** Enter the **Bridge Name**.

**Step 4** In the **Tenant** field, enter the number of the new tenant.

**Step 5** If this conference bridge is used with the UC700 host controlled voice conference feature, click the check box for **Is Host Controlled**.

**Step 6** If there are no ports available, enter the port number and then click **Add Port**. All ports for the PBX conference bridge must be configured.

**Step 7** Do one of the following:

- Click **Apply** to save the changes.
- Click **Done** to save the changes and exit the dialog box.
- Click **Cancel** to exit without saving the changes.

## Extension Management

Selecting **Extensions** from the OW5000 Platform Configuration dialog box (Figure 2-11) displays an Extensions Management dialog box (Figure 2-20).





















Figure 2-20 Extensions Management dialog box

Extension Management

Add New Extension

Filter: PBX: <All> Number: Starts With  Search

1 - 10 of 505 records 10 Results per page Page 1 of 51 > >>

	PBX	Extension ▲	Tenant	SIP URI	E164 Number
 	SV7000-40	1001	1	1001@sip.necinfrontia.com	
 	SV7000-40	1002	1	1002@sip.necinfrontia.com	
 	SV7000-44	1906	1		
 	SV7000-44	1907	1		
 	SV7000-44	2000	1	2000@necinfrontia.com	
 	SV7000-44	2001	1	2001@necinfrontia.com	
 	SV7000-40	3000	1		
 	SV7000-40	3001	1		
 	SV7000-40	3992	1		
 	SV7000-40	3999	1	3999@sip.necinfrontia.com	

1 - 10 of 505 records 10 Results per page Page 1 of 51 > >>

Range Delete URI format

From the **Extensions** page, you can search for an extension, add a new extension, edit an existing extension, or delete an existing extension. To sort the columns in ascending or descending order, click the column headings.

### Searching for Extensions

**Step 1** Select a PBX from the drop-down list in the **Filter** field and click **Search**.

You can also search by **Number** by clicking in the drop-down list and choosing **Starts with**, **Contains**, **Ends With**, or **Equals**, and then entering a value in the text box and pressing **Search**.

Wild card “\*” is not required. To display all extensions after you have filtered them, leave the text box blank and click **Search** again.

## Adding Extensions

**Step 1** To add an extension, click **Add New** in the Extensions dialog box (Figure 2-20). An Add New Extension dialog box displays (Figure 2-21).

**Figure 2-21** Add New Extension dialog box

**Step 2** Enter the **Extension** number.



**NOTE**

Fields which must be completed are designated with an asterisk (\*).



**NOTE**

Enter a private number for an IP Centrex environment.

**Step 3** Select a **PBX** from the drop-down list.

**Step 4** Select the **PhoneType** from the drop-down list. PhoneType options are listed below:

- Dterm
- Analog
- Mobility
- PS
- SIMPLE (used for SIMPLE terminal)
- SP30(SIP) (used for SIP protocol softphone)
- VoWLAN (used for MH2XX terminal)



**NOTE**

Select Dterm as a Phone Type in the case of a Dterm (Protims Mode, SIP Mode) and a SP30 (Protims Mode).

**Step 5** Select the **Tenant** number from the drop-down list.

**Step 6** Select the **E.164 Country** from the drop-down list.

**Step 7** Enter the **E.164 Number**.



*E.164 Country and E.164 Number are for the US Market only.*

**Step 8** Enter the **telURI** (used for LCS/OCS Integration only). Refer to the UNIVERGE OW5000 Installation Guide, **OW5000 Remote Call Control Service**, or related documentation for more information.

If the URI format is set in the URI format page, the telURI is generated automatically by clicking the Auto Input button.

If the URI format is not configured, nothing displays, even if you click the Auto Input button.

**Step 9** Enter the **SIPURI** for this extension.



*This field is required if you are using the SIP presence feature. It is unique per PBX and consists of XXXX@domain name. Normally, XXXX is the same as the extension number and the domain name must be the same as the name, which is assigned by the PBX. For example, 12345@unified.com.*

If the URI format is set in the URI format page, the SIPURI is generated automatically by clicking the Auto Input button.

If the URI format is not configured, nothing is displayed even if you click the Auto Input button.

**Step 10** Select the **SIP Access Server** from the drop-down list. Select the proper Access Server for the SP30 (SIP) and the VoWLAN terminal, and select Presence Gateway for any other type.



*This field is required if you are using the SIP presence feature. If the SIP presence feature is not required, select **Not Assigned**.*

**Step 11** Select whether or not **Collaboration** is enabled for your phone to be a handset of the Dterm SP30. If this flag is set, the presence for this terminal is aggregated with the terminal selected from the drop-down list. Please do not configure when the Microsoft LCS/OCS Integration and SOAP (Call Control) API is used.



*Before setting the **Collaboration**, the **Extension** configuration for the handset must be configured.*

**Step 12** Select whether or not this extension **Is Monitored** by clicking in the check box.



**Is Monitored** must be checked in the following case:

- Use presence for non SIP terminal
- Get history via OW5000 API (Call Control), OW5000 API (Call Notification), and OW5000 (Information API)

Refer to the documentation for each OW5000 related application.

**Step 13** Enter the number for a subline, then click **Add Subline** to assign a subline.

**Step 14** Do one of the following:

- Click **Apply** to save the new extension.
- Click **Apply & Add New** to save the new extension and keep adding another extension. (PBX, Phone Type, Tenant, and the SIP Access Server configuration, used in the previous data, are continuously displayed.)
- Click **Done** to save the new extension and return to the list page.
- Click **Cancel** to discard all changes and return to the list page.



If **IsMonitored** is enabled for an extension that does not exist, it causes extra traffic between the PBX and the OW5000 system. When the PBX setting is changed, please update the OW5000 configuration also.

Table 2-2 describes the required parameters for each function.

**Table 2-2** Parameter Requirements

	OW5000 API (Call Control)	OW5000 API (Call Notifica- tion)	OW5000 API (Information API)	LCS/OCS Integration	SIP Presence Configuration
Extension	X	X	X	X	X
PBX	X	X	X	X	X
Phone Type	X	X	X	X	X
Tenant	X	X	X	X	X
E.164 Country	X		X	X	X
E.164 Number					
telURI				X	
SIPURI					X
SIP Access Server					X
Collaboration					X
Is Monitored	X				X
Sublines	X				



**Note:** *Is Monitored* must be checked in the following case.

- Use presence for non SIP terminal
- Get history via OW5000 API (Call Control), OW5000 API (Call Notification), and OW5000 (Information API). Refer to the documentation for each OW5000 related application.



A subline must be configured only when the call log for subline is required.

## Editing or Deleting Extensions

- Step 1** To edit an extension, click the **Pencil**  icon next to the desired extension (Figure 2-20).
- Step 2** After making the necessary changes, do one of the following:
- Click **Apply** to save the new extension.
  - Click **Apply & Add New** to save the new extension and keep adding another extension. (PBX, Phone Type, Tenant, and the SIP Access Server configuration, used in the previous data, are continuously displayed.)
  - Click **Done** to save the new extension and return to the list page.
  - Click **Cancel** to discard all changes and return to the list page.
- Step 3** To **Delete** an extension, click the **Trashcan**  icon next to the desired extension.

## Range Delete

Use the following steps to delete a range of extensions.

- Step 1** Click **Range Delete** from the Extension Management dialog box (Figure 2-20).

**Figure 2-22** Range Delete dialog box

### SELECT THE RANGE OF EXTENSIONS TO DELETE

\* PBX:

\* Tenant:

\* Starting Extension:

\* Ending Extension:

- Step 2** Select the **PBX** and **Tenant** number from the drop-down list.
- Step 3** Enter the **Starting Extension** and **Ending Extension** in the text boxes.

**Step 4** Click **Delete**. Depending on the number of extensions you are deleting, this may take several seconds or minutes.



NOTE

*A maximum of 500 extensions can be deleted at a time.  
During business hour, some extensions may not be deleted if the extension is in use.  
In this case, try Range Delete again after business hours.*

## URI format

Selecting URI Format from [Figure 2-20](#) displays a URI Format dialog box ([Figure 2-23](#)).

**Figure 2-23** URI Format dialog box

URI Format Configuration

**TELURI FORMAT**

Extension Pattern regular expression (\$0):

Translation pattern:

**SIPURI FORMAT**

Extension Pattern regular expression (\$0):

Translation pattern:

By configuring this translation rule correctly, telURI and SIPURI can be created easily using the Auto Input button.

### Extension pattern regular expression (for telURI)

Defines the target extension range using the regular expression. Default is `^([0-9*,*]{1-16})$` and indicates that all extensions are allowed by the PBX. Refer to [Appendix C](#) for more information on the regular expression.

### Translation pattern regular expression - (for telURI)

Defines the translated pattern (telURI) in this field. The extension is treated as \$0.

Example of setting:

Extension pattern regular expression: `^([0-9*,*]{1-16})$`

Translation pattern regular expression: `$0:phone-context=nec.com`

Extension number: 5000

Translation result of telURI: `5000:phone-context=nec.com`

### Extension pattern regular expression (for SIPURI)

### Translation pattern regular expression - (for SIPURI)

Auto translation configuration for SIPURI. All specifications are the same as telURI.



License Management

Selecting **Licenses** from the OW5000 Platform Configuration dialog box (Figure 2-11) displays a License Management dialog box (Figure 2-24). Use this option to **Enable PBXs**, to **Enable Extensions**, and to display the **Licensed Information**.



PBX Configuration and Extension configuration must be done before this license configuration.

For the US, Australian and European markets, you must first configure the License Manager IP Address and the Port information in the **OW5000 Administrator**, on the **OW5000 > Settings** page, **General Settings** tab. Refer to the OW5000 Installation Guide for more details.

Enable PBXs

Follow the steps below to enable PBXs.

Figure 2-24 License Management dialog box

License Management

Enable PBXs

Enable Extensions

Licensed Information

	Total	Ent.
Installed	21	21
Current	0	0

1 - 1 of 1 records 10 Results per page Page: 1 of 1

PBX Name ▲	IP Address	Enabled	Is UGN
SV7000-44	172.24.133.44	<input type="checkbox"/>	No

1 - 1 of 1 records 10 Results per page Page: 1 of 1

Apply

- Step 1
- Click the **Enable PBXs** tab to select the desired PBX.
- Step 2
- To disable a PBX that is enabled, click to remove the check mark.
- Step 3
- Click **Apply**.



- If the PBX license is inactivated, the Extensions license belonging to the PBX is also inactivated.
- Installed and Current license is displayed at the top of the Enable PBX dialog box (Figure 2-25). Ent. license indicates the number of licenses not used by SV8300/IPS.

## Enable Extensions

Selecting **Enable Extensions** from [Figure 2-24](#), displays a License Management—Enable Extensions dialog box ([Figure 2-25](#)).

**Figure 2-25** License Management—Enable Extensions dialog box

PRESENCE		API	
Total	Ent.	Total	Ent.
Installed 10000	10000	10000	10000
Current 0	0	0	0

PBX:

Search:

Check All: ☐ PRESENCE ☐ API

1 - 4 of 4 records  Results per page Page:  of 1

Extension	PRESENCE	API
4000	<input type="checkbox"/>	<input type="checkbox"/>
4001	<input type="checkbox"/>	<input type="checkbox"/>
4002	<input type="checkbox"/>	<input type="checkbox"/>
4005	<input type="checkbox"/>	<input type="checkbox"/>

1 - 4 of 4 records  Results per page Page:  of 1

Please note the license type below:

API Client license. Set for all extensions that are controlled by the OW5000.

PRESENCE SIP Presence

Refer to the Getting Started Guide.

**Step 1** Select the PBX from the drop-down menu or enter a PBX name and then click **Search**.

**Step 2** To enable extensions, click in the desired PBX check box.

**Step 3** Click **Apply** to save the changes.



NOTE

In [Figure 2-25](#), the **Current** row displays the number of licenses already assigned. The **Ent.** (Enterprise) row displays the licenses, except for those assigned to the IPS.

Licensed Information

This page displays the current number of licenses in a system and only the region using License Manager.

Selecting **Licensed Information** from [Figure 2-24](#), displays [Figure 2-26](#).



*Figure 2-26 does not display when Asia is selected as the Sales Region.*

Figure 2-26 Licensed Information dialog box

Enable PBXs				Enable Extensions				Licensed Information			
1 - 16 of 16 records				20				Results per page			
								Page: 1 of 1			
License				Total Licenses(PBX)				Total Licenses(Server)			
APCL20											
APCL24											
APML20											
APML24											
CLSTER											
ICAML20											
ICAML24											
ICAR20											
ICAR24											
LSIR20											
LSIR24											
LSML20											
LSML24											
PRES24											
RUNTIM											
SOAP24											
1 - 16 of 16 records				20				Results per page			
								Page: 1 of 1			

- Licenses** - This field is sortable.
- Total Licenses (PBX)** - This field is sortable and indicates the total licenses in a system using the same PBX as the LMS host PBX. For example, if three OW5000 servers are connected with the same LMC, all administrators can see the same number of total licenses from the Admin License Management page.
- Total Licenses (Server)** - This field indicates the total number of licenses assigned to this server. This is assigned at the LMC web page.
- Used Licenses (Server)** - This field is sortable and indicates the used licenses in a system using the same PBX as the LMS host PBX. For example, if three OW5000 servers are connected with the same LMC, all administrators can see the same number of used licenses from the Admin License Management page.
- X Record** - This sets the maximum record on a page.
- X Page** - This sets the target page to be displayed.

## Configuring the Pager Providers

The **Pager Providers** option allows a user to receive a *real* page on their pager. Each provider has their own settings in order to contact their subscribers. Use the steps below to setup Provider information:

**Step 1** Select **Pager Providers** from the OW5000 Platform Configuration dialog box (Figure 2-11). A Pager Providers Management dialog box displays (Figure 2-27).



NOTE

Displays only when the United States is selected as the Sales Region.

**Figure 2-27** Pager Providers Management dialog box

Pager Provider Management

Add New Pager Provider

1 - 1 of 1 records 20 Results per page Page: 1 of 1

Name ▲	TAP Dialup (1-Way)	TAP Dialup (2-Way)	SNPP Host Name	Port	Message Length
Sky Link				4444	240

1 - 1 of 1 records 20 Results per page Page: 1 of 1

**Step 2** Click **Add New Pager Provider**. A Pager Provider—Add New dialog box displays (Figure 2-28).

**Figure 2-28** Pager Providers—Add New dialog box

Pager Provider Management

\* Name:

TAP Dialup (1-Way):

TAP Dialup (2-Way):

SNPP Host Name:

Port (Number):

Message Length:

Apply Done Cancel

**Step 3** Enter the **Name** of the Provider (required).

**Step 4** Enter the number in the **TAP Dialup (1-Way)** field.





*If you use TAP (Telocator Alphanumeric Protocol), either a customer provided TAP Server must be attached to the OW5000 Server via a serial connection; or a modem attached to a serial port is needed. Using either option, a serial port must be configured.*

**Step 5** Enter the **SNPP Host Name**.

**Step 6** Enter the **Port (Number)**.

**Step 7** Enter the **Max Length**.

**Step 8** Click **Apply** to save the information and then click **Done** to close the dialog box, or click **Cancel** to exit without saving the information.

**Step 9** To **Edit** or **Delete** a Provider, click the **Pencil**  or **Trashcan**  icon.

## PBX Configuration

Selecting **PBXs** from the OW5000 Platform Configuration dialog box (Figure 2-11) displays a PBX Management dialog box (Figure 2-29). If PBXs have previously been added, a list of all configured PBXs displays.

**Figure 2-29** PBX Management dialog box

PBX Name	IP Address	Office Code	PBX Type	Split Call Forward	RMI Bind Name
NECPBX1	172.24.133.44	30	UNIVERGE SV7000		OAI Server.NECPBX1

The **PBX Management** dialog box allows you to add, edit, or delete PBX Settings, Locations, Area Code Rules, PBX to PBX Dialing, and Reserved Numbers.

The PBX must be configured based on the following rules:

- Assign per PBX in the case of the CCIS network
- Assign only one PBX (OAI node) for a fusion network environment (non IP Centrex)
- Assign per UGN for an IP Centrex environment, even a fusion network environment
- Assign only one PBX (OAI node) in the case of a LCS/OCS integration

## Adding a PBX Configuration

Clicking **Add New PBX** from the PBX Management dialog box displays a PBX Configuration—Add New dialog box ([Figure 2-30](#)).

**Figure 2-30** PBX Configuration—Add New dialog box

### PBX Settings

When adding a new PBX Configuration, the first dialog box to display is PBX Settings.

- Step 1** Enter a Name for the PBX in the **PBX Name** field. This is a label used to identify the PBX. It is displayed in various list boxes to identify the location of extensions, and therefore should most likely be made to describe the site where it is located. Once the PBX name is saved, it cannot be changed.
- Step 2** Enter the IP address of the PBX in the **IP Address** field (xxx.xxx.xxx.xxx). If you do not know the PBX IP address, contact your local PBX system administrator. Determining the IP address of your PBX depends on the particular type of PBX selected, as shown in ([Table 2-3](#)). If you are using a NetFusing system, enter the IP Address where IP (OAI Interface Processor) is enabled.

**Table 2-3** PBX IP Address Locations

PBX Type	IP Address Location
NEAX 2000 IPS	CM0B00
NEAX 2400 IMS - Internal	ADTM command
NEAX 2400 IPX	ADTM command
SV7000	ADTM command (TP server address)
SV7000 MPS	ADTM command
UNIVERGE SV8300	CM0B00
UNIVERGE SV8500	ADTM (LAN2:default)

**Table 2-4** Region-based PBX Name

Japan	United States	Europe	Australia	Asia (other)
UNIVERGE SV7000	UNIVERGE SV7000	UNIVERGE SV7000	UNIVERGE SV7000	UNIVERGE SV7000
UNIVERGE SV7000 TypeSS	UNIVERGE SV7000 MPS	--	UNIVERGE SV7000 MPS	UNIVERGE SV7000 MPS
UNIVERGE APEX7600i	UNIVERGE NEAX 2400 IPX	--	UNIVERGE NEAX 2400 IPX	UNIVERGE NEAX 2400 IPX
UNIVERGE APEX3600i	UNIVERGE NEAX 2000 IPS	UNIVERGE NEAX 2000 IPS	UNIVERGE NEAX 2000 IPS	UNIVERGE NEAX 2000 IPS
	NEAX 2400 IMS - Internal			
UNIVERGE SV8300	UNIVERGE SV8300	UNIVERGE SV8300	UNIVERGE SV8300	UNIVERGE SV8300
UNIVERGE SV8500	UNIVERGE SV8500	UNIVERGE SV8500	UNIVERGE SV8500	UNIVERGE SV8500

- Step 3** Enter the PBX ID for the PBX in the **Office Code (PBX Id)** field. This is the PBX's office code. This ID is used by applications to match extensions provided in OAI messages sent from the PBX with a given extension in the OW5000 Database. This ID uniquely identifies the PBX and is critical in a CCIS environment that does not have a unique numbering plan (where extensions can have the same number in more than one networked PBX). If you are using a Stand-alone system, 1 is recommended as the Office Code.
- Step 4** Select an available **Client/Server Port** from the drop-down list. This port is used by remote applications to communicate with the OAI Server using TCP/IP. Choose a value in the range 44000-44099, that does not conflict with other programs or configured PBX's using that value. It is possible to type 'netstat -a -n' from a DOS command prompt to see ports already in use.
- Step 5** Select the **PBX Type** from one of the options in the PBX Type drop-down list. It is important to select the correct type because applications rely on this information for both licensing and functionality.

- Step 6** Select the **Split Call Forward** check box if this feature is configured on your PBX. Split Call Forwarding enables Dterm telephone users to set different call forwarding patterns for internal versus external calls.
- Step 7** Select a **Location** from the drop-down list. The location must be configured before this step. For more information, see [“Locations” on page 2-32](#).
- Step 8** Select the proper Pbx Reconnect Delay time from the drop-down list. This parameter is a delay timer and determines how much time should pass until the next reconnect request is sent to the PBX when the OW5000 realizes a disconnection between the server and the PBX. Default value is 30 seconds.
- Step 9** Select the proper Heartbeat Timeout value from the drop-down list. This is a parameter which indicates the heartbeat timeout between the server and the PBX. Default value is 128 seconds.
- Step 10** Check the **UGN (User Group Number)** if the IP centrex feature is used.
- Step 11** Enter the **Prefix** number. This parameter typically consists of Access Number + Office Code (PBX ID). This parameter is mandatory in multi-PBX systems to identify the same extension number. This parameter is not required for a closed network system.
- Step 12** Enter the **SIP Server IP Address (Port)**. The IP Address of SP must be assigned in this edit box for SV7000 and SR-MGC. Enter the SIP-BOX IP address for the IPX and IPS. All SIP Server IP addresses must be entered if there is more than one SIP Server. In the VRRP environment, both physical and logical IP addresses must be entered. The Default Port number is 5060 for SP. Set Act side IP Address of LAN1 for SV8500 system. Set 3 IP Addresses (Act type,type 0 and 1) of IP Address for a redundancy system.
- Step 13** Click **Add** to add a port, or **Remove** to remove a port.



NOTE


*UGN, Prefix, and SIP Server IP Address (Port) fields are needed for the SIP Presence function.*

- Step 14** Do one of the following:
- Click **Apply** to save the information.
  - Click **Done** to add the PBX Configuration and close the dialog box.
  - Click **Cancel** to exit without saving the new PBX configuration.

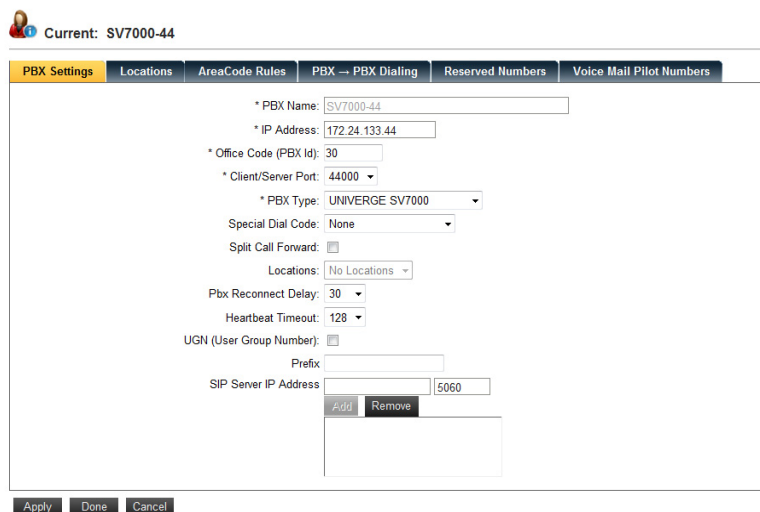


## Editing PBX Configurations

Use the following steps to edit an existing PBX configuration.

- Step 1** Click the **Pencil**  icon next to the desired PBX configuration (Figure 2-29). A PBX Configuration—Edit dialog box displays (Figure 2-31).

**Figure 2-31** PBX Configuration—Edit dialog box



The screenshot shows the 'PBX Configuration—Edit' dialog box. At the top, it says 'Current: SV7000-44'. Below this is a tabbed interface with tabs for 'PBX Settings', 'Locations', 'AreaCode Rules', 'PBX — PBX Dialing', 'Reserved Numbers', and 'Voice Mail Pilot Numbers'. The 'PBX Settings' tab is active. The form contains the following fields and controls:

- \* PBX Name:
- \* IP Address:
- \* Office Code (\*PBX Id):
- \* Client/Server Port:
- \* PBX Type:
- Special Dial Code:
- Split Call Forward: ☐
- Locations:
- Pbx Reconnect Delay:
- Heartbeat Timeout:
- UGN (User Group Number): ☐
- Prefix:
- SIP Server IP Address:

At the bottom of the dialog box are three buttons: 'Apply', 'Done', and 'Cancel'.

- Step 2** The **PBX Name** is displayed for informational purposes only and cannot be changed because it is a unique identifier for the PBX.


- Step 3** After changing the parameter, do one of the following:
- Click **Apply** to save the information.
  - Click **Done** to add the PBX Configuration changes and close the dialog box.
  - Click **Cancel** to exit without saving the changes.

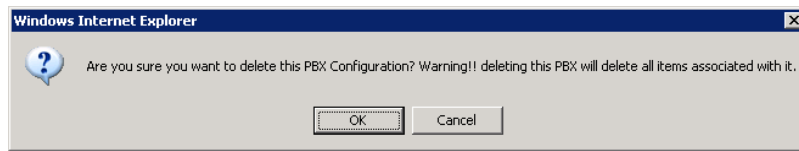


*If the UGN (User Group Number) is set with the same SIP Server which has the same IP Address for multiple PBXs having the same IP Address, the IP Address for the PBX cannot be changed. To change the IP Address, delete all IP addresses of the SIP Server IP Address and then change the PBX IP Address.*

## Deleting PBX Configurations

Use the following steps to delete an existing PBX configuration.

- Step 1** Click the **Trashcan**  icon next to the PBX configuration you wish to delete (Figure 2-29). A Delete PBX Configuration Confirmation dialog box displays (Figure 2-32).

**Figure 2-32** Delete PBX Configuration Confirmation dialog box

**Step 2** Do one of the following:

- Click **OK** to delete the configuration.
- Click **Cancel** to close the dialog box without deleting the PBX configuration.

### Locations

Locations must be configured for each PBX if outbound dialing and inbound parsing of numbers is to work correctly.



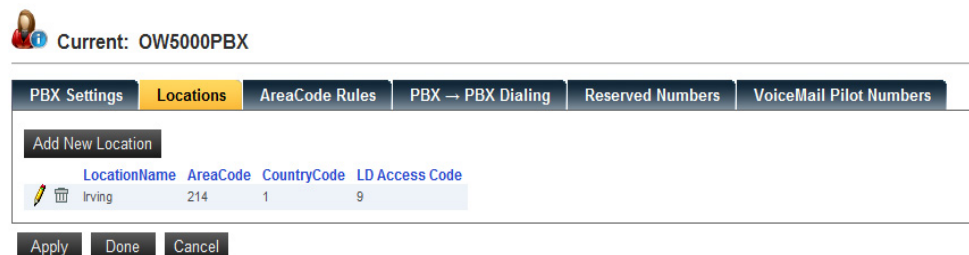
**NOTE**

*Location is used only for OW5000 API (Call Control) and LCS/OCS Integration.*

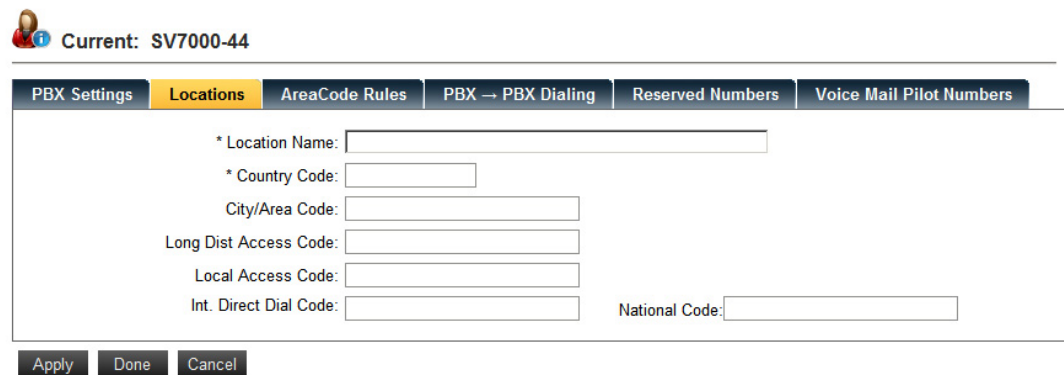
### Adding Locations

Use the following steps to add a Location for a given PBX.

**Step 1** Click the **Locations** tab to display a Locations Configuration dialog box (Figure 2-33).

**Figure 2-33** Locations Configuration dialog box

**Step 2** Click **Add New Location**. An Add New Location dialog box displays (Figure 2-34).

**Figure 2-34** Add New Location dialog box


Current: SV7000-44

PBX Settings | **Locations** | AreaCode Rules | PBX → PBX Dialing | Reserved Numbers | Voice Mail Pilot Numbers

\* Location Name:   
 \* Country Code:   
 City/Area Code:   
 Long Dist Access Code:   
 Local Access Code:   
 Int. Direct Dial Code:  National Code:


- Step 3** Enter a descriptive identifier for the location in the **Location Name** field. This is a label used to identify this Location configuration and its associated dialing rules. It is viewable on various list boxes to identify the location associated with this PBX, and it is selectable for other PBXs sharing the same dialing properties for this geographic area. Enter something descriptive such as the city name that will allow yourself and other administrators to infer associated rules for this locale.
- Step 4** Enter the Country Code for this location in the **Country Code** field. This value will be used when deciding whether or not a called destination is in the same country. Called destinations outside the configured country will be dialed as: long distance access code + international direct dial code + country code + number or E.164 format. E.164 format is used for LCS/OCS integration and OW5000 API (Call Control) makeCallWithDialNum method (dialAsIs=false).
- Step 5** Enter the City/Area Code used by the PBX in the **City/Area Code** field. This value will be used when deciding whether or not a called destination is local or long distance. By default, called numbers within the same city/area code will NOT have the city/area code inserted between the local access code and the number to dial unless a City/Area Code rule has been defined to change this behavior. Also by default, called numbers to destinations with different city/area codes will automatically have the national direct dial code inserted between the long distance access code and the number unless a separate City/Area Code rule has been defined to prevent this.
- Step 6** Enter the PBX access code needed to dial Long Distance from the PBX in the **Long Dist Access Code** field. Long distance is defined in OW5000 as calls to city/area codes different than the city/area code of the location for the calling extension. The national direct dial code will automatically be inserted after the Long Dist Access Code prior to the city/area code, so it is not necessary to enter the national direct dial code as part of the Long Dist Access Code. If this PBX is in a metropolitan area with multiple city/area codes that should not be treated as long distance, use a City/Area Code Rule to differentiate other local city/area codes so the national direct dial code will not be inserted after the Local

Access Code (note that the Local Access Code is used in place of the Long Distance Access Code in this instance).

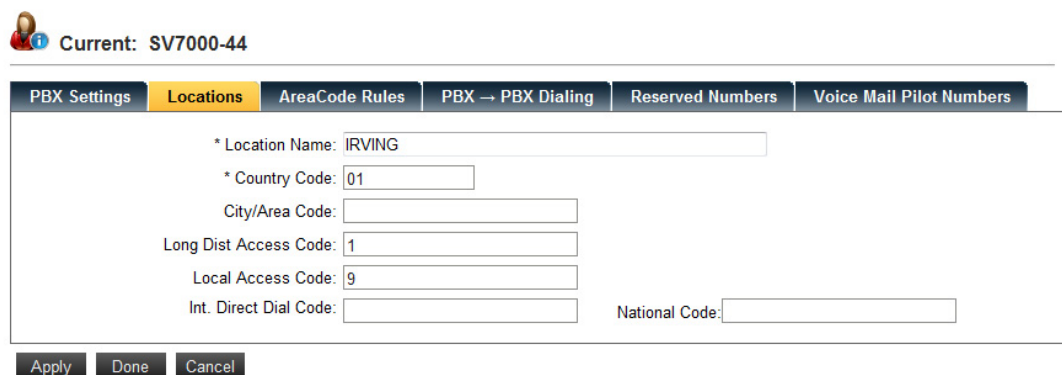
- Step 7** Enter the PBX access code needed to dial local calls from the PBX in the **Local Access Code** field. This should include the code to dial out of the PBX along with any digits that are required to place local calls by the local carrier and/or central office switch.
- Step 8** Enter the direct dial code for dialing international numbers in the **Int. Direct Dial Code** field. This is the code required to dial an international number, which will be inserted between the long distance access code and the country code. If you are not making an international call with an E.164 format, configuration is not needed.
- Step 9** Enter the direct dial code for dialing numbers inside the country but outside the current city/area code in the **National Code** field. This code will be inserted between the long distance access code and the city/area code.
- Step 10** After the Location is saved, assign the location to the PBX in the PBX Setting page and do one of the following:
- Click **Apply** to add the Location
  - Click Done to add the Location and close the dialog box.
  - Click Cancel to exit without saving the changes.

### Editing Locations

Use the following steps to edit **Locations** of configured PBXs using this location and the associated area code rules.

- Step 1** Select the PBX Configuration from those listed in the Locations Configuration dialog box (Figure 2-33) and click the **Pencil**  icon. An Edit Location Configuration dialog box displays (Figure 2-35).

**Figure 2-35** Edit Location Configuration dialog box



Current: SV7000-44

PBX Settings	Locations	AreaCode Rules	PBX → PBX Dialing	Reserved Numbers	Voice Mail Pilot Numbers
<p>* Location Name: <input type="text" value="IRVING"/></p> <p>* Country Code: <input type="text" value="01"/></p> <p>City/Area Code: <input type="text"/></p> <p>Long Dist Access Code: <input type="text" value="1"/></p> <p>Local Access Code: <input type="text" value="9"/></p> <p>Int. Direct Dial Code: <input type="text"/> National Code: <input type="text"/></p>					
<p><input type="button" value="Apply"/> <input type="button" value="Done"/> <input type="button" value="Cancel"/></p>					

- Step 2** After changing the configuration, do one of the following:
- Click **Apply** to save the information.
  - Click **Done** to save the information and close the dialog box.
  - Click **Cancel** to exit without saving the changes.


## Deleting Locations

Use the following steps to permanently delete a **Location** so that it may not be reselected by this PBX or other PBXs.

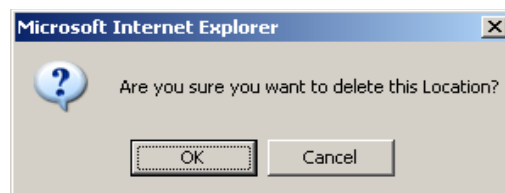


NOTE

*A location can only be deleted if it is not used by other PBXs. If it is currently in use by other PBXs, these other PBX configurations must first be modified to use a different location or no location before this location and its associated area code rules can be deleted.*

- Step 1** Select the desired location from the Locations Configuration dialog box (Figure 2-33).
- Step 2** Once the desired Location is selected, click the **Trashcan**  icon. A Delete Location Confirmation dialog box displays (Figure 2-36)

**Figure 2-36** Delete Location Confirmation dialog box



- Step 3** Click **OK** to delete this location or **Cancel** to exit the dialog box and keep this location configuration.

## Area Code Rules

If special rules exist for this location; such as requiring dialed numbers to the same city/area code have the city/area code inserted (10 digit dialing in United States), treating numbers with a different city/area code as local, or treating certain numbers within the same city/area code as long distance, click **AreaCode Rules** from the PBX Configuration dialog box (Figure 2-30). An Area Code Rule dialog box displays (Figure 2-37).

Without special rules, OW5000 will assume dialed numbers to the same city/area code as the location are local, and dial the local access code plus the number (with city/area code removed). Calls to numbers outside the given city/area code are treated as long distance such that the Long Dist Access Code is dialed followed by the national direct dial code + area code and phone number. You will be prompted to save the changes you have made thus far for the Location before proceeding.



NOTE

*The Area Code Rule is used for OW5000 API (Call Control) and LCS/OCS Integration only.*

**Figure 2-37** Area Code Rule dialog box

- Step 1** To add a rule, select a target Location and click **Add New Area Code Rule**. An Area Code Rule dialog box displays (Figure 2-37).

**Figure 2-38** Area Code Rule—Add New dialog box

- Step 2** In the **Target City/Area Code** field, enter the area code that should have a special rule when dialed. This field is required.
- Step 3** If a specific exchange within the target city/area code requires a special dialing rule, enter this number in the **Target Exchange** field. For example, if most numbers within the 214 area code are considered local, but a number such as (214) 335-1234 is long distance, enter “335” for the target exchange. If this rule applies to all exchanges within the city/area code (as can be the case for 10-digit dialing), leave this field blank.
- Step 4** If the rule you are adding requires a direct dial code access code to be added between the local or long distance access code for this location and the number to dial, enter this code in the **Direct Dial Code** field. If no special digits are required, leave this field blank. The Local or Long Distance Access Code for the location will always be dialed regardless of the value in this field, so do not include these as part of the Direct Dial Code.
- Step 5** If the target city/area code is to be inserted when dialing this area code, check the box **Include City/Area Code**. This box is needed to specify 10-digit dialing for local calls in United States.

- Step 6** Do one of the following:
- Click **Apply** to save the area code without exiting the dialog box.
  - Click **Done** to save the Area Code Rule and exit the dialog box.
  - Click **Cancel** to exit the dialog box without saving the Area Code Rule.



*Area Code Rule is used for OW5000 (Call Control API) and LCS/OCS Integration only.*

**PBX to PBX Dialing**

If you have an environment with multiple PBXs using a non-unique numbering plan, if you require inserting an access code in front of an extension before dialing, or if you receive an access code together with the calling party's extension, you must specify the rules needed by OW5000 to build up dialable strings and break apart incoming numbers into their core components of PBX and extension. Using these rules, OW5000 knows how to dial from one PBX to another when access codes must be used, and it knows how to interpret what part of an incoming number is the actual extension when an office or access code is received before the extension.



*PBX to PBX Dialing is used for multiple PBXs environment of OW5000 (Call Control API) and LCS/OCS Integration feature.*

- Step 1** Click **PBX -> PBX Dialing** from the PBX Configuration dialog box (Figure 2-28). A PBX -> PBX Dialing Configuration dialog box displays (Figure 2-39).

**Figure 2-39** PBX -> PBX Dialing Configuration dialog box

PBX SettingsLocationsAreaCode RulesPBX -> PBX DialingReserved NumbersVoiceMail Pilot Numbers

Add New Destination PBX

Destination PBX	Dialing Prefix	Extension
OW5000PBX	9	2

Add New Source PBX

Source PBX	Incoming Prefix
OW5000PBX	9

ApplyDoneCancel

The **Destination PBX** section describes how various PBXs in the CCIS network may be dialed by the current PBX. The Destination PBX is identified along with the prefix needed to be inserted before the extension. It may be necessary to specify the first digit of the extension range if the destination PBX has extensions of varying lengths. For example, a PBX may require dialing '8782' before four digit extensions beginning with '3', but '78' before five digit extensions beginning with '2'. In the case of four digit extensions, the '2' belongs to the access code, but in the case of five digit extensions, the '2' is part of the extension. Using these tables, you can identify these types of conditions

so that OW5000 can properly dial and interpret incoming numbers across the CCIS network.

The **Source PBX** section describes how incoming numbers from these source PBXs to the current PBX should be disassembled to find the actual extension of the calling party. This is done by entering the Incoming Prefix that should be removed to find the extension. It is possible to have more than one entry per source PBX in case numbers can arrive in various formats from this PBX.



NOTE

*A Prefix is not required for the PBX(UGN), which uses the IP Centrex Feature, because the Extension has its prefix as part of the extension number.*

**Step 2** To add a new Destination PBX, click **Add New Destination PBX**. An Add Destination PBX dialog box displays (Figure 2-40).

**Figure 2-40** Add Destination PBX dialog box

**Step 3** Select the desired Destination PBX from the drop-down list.

**Step 4** Enter the **Dialing Prefix** number.

**Step 5** Enter the **Extensions Beginning with** number in the text field. This parameter is used only when different access codes need to be applied for each beginning number. This configuration is not often required.


**Step 6** Do one of the following:

- Click **Apply** to save the Destination PBX without exiting the dialog box.
- Click **Done** to save the Destination PBX and exit the dialog box.
- Click **Cancel** to exit the dialog box without saving the Destination PBX.

**Step 7** To add a new Source PBX, click **Add New Source PBX**. An Add Source PBX dialog box displays (Figure 2-41).



Figure 2-41 Add Source PBX dialog box

 Current: OW5000PBX

PBX SettingsLocationsAreaCode RulesPBX → PBX DialingReserved NumbersVoiceMail Pilot Numbers

PBX: OW5000PBX

Source PBX: 

OW5000PBX

Incoming Prefix: 

9

Apply

Done

Cancel

- Step 8

Select the desired Source PBX from the drop-down list.
- Step 9


Enter the **Incoming Prefix** in the text box. An Incoming Prefix must be configured for each PBX, including its own PBX.




A Prefix must be set when the current PBX and the Source PBX are the same.

- Step 10

Do one of the following:
  - Click **Apply** to save the Source PBX without exiting the dialog box.
  - Click **Done** to save the Source PBX and exit the dialog box.
  - Click **Cancel** to exit the dialog box without saving the Source PBX.
- Step 11


To modify a Destination or Source PBX, select the desired PBX and then click the **Pencil**  icon and make the necessary changes.
- Step 12

To delete a Destination or Source PBX, select the desired PBX and then click the **Trashcan**  icon.

Reserved Numbers

Selecting the **Reserved Numbers** option from the PBX Configuration dialog box (Figure 2-30) displays a Reserved Number dialog box (Figure 2-42). This option allows you to add or edit one or more Dterms that can serve as a shared pool for applications requiring temporary use of a Dterm for complex call processing scenarios.

Figure 2-42 Reserved Number dialog box

 Current: NECPBX

PBX SettingsLocationsAreaCode RulesPBX → PBX DialingReserved NumbersVoice Mail Pilot Numbers







Add New Monitored Number

1 - 2 of 2 records 

20

 Results per page

Page 1 of 1

 	Monitor Number	Reserved Type	Tenant	Owner
 	5555	Monitored Number	1	OW5000 API
 	5556	Monitored Number	1	OW5000 API

1 - 2 of 2 records 

20

 Results per page

Page 1 of 1

- Step 1

Click **Add New Monitored Number** to add new Reserved Numbers. An Add Reserved Number dialog box displays (Figure 2-43).

**Figure 2-43** Add Reserved Number dialog box

**Step 2** Enter the number to reserve in the **Number** field.



Enter a private number for an IP centrex environment.

**Step 3** Select the **Tenant** from the drop-down list.

**Step 4** Select one of the **Reserved Type** options from the drop-down list.

**Dummy DTerm Number** - it is only necessary to allocate Dummy Dterms if you are so instructed by an application installation. This is not required unless United States is selected as the Sales Region.

**Monitored Numbers...** to enter one or more monitored numbers (AMNO assigned on the NEAX 2400) that can serve as a shared pool for applications requiring monitored numbers. It is only necessary to allocate Monitored Numbers if you will be running an application such as the Business Attendant System, which requires such numbers in its configuration.

Monitored Numbers are mandatory for LCS/OCS Integration and the Conference Server.

**Step 5** Choose the **Application** from the drop-down list.

OW5000API must be assigned for LCS/OCS integration. The ACD, Incoming Call Assistant, Location Status and the Oai Server are not used if only the OW5000 platform is used.

**Step 6** Do one of the following:

- Click **Apply** to save the Reserved number without exiting the dialog box. Click **Apply & Add New** to save the Reserved Number; the Extension is increased automatically.
- Click **Done** to save the Reserved number and exit the dialog box.
- Click **Cancel** to exit the dialog box without saving the **Reserved Number**.

**Step 7** To **Edit** existing numbers, click the **Pencil**  icon.

**Step 8** To delete a **Reserved Number**, click the **Trashcan**  icon.



IMPORTANT

Be sure to change or delete the related configuration before deleting a reserved number.

## Voice Mail Pilot Numbers

**Step 1** Selecting the Voice Mail Pilot Numbers option from the PBX Configuration dialog box (Figure 2-11) displays a Voice Mail Pilot Numbers dialog box (Figure 2-44). This option allows you to add or edit one or more Voice Mail pilot numbers; which is used for voice mail integration, such as UM8500.



NOTE

Figure 2-44 displays only if the United States is selected as the Sales Region.

**Figure 2-44** Voice Mail Pilot Numbers dialog box

Current: OW5000PBX

PBX Settings	Locations	AreaCode Rules	PBX → PBX Dialing	Reserved Numbers	VoiceMail Pilot Numbers				
Add New Pilot Number									
1 - 1 of 1 records 20 Results per page Page: 1 of 1									
<table border="1"> <thead> <tr> <th>Pilot Number ▲</th> <th></th> </tr> </thead> <tbody> <tr> <td>8500</td> <td>Set Default</td> </tr> </tbody> </table>						Pilot Number ▲		8500	Set Default
Pilot Number ▲									
8500	Set Default								
1 - 1 of 1 records 20 Results per page Page: 1 of 1									

**Step 2** Click **Add New Pilot Number** to add a new Voice Mail pilot number. An Add Voice Mail pilot number dialog box displays (Figure 2-45).

**Figure 2-45** Add Voice Mail pilot number dialog box

Current: SV7000-44

PBX Settings	Locations	AreaCode Rules	PBX → PBX Dialing	Reserved Numbers	Voice Mail Pilot Numbers
* Pilot Number: <input type="text"/>					
<div> <span>Apply</span> <span>Done</span> <span>Cancel</span> </div>					

**Step 3** Enter the pilot number to reserve in the **Pilot Number** field.

**Step 4** Do one of the following:

- Click **Apply** to save the Voice Mail pilot number without exiting the dialog box.
- Click **Done** to save the Voice Mail pilot number and exit the dialog box.
- Click **Cancel** to exit the dialog box without saving the Voice Mail pilot number.

**Step 5** To change the default Voice Mail pilot number, click **Set Default** of the proper pilot number. The Default pilot number is displayed as bold. This

number is used when a client does not specify the Voice Mail pilot number.

**Step 6** To delete a **Voice Mail Pilot Number**, click the Trashcan  icon.

## Routes/Trunks Configuration

Selecting **Routes/Trunks** from the OW5000 Platform Configuration dialog box (Figure 2-11), displays a Route/Trunk Management dialog box (Figure 2-46).



NOTE

Figure 2-46 displays only if the United States is selected as the Sales Region.

**Figure 2-46** Route/Trunk Management dialog box

Add New Trunk						
1 - 1 of 1 records			20	Results per page		Page: 1 of 1
		<u>Route Name</u> ▲	<u>PBX</u>	<u>Route Number</u>	<u>Begin Trunk</u>	<u>Ending Trunk</u>
		CCISNW1	NECPBX	1	1	10
1 - 1 of 1 records			20	Results per page		Page: 1 of 1

Use the following steps to add, edit, or delete a Route Trunk:

### Adding a Route Trunk

**Step 1** Click **Add New Trunk** from the Route Trunks dialog box. A Route Trunks—Add dialog box displays (Figure 2-47).

**Figure 2-47** Route Trunks—Add dialog box

**Step 2** Enter the number for this trunk in the **Route Number** field.



NOTE

*Fields which must be completed are designated with an asterisk (\*).*

**Step 3** Enter the **Name** associated with this trunk number.

**Step 4** Enter the **Beginning Trunk** and the **Ending Trunk** number.

**Step 5** Select the **PBX** from the drop-down list.

**Step 6** Select the **Tenant Number** from the drop-down list.

**Step 7** Enter the desired number in the four **UserDefined** fields.

**Step 8** Do one of the following:

- Click **Apply** to save the information without closing the dialog box.
- Click **Done** to save the record and exit the dialog box.
- Click **Cancel** to exit the dialog box without saving the record.

**Step 9** Click the **Pencil**  or **Trashcan**  icon to edit or delete a Route/Trunk.

## Serial Ports Configuration

Selecting **Serial Ports** from the OW5000 Platform Configuration dialog box (Figure 2-11), displays a Serial Port Management dialog box (Figure 2-48).



NOTE

Figure 2-48 displays only if the United States is selected as the Sales Region.

**Figure 2-48** Serial Port Management dialog box

Serial Port	Baud Rate	Data Bits	Parity	Stop Bits	Flow Control
1	300	7	Even	None	HardWare

**Step 1** To add a serial port, click **Add New Serial Port**. A Serial Port Management dialog box (Figure 2-48).

**Figure 2-49** Serial Port Management dialog box

Serial Port: 1  
 Baud Rate: 300  
 DataBits ID: 7  
 Parity: Even  
 Stop Bits: None  
 Flow Control: HardWare  
 Apply Done Cancel

**Step 2** Enter the information in the following fields:



- Serial Port
- Baud Rate
- DataBits ID
- Parity
- Stop Bits
- Flow Control



TIP

Select the **HardWare** Flow Control option for TAP page support.

- Step 3

To edit or delete a serial port, select the **Pencil**  icon or the **Trashcan**  icon.
- Step 4

Do one of the following:
  - Click **Apply** to save the information.
  - Click **Done** to save the information and exit the dialog box.
  - Click **Cancel** to exit without saving the information.

Configuring Voice Mail Servers

Selecting **Voice Mail Servers** from the OW5000 Platform Configuration dialog box (Figure 2-11) displays a Voice Mail Server Management dialog box (Figure 2-50).





Figure 2-50 displays only if the United States is selected as the Sales Region.

Figure 2-50 Voice Mail Server Management dialog box

Voice Mail Server Management

Add New Voice Mail Server

1 - 1 of 1 records 20 Results per page Page: 1 of 1

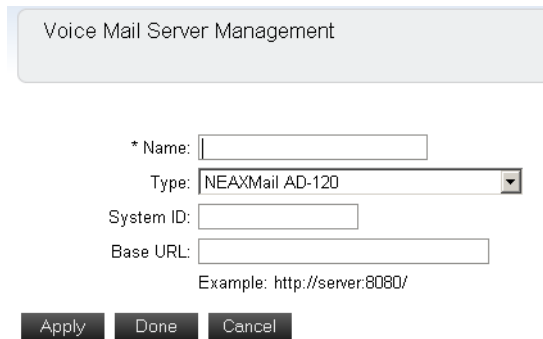
	Name	Type	System ID	Mailbox Count	VoiceMail Count	Base URL
 	Messages	NEAXMail AD-120		0	0	

1 - 1 of 1 records 20 Results per page Page: 1 of 1

## Adding a Voice Mail Server

**Step 1** Click **Add New Voice Mail Server**. A Voice Mail Server—Add dialog box displays (Figure 2-51).

**Figure 2-51** Voice Mail Server—Add dialog box



The dialog box is titled "Voice Mail Server Management". It contains the following fields and controls:

- \* Name:
- Type:  (dropdown menu)
- System ID:
- Base URL:
- Example: http://server:8080/
- Buttons: Apply, Done, Cancel





Fields which must be completed are designated with an asterisk (\*).

**Step 2** Enter the **Name** for the Voice Mail Server.

**Step 3** Select the **Type** from the drop-down list.

**Step 4** Enter the **System ID**. (optional)

**Step 5** Enter the **Base URL** for the Voice Mail Server.

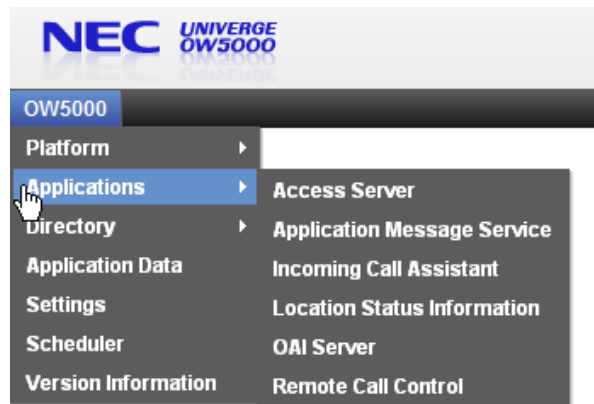
**Step 6** To edit or delete a Voice Mail Server, click the **Pencil**  or **Trashcan**  icon.



## Maintaining the OW5000 Applications

OW5000 Applications are installed as part of the OW5000 platform in most cases. Each module supports a specific feature such as SIP Presence, and LCS/OCS Integration. Selecting **Applications** from the OW5000 Options dialog box (Figure 2-10), displays an OW5000 Applications Configuration dialog box (Figure 2-52).

**Figure 2-52** OW5000 Applications Configuration dialog box



NOTE

Figure 2-52 is an example when the United States is selected as the Sales Region.

The following topics are included in this section:

- [Access Server Configuration](#)
- [Application Message Service Configuration](#)
- [Email Notification Configuration](#)
- [Incoming Call Assistant Configuration](#)
- [Location Status Information Configuration](#)
- [OAI Server Configuration](#)
- [Remote Call Control Configuration](#)

## Access Server Configuration

Selecting **Access Server** from the OW5000 Applications Options dialog box (Figure 2-52) displays an Access Server List Manager dialog box (Figure 2-53). Follow the steps below to add, edit, or delete an access server.

One PSGW (Presence Gateway) and more than one Access Server configuration is required for the SIP presence feature.



NOTE

PSGW is set as the default. Do not delete this configuration. (Port 6061 is assigned)

**Figure 2-53** Access Server List Manager dialog box

General Settings

Routing Info

Add New Access Server



1 - 1 of 1 records

10

Results per page

Page: 1

of 1

 	Server Name	IP Address	Listen Port	Legacy Port	RPC Listen Port	TOS	Keep Alive	Timer T1	Is PSGW	Binding Type
	PSGWLocal	172.24.133.73	6061			00	1800	500	<input checked="" type="checkbox"/>	PSGW

1 - 1 of 1 records

10

Results per page

Page: 1

of 1

## Adding an Access Server

**Step 1** Clicking **Add New Access Server** from Figure 2-53 displays an Add New Access Server dialog box (Figure 2-54).

**Figure 2-54** Add New Access Server dialog box

Access Server

General Settings	Routing Info
<p>* Server Name: <input type="text"/></p> <p>* IP Address: <input type="text"/></p> <p>* Listen Port: <input type="text" value="6060"/></p> <p>Legacy Port: 60002</p> <p>* RPC Listen Port: <input type="text" value="62000"/></p> <p>* TOS: <input type="text" value="00"/></p> <p>* Keep Alive: <input type="text" value="1800"/></p> <p>* Timer T1: <input type="text" value="500"/></p> <p>Is PSGW: <input type="checkbox"/></p> <p>Binding Type: <input type="text" value="TCP/IP"/></p>	
<p>Apply Done Cancel</p>	

**Step 2** Enter the **Server Name**. This name is used as a unique ID. Once the Access Server is defined, you cannot change the Server Name. The values in Step 3 to Step 9 do not have to be changed from the default of the parameter is not in conflict with another application.

**Step 3** Enter the **IP Address** for the server. Use the same address as where the OW5000 Platform is installed. Only one Access Server can be assigned per server.

**Step 4** Enter the **Listen Port** number of the Access Server. (accepts 1025 to 65535 only.) Default is 6060. A Listen Port is not required for PSGW.



*Only one Access Server is available (except PSGW) per server.*

**Step 5** Enter the listen port in the **Legacy Port** field. Accepts 1025 to 65535 only. Default is 60002. This parameter is not used for OW5000 R4. (Future use).

**Step 6** Enter the **RPC Listen Port** number. If PSGW is checked, this value is not required. Accepts 1025 to 65535 only. Default is 62000.

**Step 7** Enter the **TOS** value. This field accepts HEX only, but 0x is not needed. Default is 00. This value can be changed. Only Access Server works on the Microsoft Windows Server 2003. To enable this configuration, change the registry modification as shown below.

Based on the following URL, add a registry key named "DisableUserTOSSetting" under HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters then set 0.

<http://technet.microsoft.com/en-us/magazine/2007.02.cableguy.aspx>

**Step 8** Enter the **Keep Alive** interval (in seconds). Default is 1800.

**Step 9** Enter the **Timer T1** Value (in milliseconds) which means the first retry timer of the SIP request packet from the Access Server to the terminals. Default is 500 milliseconds. Usually no configuration change is required.

**Step 10** Check **Is PSGW** if the server is PSGW. PSGW can only be installed on the same box as the OW5000 Platform. OW5000 Platform installer automatically creates the PSGW configuration (PSGWlocal). The PSGWlocal settings do not need editing unless this configuration is deleted accidentally.

**Step 11** Select the **Binding Type** from the drop-down list. Available options are Named Pipe, TCP/IP, and HTTP. If PSGW is not checked, this value is disabled. Only TCP/IP is available for this version.

**Step 12** After changing the configuration, do one of following:

- Click **Apply** to save the Access Server information.
- Click **Done** to save the Access Server information and close the dialog box.
- Click **Cancel** to exit without saving the changes.

**Step 13** To edit Access Server, click the Pencil icon on the Access Server List Manager dialog box (Figure 2-53).

**Step 14** To delete Access Server, click the Trashcan icon on the Access Server List Manager dialog box (Figure 2-53).



*If the Server Name or IP address is duplicated in the database, an error message displays.*

NOTE

## Routing Info

Selecting the Routing Info option from the Access Server dialog box (Figure 2-53) displays a Routing Info dialog box (Figure 2-55). This option allows you to add or edit a routing rule which is used for SIP presence federation. Multiple routing rules can be assigned. The OW5000 system checks the routing based on priority (the first line is the highest priority).

Figure 2-55 Routing Info dialog box

General Settings

Routing Info

Add New Routing Rule

1 - 3 of 3 records

10

Results per page

Page: 1 of 1

	<a href="#">Routing Rule</a>	<a href="#">ReqEx</a>	<a href="#">TranslationPattern</a>	<a href="#">IP Address</a>	<a href="#">Port Number</a>	<a href="#">Reorder</a>	<a href="#">Priority</a> ▲
		^710([0-9*#](5))@.+	710\$1@sv7100	172.24.130.165	5060	⬆️ ⬇️	1
		^820([0-9*#](5))@.+	820\$1@sv8200	172.24.130.186	5060	⬆️ ⬇️	2
		^730([0-9*#](5))@.+	730\$1@sv7300	172.24.130.154	5060	⬆️ ⬇️	3

1 - 3 of 3 records

10

Results per page

Page: 1 of 1

Test Routing Rule

## Adding a Routing Rule

Clicking **Add New Routing Rule** from the Access Server dialog box displays an Access Server—Routing Rule Info page (Figure 2-56).

Figure 2-56 Access Server—Routing Rule Info page

General Settings		Routing Info			
ROUTING RULE INFO					
* Routing Rule:	<input type="text"/>				
Translation Pattern:	<input type="text"/>				
* IP Address:	<input type="text"/>				
* Port:	<input type="text"/>				
<input type="button" value="Apply"/> <input type="button" value="Done"/> <input type="button" value="Cancel"/>					

## Routing Info

Use the information below to add a new Routing Rule.

**Step 1** Enter a regular expression of the target SIPURI in the **Routing Rule** field. Configuration examples are listed below:

- Step 2** Enter the translation format in the **Translation Pattern** field. \$1 must be there in this field. Refer to [Appendix C](#) for details on the Regular Expression.
- Step 3** Enter the target access server in the **IP Address** field. This Access Server belongs to a different OW5000 system so the Access Server name is not available.
- Step 4** Enter the target access server port number in the **Port** field.

Example1:

Routing Rule: ^710([0-9\*#]{5})@.+\$

(SIPURI start from 710 and 5 digits (total 8 digits) before @ mark and store that 5 digits as \$1)

Translation Pattern: \$1@sip.com

IP Address: 192.168.0.10

Port: 5060

Input SIPURI: 71012345@necinfrontia.com

Result:

12345@sip.com is sent to 192.168.0.10 port 5060 using TCP session.

## Testing a Routing Rule

Clicking **Test Routing Rule** from the Access Server dialog box displays an Access Server—Test Routing Rule dialog box ([Figure 2-57](#)). The Test Routing Rule button is displayed when more than one Routing Rule is assigned.

**Figure 2-57** Access Server—Test Routing Rule dialog box

This page provides test functionality for a routing rule.

- Step 1** Enter the test SIPURI in the **Test Routing Rule** field and then click **Test**.

If a matching routing rule is found in the system, the routing rule and target information displays on this page.

If a matching rule is not found in the system, the Routing Rule Info field is blank and an error box displays. The rule is checked from the top routing rule so if multiple rules are matched for the test value, the highest priority rule displays.

## Application Message Service Configuration

Selecting **Application Message Service** from the OW5000 Applications Options dialog box (Figure 2-52) displays an Application Message Service dialog box (Figure 2-58).

**Figure 2-58** Application Message Service dialog box



Application Message Service

TCP Service Port:

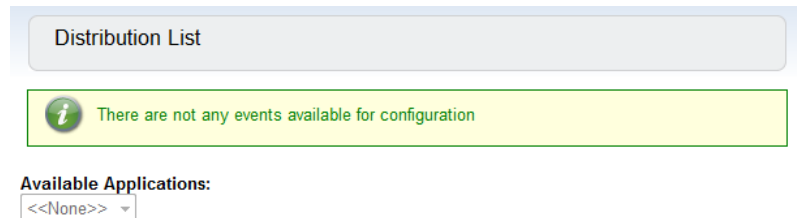
Apply

**Step 1** Enter the **TCP Service Port** for the application message and then click **Apply**. Default port is 5425.

## Email Notification Configuration

Selecting **Email Notification** from the OW5000 Applications Options dialog box (Figure 2-52) displays a Distribution List dialog box (Figure 2-59). This configuration is available only when the appropriate service is installed.

**Figure 2-59** Distribution List dialog box



Distribution List

*i* There are not any events available for configuration

Available Applications:

In the **Available Applications** drop-down list, there will be **<<None>>** if only the OW5000 platform is installed.

Refer to each application's documentation for more details.

## Incoming Call Assistant Configuration

The following options are originally configured during the OW5000 Platform installation. They may be reconfigured through OW5000 Administrator by completing the steps below.

- Step 1** Login to the OW5000 Administrator program. Once you are logged into OW5000 Administrator, follow this path to open the ICA configuration options: **OW5000 > Applications > Incoming Call Assistant**. An ICA General Settings dialog box displays (Figure 2-60).

**Figure 2-60** ICA General Settings dialog box

- Step 2** Enter information in the following fields for **Server Settings**.

### —Legacy TCP/IP Port

The TCP/IP Port is the port number used by external applications to connect to the LSI Service. The default number (5424) need only be changed if the external applications cannot connect to the ICA Service due to a conflict with other programs on the OW5000 Server already using this port.

- Step 3** Review the **Options** information.

### —Name Display Enabled in PBX

If your PBX is currently configured to use the built-in Name Display Feature, check the box **Name Display Enabled in PBX**. This ensures that ICA will not display redundant information about calling employees that the PBX is already displaying to your Dterm.

When checked, ICA will not display a caller's name if the caller is an employee, and they are calling your prime line. External numbers to your prime line will still be displayed by ICA as well as all calls to your sublines, employee included. Also, ICA will not show a called

employee's name on placed calls. If the call you are placing is to a non-employee number, ICA will display the dialed number or name.

If **Name Display Enabled in PBX** is not checked, ICA will always attempt to reconcile the caller or called party number to names in the employee, external, or personal directories and display this information on your Dterm, with one exception. If you are placing a call to an employee who has set their status through the Location Status application (LSI), **and** LSI is configured to flash the status to your phone, ICA does not display the employee name. Instead, it gives control to LSI so that you can see the person's status, return date, time, and alternate number, if any.

#### —Show External Number

If this item is checked, ICA will always display the ANI information for an external call unless a name match is found. If a name match is found, ICA will display the name. If this item is not checked, ICA will only display a name if a name is found, or if the incoming line is a sub line. Otherwise, nothing is displayed.

#### —Show DID Information

Select this check box to configure ICA to show the name of the called number as it is found in the OW5000 DID (Direct Inward Dial) Database. This DID number must be configured as a virtual number in the PBX and all calls forwarded to the user's extension. This box is typically **NOT** selected in order to always show the caller's ANI instead.

#### —Password Required

Select this check box to require users to enter a password when accessing Incoming Call Assistant.



NOTE

*If this check box is not selected, the user will be allowed to choose not to use a password when accessing Incoming Call Assistant. If the check box is selected, they will be required to enter a password before they can access Incoming Call Assistant.*

#### —Chime on Incoming Call to Subline

If your PBX is configured so that incoming calls to sublines do *not* ring, you may desire to check this box so that ICA users are alerted with a Dterm chime when receiving an incoming call on one of their sublines.

#### —Outbound Call Log Size

Specifies the number of records that will be stored for each user's outbound call history. This value also affects other applications that view the history.

#### —Inbound Call Log Size

Specifies the number of records that will be stored for each user's inbound call history. This value also affects other applications that view the history.

#### —Max Idle Time (seconds)

Specifies the number of seconds that ICA waits for user input before exiting on that person's Dterm.



**Step 4** In the **Name Display Format for Employee Match** section, select one of the following ways to display employee names from the drop-down list.

—Employee Display Name

—Last,First

—First Last

This option allows the user to select how names are displayed on the Dterm when ICA finds an employee match to an incoming or outgoing call. This name can be the display name, which is configured in the OW5000 Administrator for that employee, or it can be a combination of first and last name. If “last, first” or “first last” are selected and either first name or last names are blank, the default will be the display name.

**Step 5** You can modify the amount of time that ICA waits for user input before exiting on that person’s Dterm in the **OAI Timeout** field.

**Step 6** Click **Apply** to accept the configuration or **Cancel** to discard the changes.

## Redirect Configuration

Selecting **Redirect Configuration** displays an ICA Redirect Configuration dialog box (Figure 2-61).

**Figure 2-61** ICA Redirect Configuration dialog box

PBX	Redirect Number
325	1235
325	1236
325	1237
425	2222
Conf2 PBX	21345
DonTest2	543
IPS	4070
LIBRA	8900
PETPBX44	3458
POE	642

**Step 1** Click **Add New Redirect Configuration**. A Redirect Configuration—Add New dialog box displays (Figure 2-62).

**Figure 2-62** Redirect Configuration—Add New dialog box


Incoming Call Assistant Redirect Configuration Manager

PBX:

Redirect Number:

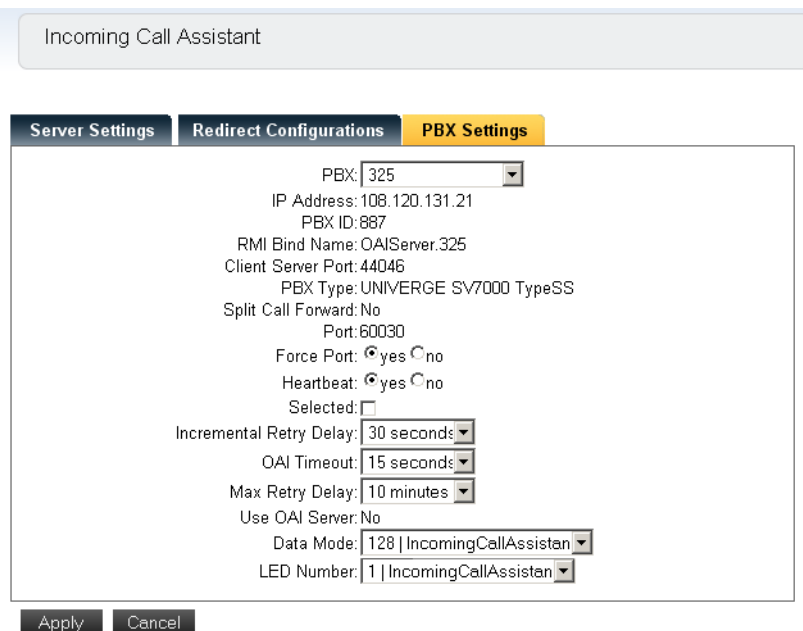
**Step 2** Select the **PBX** from the drop-down list.

**Step 3** Select the **Redirect Number** from the drop-down list.

**Step 4** Click **Done** to accept the changes or **Cancel** to exit without saving the changes.

### PBX Settings

Selecting **PBX Settings** from the ICA General Settings dialog box (Figure 2-60) displays an ICA PBX Settings dialog box (Figure 2-63).

**Figure 2-63** ICA PBX Settings dialog box


Incoming Call Assistant

Server Settings | Redirect Configurations | **PBX Settings**

PBX:

IP Address: 108.120.131.21

PBX ID: 887

RMI Bind Name: OAI Server.325

Client Server Port: 44046

PBX Type: UNIVERGE SV7000 TypeSS

Split Call Forward: No

Port: 60030

Force Port: ☒ yes ☐ no

Heartbeat: ☒ yes ☐ no

Selected: ☐

Incremental Retry Delay:

OAI Timeout:

Max Retry Delay:

Use OAI Server: No

Data Mode:

LED Number:

Values in gray are the read-only values assigned at the time the PBX was configured for use with the OW5000 Platform. Changes to these values can only be made by modifying the global PBX configuration under OW5000 Platform. Such changes will affect every application using that PBX. To specifically modify the PBX settings used only by ICA, use the following steps.

**Step 1** Verify the value for **Force Port**.

This field has the following settings:

- **Yes** specifies that the application uses the same port each time it runs. This should be selected to avoid problems with clearing Dterm displays and monitoring equipment.
- **No** specifies that the application will retry one of the other port numbers when the application fails to connect to the PBX because the port may be in use by another application. This setting has no effect when the PBX Type is NEAX 2400 IMS Internal IP, UNIVERGE SV7000, or NEAX 2000 IPS.

You should normally select **Yes** for the Force Port field.

**Step 2** Verify the setting for **Heartbeat**.

This field has the following settings:

- **Yes** specifies that the application checks approximately every 20 seconds to make sure the PBX connection is still alive and operational.
- **No** specifies that the application will not check the PBX connection.

You should normally select **Yes** for the Heartbeat field.

**Step 3** Check the **Selected** checkbox if you would like ICA to attempt to connect to this PBX the next time it is restarted.

Consider enabling the **Selected** checkbox for ICA's PBX Settings, soon after installation of OW5000 Platform. This is not enabled as a default, on a fresh install.

**Step 4** If needed, you can modify the **Incremental Retry Delay**. The **Incremental Retry Delay** designates the amount of time the application waits to attempt to reconnect to the PBX after the connection is lost. If the connection to the PBX is lost, ICA waits for the amount of time specified in the Incremental Retry Delay field before attempting to reconnect the first time. If the connection still cannot be made, the specified amount of time will be added to the delay period before the next attempt. For example, if the Incremental Retry delay is set to 30 seconds, ICA waits 30 seconds before attempting to reconnect. If that first attempt fails, the application waits 60 seconds before making a second attempt to connect, then waits 90 seconds before making a third attempt, and so on. When the application successfully reconnects to the PBX, the delay time goes back to the amount of time set in the Incremental Retry Delay Value field. Incremental Retry Delay Value is typically set to 30 seconds.

**Step 5** You can modify the amount of time that ICA waits for the user input before exiting on that person's Dterm in the **OAI Timeout** field.

**Step 6** The **Max Retry Delay** specifies the maximum amount of time the application waits between attempts to reconnect to the PBX after the connection is lost. This is used in conjunction with the Incremental Retry Delay and ensures that the application will try to re-establish a connection to the PBX within a certain amount of time. The Max Retry

Delay Value is typically set to 1 hour to make sure that the application will attempt to reconnect to the PBX at least once an hour.

**Step 7** You can change the **Data Mode** that ICA uses to communicate with Dterm users by selecting an available Data Mode from the drop-down list. The data mode you select must be programmed for use with OAI in the PBX, and it must be assigned to a function key button on each user's Dterm in order for ICA to be available to the user.

The value ranges from 128 to 191 and should match the OPCODE in the AOKC command on the NEAX 2400 IMS and UNIVERGE SV7000, or the D70 command if using the NEAX 2000 IPS.

**Step 8** You can change the **LED Number** that ICA lights when active on the Dterm.

**Step 9** Do one of the following:

- Click **Apply** to save the information.
- Click **Cancel** to exit without saving the information.

## Location Status Information Configuration

The Location Status Information (LSI) options are originally configured during the OW5000 Platform installation process. They may be reconfigured through the OW5000 Administrator by completing the steps below.

**Step 1** Login to the OW5000 Administrator program. Once you are logged in to OW5000 Administrator, follow this path to open the LSI configuration options: **OW5000 > Applications > Location Status Information**. An LSI General Settings dialog box displays (Figure 2-64).

**Figure 2-64** LSI General Settings dialog box

Location Status Information

Server Settings Message Settings PBX Settings

LSI Name: \*Unnamed\*

\* Legacy TCP/IP Port: 5241

Options

☐ Display Status

☐ Password Required

Max Idle Time (seconds): 15

Apply Cancel

**Step 2** Enter information for the **Server Settings**.

— **Legacy TCP/IP Port**

The TCP/IP Port is the port number used by external applications to connect to the LSI Service.

**Step 3** Review the **Options** information.

— **Display Status**

Select this check box to configure LSI to show the name of the called number.

— **Password Required**

Select this check box to require users to enter a password when accessing LSI.

— **Max Idle Time**

Specifies the number of seconds that LSI waits for user input before exiting on that person's Dterm. The default value is set at 15 seconds.

**Step 4** Do one of the following:

— Click **Apply** to save the information.

— Click **Cancel** to exit without saving the information.

## Message Settings

Selecting **Message Settings** displays an LSI Message Settings dialog box (Figure 2-65).

**Figure 2-65** LSI Message Settings dialog box

Location Status Information

Server Settings
Message Settings
PBX Settings

Add New Message

1 - 10 of 12 records
10 Results per page
Page 1 of 2
> >>

	System Presence ▲	SIP Presence
	At Lunch	meal
	Available	no_plan(online)
	Away from Desk	step_out
	Busy	no_plan(absence)
	Gone Home	go_home
	In a Meeting	meeting
	Offline	
	On Break	break
	On Business Trip	biz_trip
	On Vacation	vacation

1 - 10 of 12 records
10 Results per page
Page 1 of 2
> >>

Default Online: Available

Default Offline: Offline

Default Idle: Away from Desk

Default Busy: In a Meeting

Default Out of Office: Out Of Office

Default DTerm: Available

Default Mobility: Available

Apply
Cancel

—**System Presence**

The default values are reconfigurable.

—**SIP Presence**

This is a fixed list and cannot be reconfigured.

—**Default Online**

Use the drop-down list to change the System Presence status.

—**Default Offline**

Use the drop-down list to change the default offline status. Max 16 characters.

—**Default Idle**

Use the drop-down list to change the System Presence status.

—**Default Busy**

Select the desired option from the drop-down menu.

—**Default Out of Office**

Select the desired option from the drop-down menu

—**Default Dterm**

Select the desired option for the default status when a new non SIP presence is used for extension.

—**Default Mobility**

Select the desired option for the status related to the mobility feature

- Step 1** To add a new message, click **Add New Message**. An LSI Message Settings—Add New dialog box displays [\(Figure 2-66\)](#).

**Figure 2-66** LSI Message Settings—Add New dialog box

Location Status Information Message Manager

\* System Presence:

SIP Presence NONE ▼

Done Cancel

- Step 2** Enter a new message in the **System Presence** text box.
- Step 3** Select the **SIP Presence** from the drop-down list.
- Step 4** Do one of the following:
- Click **Done** to save the information.
  - Click **Cancel** to exit without saving the information.

## PBX Settings

Selecting **PBX Settings** from the LSI General Settings dialog box displays a PBX Settings Configuration dialog box (Figure 2-67).

**Figure 2-67** PBX Settings Configuration dialog box

The dialog box is titled "PBX Settings Configuration" and has a tabbed interface with three tabs: "Server Settings", "Message Settings", and "PBX Settings". The "PBX Settings" tab is selected. The settings are as follows:

- Location Status Information (grayed out)
- PBX: \*NECPBX1 (dropdown)
- IP Address: 10.0.0.100 (grayed out)
- PBX ID: 100 (grayed out)
- RMI Bind Name: OAIServer.NECPBX1 (grayed out)
- Client Server Port: 44000 (grayed out)
- PBX Type: UNIVERGE SV7000 (grayed out)
- Split Call Forward: No (grayed out)
- Port: 60030 (grayed out)
- Force Port: ☒ yes ☐ no
- Heartbeat: ☒ yes ☐ no
- Selected: ☒
- Incremental Retry Delay: 30 seconds (dropdown)
- OAI Timeout: 15 seconds (dropdown)
- Max Retry Delay: 5 seconds (dropdown)
- Use OAI Server: No (grayed out)
- Data Mode: 128 | LocationStatus (dropdown)
- LED Number: 2 | LocationStatus (dropdown)
- Buttons: Apply, Cancel

Values in gray are the read-only values assigned at the time the PBX was configured for use with the OW5000 Platform. Changes to these values can only be made by modifying the global PBX configuration under OW5000 Platform. Such changes will effect every application using that PBX. To specifically modify the PBX settings used only by LSI, use the following steps:

**Step 1** Verify the value for **Force Port**.

This field has the following settings:

- **Yes** specifies that the application uses the same port each time it runs. This should be selected to avoid problems with clearing Dterm displays and monitoring equipment.
- **No** specifies that the application will retry one of the other port numbers when the application fails to connect to the PBX because the port may be in use by another application. This setting has no effect when the PBX Type is NEAX 2400 IMS Internal IP, UNIVERGE SV7000, or NEAX 2000 IPS.

You should normally select **Yes** for the Force Port field.

**Step 2** Verify the setting for **Heartbeat**.

This field has the following settings:

- **Yes** specifies that the application checks approximately every 20 seconds to make sure the PBX connection is still alive and operational.
- **No** specifies that the application will not check the PBX connection.

You should normally select **Yes** for the Heartbeat field.

- Step 3** Check the **Selected** checkbox if you would like LSI to attempt to connect to this PBX the next time it is restarted.



Consider enabling the **Selected** checkbox for ICA's PBX Settings, soon after installation of OW5000 Platform. This is not enabled as a default, on a fresh install.

- Step 4** If needed, you can modify the **Incremental Retry Delay**. The **Incremental Retry Delay** designates the amount of time the application waits to attempt to reconnect to the PBX after the connection is lost. If the connection to the PBX is lost, LSI waits for the amount of time specified in the Incremental Retry Delay field before attempting to reconnect the first time. If the connection still cannot be made, the specified amount of time will be added to the delay period before the next attempt. For example, if the Incremental Retry delay is set to 30 seconds, LSI waits 30 seconds before attempting to reconnect. If that first attempt fails, the application waits 60 seconds before making a second attempt to connect, then waits 90 seconds before making a third attempt, and so on. When the application successfully reconnects to the PBX, the delay time goes back to the amount of time set in the Incremental Retry Delay Value field. Incremental Retry Delay Value is typically set to 30 seconds.
- Step 5** You can modify the amount of time that LSI waits for user input before exiting on that person's Dterm in the **OAI Timeout** field.
- Step 6** The **Max Retry Delay** specifies the maximum amount of time the application waits between attempts to reconnect to the PBX after the connection is lost. This is used in conjunction with the Incremental Retry Delay and ensures that the application will try to re-establish a connection to the PBX within a certain amount of time. The Max Retry Delay Value is typically set to 10 minutes to make sure that the application will attempt to reconnect to the PBX at least once an hour.
- Step 7** You can change the **Data Mode** that LSI uses to communicate with Dterm users by selecting an available Data Mode from the drop-down list. The data mode you select must be programmed for use with OAI in the PBX, and it must be assigned to a function key button on each user's Dterm in order for LSI to be available to the user.

The value ranges from 128 to 191 and should match the OPCODE in the AOKC command on the NEAX 2400 IMS and UNIVERGE SV7000, or the D70 command if using the NEAX 2000 IPS. 128 is assigned as the default value.

- Step 8** You can change the **LED Number** that LSI lights when active on the Dterm. Blank is assigned as the default value.
- Step 9** Do one of the following:
- Click **Apply** to save the information.
  - Click **Cancel** to exit without saving the information.



## OAI Server Configuration

OAI Server is a component of the OW5000 and enables Java, Web, and other applications, except Remote Call Control, to communicate with the PBX using NEC's Java OAI libraries. OAI Server also manages a single connection (association) to each target PBX on behalf of the applications.

Follow the steps below to configure OAI Server:

- Step 1** Selecting **OAI Server** from the OW5000 Applications Options dialog box (Figure 2-52) displays an OAI Server Settings dialog box (Figure 2-68).

**Figure 2-68** OAI Server Settings dialog box

- Step 2** Enter the tenant number in the **OAI Tenant Number** field. The Tenant Number is used by the OAI Server when it opens facilities with the PBX. Typically the default value of 0 is the desired value because this allows OAI Server to work for all tenant numbers in the PBX.



**NOTE**

*The OAI Server ignores the OAI Tenant Number setting when opening the Free Location Facility. The Free Location Facility always uses Tenant 1.*

To use the OAI Server, **Selected** must be checked in the PBX Settings dialog box (Figure 2-69). When assigning a new PBX, the **Selected** checkbox is checked by default.

**Figure 2-69** PBX Settings dialog box

The PBX Settings dialog box is shown with the 'PBX Settings' tab selected. The configuration details are as follows:

- PBX:** \*SV7000-40-Hotel (dropdown menu)
- IP Address:** 172.24.133.40
- PBX ID:** 40
- RMI Bind Name:** OaiServer.SV7000-40-Hotel
- Client Server Port:** 44000
- PBX Type:** UNIVERGE SV7000
- Split Call Forward:** No
- Port:** 60030
- Force Port:** ☒ yes ☐ no
- Heartbeat:** ☒ yes ☐ no
- Selected:** ☒
- Incremental Retry Delay:** 30 seconds (dropdown menu)
- Max Retry Delay:** 10 minutes (dropdown menu)
- Use OAI Server:** No
- Enable Free Location Facility:** ☐

Buttons at the bottom: Apply, Cancel

**Step 3** Select the **PBX** from the drop-down list.

Values in gray are the read-only values assigned at the time the PBX was configured for use with the OW5000 Platform. Changes to these values can only be made by modifying the global PBX configuration under OW5000 Platform. Such changes will effect every application using that PBX. To specifically modify the PBX settings used only by LSI, use the following steps.

**Step 4** Verify the value for **Force Port**.

This field has the following settings:

- **Yes** specifies that the application uses the same port each time it runs. This should be selected to avoid problems with clearing Dterm displays and monitoring equipment.
- **No** specifies that the application will retry one of the other port numbers when the application fails to connect to the PBX because the port may be in use by another application. This setting has no effect when the PBX Type is NEAX 2400 IMS Internal IP, UNIVERGE SV7000, and NEAX 2000 IPS.

You should normally select **Yes** for the Force Port field.

**Step 5** Verify the setting for **Heartbeat**.

This field has the following settings:

- **Yes** specifies that the application checks approximately every 20 seconds to make sure the PBX connection is still alive and operational.
- **No** specifies that the application will not check the PBX connection.

You should normally select **Yes** for the Heartbeat field.

- Step 6** Check the **Selected** checkbox if you will use the OAI Server. It is mandatory for OW5000 API (Call Control and Call Notification) and Presence Gateway (Legacy presence of SIMPLE).
- Step 7** Specify the amount of time the application waits to attempt to reconnect to the PBX after the connection is lost in the **Incremental Retry Delay** field. This value is usually 30 seconds.
- Step 8** Specify the maximum amount of time the application waits between attempts to reconnect to the PBX after the connection is lost in the **Max Retry Delay** field. This value is usually 30 seconds.
- Step 9** Check the **Enable Free Location Facility** box if an application will be run that uses the OAI Server and requires the use of the Free Location Facility. Because the PBX only allows one application to simultaneously have the Free Location Facility opened for use, this box should only be checked if instructed to avoid conflict with non-OW5000 applications that require the Free Location Facility.
- Step 10** Do one of the following:
- Click **Apply** to save the settings.
  - Click **Cancel** to exit without saving the changes.

## Remote Call Control Configuration

Selecting **Remote Call Control** from the OW5000 Applications Options dialog box (Figure 2-52) displays an RCC Setting dialog box (Figure 2-70).

**Figure 2-70** RCC Setting dialog box



NOTE

If you have not installed Remote Call Control, this setting is not needed. For more information, refer to the UNIVERGE OW5000 Installation Guide, **OW5000 Remote Call Control Service**.

### General Settings

- Step 1** Enter the port number in the **Listen Port** field. 5060 is recommended, but it must be configured when LCS/OCS is installed on the same server.



NOTE

To set a Monitored number, use the **OW5000 Platform** option and then select **PBX Configurations > Reserved Numbers**. See [“Reserved Numbers” on page 2-39](#).

**Step 2** Click **Apply** to set the port.



To use the Remote Call Control service with SV8500, SV7000, and IPX series, a Monitored number must be assigned. Refer to “Reserved Numbers” on page 2-39 for more detail.

## Normalization Rules

Selecting Normalization Rules from the Remote Call Control dialog box (Figure 2-70) displays a Normalization Rules dialog box (Figure 2-71).

This option allows you to add or edit normalization rules which are used for LCS/OCS Integration. This value is usually 30 seconds. Multiple normalization rules can be assigned. The OW5000 system checks the rule based on priority (first line is highest priority). By clicking the Reorder arrow in the list can change the priority of the rule.

**Figure 2-71** Normalization Rules dialog box

Country Code	Regular Expression	Translation Pattern	Comment	Reorder	Priority
1	^([0-9]*)(3,4)\$	tel:\$1,phone-context=necinfrontia.com	For NEC Infrontia, Inc	⬆ ⬇ ⬇ ⬆	1
1	^([0-9]*)(5,6)\$	tel:\$1,phone-context=nec.com	For NEC Corporation	⬆ ⬇ ⬇ ⬆	2

## Adding a Normalization Rule

Clicking **Add New** from the Normalization Rules dialog box displays a Remote Call Control—Normalization Rules dialog box (Figure 2-72).

**Figure 2-72** Remote Call Control—Normalization Rules dialog box

**NORMALIZATION RULE INFO**

Country Code: United States of America (1)

Phone Pattern Regular Expression:

Translation Pattern:

Comment:

Apply Done Cancel

## Normalization Rule Info

When adding a new Normalization Rule, follow the steps below:

- Step 1** Select the target Country Code from the **Country Code** drop-down list.
- Step 2** Enter a regular expression of the target phone in the **Phone Pattern Regular Expression** field. Refer to [Appendix C](#) for more details on Regular Expression.
- Step 3** Enter the translation format in the **Translation Pattern** field. \$1 must be in this field.
- Step 4** Enter a comment for this normalization rule.

Example1:

Phone Pattern Regular Expression: ^0([0-9\*#]{3,4})\$

(Phone number starts from 0 and 3 or 4 digits (total 4 or 5 digits) and stores these digits as \$1. Note that the first 0 is not included in \$1).

Translation Pattern: tel:\$1;phone-context=necinfrontia.com

Comment: This rule is used for NEC Infrontia, Inc.

Input phone number: 01234

Result:

tel:1234;phone-context=necinfrontia.com

## Testing a Normalization Rule

Clicking **Test Rule** from [Figure 2-72](#) displays a Remote Call Control—Test Normalization Rule page ([Figure 2-73](#)). The Test Rule button displays when more than one Rule is assigned.

**Figure 2-73** Remote Call Control—Test Normalization Rule dialog box

The dialog box is titled "Remote Call Control—Test Normalization Rule". It has two tabs: "General Settings" and "Normalization Rules". The "Normalization Rules" tab is selected.

**NORMALIZATION RULE INFO**

Country Code: Afghanistan (93) (dropdown menu)

Phone Pattern Regular Expression: (text input field)

Translation Pattern: (text input field)

Comment: (text input field)

**TEST TRANSLATION**

Test dialed number: (text input field) [Check Rule button]

Translated number: (text input field)

**TEST ANI TRANSLATION**

Test ANI: (text input field) Destination PBX: NECPBX (dropdown menu) [Check Rule button]

Translated number: (text input field)

[Apply] [Done] [Cancel] buttons at the bottom.

This page provides test functionality for normalization rules. There are 2 test capabilities: TEST TRANSLATION and TEST ANI TRANSLATION.

**TEST TRANSLATION** is used to check the regular expression of the rule, but the OW5000 system determines the rule not only this regular expression.

**TEST ANI TRANSLATION** is used to check how the OW5000 converts this input phone number. OW5000 uses several internal logics to determine the translation results so this test field allows the user to see how the OW5000 works. To test TEST ANI TRANSLATION, assign a Country Code for the Rule and Location in PBX Management page.

### TEST TRANSLATION

**Step 1** Enter the test phone number in Test Dialed Number and then click **Check Rule**.

If there is a matching normalization rule in the system, the normalization rule and the translated result displays on this page.

If there is no matching rule in the system, *Translated number field is a blank*. The Rule is checked from the top normalization rule so if multiple rules are matched for the test value, the highest priority rule displays.

### TEST ANI TRANSLATION

**Step 1** Enter the test phone in the Test ANI field, select the destination PBX from the drop-down list, and then click **Check Rule**.

If there is a matching normalization rule in the system, the rule and translated result displays in the Translated number field.

If there is no matching rule in the system, the Translated number field is a blank. Rule is checked from the top normalization rule so if multiple rules are matched for test value, highest priority rule is displayed.

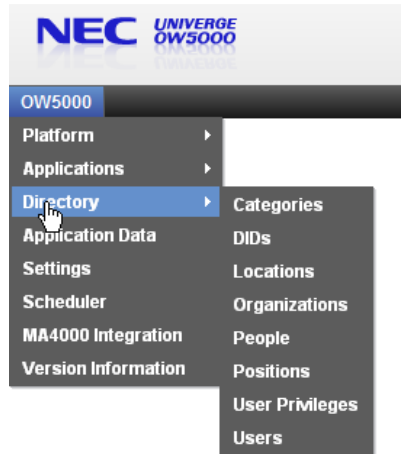
---

## Maintaining the OW5000 Directory

Selecting **Directory** from the OW5000 Options dialog box (Figure 2-10), displays an OW5000 Directory Configuration dialog box (Figure 2-74). The following figure is an example when the United States is selected as the Sales Regions.

---

**Figure 2-74** OW5000 Directory Configuration dialog box



The following topics are included in this section:

- [Configuring Categories](#)
- [Configuring DIDs](#)
- [Configuring Locations](#)
- [Configuring Organizations](#)
- [Person Management](#)
- [Configuring Positions](#)
- [User Privileges Configuration](#)
- [User Management Configuration](#)

## Configuring Categories

The Categories option is used to group organizations, locations, and people together.

Prior to adding categories, the Organizations, Locations, and People must already be configured by OW5000 Administrator. Please refer to [“Configuring Organizations” on page 2-78](#), [“Configuring Locations” on page 2-75](#), and [“Person Management” on page 2-81](#).

Selecting **Categories** from the OW5000 Directory Configuration dialog box ([Figure 2-74](#)) displays [Figure 2-75](#).

**Figure 2-75** Category Management dialog box

## Adding Categories

**Step 1** To add a new category, click **Categories** and then click **Add New**. [Figure 2-76](#) displays.

**Figure 2-76** Add New Category dialog box

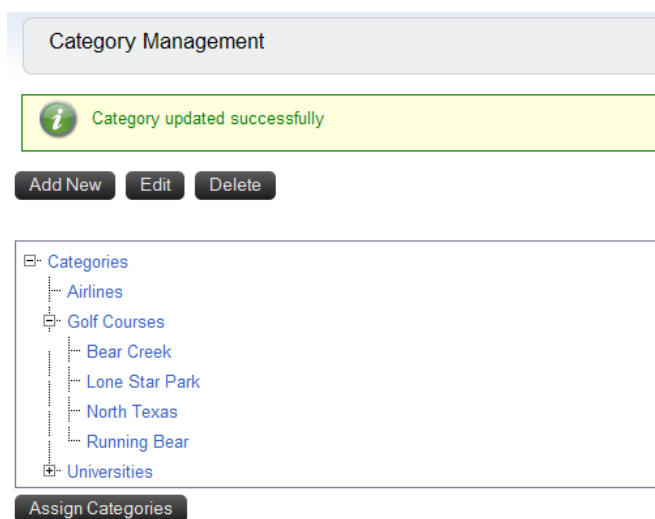
**Step 2** Enter the **Category Name** and a **Category Description**.

**Step 3** Do one of the following:

- Click **Apply** to save the changes.
- Click **Done** to exit the dialog box.
- Click **Cancel** to exit without saving the changes.

The category is added to the list



**Figure 2-77** Category Added dialog box

## Editing Categories

**Step 1** Select the desired category name and click **Edit**. Make the necessary changes and then do one of the following.

- Click **Apply** to save the changes.
- Click **Done** to exit the dialog box.
- Click **Cancel** to exit without saving the changes.

## Assigning Categories

Select the desired category name and click **Assign Categories**. [Figure 2-78](#) displays.

**Figure 2-78** Assign Categories dialog box

Category Management

Parent Category: Golf Courses  
 Category Name: North Texas  
 Category Description: N-tx

ASSIGN CATEGORIES

Organizations Locations People

Filter: Unit Name Contains [ ] Search

[-] Organizations  
 [-] American Airlines  
 [-] The Mark

Apply Done Cancel

- Step 1** Select an Organization or use the **Search** option to link an organization with the category.
- Step 2** Select the search criteria from the **Filter** drop-down list.
- Step 3** Select the **Field** in which to search from the drop-down list.

For example, Contains, Equals, or Starts With and click **Search**. A Database Search Results screen displays listing all previously entered data.

Configuring DIDs

Selecting **DIDs** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a DID dialog box (Figure 2-79).



Displays only if the United States is selected as the Sales Regions.

Figure 2-79 DID dialog box

DID Management

Add New DID

1 - 4 of 4 records 20 Results per page Page 1 of 1

	Name ▲	Extension	PBX	Company
	09	110	325	
	did test	110	325	bwtest-main
	did test	110	325	Company 1
	did test	110	325	Company 1

1 - 4 of 4 records 20 Results per page Page 1 of 1

Manage Custom Fields

Adding a DID Record

**Step 1** Click **Add New DID** from the DID dialog box. A DID Management dialog box displays (Figure 2-80). If a company has not been defined, an error message will display in the dialog box.

Figure 2-80 DID Management dialog box

DID Management

\* Name:

\* PBX: 

NECPBX1

\* Extension: 

10330

\* Company: 

NEC Infrontia

Test DID:

Apply Done Cancel



Fields which must be completed are designated with an asterisk (\*).

**Step 2** Enter the **Name** associated with the DID field.



**Step 3** Select the **PBX** from the drop-down list.

**Step 4** Select the **Extension** from the drop-down list.

**Step 5** Select the **Company** from the drop-down list.



NOTE

To remove or change an existing DID Record, select the desired record and then click the **Pencil**  or **Trashcan**  icon.

**Step 6** Do one of the following:

- Click **Apply** to save the changes.
- Click **Done** to exit the dialog box.
- Click **Cancel** to exit without saving the changes.

## Manage Custom Fields




Selecting **Manage Custom Fields** displays a Manage Custom Fields dialog box (Figure 2-81).

**Figure 2-81** Manage Custom Fields dialog box

DID Custom Fields

Add New Custom Field

1 - 1 of 1 records 20 Results per page Page: 1 of 1



Field Name ▲	Required
Direct Inc.  	

1 - 1 of 1 records 20 Results per page Page: 1 of 1

Done



NOTE

To remove or change an existing Custom Field, select the desired record and then click the **Pencil**  or **Trashcan**  icon.

**Step 1** To add a new field, click **Add New Custom Field** from Figure 2-81. A DID Custom Field dialog box displays (Figure 2-82).

Figure 2-82 DID Custom Field dialog box

DID Custom Fields

\* Field Name:

☐ Required

Apply

Done

Cancel



Fields which must be completed are designated with an asterisk (\*).

- Step 2
- Type the **Field Name** in the text box.
- Step 3
- Select the **Required** checkbox if this entry is mandatory.
- Step 4
- Do one of the following:
- Click **Apply** to update the changes.

—Click **Done** to exit the dialog box.

—Click **Cancel** to exit without saving the changes.

### Configuring Locations

Location is used to assign location data. In the Employee Role page, the user can make a relation between an employee and a location.

Selecting **Locations** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a Location Management dialog box (Figure 2-83).

Figure 2-83 Location Management dialog box

Location Management

Add New

Edit

Delete

Filter: 

All

 Location Name: 

Starts With

Search

Home

Home

1 - 1 of 1 records 

20

 Results per page 

Page: 1 of 1

Name	Fully Qualified Location Name
test location	test location

1 - 1 of 1 records 

20

 Results per page 

Page: 1 of 1

## Adding a Location

**Step 1** Click **Add New** from the Location Management dialog box. An Add New Location dialog box displays (Figure 2-84).



NOTE

- Highlight **Locations** to add a new parent location.
- Highlight a location beneath the parent location to add a new location to the parent.

**Figure 2-84** Add New Location dialog box



NOTE

Fields which must be completed are designated with an asterisk (\*).

**Step 2** Enter the **Name** of the location.

**Step 3** Select the **Type** of location from the drop-down list.

**Step 4** Enter any desired **Notes**.

**Step 5** To assign phone numbers, click **Add New**. An Add Location Phone dialog box displays (Figure 2-85).

**Figure 2-85** Add Location Phone dialog box

Location Management

Parent: <None>

\* Name: Manufacturing

Type: Office

Notes:

---

**PHONE NUMBERS**

Add New

No phone numbers are assigned.

Type: Internal

Add New Extension

Select a number to add

PBX: <All> Filter: Starts With Search Cancel

1 - 1 of 135 records 1 Results per page Page: 1 of 135

PBX	Extension	Tenant
SV7000-44	1906	1

1 - 1 of 135 records 1 Results per page Page: 1 of 135

Apply Done Cancel

- Step 6** Select the **PBX** or choose **<All>** from the drop-down list.
- Step 7** To find a number, select a **Filter** option from the drop-down list and then click **Search**.
- Step 8** Do one of the following:
- Click **Apply** to update the changes.
  - Click **Done** to exit the dialog box.
  - Click **Cancel** to exit without saving the changes.

---

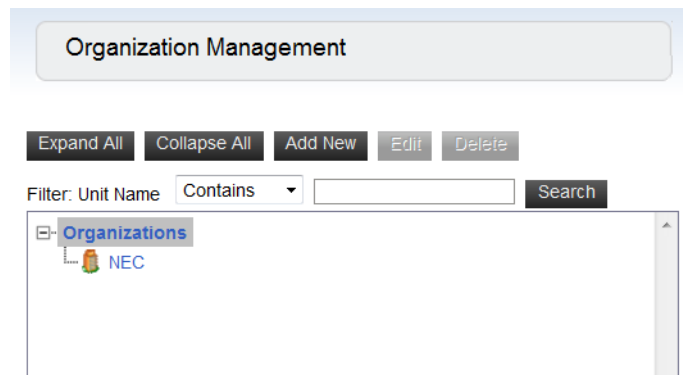
## Configuring Organizations

Organization is used to assign organization data. In the Employee Role page, the user can make a relation between an employee and an organization.

Selecting **Organizations** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays an Organizations Management dialog box (Figure 2-86).

---

**Figure 2-86** Organizations Management dialog box



Use this dialog box to add, edit, or delete organizations. Use **Expand All** to view all Organizations or **Collapse All** to only view the parent organization.



NOTE

To remove or edit an existing organization, highlight the organization and click **Edit** or **Delete**.



### Adding an Organization

**Step 1** Click **Add New** from the Organization dialog box. An Organization—Add New dialog box displays (Figure 2-87).



NOTE

- Highlight Organization to add a new parent organization.
- Highlight an organization beneath the parent organization to add a new organization to the parent.
  - Fields which must be completed are designated with an asterisk (\*).



NOTE

You can also use the plus and minus symbols to Collapse or Expand the view.

Figure 2-87 Organization—Add New dialog box

Organization Management

Parent: <None>

\* Name:

Type: 

...Division

☒ Internal ☐ External

Notes:

LOCATIONS

Add New

No locations are assigned.

PHONE NUMBERS

Add New

No phone numbers are assigned.

Apply

Done

Cancel

- Step 2** Select the **Type** of number to add from the drop-down list, either **Internal** or **External**.
- Step 3** Enter the **Name** of the organization.
- Step 4** Select the **Type** of organization from the drop-down list.
- Step 5** Select whether or not the organization is **Internal** or **External** by selecting the appropriate option button.
- Step 6** Enter any desired **Notes**.

## Adding Locations

- Step 1** If no locations are assigned, or you wish to add more locations, click **Add New** in the Locations section. An Organization—Add Locations dialog box displays (Figure 2-88).

**Figure 2-88** Organization—Add Locations dialog box

LOCATIONS

Add New

Select a location to add. Cancel

Filter: All Location Name: Starts With Search

Home Home

1 - 1 of 1 records 20 Results per page Page: 1 of 1

Name ▲	Fully Qualified Location Name
Manufacturing	Manufacturing

1 - 1 of 1 records 20 Results per page Page: 1 of 1

- Step 2** Select the location to add from the drop-down list and then click **Select**.

## Adding Phone Numbers

- Step 1** If no phone numbers are assigned, or you wish to add more numbers, click **Add** in the Phone Numbers section. An Organization—Add Phone Numbers dialog box displays (Figure 2-89).

**Figure 2-89** Organization—Add Phone Numbers dialog box

PHONE NUMBERS

Add New

No phone numbers are assigned.

Add New Extension

Select a number to add

PBX: <All> Filter: Starts With Search Cancel

1 - 1 of 135 records 1 Results per page Page: 1 of 135 > >>

PBX	Extension ▲	Tenant
SV7000-44	1906	1

1 - 1 of 135 records 1 Results per page Page: 1 of 135 > >>

Apply Done Cancel

- Step 2** Select the **PBX** from the drop-down list.
- Step 3** To find a number, select a **Filter** option from the drop-down list and then click **Search**.

- Step 4** Do one of the following:
- Click **Apply** to update the changes.
  - Click **Done** to exit the dialog box.
  - Click **Cancel** to exit without saving the changes.

Person Management

Selecting **People** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a Person Management dialog box (Figure 2-90).











Figure 2-90 Person Management dialog box

Person Management

Add New Person

Filter: All Last Name Starts With Search

621 - 625 of 1003 records 5 Results per page << < Page: 125 of 201 > >>

	Last Name ▲	First Name	Full Name	SIP URI	Contact Method
 	Brett	Meghan	Brett, Meghan		16154
 	Bright	Alicia	Bright, Alicia		13958
 	Brooks	Nathan	Brooks, Nathan		11980
 	Brown	David	Brown, David		16156
 	Brown	Evan	Brown, Evan		17761

621 - 625 of 1003 records 5 Results per page << < Page: 125 of 201 > >>

Range Delete Manage Custom Fields Full Name Format URI Format

Searching the Database

Use the following steps to conduct a search in the **Person** database.

- Step 1** Select the search criteria from the **Filter** drop-down list.



A Role, such as **User** and **employee**, is set in the **Roles** page. Select **All** in case a Role is not assigned. Refer to “**Roles**” on page 2-87.

- Step 2** Select the **Field** in which to search from the drop-down list.

For example, Last Name, First Name, Contact Method, or Login ID. Another way to search is to select **Starts with** and then enter data in the text box and click **Search**. A Database Search Results screen displays listing all previously entered data. A wildcard (\*) is not required. If you want to display all Persons, set blank in the search field or set None as the search target and then click **Search**.

To add a new person, see “**Adding a Person**” on page 2-84.

## Manage Person Custom Fields

Use the following steps to add user defined fields in the Person database.



NOTE

*This parameter is supported only when other OW5000 applications, which are supported in US market, is installed in the system.*

- Step 1** Click **Manage Custom Fields**. A Person Custom Fields dialog box displays (Figure 2-91).

**Figure 2-91** Person Custom Fields dialog box

Person Custom Fields

Specify the names of the custom fields.

* UserDefined 1:	<input type="text" value="UserDefined1"/>	<input type="checkbox"/> Required
* UserDefined 2:	<input type="text" value="UserDefined2"/>	<input type="checkbox"/> Required
* UserDefined 3:	<input type="text" value="UserDefined3"/>	<input type="checkbox"/> Required
* UserDefined 4:	<input type="text" value="UserDefined4"/>	<input type="checkbox"/> Required
* UserDefined 5:	<input type="text" value="UserDefined5"/>	<input type="checkbox"/> Required
* UserDefined 6:	<input type="text" value="UserDefined6"/>	<input type="checkbox"/> Required

Apply Done Cancel

- Step 2** Select an available undefined **UserDefined** field and enter the desired label for the field.
- Step 3** Select the **Required** checkbox if the information to be entered in the newly defined field is mandatory.
- Step 4** Do one of the following:
- Click **Apply** to update the changes.
  - Click **Done** to exit the dialog box.
  - Click **Cancel** to exit without saving the changes.

### Full Name Display Format

Use the following steps to customize the display name of a Person. At least one person must be assigned before changing this format.

- Step 1
- Select **Full Name Format** from the Person Manager dialog box. A Full Name Display Format dialog box displays (Figure 2-92).

Figure 2-92 Full Name Display Format dialog box

Person Full Name Settings

Full Name Format: Last First, Capital on First & Last Names

Preview of Full Name: Doe John M.

ApplyDoneCancel

- Step 2
- Choose a format from the drop-down list to display a **Preview of Full Name**. Available options are shown in Figure 2-93.
- Step 3
- Do one of the following:
- Click **Apply** to update the changes.
- Click **Done** to exit the dialog box.
- Click **Cancel** to exit without saving the changes.

Figure 2-93 Full Name Display Options

Last First, Capital on First & Last Names

Last First, Capital on First & Last Names

First MI Last, Title Case

Last, Prefix First MI, Suffix, Title Case

Prefix First MI Last, Suffix, Title Case

Last Name First Name

### URI Format Configuration

Selecting **URI Format** from Figure 2-90 displays a URI Format Configuration dialog box (Figure 2-94).

Figure 2-94 URI Format Configuration dialog box

URI Format Configuration

SIPURI FORMAT

SIP URI Key Parameter (\$0): First Character of First Name + Last Name

Translation pattern:

IMURI FORMAT

IM URI Key Parameter (\$0): First Character of First Name + Last Name

Translation pattern:

ApplyCancel

**Step 1** Select one of the following keys from the **URI Key Parameter** drop-down list: The selected key is treated as \$0:

- Primary Extension
- Prefix + Primary Extension
- First Name
- Last Name
- First character of First name + Last Name
- Login ID



NOTE

*Primary Extension and Prefix + Primary Extension keys are only available and displayed in the US Market.*



NOTE

*If **Login ID** is selected as the URI Key Parameter in the Person URI Derivation, User roles must be selected for creation in the Import Settings so that the **Login ID** database field can be mapped to a Login ID column in the Input File. This column **MUST** contain unique Login IDs for each person being added or updated. If an input record specifies a Login ID that is already in use in the OW5000 database, data associated with the existing Person can be overwritten by the data that's being imported for that Login ID. Please ensure that if you are attempting to add a new Person to the database, that the specified Login ID is unique relative to existing Login IDs in the database and relative to other Login IDs in the DBTool Input File.*

**Step 2** Enter the **Translation Pattern Regular Expression**. Maximum of 100 characters, only single byte.



NOTE

*An IMURI FORMAT is used only for the OW5000 applications which are released in US market.*

## Adding a Person

Use the following steps to add a new record to the **Person** database.

**Step 1** Click **Add New Person** in the Person Manager dialog box (Figure 2-90). A Person Management dialog box displays (Figure 2-95).

Example:

URI Key Parameter : First Name  
Translation Pattern : \$0@nec.com

First name of person : Steve  
Auto generated SIP URI : Steve@nec.com



REFERENCE

*Refer to "[Person Database](#)" on page [Appendix B-1](#) for more information on the database fields and their sizes.*

## Person

When adding a new record from the Person Management dialog box, the first screen to display is the **Person** tab (Figure 2-95). The figure below displays when United States is selected as the Sales Regions.

**Figure 2-95** Person Management—Add New dialog box

Current:

**Person** Roles Contact Methods Addresses

\* Last Name:

\* First Name:

Middle Name:

Display Name:

Prefix:

Suffix:

SIP URI:  Auto Input

SIP Access Server:  Not Assigned

SIPUA Group:  Not Assigned

IM URI:  Auto Input

IM Access Server:  Not Assigned

Voice Mail Server:

Subscriber ID:

Special Dial Code:

Add Photo:  Browse...

UserDefined1:

UserDefined2:

UserDefined3:

UserDefined4:

UserDefined5:

UserDefined6:

Note:

Apply Done Cancel



Fields which must be completed are designated with an asterisk (\*).

**Step 1** Enter the **Last Name** and the **First Name** for the new record.

**Step 2** If desired, enter data into the **Middle Name**, and **Display Name** fields.



*Display Name is used when OW5000 applications display the person's name on a Dterm (call logs, calling party information, etc.). This name is limited to 16 characters due to display size limitations and is auto generated using the person's first and last names. You may choose to enter a Display Name in the text box to override/prevent auto generation. Should you wish to resume auto-generation of this field at a later date, simply clear it by back spacing over any existing value.*



- First character of Middle Name + .(dot) is used for the Full Name Display Format. If the Display Name is blank, the Full Name Display Format is applied.
- DBTool Person import — Display Name Generation checks this Display Name parameter.

**Step 3** If desired, select a **Prefix** or **Suffix** for this record.

**Step 4** Do one of the following:

Enter a **SIP URI** if you are using a SIP Server. This SIP URI must be unique in the system. If you are using a SIP terminal, it must be the same as the SIP URI that was assigned in the Extension page or prefix+extension SIP URI.

Select **Auto Input** to set auto generated SIPURI based on the regular expression assigned in URI format page, overwrite the SIPURI that is displayed, or do nothing if the regular expression is not configured.

In the URI Format Configuration page, if the Prefix + Primary Extension or Primary Extension is selected as the SIP URI Key Parameter(\$0), the Primary Extension must be set as the contact method before this step.

**Step 5** Select a **SIP Access Server** from the drop-down list.

**Step 6** Select a **SIPUA Group** name from the drop-down list.



*IM URI, IM Access Server, Voice Mail Server, Subscriber ID and Photo are used for some OW5000 Applications released in US market only.*

**Step 7** Enter the **IM URI** number.

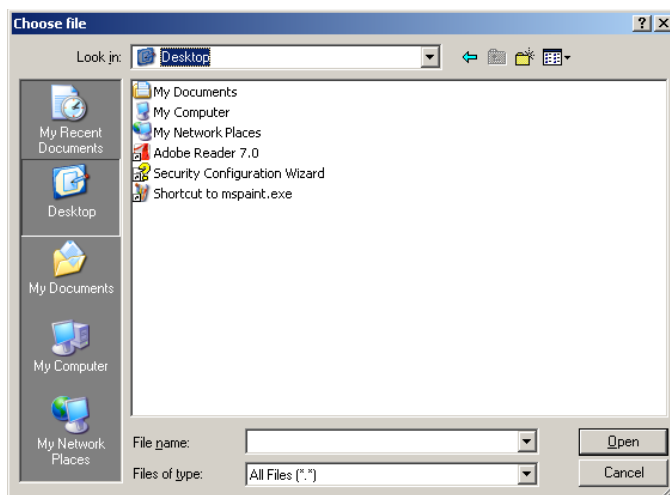
**Step 8** Select the **IM Access Server** from the drop-down list.

**Step 9** Select a **Voice Mail Server** from the drop-down list.

**Step 10** Enter the **Subscriber ID** number.

**Step 11** To add a **Photo**, click **Browse**. An Add Photo dialog box displays (Figure 2-96).



**Figure 2-96** Add Photo dialog box

**Step 12** Enter the file name of the desired photo or choose a different path to find the location and then click **Open**. The file name is added in the **Photo** field.



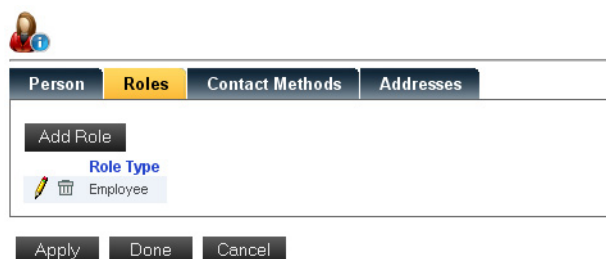
When adding a picture for a person to be viewed in the UC700 client, please be sure to put pictures in a folder accessible by the local service account. Do NOT select a path in a specific user's My Documents or My Pictures folder, for example. Instead, create a separate folder under the C or D drive.

**Step 13** Do one of the following:

- Click **Apply** to save the record.
- Click **Done** to close the dialog box.
- Click **Cancel** to exit without saving the information.

## Roles

Roles can be added to any person that is already configured in the **Person** database. After selecting the desired person, click the **Roles** tab to display a Roles dialog box (Figure 2-97). The following figure displays when United States is selected as the Sales Regions.

**Figure 2-97** Roles dialog box

## Adding a User Role

**Step 1** Click **Add Role**. A Roles—Add New dialog box displays (Figure 2-98). The following figure displays when United States is selected as the Sales Regions.



**IMPORTANT**

The dialog boxes will differ depending on the type of role selected. **User** and **Employee** are required for OW5000 API (InformationAPI).

The following screens reflect the steps necessary for adding a User as the role type. Multiple roles can be assigned for one person.

**Figure 2-98** User Roles—Add New dialog box



**NOTE**

Fields which must be completed are designated with an asterisk (\*).

**Step 2** Select **User** from the drop-down list.

**Step 3** Enter the information in the following fields:

- Login ID
- New Password
- Confirm New Password



**NOTE**

**User** must be selected if SOAP (Information API) is used and the user needs to login to OW5000 Administrator. The length of the password must be at least 8 characters long and include the following rules:

- 1 Uppercase letter (A-Z)
- 1 Lowercase letter (a-z)
- 1 Digit(1-9)
- 1 Special Character (excluding a space, square brackets, backslash, and single or double quotes)

**Step 4** For Windows Authentication, enter the **NTLM Login ID** for the user.



*UC700 only for this parameter. This parameter does not display if UC700 is not installed or if United States is selected as the Sales Region.*

**Step 5** To disable the user role for any reason, click the check box **Login is disabled**.

**Step 6** To set the password to never expire for the user, click the check box **Password never expires**.

**Step 7** To select the **Security Roles** for this user, click the checkbox for each application the user is allowed to view or use, and then select the role type. For example, an administrator, a user, a recipient, or an assistant.



**Step 8** Select the **Confidentiality Status** for this role from the drop-down menu. This is not required for configuration unless United States is selected as the Sales Region.

**Step 9** Do one of the following:

- Click **Apply** to add the role and continue with the configuration.
- Click **Done** to save the information and close the dialog box.
- Click **Cancel** to exit without saving the changes.

### Adding an Employee Role

After selecting the name, click the **Roles** tab from the Person Management dialog box (Figure 2-95). Select **Employee** from the drop-down role type list box to display an Employee Role Type dialog box (Figure 2-99).

If the selected person already has a role assigned, you can edit or delete the role by clicking the Pencil  or Trashcan  icon (Figure 2-97). The following figure displays when United States is selected as the Sales Regions.

**Figure 2-99** Employee Roles—Add New dialog box

**Step 1** Enter the **Employee ID**.



**NOTE**

The **Employee Position**, **Employee Type**, and **Confidentiality Status** are not used.

**Step 2** Select the **Employee Position** from the drop-down list.

**Step 3** Select the **Employee Type** from the drop-down list. For example, a Contractor, Permanent, or Part Time employee.

**Step 4** To set an **Organization** for this employee, click **Select** and then choose an organization. For configuring an Organization, see [“Configuring Organizations” on page 2-78](#). To remove an organization, click **Remove**.

**Step 5** To set a **Location**, click **Select** and then choose a location. For configuring a Location, see [“Configuring Locations” on page 2-75](#). To remove a location, click **Remove**.

**Step 6** Select the **Confidentiality Status** from the drop-down menu.

**Step 7** Do one of the following:

- Click **Apply** to add the role and continue with the configuration.
- Click **Done** to save the information and close the dialog box.
- Click **Cancel** to exit without saving the changes.

Contact Methods

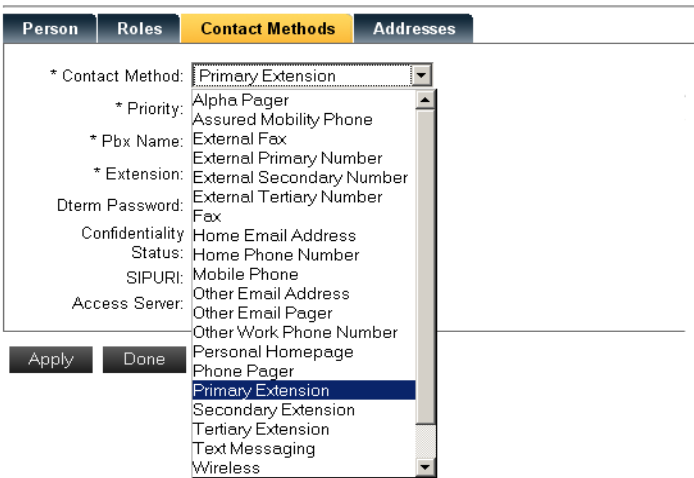
To add a contact method, select the **Contact Method** tab. A Contact Method dialog box displays (Figure 2-100). The following figure is an example when the United States is selected as the Sales Regions.

Figure 2-100 Contact Method dialog box



**Step 1** If no Contact Methods are configured, click **Add New Contact Method**. A Select Contact Method—Type dialog box displays (Figure 2-101). The following figure is an example when the United States is selected as the Sales Regions.

Figure 2-101 Select Contact Method—Type dialog box



**Step 2** Select the type of contact method from the drop-down list.



Fields which must be completed are designated with an asterisk (\*).

The Contact Method dialog boxes may differ depending on the type of contact method you selected. Primary Extension, Secondary Extension and Tertiary Extension are available as a SIP Presence feature. If you are using a softphone collaboration feature, the Primary Extension should be a collaborated extension, and the Secondary Extension should be the softphone.

For example, if you selected Primary Extension from the drop-down list, a Contact Methods—Primary Extension dialog box displays (Figure 2-102). The following figure is an example when the United States is selected as the Sales Regions.

**Figure 2-102** Contact Methods—Primary Extension dialog box

\* Contact Method: Primary Extension

\* Priority: 1

\* PBX Name: NECPBX1

\* Extension:  **Add New Extension**

Starts With  **Search**

1 - 5 of 134 records 5 Results per page Page: 1 of 27 > >>

	Extension	Tenant	E164 Number
>	2110	1	
>	2123	1	
>	10330	1	
>	15410	1	
>	15415	1	

1 - 5 of 134 records 5 Results per page Page: 1 of 27 > >>

Pilot Number: None

Dterm Password:

Confidentiality Status: None

SIPURI:

Access Server:

**Apply Done Cancel**

- Step 3** Select the **Priority** from the drop-down list.
- Step 4** Select the **PBX Name** from the drop-down list.
- Step 5** Do one of the following to choose an **Extension**:

- select the target Extension from the extension list
- click **Add New Extension**

Clicking the **Add New Extension** button opens an Extension dialog box. Refer to “[Adding Extensions](#)” on page 2-18 for more information. After entering all necessary information, click **Apply**.

- search for an extension, by choosing **Contains**, **Ends With**, **Equals**, or **Starts With** from the drop-down list, then enter the desired value and click **Search**.

- Step 6** Select **Pilot Number** for personal voice mailbox (displayed only when UC700 is installed).
- Step 7** Enter the **Dterm Password** (if applicable) in the text box.

**Step 8** Choose the **Confidentiality Status** from the drop-down list. (Only available for the US market).



*Pilot Number, Dterm Password, and Confidentiality Status are not used unless the OW5000 Applications released in the US market are used.*

**Step 9** Do one of the following:

- Click **Apply** to add the contact method and continue with the configuration.
- Click **Done** to save the information and close the dialog box.
- Click **Cancel** to exit without saving the information.

### Address Information

This is displayed only when the United States is selected as the Sales Region or if an OW5000 Application which released in US market is installed.

**Step 1** To add an address, select the **Addresses** tab. If no Addresses have been configured, click **Add New Address**. An Address Information dialog box displays (Figure 2-103).

**Figure 2-103** Address Information dialog box

**Step 2** Select the **Address Type** from the drop-down list.



*Fields which must be completed are designated with an asterisk (\*).*

**Step 3** Enter/select information in the following fields:


- Country/Region
- Street
- City
- Zip/Postal Code

**Step 4** Do one of the following:

- Click **Apply** to add the address.
- Click **Done** to display the new entry.
- Click **Cancel** to exit without saving the information.


### Editing or Deleting Person

To edit or delete a person, follow the steps below.

**Step 1** Click the **Pencil**  icon next to the desired Person to edit the data (Figure 2-90).

**Step 2** After you have completed the editing, do the one of following:

- Click **Apply** to save the information.
- Click **Done** to save the information and close the dialog box.
- Click **Cancel** to exit without saving the changes.

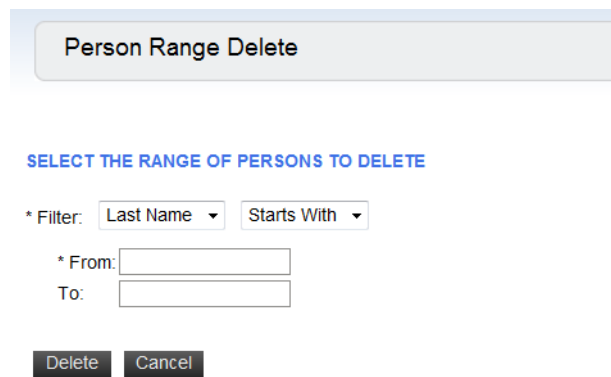
**Step 3** Click the **Trashcan**  icon next to the desired Person to delete the data.

### Person Range Delete

Follows the steps below to range delete a Person.

**Step 1** Click **Range Delete** from the Person Management dialog box (Figure 2-90).

**Figure 2-104** Person Range Delete dialog box



The dialog box is titled "Person Range Delete". Below the title is a section labeled "SELECT THE RANGE OF PERSONS TO DELETE". This section contains a filter selection area with a label "\* Filter:" followed by two dropdown menus: "Last Name" and "Starts With". Below the filter area are two text input fields: "\* From:" and "To:". At the bottom of the dialog box are two buttons: "Delete" and "Cancel".

**Step 2** Select the desired filter of the range delete from drop-down list.

**Step 3** If you use an alphabet or numeric value as the query parameter, enter the value in the **From** and **To** text box fields. If another query parameter is used, such as a multi-byte character, enter the value in the **From** text box field only.



**Step 4** Click **Delete**. This may take a few minutes depending on the number of people to be removed. A maximum of 500 people can be deleted at a time.



NOTE

*A Person cannot be deleted if they are in use by the system. In this case, retry the range delete or execute after business hours.*



NOTE

*DBTool—BulkDelete can be used as a Person delete.*

## Configuring Positions

**Step 1** Selecting **Position** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a Position Management dialog box (Figure 2-105). The following figure is an example when the United States is selected as the Sales Regions.

**Figure 2-105** Position Management dialog box

Position Management

Add New Position

Filter:

Search

1 - 20 of 2186 records

20

Results per page

1

Page

110

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> >>

		Title ▲	Abbreviation
		Med student	Medstudent
		(som) Physician	(som)Physi
		*admin Assistant	*adminAssi
		*analyst Programmer I	*analystPr
		*asst Credit/collect Mgr	*asstCredi
		*carpenter	*carpenter
		*clerical Specialist V	*clericalS
		*clinical Psychologist Iii	*clinicalP
		*counselor I	*counselor
		*demographer	*demograph
		*department Secretary	*departmen
		*director Of Cars	*directorO
		*emt Trainer Iv	*emtTraine
		*invalid Job Class	*invalidJo
		*lead Custodian	*leadCusto
		*med Transcriptionist Ii	*medTransc
		*medical Dept. Admin Iii	*medicalDe
		*mental Health Assoc Ii	*mentalHea
		*physician	*physician
		*program Manager	*programMa

1 - 20 of 2186 records

20

Results per page

1

Page

110

of 110

> >>

UCE Application Platform (UNIVERGE OW5000) Configuration Guide

## Adding a Position

**Step 1** Click **Add New Position** from the Position Management dialog box. A Position—Add New dialog box displays (Figure 2-106).

**Figure 2-106** Position—Add New dialog box



\* Title:

Abbreviation:

**Step 2** Enter the position name in the **Title** field.



**Step 3** (Optional) Enter the position abbreviation in the **Abbreviation** field.

**Step 4** Do one of the following:

- Click **Apply** to save the information.
- Click **Done** to exit the dialog box.
- Click **Cancel** to exit without saving the changes.



**NOTE**

To remove or edit an existing position, select the **Pencil**  or **Trashcan**  icon.

**Step 5** To find a position, enter data in the **Filter** text box and click **Search**.

### Configuring Specialities

Selecting **Specialities** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a Specialities dialog box (Figure 2-107). Specialities is displayed only when UA5200 is installed in the system.









































Figure 2-107 Specialities dialog box

Specialty Management

Add New Specialty

Filter:  Search

1 - 20 of 55 records 20 Results per page Page: 1 of 3 > >>

	Name ▲
 	Adolescent Medicine
 	Adolescent Psychiatry
 	Allergy
 	Anesthesiology
 	Anesthesiology, Pediatric
 	Burn
 	Cardiac and Thoracic Surgery, Pediatric
 	Cardiology
 	Cardiology, Pediatric
 	Child & Adolescent Psychiatry
 	Child Development
 	Critical Care, Pediatric
 	Dentistry, Pediatric
 	Dermatology
 	Dermatology, Pediatric
 	Electrophysiology
 	Emergency Medicine
 	Emergency Medicine, Pediatric
 	Endocrinology
 	Endocrinology, Pediatric

1 - 20 of 55 records 20 Results per page Page: 1 of 3 > >>

### Adding a Specialty



**Step 1** Click **Add New Specialty** from the Specialities dialog box. A Specialty—Add New dialog box displays (Figure 2-108).

Figure 2-108 Specialty—Add New dialog box

Specialty Management

\* Description:

Apply Done Cancel

- Step 2** Enter a name in the **Description** field.
- Step 3** Do one of the following:
- Click **Apply** to save the specialty.
  - Click **Done** to exit the dialog box.
  - Click **Cancel** to exit without saving the changes.
- Step 4** To remove or edit an existing specialty, select the **Pencil**  or **Trashcan**  icon next to the specialty name.

## User Privileges Configuration

- Step 1** Selecting **User Privileges** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a User Privilege Management dialog box (Figure 2-109). The following figure is an example when the United States is selected as the Sales Regions.

**Figure 2-109** User Privilege Management dialog box

User Privilege Management

SEARCH USERS

Organizations Locations Roles Security

Search:

Organizations Results Selected Members

NEC Corporation of America  
NEC Infrontia  
NEC Infrontia, Inc.  
NEC Unified Solutions, Inc.

APPLICATIONS AND ROLES

☐ Employee  
☐ Patient  
☐ Physician  
☐ Student  
☒ User

APPLICATIONS AND ROLES

☐ Mobility Client   
☐ OW5000 Administrator   
☐ UC700

SELECT ORGANIZATION

Organization : <Not Set>

SELECT LOCATION

Location : <Not Set>

**Step 2** To modify privileges for a user, enter the user name in the **Search** text box. You can also search by **Organizations**, **Locations**, **Roles**, or **Security**.

**Step 3** Select the desired application(s) in which to change privileges, and then select the privilege type from the drop-down list.

**Step 4** Click **Apply**.



NOTE

*If the person being modified does not have an assigned role but Organization/Location is selected on this page, an Employee role will be created for this person and associated with the selected Organization/Location.*



NOTE

*If the person is already assigned a role, like physician/employee/patient, and has an associated Organization/Location, they will simply be updated with the new values.*



NOTE

*If multiple people are assigned User roles using the **User Privilege** page, the default password that the OW5000 uses for the created logins is **Passw0rd\$**.*



NOTE

*A maximum of 500 people can be modified at one time.*

## User Management Configuration

Selecting **Users** from the OW5000 Directory Configuration dialog box (Figure 2-74) displays a **User Management** dialog box (Figure 2-110). This option allows you to manage user information, and to add or change application and role privileges. The following figure is an example when the United States is selected as the Sales Regions.



**IMPORTANT**

The **Password** for an Administrator can only be changed from this configuration page. The Person Management Roles page can be used for other person configurations.

**Figure 2-110** User Management dialog box

User Management

**SEARCH USERS**

Filter By: Last Name ▾ Starts With ▾  Search

1 - 8 of 8 records 10 Results per page Page: 1 of 1

	<a href="#">Last Name</a> ▲	<a href="#">First Name</a>	<a href="#">Full Name</a>	<a href="#">Login ID</a>
		Front Desk	Front Desk	
		Guest Phone	Guest Phone	
	Administrator	Administrator	Administrator	admin
	Davis	Scott	Davis, Scott	sdavis
	Little	James	Little, James	jittle
	mehta	vivek	mehta, vivek	
	Mohammed	Rizaullah	Mohammed, Rizaullah	Riza
	Westbrook	Lesley	Westbrook, Lesley	

1 - 8 of 8 records 10 Results per page Page: 1 of 1

**USER INFORMATION**

\* Login ID:

\* New Password:

\* Confirm New Password:

NTLM Login ID:

☐ Disable User Role

☐ Password never expires

Employee Name:

---

**APPLICATIONS AND ROLES**

☐ Message Center

☐ On-Call Administrator

☐ OW5000 Administrator

☐ Procedure Manager Administrator

☐ UA5200 Server

☐ Wake-Up

MC Admin Recipient ▾

On Call Admin User ▾

OW5000 Administrator ▾

Procedure Manager Admin ▾

UA5200 Administrator ▾


Wake Up Administrator ▾

Apply

Use the steps below to change passwords, application privileges, or to delete a user account.

## Modifying a User Account

Use the following steps to modify an account.

**Step 1** Select the **Pencil**  icon next to the desired user from the list of displayed names (Figure 2-110), or enter data in the **Filter By** field and click **Search**.

**Step 2** Enter the **Login ID**.



*Fields which must be completed are designated with an asterisk (\*).*

**Step 3** Enter a new password in the **New Password** field.



*The length of the password must be at least eight characters long and include the following rules:*

- 1 Uppercase letter (A-Z)*
- 1 Lowercase letter (a-z)*
- 1 Digit(1-9)*
- 1 Special Character (excluding a space, square brackets, backslash, and single or double quotes)*

**Step 4** Enter the new password again in the **Confirm New Password** field.

**Step 5** For Windows Authentication, enter the **NTLM Login ID** for the user.



*This parameter is displayed only when the United States is selected as the Sales Region or if OW5000 Applications which are released in US market is installed.*


**Step 6** To disable the user role for any reason, click the check box **Login is disabled**.

**Step 7** To set the password to never expire for the user, click the check box **Password never expires**.

**Step 8** Select the desired privilege for OW5000 Administrator as well as any installed applications. See each application's installation guide for a definition of each available choice.

**Step 9** Click **Apply**.

## Deleting a User Account

**Step 1** Select the **Trashcan**  icon next to the desired user from the list of displayed names (Figure 2-110), or enter data in the **Filter By** field and click **Search**. A delete confirmation dialog box displays.

**Step 2** Click **OK** to delete the user role for this person.

---

## Application Data Management

From the Application Data Management page, it is possible to change the configuration data of the OW5000 system. This configuration change is allowed only for maintenance, and should never be changed without first consulting with an NEC representative.

---

## Settings Configuration

Selecting **Settings** from the OW5000 Options dialog box ([Figure 2-10](#)), displays an OW5000 General Settings dialog box ([Figure 2-111](#)).

---

### General Settings

Follow the steps below to configure the General Settings. The following figure is an example when the United States is selected as the Sales Regions.



Figure 2-111 OW5000 General Settings dialog box

**General Settings** **Countries & States**

**DEFAULT COUNTRY CODE**  
Select The Default Country Code: United States of America (1)

**REPORT SETTINGS**  
Reporting Services URL: http://galactica64/ReportServer  
Reports must be uploaded to the report server before they can be executed: [Upload Reports](#)

**DEFAULT HOME PAGE**  
Select The Default Home Page: Blank(default)

**PASSWORD SETTINGS**  
☒ Password Never Expires  
Default Password Validity Period: 0 (days)

**LICENSE MANAGER CONNECTION INFORMATION**  
IP Address/Name: Port: 49300  
*If any changes to this section are made, it may take a minute for the system to read licenses and reflect changes.*

**SMTP SERVER SETTINGS**  
SMTP Server Name: (e.g. 'server.domain.prv')  
Server SMTP Port: 25 (1 - 65535; default '25')  
SMTP Secure Port: (1 - 65535)  
Username:  
Password:

[Apply](#) [Cancel](#)

- Step 1** Select the **Default Country Code** from the drop-down list.
- Step 2** Enter the **Reporting Services URL**. The OW5000 installed server is set as the default URL. This parameter is displayed only when the United States is selected as the Sales Region.
- Step 3** Select the **Default Home Page**. The Extension or Person page can be selected as the default page when you log into OW5000 Administrator.



When logging in after a session timeout, the last page you used before the timeout displays; not the Default Home Page.

- Step 4** To set the password to never expire for the user, click the check box **Password never expires**.

When **Password never expires** is checked, set the validity period for the password. This parameter is disabled if **Password Never Expires** is set.

- Step 5** In the **License Manager Connection Information** section, do the following:

- enter the **IP Address/Name** and the **Port** number to set the LMC server connection IP Address. This is a mandatory parameter.
- enter the **Port** number to set the LMC Server connection port. This is a mandatory parameter.



NOTE

*This configuration is not required when Asia is selected as the Sales Region.*

- Step 6** Do one of the following:
- Click **Apply** to save the speciality.
  - Click **Cancel** to exit without saving the changes.

## Countries & States

Follow the steps below to configure Countries & States.

**Figure 2-112** OW5000 Countries & States dialog box

Description	Country Code	Is Default for Install	Is Default for CountryCode
Afghanistan	93	False	False
Albania (Republic of)	355	False	False
Algeria (People's Democratic Republic of)	213	False	False
American Samoa	1	False	False
Andorra (Principality of)	376	False	False

## Adding a New Country

- Step 1** Click **Add New Country/Region** in the Countries & States dialog box (Figure 2-112). Figure 2-113 displays.

**Figure 2-113** Adding New Country/Region dialog box

The dialog box is titled 'Adding New Country/Region'. It has two tabs: 'General Settings' and 'Countries & States'. The 'Countries & States' tab is selected. The form contains the following fields and controls:

- \* Description: [Text Input Field]
- \* Country Code: [Text Input Field]
- Is Default For Install: ☐
- Is Default For CountryCode: ☐
- Buttons: Apply, Done, Cancel

**Step 2** Enter the **Description** and the **Country Code**.

**Step 3** Do one of the following for the **Is Default For Install** field.

- Do **not** check if you are creating a new Country.
- Do check if this new country is treated as the default country when more than one county has the same country code.

**Step 4** Do one of the following:

- Click **Apply** to save the record.
- Click **Done** to close the dialog box.
- Click **Cancel** to exit without saving the information.

### Adding New Region

**Step 1** Select the target **Country** from the country list ([Figure 2-112](#)).

**Step 2** State/Provinces displays at the bottom of list, so click **Add New State/Province**. A State/Provinces dialog box displays.

**Figure 2-114** State/Provinces dialog box

The dialog box is titled 'STATES/PROVINCES'. It contains the following fields and controls:

- \* Name: [Text Input Field]
- \* Code: [Text Input Field]
- Buttons: Apply, Done, Cancel

**Step 3** Enter the **Name** and **Code**.

**Step 4** Do one of the following:

- Click **Apply** to save the record.
- Click **Done** to close the dialog box.
- Click **Cancel** to exit without saving the information.

## Schedule Configuration


OW5000 provides schedule functionality of data import/export and database backup. It allows a variety of scheduling types such as one-time, daily, weekly and monthly. Also, the history page shows the result of the schedule.



### Creating a DBTool Schedule

Select **Scheduler** from the OW5000 Options dialog box (Figure 2-10) and follow the steps below.

**Step 1** Click the **DBTool** tab to display Figure 2-115, and then follow the steps below to configure the schedules.

**Figure 2-115** Schedule Profile dialog box

Profile Name	Import / Export Source	Profile Type	Scheduled
 Employees	DBTool	Import	False

**Step 2** When scheduling an existing profile, select **Schedule Profile** or click the **Pencil**  icon to display a Scheduling dialog box (Figure 2-116). To delete or cancel a schedule, click the **Trashcan**  icon. Refer to [Chapter 5, "Database Operations" on page 5-1](#) for information on creating a DBTool Profile.

**Figure 2-116** Scheduling (One Time) dialog box

- Step 3** Check the **Enabled** check box. When checked, the scheduled profile is available.
- Step 4** Select the **Recurring Type** from the drop-down list. Selection options are **One Time** (non-recurring), or **Recurring**. If recurring is selected, a frequency of daily, weekly, or monthly is available for selection. The display screen is dependent on the kind of schedule created.

**Duration of Recurrence** is used to configure a detailed schedule.

**Start Date:** Sets the start date of this schedule.

**Start Time:** Sets the start time of this schedule.

**End By:** Sets the end date of this schedule. Select **No End Date** when you do not need to set an end date.



NOTE

*If a One Time schedule is set before the current time, the schedule will not be executed.*



NOTE

*A One Time schedule only needs the start date and time. A Recurring schedule needs the setting of Recurrence Pattern in addition to the Duration of Recurrence.*

For instance, if you select **Recurring** from the Schedule Type drop-down list and select **Daily** as the Recurrence Pattern, [Figure 2-117](#) displays.

**Figure 2-117** Scheduling (Recurring Daily) dialog box

DBTool Database BackUp History

Profile :

Enabled: ☒ Recurring Type:

---

Schedule Time

\* Start Date:   \* Start Time:

---

Recurrence Pattern

Every  Day(s)

---

Duration of Recurrence

\* Start Date:

\* Start Time:

☐ End By:

☒ No End Date

This Schedule is executed on a daily basis. Set 1 to run the schedule import/export everyday.

**Duration of Recurrence** is used to configure a detailed schedule.

**Start Date:** Sets the start date of this schedule.

**Start Time:** Sets the start time of this schedule.

**End By:** Sets the end date of this schedule. Select **No End Date** when you do not need to set an end date.

Selecting **Weekly** as the Recurrence Pattern displays [Figure 2-118](#).

**Figure 2-118** Scheduling (Recurring Weekly) dialog box

DBTool Database BackUp History

Profile :

Enabled: ☒ Recurring Type:

Schedule Time

\* Start Date:  \* Start Time:   AM

Recurrence Pattern

Recur every  weeks on: ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday

☐ Thursday ☐ Friday ☐ Saturday

Duration of Recurrence

\* Start Date:  \* End By:

\* Start Time:   AM ☐ No End Date

Apply Cancel

This schedule is executed on a weekly basis. Set 1 to run the schedule import/export every week.

**Duration of Recurrence** is used to configure a detailed schedule.

**Start Date:** Sets the start date of this schedule.

**Start Time:** Sets the start time of this schedule.

**End By:** Sets the end date of this schedule. Select **No End Date** when you do not need to set an end date.

Selecting **Monthly** as the Recurrence Pattern displays [Figure 2-119](#).

**Figure 2-119** Scheduling (Recurring Monthly) dialog box

DBTool Database BackUp History

Profile : Employees

Enabled: ☒ Recurring Type: Recurring

Schedule Time

\* Start Date:  \* Start Time: 12:00:AM

Recurrence Pattern

Monthly

☒ Day 1 of every 1 month(s)

☐ The first Sunday of every 1 month(s)

Duration of Recurrence

\* Start Date: January 19 2010 \* End By:

\* Start Time: 12:00:AM ☒ No End Date

Apply Cancel

This schedule is executed on a monthly basis. Set 1 to run the schedule import/export every month.

**Duration of Recurrence** is used to configure a detailed schedule.

**Start Date:** Sets the start date of this schedule.

**Start Time:** Sets the start time of this schedule.

**End By:** Sets the end date of this schedule. Select **No End Date** when you do not need to set an end date.



## Confirmation of Schedule Results

To confirm the schedule results, use the Log Viewer by following the steps below.

**Step 1** Click **Start > All Programs > NEC OW5000 > Runtime Platform > LogViewer**, and then select **Scheduler and DBTool**, which includes the log of confirmation dates, and then click **Start Search**.

When the scheduler is executed, the following event is logged (Table 2-5).

**Table 2-5** Scheduler Execution

Severity	Application	Description
Debug	Scheduler	Successfully executed.DbToolPlugin:

When the DBTool is executed, the following event is logged (Table 2-6).

**Table 2-6** DBTool Execution

Severity	Application	Description
Info	DBTool	New Application has started logging: APP:DBTool PID: <PID #> TID:<TID #> USER:Administrator MACHINE: <OW5000 server name> EXE:C:\Program Files\NEC\OW5000\DBTools\DBToolConsole.exe EventSource:OAIMsg.dll.

When the DBTool process is completed, the following event is logged (Table 2-7).

**Table 2-7** DBTool Process Completed

Severity	Application	Description
Dbug	DBTool	Closing Log

**Step 2** If a schedule is not executed correctly, an Error event is logged between the executed and completed event.

## Creating a Database Backup Schedule

**Step 1** Click the **Database Backup** tab to display [Figure 2-120](#), and then follow the steps below to configure the schedules.

**Figure 2-120** Database Backup dialog box

DBTool Database BackUp History

\* Retention Days: 14

\* File Name:  Test File Path

The backup would be taken on Database server in SQL Server's default directory.

SCHEDULE

Enabled: ☒ Recurring Type: Recurring

Schedule Time

\* Start Date:  \* Start Time: 12:00 AM

Recurrence Pattern

Daily

Every 1 Day(s)

Duration of Recurrence

\* Start Date: January 26 2010 \* Start Time: 12:00 AM

End By:  No End Date

Apply Cancel

- Step 2** Enter the number of days in the **Retention Days** edit box to define the amount of time the backup file will be kept in the server. Default is 14 days.
- Step 3** Enter the **File Name** to define the saved backup file name. By default, the file is backed-up in the same location as where SQL Server is installed. By clicking **Test File Path**, you can confirm that the database backup file was created correctly.
- Step 4** Set the schedule based on your requirements. Refer to [“Creating a DBTool Schedule” on page 2-106](#) for more details.

## History

**Step 1** Click the **History** tab to display [Figure 2-121](#). This dialog box displays the results of the schedule process for both DBTool and Database Backup.

**Figure 2-121** History dialog box

DBTool		Database BackUp		History	
Filter: Event Type :		All		Event Name : Starts With	
				Search	
1 - 2 of 2 records		10		Results per page	
				Page: 1 of 1	
Event Type	Event Name	Start Date Time	End Date Time	Success	Retried
DbTool	Import extensions	1/20/2010 10:05:00 AM	1/20/2010 10:05:00 AM	True	
DbTool	License Import	1/20/2010 10:10:00 AM	1/20/2010 10:10:00 AM	False	
1 - 2 of 2 records		10		Results per page	
				Page: 1 of 1	

When a schedule is executed, the **Type**, **Event Name**, **Date** and the results display. If the schedule process fails, click on the icon (left side) of the results information. The request is then executed immediately.

## MA4000 Integration

Please refer to [Chapter 6, "OW5000-MA4000 Integration"](#) on page 6-1 for more information.

## Version Information

Selecting **Version Information** from "OW5000 Options dialog box" on page 2-8, displays an OW5000 Version Information dialog box (Figure 2-122). This is used for informational purposes only.

Figure 2-122 OW5000 Version Information dialog box

OW5000 Version Information

**SUMMARY BUILD INFORMATION**

**Version:** 6.4.0 A7  
**Build:** 6.4.0.8  
**Date:** 12-21-2008  
**Time:** 01:16:39

**DETAILED FILE VERSION INFORMATION**

1 - 5 of 727 records 5 Results per page
Page: 1 of 146 > >>

File Name ▲	Path	Version	Date
AccessServer.exe	C:\Program Files\NEC\OW5000\AccessServer\	6.5.118.0	1/28/2009
Admin.Common.dll	C:\Program Files\NEC\OW5000\Administrator\bin\	6.5.125.0	1/30/2009
Admin.Common.dll	C:\Program Files\NEC\OW5000\Administrator\bin\	6.5.125.0	1/30/2009
Admin.MessageCenter.dll	C:\Program Files\NEC\OW5000\Administrator\bin\	6.5.125.0	1/30/2009
Admin.MessageCenter.dll	C:\Program Files\NEC\OW5000\Administrator\bin\	6.5.125.0	1/30/2009

1 - 5 of 727 records 5 Results per page
Page: 1 of 146 > >>



NOTE

If Asia (Others) is selected as the Sales Region, check the OW5000 version using the steps below.

1. Open Issue.txt from C:\Program Files\NEC\OW5000\Runtime Platform\Issue.txt (default).
2. Confirm the underline part as the version information.

DO NOT MODIFY THIS FILE  
 SC-3904 OWX PROG-R4 ISSUE X.XX

## Exiting OW5000 Administrator

The OW5000 Administrator user interface can be exited by closing your browser or by clicking **Log Out** in the OW5000 Administrator Control Panel (Figure 2-10).



NOTE

OW5000 Administrator will automatically time out if there is no activity after 15 minutes (default). If this happens, you will need to login again to continue the configuration.

# 3

---

## WatchDog

WatchDog is a utility in the OW5000. It operates in the background and monitors selected software service applications.

Should a service encounter some type of data error, it may shutdown and disable the network service it was providing. Since these services cannot restart themselves, WatchDog can detect the service outage and then restart the service application. WatchDog can monitor multiple service applications residing on the local server.

When WatchDog detects a monitored service shutdown, it first makes a log entry, and after a set interval, restarts the service. Log entries can aid in application troubleshooting. If the monitored service has any dependent services set up (typically automatically set during the installation of the application), they will be stopped before the monitored service is restarted.

The following topics are included in this chapter.

### *Chapter Topics*

- [Verifying the WatchDog Status](#)
- [WatchDog Helper](#)

---

## Verifying the WatchDog Status

WatchDog is installed during the initial OW5000 installation. No additional installation is required. It is configured by default to automatically start every time the OW5000 Server boots.

These settings can be verified through the Administrative Tools window. WatchDog cannot monitor the service if it is installed on another server.

---

## WatchDog Helper

WatchDog Helper is the graphical user interface (GUI) for the OW5000 WatchDog application. The following sections describe the windows and functions of WatchDog Helper.

## Main Window

Starting the WatchDog Helper program displays the WatchDog Helper main window (Figure 3-1).

**Step 1** Start WatchDog Helper by clicking the **Start** button on the workstation desktop, and then select **All Programs > NEC OW5000 > Runtime Platform > WatchDog Helper**.

**Figure 3-1** WatchDog Helper main window

OW5000 Application	Host Machine	Monitoring	Retry Interval	Service Status
OW OAIMonitor	PROPHET	Yes	10	Running
OWAccessServer	PROPHET	Yes	10	Running
OWConference Server	PROPHET	Yes	10	Not Running
OWDBSync	PROPHET	Yes	10	Not Running
OWIncomingCallAssi...	PROPHET	Yes	86400	Not Running
OWLocationStatus	PROPHET	Yes	86400	Not Running
OWOaiServer	PROPHET	Yes	10	Not Running
OWPSGateWayService	PROPHET	Yes	10	Not Running
OWRmid	PROPHET	Yes	10	Running
OWRmiRegistry	PROPHET	Yes	10	Running
OWTelephony Even...	PROPHET	Yes	10	Not Running
OWTomcat	PROPHET	Yes	10	Running

The columns in the WatchDog Helper main window (Figure 3-1) are described in Table 3-1.

**Table 3-1** WatchDog Helper main window—columns

Option	Action
OW5000 Application	Services that have been assigned to be monitored by WatchDog.
Host Machine	Name of the local Host server where services are monitored by WatchDog.
Monitoring	Indicates whether WatchDog monitoring is currently enabled for a service. A service may be listed to be monitored, but can have monitoring temporarily turned off to allow for specific testing of the service application. This would be useful if testing could generate errors or changes in the operating status of the service.
Retry Interval	Displays the time interval (in seconds) that WatchDog will wait, after it monitors a service shutdown, before it restarts the monitored service. This interval is set as appropriate for the service and its specific requirements in restarting.

Option	Action
Service Status	Additional way to determine if the service itself is running. A Service Status of "Running" could indicate a service that was started. A Service Status of "Not Running" could indicate a service that was shut down. A Service Status of "Invalid/ Non Existing Service" could indicate the service is not registered to the OS. A Service Status of "WatchDog not running" could indicate that service monitoring is shutdown. A Service Status of "Not Monitored" could indicate that the Monitoring setting is inactivated or that service monitoring is not set.

### Main Window Display Options

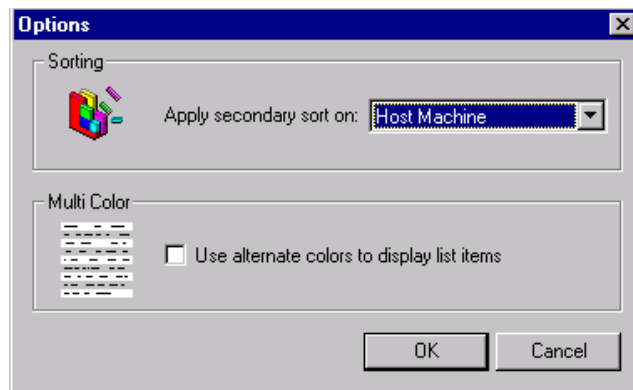
The main window Tool and Status bars can be enabled or disabled. From the menu bar, under **View** select to enable or disable the tool and status bars.

The main window application listing can be sorted by selected column. Click on a column label (OW5000 Application, Host Machine, Monitoring, Retry Interval, or Service Status) to sort the list by that column. Alternate selection of the sort column will alternately sort the list in ascending or descending order.

The main window listing can be further sorted and the display enhanced for readability.

**Step 1** Select **View > Options** from the main window. A WatchDog Helper Options dialog box displays (Figure 3-2).

**Figure 3-2** WatchDog Helper Options dialog box



The Options dialog box provides the selection of a secondary sort parameter.

- Step 2** Select the secondary column from the **Apply secondary sort on** drop-down list.
- Step 3** The main window listing can be displayed with a different line color for other service applications for easier readability. Select the **Use alternate colors to display list items** box to apply the Multi Color display style.

**Step 4** Click **OK**.

### Main Window Toolbar








The main window toolbar (Figure 3-3) provides toolbar buttons to quickly access the primary WatchDog Helper functions.

**Figure 3-3** WatchDog Helper main window toolbar



The seven buttons (left to right) provide quick access to the functions described in Table 3-2.

**Table 3-2** Main window toolbar

	Add Service item
	Delete Service item
	Update Service item
	Stop Service
	Start WatchDog
	Stop WatchDog
	About (Shows the "About This Program" information)



The functions can also be selected by clicking the right mouse button to display the context (shortcut) menu (Figure 3-4). Select the desired function as indicated.


**Figure 3-4** WatchDog Helper shortcut menu



These functions are described in detail in the following sections.

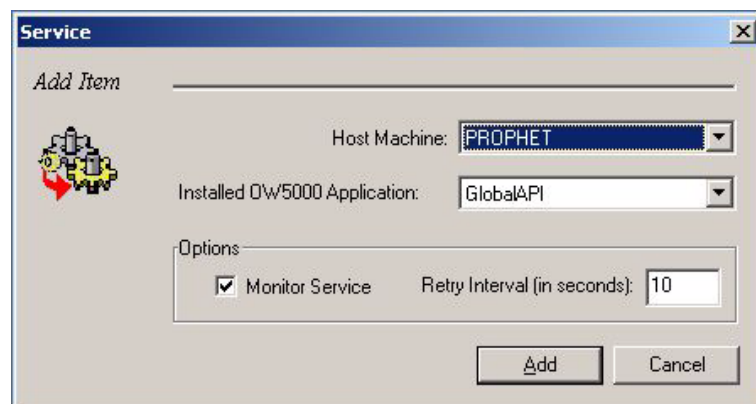
## Adding a Service

Use the following steps to add a service application for monitoring by WatchDog.

- Step 1** Do one of the following in the main WatchDog Helper window:
- Click **Tools > Add Service**.
  - Right-click the name of any OW5000 Application in the main window and select **Add Service**.
  - Click the **Add Service**  button.

A WatchDog Helper Add Service dialog box displays (Figure 3-5).

**Figure 3-5** WatchDog Helper Add Service dialog box



- Step 2** Select the desired Host from the drop-down list of available machines in the **Host Machine** field.

**Step 3** Select the OW5000 application to be monitored by WatchDog for the specific Host Machine from the **Installed OW5000 Application** field.



*If nothing is shown, all the OW5000 applications are already monitored by WatchDog.*

**Step 4** Select the **Monitor Service** box under Options if WatchDog monitoring is to be enabled at this time.

**Step 5** Enter the **Retry Interval** (in seconds) for the restart of this application following a shutdown.




*Some applications take longer to completely shut down than others. Selecting a retry interval that is too short may result in a service race condition where a service may try to restart before it is completely shut down. This can result in serious problems with Windows and the services may not start properly.*

**Step 6** Select the **Add** button to add the service item, or **Cancel** to leave this function without saving your changes. Once an application item is added, it will then be listed on the WatchDog Helper main window of monitored service applications.

## Deleting a Service

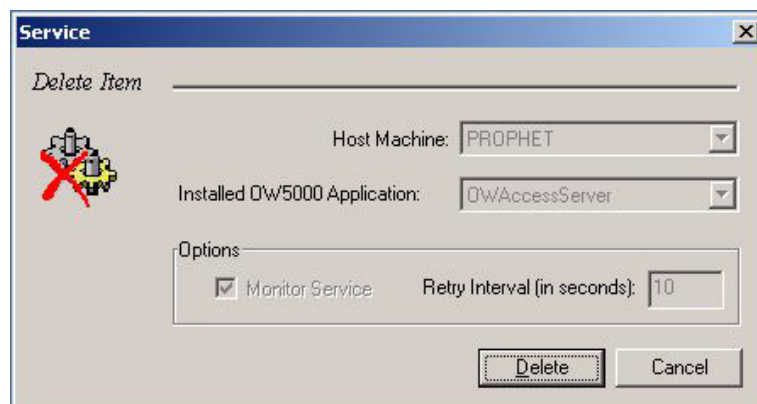
Use the following steps to delete a monitored service application from WatchDog.

**Step 1** Do one of the following in the main WatchDog Helper window:

- Select OW5000 Application, then click **Tools > Delete Service**.
- Right-click the name of any OW5000 Application in the main window and select **Delete Service**.
- Select **OW5000 Application**, then click the **Delete Service**  button.

A WatchDog Helper Delete Service dialog box displays (Figure 3-6).

**Figure 3-6** WatchDog Helper Delete Service dialog box



The information in the dialog box verifies the service to be removed from WatchDog monitoring.

**Step 2** Click **Delete** to delete the item.

## Updating a Service

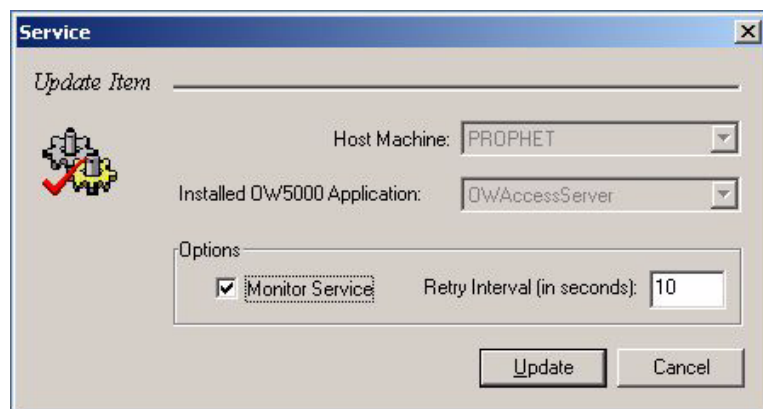
Use the following steps to update WatchDog settings for any monitored service application.

**Step 1** Do one of the following in the main WatchDog Helper window:

- Select OW5000 Application, then click **Tools>Update Service**.
- Double click the name of any OW5000 Application in the main window.
- Right-click the name of any OW5000 Application in the main window and select **Update Service**.
- Select **OW5000 Application**, then click **Update**.

A WatchDog Update Item dialog box displays (Figure 3-7).

**Figure 3-7** WatchDog Update Item dialog box



**Step 2** Select or clear the **Monitor Service** box under Options if you want to change this choice.


**Step 3** If desired, change the **Retry Interval** (in seconds) for the restart of this application following a shutdown.

**Step 4** Select **Update** to save the changes.

## Stopping a Service

Use the following steps to stop an OW5000 application from WatchDog Helper.

**Step 1** Do one of the following in the main WatchDog Helper window:

- Select **OW5000 Application**, then click **Tools > Stop Service**.
- Right-click the name of any OW5000 Application in the main window and select **Stop Service**.
- Select **OW5000 Application**, then click the **Stop Service**  button.

A WatchDog Helper dialog box displays verifying the selected service application to stop. This function can aid in troubleshooting services.

**Step 2** Click **Yes**.

A few seconds after stopping a service, the main window **Service Status** for the selected service should indicate 'Not Running'. But, if WatchDog service is started, after the Retry Interval time is passed, the status will go back to 'Running'.



NOTE

A Service can be stopped from the Services window. But if WatchDog service is running, the service cannot be stopped. To stop the service from the Services window, stop OWWatchDog first.



NOTE

If OW5000 Access Server is installed on a separate server, it cannot be monitored by WatchDog service. Stop the service from the installed server's Service window.



NOTE

There is a case that the status of the Access Server keep displaying "Stopping" when the user tries to stop/restart. In this case, stop the AccessServer.exe from Task Manager.



NOTE

When stopping a service for OWTelephony Event Notification and OWOaiServer, the terminal which has been in a call shows the on-phone status until the on-hook event is occurred after restart. (non SIP terminal presence feature is used)

## Starting WatchDog

Starting WatchDog will enable and start WatchDog monitoring for all listed service applications. Select **Start WatchDog** from the menu bar, toolbar, or click the right mouse button. A few seconds after starting WatchDog, the main window **Service Status** should indicate the current status for each service.

**Step 1** In the WatchDog Helper main window, follow one of the options below:

- Click the **Start WatchDog** button .

—Right-click at the main window and then click **WatchDog > Start Service**.



*WatchDog can start from **Control Panel > Administrative Tools > Services** and then start OWWatchDog service.*



*OW5000 Access Server which is installed in a separate server cannot be monitored by WatchDog.*

## Stopping WatchDog

WatchDog monitoring can be stopped for all service applications. This could be useful in application maintenance activities. Select **Stop WatchDog** from the menu bar, toolbar, or click the right mouse button. The main window **Service Status** should indicate 'WatchDog Not Running' for all services.

Follow the steps below to stop WatchDog.

**Step 1** Do one of following from the WatchDog Helper main window.

—Click the **Stop WatchDog** button .

—Right-click in the main window and then select **WatchDog > Stop Service**.



*WatchDog can be stopped from the Services window. (OWWatchDog service)*

## Exiting WatchDog Helper

Exit the WatchDog Helper application from the menu bar, under the **File** menu and select **Exit**.



## 4

## Log Viewer

Log Viewer is a utility in the UNIVERGE OW5000. OW5000 applications generally log events to the OW5000 Log Server (OAI Monitor). These logs are then stored into log file.

Log Viewer gives a system administrator the ability to:

- Connect to the OW5000 Log Server, display logged event, and change the log level.
- Open .LOG files generated by the Log Server to query, filter, and display their contents.
- Open the current log file which is created by the OW5000 Log Server and display the Real-time log information.

The following topics are included in this chapter.

### *Chapter Topics*

- [\*Log Viewer Support Feature\*](#)
- [\*Starting Log Viewer\*](#)
- [\*Log Viewer Main Window\*](#)
- [\*Standard Query Mode\*](#)
- [\*Print Log Information\*](#)
- [\*Real-time Query Mode\*](#)
- [\*Configuration of OW5000 Application Log Level\*](#)
- [\*Log File Maintenance\*](#)
- [\*Change Query Mode\*](#)

## Log Viewer Support Feature

Log Viewer support features are different based on the environment and the conditions.

There are two operating environment choices:

- Using Log Viewer on the OW5000 Platform installed server (Local).
- Using Log Viewer on a separate server from the OW5000 Platform installed server (Remote).

There are two start-up modes available:

- Connecting with the OW5000 Log Server (Log Server)
- Connecting with the OAI.LOG file

#	Features	Local		Remote	
		Log Server	OAI.LOG	Log Server	OAI.LOG
1	Query/Display current log file (Standard Query)	X	-	X	-
2	Query/Display saved log file (Standard Query)	-	X	-	X
3	Filtering by text (Standard Query)	X	X	X	X
4	Search by text (Standard Query)	X	X	X	X
5	High light display (Standard Query)	X	X	X	X
6	Day Light Saving adjustment (Standard Query)	X	X	X	X
7	Display attached data (Standard Query)	X	X	X	X
8	Print out event information (Standard Query)	X	X	X	X
9	Save search result (Standard Query)	X	-	-	-
10	Bookmark (Standard Query)	X	-	-	-
11	Query/ Real-time Display current log file (Real-time Query)	X	-	-	-
12	Filtering by text (Real-time Query)	X	-	-	-
13	Search by text (Real-time Query)	X	-	-	-
14	High light display (Real-time Query)	X	-	-	-
15	Day Light Saving adjustment (Real-time Query)	X	-	-	-
16	Display attached data (Real-time Query)	X	-	-	-



#	Features	Local		Remote	
		Log Server	OAI.LOG	Log Server	OAI.LOG
17	Print out event information (Real-time Query)	X	-	-	-
18	Save search result (Real-time Query)	X	-	-	-
19	Bookmark (Real-time Query)	X	-	-	-
20	Change Log Level	X	-	X	-
21	Maintenance Log File	X	-	X	
22	Change Query Mode	X	-	X	-



NOTE

Multiple Log Viewers can be used on the same server. However, it might be a problem when the Log Viewer configuration is changed. Therefore, do not change any configurations while multiple Log Viewers are being used.

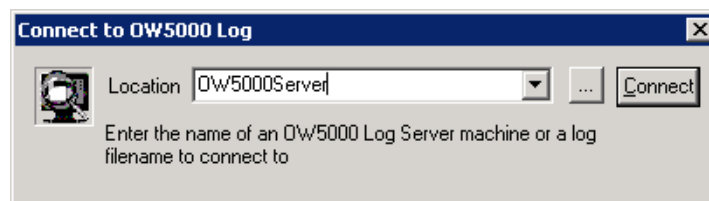
## Starting Log Viewer

Log Viewer connects to the OW5000 Log Server (OAI Monitor) or the log file which was created by the OW5000 Log Server.

Use the following steps to start Log Viewer:

- Step 1** From the desktop, click the **Start** button, and then select **All Programs > NEC OW5000 > Runtime Platform > Log Viewer**. A Connect to OW5000 Log dialog box displays (Figure 4-1).

**Figure 4-1** Connect to OW5000 Log dialog box



- Step 2** In the **Location** field, type the name where the Log Server is to connect.

If this is a Local Server, type the OW5000 Platform computer name where it connects to the OW5000 Log Server.

If this is a Remote Server, type the OW5000 Platform server IP Address and port number (5690). For example, 127.0.0.1:5690. If the DNS is available, the OW5000 Platform computer name is available even if it is a remote server. You can also use the browse button (...) to select a log file

or use the drop-down list to display all previously opened machines and .LOG files in the Location field.

**Step 3** Click the **Connect** button, A Log Viewer Main Window displays if it is connected successfully. A Connect Failed dialog box displays if it failed (Figure 4-2).

**Step 4** Click **OK** and try again beginning with [Step 2](#).

**Figure 4-2** Connection Failed dialog box

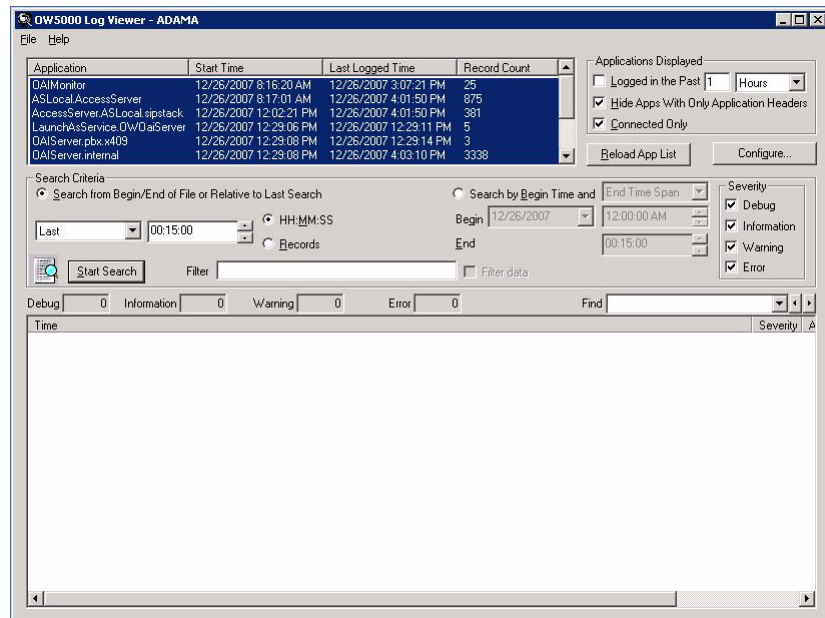


## Log Viewer Main Window

Starting the Log Viewer program displays the Log Viewer Main Window, shown in [Figure 4-3](#). Standard Query mode is applied when the Log Viewer starts.

From the Log Viewer Main window, you can:

- Specify the applications that are displayed.
- Search the log files for specific information, including events, dates, and text. See ["Searching for Logged Events" on page 4-13](#), for more information.
- View log file information. See ["Viewing Event Data" on page 4-14](#), for more information.
- Print log file information. See ["Print Log Information" on page 4-15](#), for more information.
- Save query results and bookmark them for easy access. See ["Saving Search Results and Working with Bookmarks" on page 4-16](#), for more information.
- In Real-time Query mode, Real-time event information displays. See ["Real-time Query Mode" on page 4-18](#) for more information.
- Change the application log level. See ["Configuration of OW5000 Application Log Level" on page 4-20](#) for more information.
- Maintenance of log files. See ["Log File Maintenance" on page 4-22](#) for more information.
- Change query mode between Standard Query mode and Real-time Query mode. See ["Log File Maintenance" on page 4-22](#) for more information.

**Figure 4-3** OW5000 Log Viewer Main window

The Log Viewer window contains the following components:

#### Title Bar

Displays the name of the application and the name of the OW5000 Log Server or log file to which Log Viewer is connected.

**Figure 4-4** Log Viewer Title Bar

#### Menu Bar

The menu bar displays at the top of the Log Viewer window and contains two pull-down menus: File and Help (Figure 4-5).

**Figure 4-5** Log Viewer Menu Bar

Each menu item contains various menu options. Each menu item and its corresponding menu options are described below:

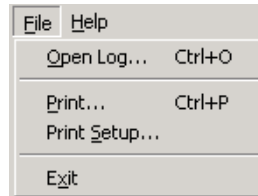
---

## File Menu

The **File** menu options are Open Log, Print, Print Setup, and Exit. A brief description of each option is listed below.

---

**Figure 4-6** File Menu



### Open Log

Opens a dialog box which enables you to connect to a specified OW5000 Log Server or .LOG file. When connected to a Log Server, you can view and configure its log parameters.

### Print

Opens the Print dialog box and enables you to print the events that are currently displayed.

### Print Setup

Opens the Print Setup dialog box where you can select your printing options.

### Exit

Closes Log Viewer.

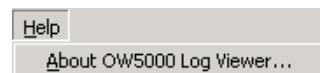
---

## Help Menu

The **Help** menu option is About OW5000 Log Viewer. A description of this option is listed below ([Figure 4-7](#)).

---

**Figure 4-7** Help Menu



### About OW5000 Log Viewer

Displays version information for the Log Viewer.

## Application Group Box

The Applications Group Box displays the application log sessions so the user can select a session to perform searches (Figure 4-8). The Application Group Box displays information for each log session performed by an application as follows:

**Figure 4-8** Application Group Box

Application	Start Time	Last Logged Time	Record Count
DAIMonitor	05/27/09 09:05:18	05/27/09 09:05:39	9
Watch Dog	05/27/09 09:05:22	05/27/09 09:05:43	11
AMS	05/27/09 09:05:25	05/27/09 09:05:25	2
LaunchAsService.DWDAIserver	05/27/09 09:05:27	05/27/09 09:05:32	11
DAIServer.pbxx409	05/27/09 09:05:29	05/27/09 09:05:39	4

### Application

The name that the application used for the log session (typically the name of the application performing the logging).

### Start Time

The time of the first event logged by the application for this log session.

### Last Logged Time

The time of the last logged event by the application for this log session.

### Record Count

Number of records/events logged by the application for this log session.

## Applications Displayed Box

The Applications Displayed in the Application Group Box can be altered so that only the more relevant application log sessions are displayed by using the controls in the Applications Displayed Box (Figure 4-9).

The Applications Displayed Box is activated only in the Standard Query Mode. It is deactivated in the Real-time Query Mode.

The controls and their functions are described below:

**Figure 4-9** Applications Displayed Box

The screenshot shows a control box titled "Applications Displayed". It contains three settings:

- A checkbox labeled "Logged in the Past" followed by a text input field containing "1" and a dropdown menu set to "Hours".
- A checked checkbox labeled "Hide Apps With Only Application Headers".
- A checked checkbox labeled "Connected Only".

### Logged in the Past XX XXXX

When checked, the user is able to specify the most recent log sessions by Days, Hours, Minutes or Seconds. If checked, and an application sessions last log event is not within the specified time, that application will not be displayed in the Application Group Box.

### Hide Apps With Only Application Headers

When this option is checked, applications are hidden that have not logged any information, other than the initial Application started logging message. This is normally checked so that log sessions that have not logged anything other than the start of the log session are not displayed.

### Connected Only

When checked, applications that currently have a logging session connected with the OAIMonitor service is displayed. Typically this will be the applications that are currently running. To see log sessions of applications that have ended their log session, you must unselect this option.

---

### Reload App List Button

If an application has started a new log session (which typically happens when an application starts or restarts), you can reload the applications in the Application Group Box by clicking on **Reload App List** to get the most recent list of applications.

This is available only when the Log Viewer is connected with the OW5000 Log Server (OAI Monitor).

---

### Configure...Button

The following functions are available when selecting **Configure** (Figure 4-3).

- Configure event type of applications which are connected to OW5000 Log Server (OAI Monitor.) See ["Configuration of OW5000 Application Log Level" on page 4-20](#) for more information.
- Configure the maximum file size of OAI.LOG and the maximum number of files of OAI.LOG which stored in the server. See ["Log File Maintenance" on page 4-22](#) for more information.
- Backup current OAI.LOG file which is the log file of OW5000 manually. See [Page 4-22](#) for more information.
- Change query mode between the Standard Query Mode and Real-time Query mode. Also able to configure the parameter. See [Page 4-24](#) for more information.

## Search Criteria Box

The search criteria box allows you to set the search condition of the OW5000 application log (Figure 4-10).

The Date, Time, Severity and search text are used as search conditions.

**Figure 4-10** Search Criteria Box

## Search from Begin/End of File or Relative to Last Search Radio Button

Selecting this option allows the user to search from a point in the file (beginning, end, or from the last search position). The following types of relative searches are available:

### Last

Backward search starting from the end of the file.

### First

Forward search starting from the beginning of the file.

### Previous

Backward search starting from the first record displayed on the previous search.

### Next

Forward search starting from the last record displayed on the previous search.

### Include Previous

Same as Previous except the current search results are not cleared. The new search results are inserted in front of the current search results.

### Include Next

Same as Next except the current search results are not cleared. The new search results are appended to the end of the current search results.

The range can be specified by either a time range or number of records.

### HH:MM:SS

Indicates the range to be displayed specified by the number of Hours, Minutes and Seconds from the first record displayed.

### Records

Indicates the number of records to be displayed.



**NOTE**

*This will override the Max. Number of Results in the Application Log Properties dialog box—Maintenance tab. This is deactivated when in Real-time Query Mode.*

Selecting **Search by Begin Time Radio Button** allows the user to search by specifying a begin time. The end of the search can be specified by one of the following ways:

**Figure 4-11** Search by Begin Time

**End Time**

Indicates the user will specify the absolute end date and time for the search.

**Record Count**

Indicates the user will specify the number of records that the search will display.

**End Time Span**

Indicates the user will specify how many Hours, Minutes, and Seconds past the Begin Time that the End Time will be for the search.

**NOTE**

*This will override the Max. Number of Results in the Application Log Properties dialog box—Maintenance tab. This is deactivated when in Real-time Query Mode.*

**Severity Box**

The Setting Severity Box allows the user to select search conditions based on an event type. There are 4 types of events; such as **Debug**, **Information**, **Warning**, and **Error**. The user can set the type per selected application.

**Filter Field**

Type a word or phrase in the **Filter** field to filter the list for a word or phrase (Figure 4-12).

**Figure 4-12** Filter Field

Select the **Also filter data** check box if you want to filter the information in the attached data.

**Daylight Saving Time Check Box**

Setting this parameter allows the user to adjust Daylight Savings Time. Start Time and Last Logged Time in the Application Group box, and Time in the Event Display Area are the target of this adjustment.



### Start Search Button

Clicking the Start Search button allows the user to start the search using search conditions which are assigned in the Search Criteria for application(s) assigned in the Application Group Box. Search results displayed in the Event Display Area and the total event number is displayed in the search result display area per event type.

### Start Auto Refresh Button

Clicking the Start Auto Refresh Button allows the user to start a Real-time display. It is deactivated when in the Standard Query Mode.

### Search Results Display Area

The total number of events information is displayed in this area for each event type (Figure 4-13).

**Figure 4-13** Search Result Display Area



### Find Field

**Step 1** Type a word or phrase in the **Find** box to find a specific word or phrase in a log file (Figure 4-14).

**Figure 4-14** Find Field



**Step 2** The specific word is highlighted in yellow by clicking the **ON** button.

**Step 3** Clicking the **right** or **left arrow** allows you to scroll through the display to reach the next target event.

Log Viewer searches above or below the currently selected log event, depending on the arrow you select.

## Event Information Display Area

The Event Information Display Area displays the searched event information (Figure 4-15).

**Figure 4-15** Event Information Display Area

Time	Severity	Application	Description
05/27/09 09:10:12.140	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:10:28.953	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:10:28.953	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:10:28.953	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:10:45.656	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:10:45.656	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:11:02.484	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:11:02.484	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:11:02.484	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:11:02.484	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:11:19.000	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:11:19.000	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:11:19.000	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:11:35.609	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:11:35.609	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:11:35.609	Info	QAI Server.pbz.internal	Top of loop in read thread..
05/27/09 09:11:52.843	Info	QAI Server.pbz.internal	AllFacilitiesMap.getFacility(48, 0)..
05/27/09 09:11:52.843	Info	QAI Server.pbz.internal	QAIHeartbeat.processA1() nxBYTElnx=xd byteCount=24 count=80.a1 81 15 30 81 12 02
05/27/09 09:11:52.843	Info	QAI Server.pbz.internal	Top of loop in read thread..

### Time

The Time when the application event happened

### Severity

Event Type

### Application

Name of log session for the application

### Description

Description of log information

### Data

Data size for the event

## Standard Query Mode

The Standard Query Mode allows the user to search and display the event information.

- Connect to the OW5000 Log Server to search and display the logged events which have been logged when the Start Search was clicked.
- Open the log file created by the OW5000 Log Server to search and display the logged events.

### Searching for Logged Events

Use the following items to filter a search of logged events in the Log Viewer.

- the application
- the time period
- the log file severity type - such as **Debug**, **Information**, **Warning**, or **Error**
- Text Filter

### Starting a Search

- Step 1** Select the application whose files you want to search from the **Application** group box. To select more than one application, hold down the **Ctrl** key while you click each application.
- Step 2** Set the search time period from **Search from Begin/End of File or Relative to Last Search** or **Search by Begin Time**.
- Step 3** Select one or more checkboxes in the Severity type group box: **Debug**, **Information**, **Warning**, **Error**.
- Step 4** If you are searching for a particular event, extension, or pattern, type this text in the **Filter** field.
- Step 5** Click the **Start Search** button to begin searching the log files. Search results are displayed in the Event Information Display Area, also the total number of Debug, Information, Warning and Error events are displayed in the Search Result Display Area.



NOTE

*If the data for a given time period seems incomplete, check the Max Number of Results on the **Configure > Maintenance** tab. It is possible that more entries exist for this time period, but the logged entries exceed the maximum number of results configured. To solve this problem, either issue another query where the Start Time begins from the point where the last entry leaves off, or increase the Max Number of Results.*

### Searching Logged Events for Specific Test

Once the list of logged events is displayed, you can search or filter the list for a specific word or phrase.

#### Finding a specific word or phrase

- Step 1** Type a word or phrase in the **Find** box to find a specific word or phrase in a log file. Click **ON** button if the highlighted word/phrase displays.
- Step 2** Click the **Prev** or **Next arrow** to scroll through the log events. Log Viewer searches above or below the currently selected log event, depending on the arrow you select.

#### Filtering the list for a word or phrase

- Step 1** Type a word or phrase in the **Filter** field to filter the list for a word or phrase.
- Step 2** Select the **Also filter data** check box if you want to filter the information in the attached data.
- Step 3** Click the **Start Search** button to begin the search. The log events, from your search containing the specified word or phrase, are displayed.

#### Viewing Event Data

If data is attached to a log event, the size of the data displays in the **Data** column of the box displaying the logs. To view data attached to a log event, double-click the desired logged event that contains attached data. The data and a brief description of the data is displayed in a list box.

#### Reload Application List

If an application has started a new log session (which typically happens when an application starts or restarts) you can reload the applications in the Application Group Box by clicking on **Reload App List** to get the most recent list of applications.

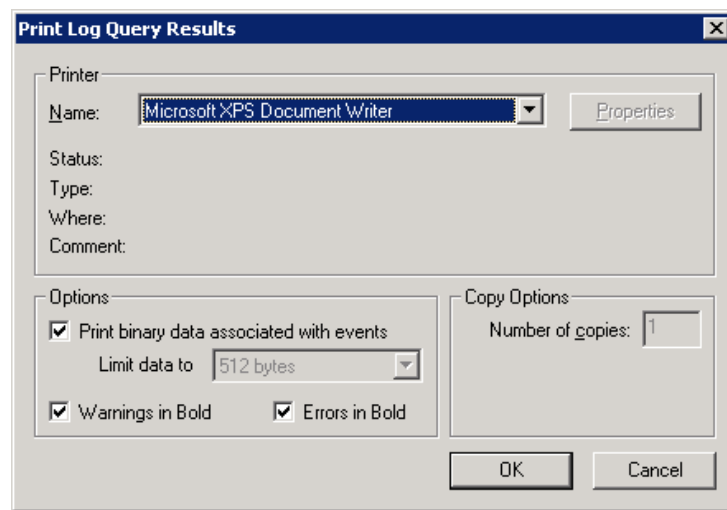
## Print Log Information

Once the list of logged events is displayed, you can print one or more log events from the Logs tab.

To print one or more log events:

- Step 1** To select more than one log event, hold down the **Ctrl** key to select each event or hold down the **Shift** key to select a range of events.
- Step 2** Click **File > Print** from the menu bar. [Figure 4-16](#) displays.

**Figure 4-16** Print Log Query Results dialog box

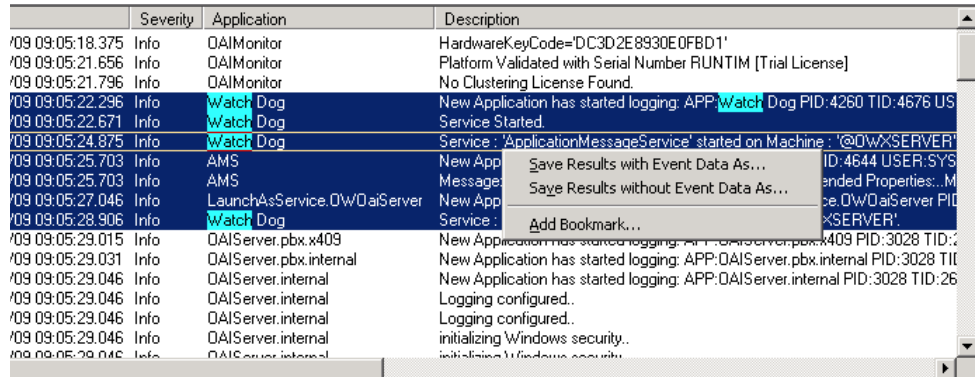


- Step 3** Select the printer **Name** that you want to use.
- Step 4** To print the binary data as well as the log event, select the **Print binary data associated with events** checkbox.
- Step 5** To print warnings in bold, select the **Warnings in Bold** checkbox.
- Step 6** To print errors in bold, select the **Errors in Bold** checkbox.
- Step 7** Click **OK**. The selected log events print.

## Saving Search Results and Working with Bookmarks

Log Viewer allows you to save the results of a query to a text file, to set a bookmark in the results, and to jump to a bookmark once it is set. To use these features, click the right mouse button on the results of a query to open a shortcut menu with the save results, and bookmark options (Figure 4-17).

Figure 4-17 Log Viewer Shortcut menu



### Saving Query Results

Use the following steps to save the results of a query to a text file.

- Step 1** Select the log event(s) to be saved. To select more than one log event, hold down the **Ctrl** key to select each event, or hold down the **Shift** key to select a range of events.
- Step 2** Click the right mouse button on the result(s) selected to open the shortcut menu (Figure 4-17), and then do one of the following:
  - Select **Save Results with Event Data As** to save the Log Events and Log Event Data of the search results.
  - Select **Save Results without Event Data As** to save only the Log Events of the search results.

Refer to “Viewing Event Data” on page 4-14, for more information on Event Data.

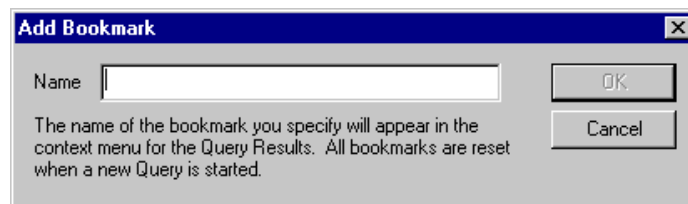
- Step 3** Click **Save**.

### Creating a Bookmark

Use the following steps to create a Bookmark:

- Step 1** Click the right mouse button on the desired log event to set a bookmark. A shortcut menu opens.
- Step 2** Select **Add Bookmark**. An Add Bookmark dialog box displays (Figure 4-18).

**Figure 4-18** Add Bookmark dialog box



**Step 3** Enter the name of the bookmark and click **OK**. The new bookmark is saved and displayed in the Bookmarks on the shortcut menu (Figure 4-19).

### Opening a Bookmark



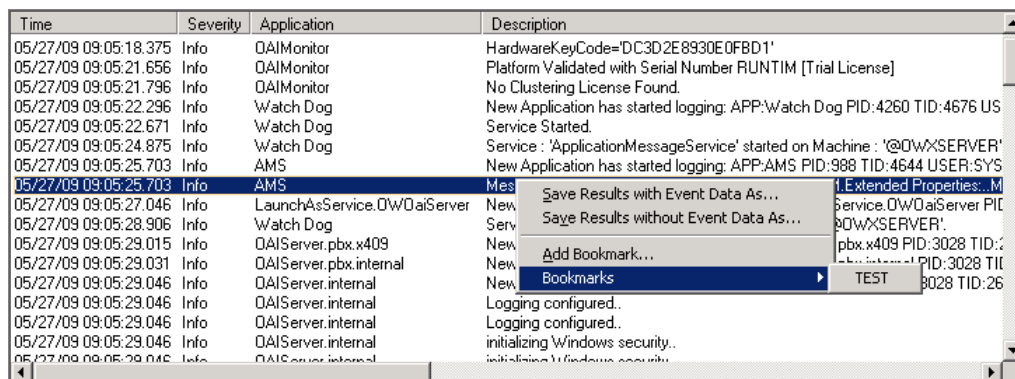
*A Bookmark is available only when the query result is displayed.*

Use the following steps to open a Bookmark.

**Step 1** Select the **Bookmarks** from the shortcut menu to go to an existing bookmark.

**Step 2** Select the desired bookmark. The log results will scroll so that the bookmarked event is visible and selected (Figure 4-19).

**Figure 4-19** Selecting a Created Bookmark



## Real-time Query Mode

Real-time Query Mode allows the user to search event information and display the information in the event window. Connecting with the OW5000 Log Server (OAI Monitor) displays the event information after the time set for Start Auto Refresh is clicked.

### Real-time display of event information

Use the following items to filter a search of logged events in the Log Viewer.

- the application
- the log file severity type, such as Debug, Information, Warning, or Error
- Text Filter

### Start/Stop search

- Step 1** Click the **Configure** button. After an Application Log Properties dialog box displays, click the **Maintenance** tab.
- Step 2** Click the **Real-time Query** radio button, configure the **Max. Number of Lines** (if required), and then click **OK**.
- Step 3** Select the application whose files you want to search from the **Application** group box. To select more than one application, hold down the **Ctrl** key while you click each application.
- Step 4** Select one or more checkboxes in the **Severity type** group box: **Debug**, **Information**, **Warning**, or **Error**.
- Step 5** If you are searching for a particular event, extension, or pattern, type this text in the **Filter** field.
- Step 6** Start the event information search by clicking the **Start Auto Refresh** button. The searched event information will be displayed in the event information display area. The total number of the following will display in the Search result display area, Debug, Information, Warning and Error.
- Step 7** Click the **Stop Auto Refresh** button to stop the Real-time display.



NOTE

*You cannot change the search application during the Real-time display. To change the application, stop the Real-time display, change the search application, and then click the **Start Auto Refresh** button.*

*When the total number of lines displayed in the event information display area exceeds the Max. Number of Lines, which is assigned using the Maintenance tab, the oldest information in the event display area is deleted.*

*If the OAI.LOG file reaches the maximum file size, the Real-time display will not continue the back up process.*





NOTE

Real-time display is available only for the application which is connected with the OW5000 Log Server (OAI Monitor), and also displayed in the Application Group box.

### Finding a Specific Word or Phrase

Once the list of logged events are displayed, you can search or filter the list for a specific word or phrase. To find a specific word or phrase in a log file, follow the steps below.

- Step 1** Type a word or phrase in the **Find** box.
- Step 2** Click the **Prev** or **Next arrow** to scroll through the log events. Log Viewer searches above or below the currently selected log event, depending on the arrow you selected.

### Filtering the list for a word or phrase

- Step 1** Type a word or phrase in the **Filter** field to filter the list for a word or phrase.
- Step 2** Select the **Also filter data** check box if you want to filter the information in the attached data.
- Step 3** Click the **Start Search** button to begin the search. The log events from your search that contain the specified word or phrase displays.

All events display when pressing the **Enter** key. You do not need a value in **Filter** field.

## Configuration of OW5000 Application Log Level

OW5000 Log Viewer allows a user to set or change an event type of the application that is connected to the OW5000 Log Server (OAI Monitor).

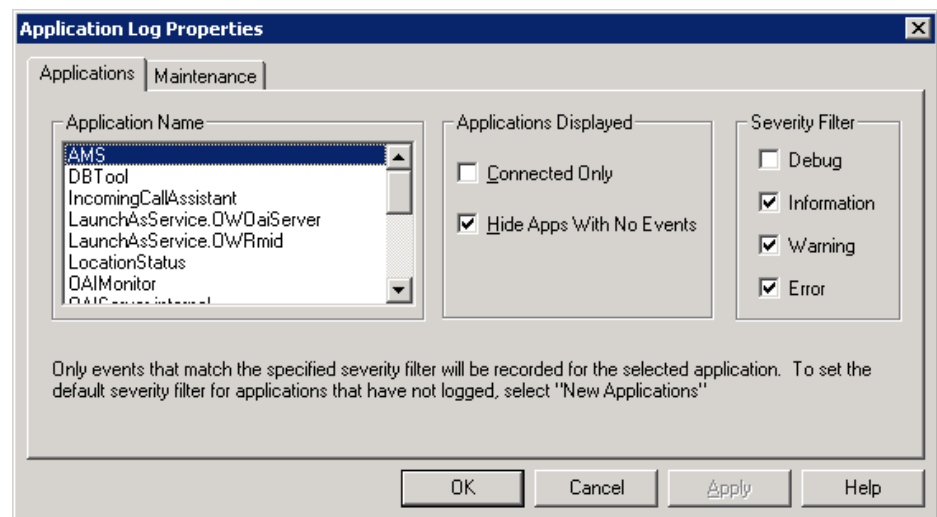
**Step 1** Click the **Configure** button in the Log Viewer Main Window (Figure 4-3). Figure 4-20 displays.



NOTE

*This feature is available only when the Log Viewer is connected to the OW5000 Log Server (OAI Monitor).*

**Figure 4-20** Application Log Properties dialog box—Applications tab



### Application Name Box

Displays the Application names that are connected to OW5000 Log Server (OAI Monitor).

### Applications Displayed Box

Using this configuration, applications strongly related to the OW5000 only will display.

### Connected Only

This check box is available only when the application is connected with the OW5000 Log Server (OAI Monitor).

When selected, only the applications that have a current log session with the OW5000 Log Server (OAI Monitor) will be displayed. Usually these applications get together with the applications which are currently working. To display all applications, this check box should be unchecked.

### Hide Apps With Only Application Headers

If this check box is checked, the applications that do not have an event log will be hidden in the event information display area.

### Severity Filter Box

The Severity Filter allows the user to set or change the display event type of the applications selected in the Application Name box. There are four event types (**Debug**, **Information**, **Warning** and **Error**) and can be selected per application. Unchecked events are not logged nor displayed in the event information display area.

Click **Apply** to save the configuration. The selected event type configuration will be applied after this process in the log file (OAI.LOG), which is created by the OW5000 Log Server (OAI Monitor).

---

### Change Log Level Process

Select the application name from the **Application Name** box. The current configuration of the selected application will display in the **Severity** box. To select more than one application, hold down the **Ctrl** key while you click each application. In this case, the last application configuration displays.

Select one or more checkboxes in the **Severity** type group box: **Debug**, **Information**, **Warning**, or **Error**.

Click **Apply** or **OK**. The same configuration is applied if more than one application is selected.

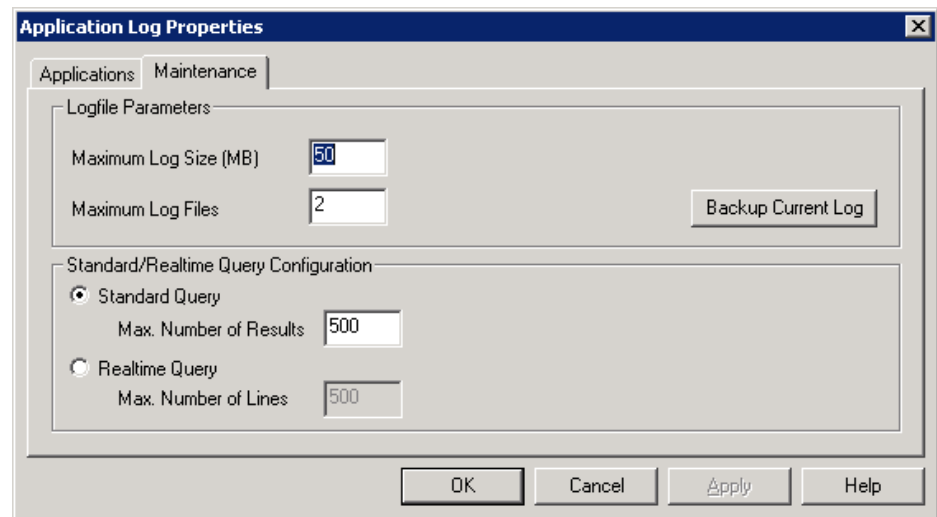
## Log File Maintenance

The OW5000 Log Viewer allows the user to maintain a log file that is created by OW5000 Log Server (OAI Monitor).

**Step 1** Click the **Configure** button in Log Viewer Main Window (Figure 4-3).

**Step 2** Click the **Maintenance** tab. Figure 4-21 displays.

**Figure 4-21** Application Log Properties dialog box—Maintenance tab



### Logfile Parameters Box

The Logfile Parameter Box allows the user to set a maximum log file size (OAI.LOG), and a maximum number of files stored in the disk. You can also create a manual backup.

The required maximum log file size can be changed based on the feature and traffic. Choose the proper settings based on the servers' available disk size and backup period of the log file.



**NOTE**

*This feature is available only when Log Viewer is connected to the OW5000 Log Server (OAI Monitor).*

### Maximum Log Size (MB) Field

Configure maximum file size of OAI.LOG (MB)

The Default is 50MB and it is configurable between 1MB and 1024MB.

The configuration is applied when the **Apply** button is clicked. The Backup file name format is OAI\_MMDDYYYY\_HHMMSSmmm.Log.

(MM:month, DD:day, YYYY:year, HH:hour, MM:minute, SS:second, mmm:millisecond)

The OAI.LOG file is stored in OW5000 Platform install folder. For example, C:\Program Files\NEC\OW5000\Runtime Platform\

The Underline(\_) is the path which is selected during OW5000 Platform install step.

Backup files are stored in following path.

C:\Program Files\NEC\OW5000\Runtime Platform\archive

### Maximum Log Files Field

Configure the maximum number of backup files.

The Default value is 2 and it is configurable between 2 to 999.

The Configuration is applied when the **Apply** button is clicked. The oldest file is deleted when the backup files reach this maximum value.

### Backup Current Log Button

Click this button to backup the OAI.LOG file manually. The Backup file is stored in the backup file folder as:

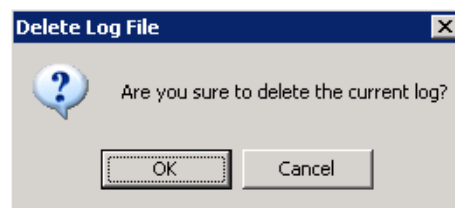
M\_OAI\_MMDDYYYY\_HHMMSSmmm.LOG file format.

(MM:month, DD:day, YYYY:year, HH:hour, MM:minute, SS:second, mmm:millisecond)

The following step is for a manual backup.

**Step 1** Click **Backup Current Log** button. [Figure 4-22](#) displays.

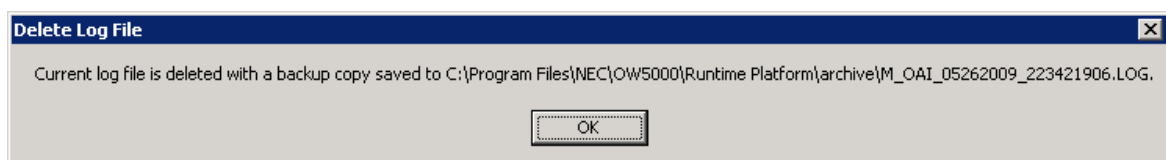
**Figure 4-22** Delete Log File dialog box



**Step 2** Click **OK** to delete the log file or **Cancel** to suspend this process.

[Figure 4-23](#) displays, with the stored file path information, when a backup is successful. If the backup fails, a Delete Log File—Delete NG dialog box displays. Try executing again at a later time.

**Figure 4-23** Delete Log File—Backup Copy dialog box



If the backup fails, a Delete Log File—Delete NG dialog displays. Try again after a short period.

---

## Change Query Mode

The OW5000 Log Viewer allows a user to change the query mode by clicking the **Configure** button in the Log Viewer Main Window (Figure 4-3). An Application Log Properties dialog box displays.

**Step 1** Click the **Maintenance** tab.

---

### Standard/Real-time Query Configuration Box

Select Standard Query Mode or Real-time Query mode as the Log Viewer query mode.

The following configurations are available for each mode.

---

### Standard Query Radio Button

Select this options if the Standard Query mode is used.

This mode is selected when Log Viewer starts up.

---

### Max. Number of Results Field

Set the maximum events number which displays in the Event Information Display Area when in Standard Query Mode.

Click **Apply** after the proper value is set in the Max. Number of Results field.

The default value is 500 and it is configurable between 1 and 4294967295.

Entering smaller numbers will allow users to view the query results faster. However, if the time period of a search is too short, the desired results may not be viewable due to the volume of events within the time specified in the query. If this happens, either increase this number to the desired size or narrow the window of time to retrieve fewer matches.

---

### Real-time Query Radio Button

Select if Real-time Query mode is used.

Real-time Query mode is available only when the Log Viewer is used on the OW5000 platform server.

---

### Max. Number of Lines Field

Set the maximum events number which displays in the Event Information Display Area in Real-time Query Mode.

Click **Apply** after the proper value is set in the Max. Number of Lines field.

The default value is 500 and it is configurable between 1 and 4294967295.





# 5

---

## Database Operations

DBTool is a utility in the OW5000 Platform in OW5000 R4. It provides a system administrator the capability to import and export data between the OW5000 databases and text files. The OW5000 Master database can be populated in a number of ways, including OW5000 Administrator and DBTool.

The following topics are included in this chapter.

*Chapter Topics:*

- [OW5000 Administrator](#)
- [DBTool \(Database Import/Export\)](#)
- [DBTool](#)
- [Data Mapping Quick Reference Tables](#)

---

### OW5000 Administrator

OW5000 Administrator is part of the OW5000 Runtime Platform. [“Maintaining the OW5000 Directory” on page 2-69](#) describes how to use OW5000 Administrator to enter and maintain records in the database.

---

### DBTool (Database Import/Export)

The DBTool allows data to be imported and exported into OW5000 databases. Specifically, this tool imports Extension, License, Location, Organization, Person, Route/Trunk and SIPUA Group data records from a text file into the specified OW5000 database (also LDAP can be a source for import). The data fields can be mapped to existing database fields. The configuration and field mapping settings can be saved as a profile, so these operations can be easily repeated manually for later single or repeated occurrences.

## Database Backup

It is recommended that you backup the database in the event that data is imported incorrectly.



IMPORTANT

*If you want to make a backup, you have to backup both "master" and "OW5000". As for the "master" database, you should make a backup when you install/upgrade OW5000. Frequent backups are not necessary.*



IMPORTANT

*Backed up data can be reused (restored) only when the same version of the OW5000 Platform is used with the same computer name and the same IP address.*

*Data before a version upgrade cannot be used when the OW5000 Platform is upgraded, so backup the data again after the version upgrade.*

Use the following steps to backup the OW5000 database.

**Step 1** Log into the server where SQL Server 2005/2008 is in operation using an account that has Administrator rights.

**Step 2** Click the **Start** button on the desktop, and then select **All Programs > Accessory > Command Prompt** to enter the command below.

In the following example, connection is made to the default instance name, SQLEXPRESS, of SQL Server 2005/2008 Express Edition.

SQL Server 2005 Express Edition case, move to following folder  
**C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn**

SQL Server 2008 Express Edition case, move to following folder  
**C:\Program Files\Microsoft SQL Server\MSSQL10.SQLEXPRESS\MSSQL\Binn**

```
C:\sqlcmd -S (local)\SQLEXPRESS
1>BACKUP DATABASE OW5000
2>TO DISK='ow5000.bak'
3>GO
```

**Step 3** After completing the backup, enter **exit** to end the SQLCMD command.

```
1>exit
```

A backup file (**ow5000.bak**) is stored in the Backup folder of SQL Server 2005/2008. The backup file is stored in the following folder:

SQL Server 2005 Express Edition case  
**C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\ Backup\**

To create an OW5000 database backup in another location, specify the storage destination as follows:

```
SQL Server 2008 Express Edition case
C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\ Backup\

2> TO DISK='D:\sqlbackup\ow5000.bak'
```

To backup the master database, run the following command.

```
1> BACKUP DATABASE master
2> TO DISK='master.bak'
3> GO
```

## Database Restore

By restoring a backup file, the OW5000 database can be restored to the same database condition as when the backup was created.



**IMPORTANT**

*Backed up data can be reused (restored) only when the same version of the OW5000 Platform is used with the same computer name and the same IP address.*

*Data before a version upgrade cannot be used when the OW5000 Platform is upgraded, so backup the data again after the version upgrade.*

Use the following steps to restore the OW5000 database:

- Step 1** Log into a server where the OW5000 Platform is in operation using an account that has Administrator rights.
- Step 2** Click the **Start** button on the desktop, and select **Control Panel > Administrative Tool > Services** to stop the following services in the Service window. Use the order listed below.
  - OWWatch Dog
  - OW OAIMonitor\*
  - OWAccessServer (only when this is installed. Also, stop Access Server installed in another server.)
  - Remote Call Control (only when this is installed)
  - World Wide Web Publishing Service

\* Other related services are also stopped.
- Step 3** End the Database Import Tool and Database Export Tool when they are started.
- Step 4** Log into the server where the SQL Server 2005/2008 is in operation, using an account that has Administrator rights.
- Step 5** Click the **Start** button on the desktop, and then select **All Programs > Accessory > Command Prompt** to enter the following command.

In the following example, connection is made to the default instance name, SQLEXPRESS, of SQL Server 2005/2008 Express Edition using NT Authentication.

SQL Server 2005 Express Edition case, move to following folder  
**C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn**

SQL Server 2008 Express Edition case, move to following folder  
**C:\Program Files\Microsoft SQL Server\MSSQL10.SQLEXPRESS\MSSQL\Binn**

**C:\sqlcmd -S (local)\SQLEXPRESS**

**1>USE master**

**2>GO**

Enter the following command to delete the OW5000 database:

**1>DROP DATABASE OW5000**

**2>GO**

After deleting the database, enter the following command to restore the OW5000 database.

**1>RESTORE DATABASE OW5000**

**2>FROM DISK='ow5000.bak'**

**3>GO**

**Step 6** After restoring the database, enter the following command to enable Service Broker:

**1> ALTER DATABASE OW5000 SET ENABLE\_BROKER**

**2> GO**

**Step 7** Enter **exit** after the restore is completed.

**1> exit**

**Step 8** Start the services listed below, in the following order, on a server where the OW5000 Platform is in operation.

- World Wide Web Publishing Service
- OWWatch Dog
- OAI Monitor
- OWAccessServer (when installed on another server)
- Remote Call Control (when installed on another server)

## DBTool

The DBTools application provides OW5000 customers the ability to import and export data to and from the OW5000 Database. The application combines functionality from the former DBImport and DBExport tools into a single application. DBTool has a separate installer and is able to install into a non-OW5000 platform server.



NOTE

*An Import/Export file can be viewed at a remote PC, but the schedule would fail if the OW5000 system cannot access the file.*

**Step 1** After clicking **DBTool**, the following login dialog box displays (Figure 5-1).

**Figure 5-1** DBTool Login dialog box

**Table 5-1** DBTool Login fields

Field	Description
OW5000 Server/IP Address	The OW5000 server in which to connect.
User Name	User name for OW5000. <b>Note:</b> DBTool privileges is required for the user. Refer to <a href="#">“User Management Configuration” on page 2-100</a> .
Password	Password for OW5000
Connect	Validates the information and connects and closes the form to open another.



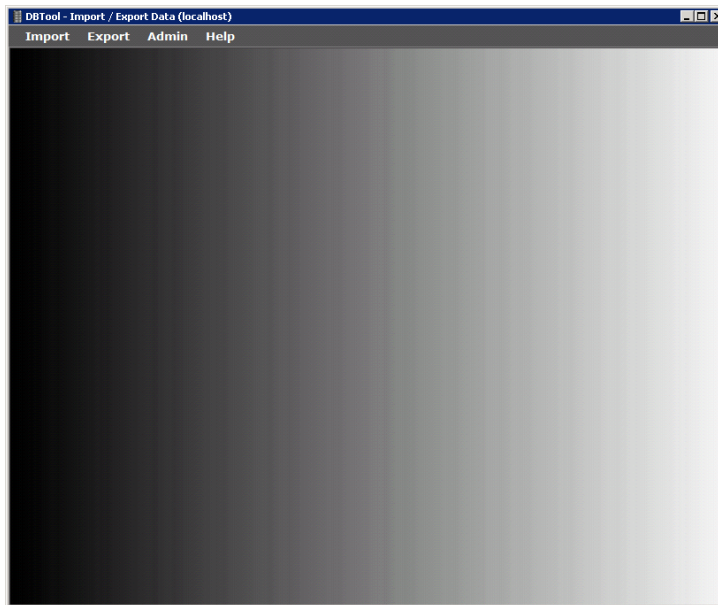
NOTE

*PBX configuration from OW5000 Administrator must be completed before starting the DBTool.*

**Step 2** Click **Connect**. A DBTool Options dialog box displays (Figure 5-2).

---

**Figure 5-2** DBTool Options dialog box



DBTool provides the following feature set:

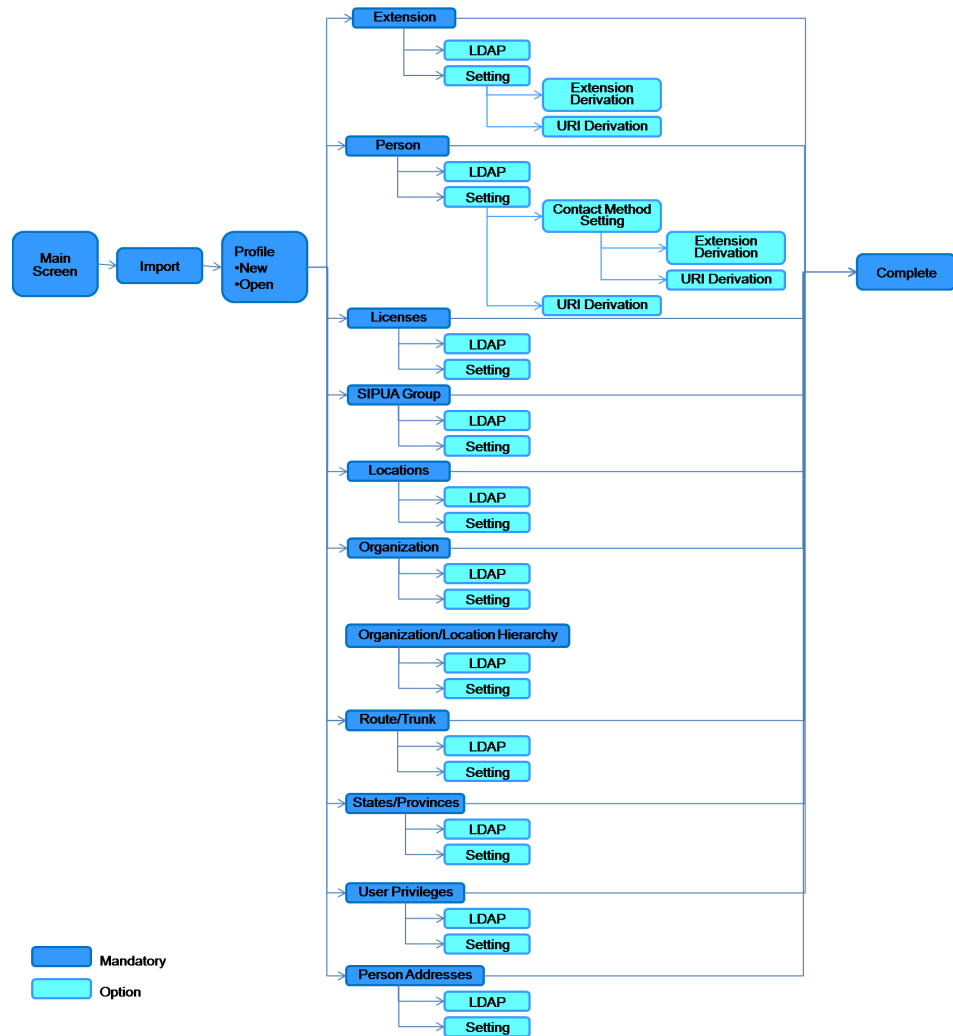
- **Import**  
*Imports data from the text file or LDAP. Refer to ["Import Data" on page 5-6](#) for more information.*
- **Export**  
*Exports data from the OW5000 database to a text file. Refer to ["Export Data" on page 5-33](#) for more information.*
- **Admin**  
*The user is able to selectively delete Persons (by Role), Contact Methods, and all other types available for Import/Export. Refer to ["Admin" on page 5-38](#) for more information.*
- **Help**  
*Indicates the version and database information. See ["Help" on page 5-41](#).*

---

## Import Data

[Figure 5-3](#) shows the data import flow using the DBTool. In OW5000 R4, the DBTool supports seven import types. Both the file and LDAP are available as an import source. Using the Settings configuration, the DBTool can create default input values based on the definitions.

Figure 5-3 Data Flow using DBTool



If this is a Japanese market and UC700/MC550 is not installed, States/Provinces, User Privileges, and Person Addresses are not displayed.

## Import Procedure

Use the following procedure to Import data. Note that the Database Import Tool cannot import all the items that can be set with OW5000 Administrator. Some settings differ depending on the functions to be used.



**IMPORTANT**

*Please assign the PBX and Access Server information in order to import the Person data correctly from DBTool.*

**Table 5-2** DBTool Import Procedure

Number	Import Type	Dependency	Note
1	Extension	None	
2	License	Extension	
3	Location	Extension	
4	Organization	Extension, Location	
5	Organization/Location Hierarchy	Extension, Location	
6	SIPUA Group	None	
7	Person	Extension, Location Organization, and SIPUA Group	
8	States/Provinces	None	Available except for US market and UC700/MC550 is installed.
9	Person Addresses	Person, States/Provinces	Available except for US market and UC700/MC550 is installed.
10	User Privilege	Person (User Role)	Available except for US market and UC700/MC550 is installed.
11	Route/Trunk	None	

**Step 1** To import the data, select Import Profile from **Import > Profile**. You can add a new profile or open an existing profile.



## Creating a New Profile

Follow the steps below to create an import profile. After creating an import profile, you can open the profile for import.

**Step 1** Click **Import** from the menu bar (Figure 5-2).

**Step 2** Click **New** from the menu to display Figure 5-4.

**Figure 5-4** Create Profile dialog box



NOTE

Before importing Person data, set the Office Code(PBX Id) using **PBX Management > PBX Settings** page and enter the Server Name using the **Access Server** page. If SIP Presence feature is not used, the Access Server name information is not required.

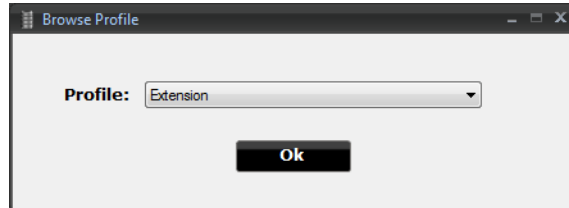
**Table 5-3** Create Profile fields

Field	Description
Profile Name	The unique name for the profile. This profile saves the information set in this import process. This created profile can be used in the Schedule page of the OW5000 Administrator.
Import Type	The type of import (e.g. Extension, Person). Please refer to <a href="#">"Data Mapping Quick Reference Tables"</a> on page 5-42 for details regarding Import and Export Types.
Source	Select the import source. This can be File or LDAP.
Input File	The full path, including file name, of the file that will be imported. If you use the Scheduler functionality, you must save the import file on the OW5000 Platform installed server.
Column Delimiter	<p>The following delimiters are available as an import file:</p> <ul style="list-style-type: none"> <li>• Comma (,)</li> <li>• Pipe ( )</li> <li>• Space</li> <li>• Tab</li> </ul> <p>Delimiter is automatically detected once the input file is selected.</p>
Use Quoted Field	Select if a double quotation mark (") is used in the import file. This is checked by default. If your selected file has a double quotation mark, this check box is checked automatically.

### Opening a Profile

Once the user creates a profile, anyone with DBTool privileges can open the profile by selecting **Open** from **Import > Profile > Open** (Figure 5-5).

**Figure 5-5** Open Profile dialog box



**Table 5-4** Profile fields

Field	Description
Profile	List of profiles already created for import.

When LDAP is selected as the Source, LDAP related configurations are required, as described in the section below.

### LDAP

OW5000 DBTool LDAP Integration synchronizes the OW5000 directory to an LDAP compliant directory, making it possible for an LDAP compliant directory to be the source of employee directory data used in the OW5000 directory. This eliminates the need for employee data administration of the OW5000 server, as it automatically gets updated information from the directory server. The LDAP Integration application can load all data from the LDAP compliant directory, or changes since the last synchronization if this feature is supported by the LDAP server.

OW5000 DBTool LDAP Integration lets administrators specify an LDAP source to populate the OW5000 directory of employees and external to populate the OW5000 directory of employee and external numbers. Because the structure and elements of an LDAP directory can vary, a user interface is provided for entering specific queries to retrieve key data elements from the LDAP server. After the discovery process, returned fields can then be mapped to OW5000 fields. If supported by the LDAP server (only LDAP V.3 supported), queries can be formulated to only get records that have been added or modified in a given time interval since the query was last run.

The LDAP source name, query, and mapping can be saved and scheduled through web-based OW5000 Administrator to run at designated recurrent times. There is no limit to the recurrence. The query can be run as often as once a minute or as little as once a quarter.

Because the LDAP source, query, mapping, and scheduling are stored as a unit, it is possible to gather OW5000 data from multiple LDAP sources or queries and schedule these queries independently.

Any LDAP v.3 compliant server will work as an OW5000 DbTool source, including the following:

- IBM Tivoli Directory Server
- IBM Lotus Notes/Domino
- Microsoft Active Directory
- Microsoft Exchange Server
- Microsoft ADAM
- Novell eDirectory

## Configuring LDAP

The LDAP menu is available when LDAP is selected as the source in the Create Profile dialog box (Figure 5-4).



NOTE

*In order to use LDAP, you must register the LDAP license. Please refer to the OW5000 installation Guide for more details. A license is **not** required for the Asian and Russian market.*

**Figure 5-6** LDAP Configuration dialog box

To connect with the LDAP source, the following LDAP Server settings are required.

- [LDAP Server](#)
- [Base DN](#)
- [Other Settings](#)
- [Search Filter](#)

### LDAP Server

Use the information below to set the LDAP server information. The Username and Password is for the LDAP server, not OW5000.

**Figure 5-7** LDAP Server dialog box

The dialog box has four tabs: LDAP Server, Base DN, Other Settings, and Search Filter. The LDAP Server tab is active. It contains four input fields: Host, Port (with a default value of 389), Username, and Password. A Test button is located at the bottom right.

**Table 5-5** LDAP Server fields

Field	Description
Host	The computer name of the LDAP server.
Port	The port number that the LDAP server is listening on for connections. The default is port number 389.
Username/Password	The user name and password to connect LDAP server for the query.
Test	Try to connect LDAP server. <b>Connection successful</b> is displayed on the bottom of the window in green if it is connected.

### Base DN

**Figure 5-8** Base DN dialog box

The dialog box has four tabs: LDAP Server, Base DN, Other Settings, and Search Filter. The Base DN tab is active. It contains a single input field labeled Base Distinguished Name. A Fetch DNS button is located at the bottom right.

**Table 5-6** Base DN fields

Field	Description
Base distinguished name	The distinguished name (DN) that identifies the starting point of a search.
Fetch NDs	Press the Fetch DN's button to <b>discover</b> possible Base DN's.

### Other Settings

**Figure 5-9** Other Settings dialog box

**Table 5-7** Other Settings fields

Field	Description
Use Last Import Time in Search	Denotes the date and time the last import occurred. If "Use Last Import Time in Search" is checked, the Search Filter will automatically be altered so that only those records changed since the last import will be returned from the query. This option uses Microsoft's Active Directory "modify Time Stamp" operational attribute.
Import Status	Indicates whether or not an import is currently being performed. Two simultaneous searches for the same profile cannot occur because an import will check this setting first before performing the search. WARNING: Modifying this setting may result in overlapping searches.

## Search Filter

**Figure 5-10** Search Filter dialog box

The screenshot shows a dialog box titled 'Search Filter'. It has four tabs: 'LDAP Server', 'Base DN', 'Other Settings', and 'Search Filter'. The 'Search Filter' tab is selected, and it contains a text area with the LDAP search filter '(objectclass=\*)'.

**Table 5-8** Search Filter fields

Field	Description
Search Filter	Enter a valid LDAP search filter. For example, to search for all users in Active Directory, enter "(&(objectcategory=person)(objectclass=user))." To search for the Active Directory "modify Time Stamp" operational attribute.



For more information about forming LDAP search filters, please refer to the article RFC2254.

The screenshot shows a dialog box titled 'Import Fields'. It is divided into two main sections: 'Available Attributes' on the left and 'Selected Attributes' on the right. Between these sections are two circular buttons with arrows, one pointing right and one pointing left, for moving attributes between the lists. At the bottom right, there is a 'Search' button.

- Step 1** After entering all required configurations, press **Search** to *discover* which attribute lists are available for the specified LDAP server. Next, select the list of attributes for the desired import. If no attribute strings were returned by the search, contact your LDAP directory administrator.
- Step 2** Provide the necessary information in each section as described below.

**Table 5-9** Search fields

Field	Description
Available Attributes	A list of fields in the LDAP directory that the user has not selected to import.
Selected Attributes	A list of fields in the LDAP directory that will be imported and shown in the DBTool GUI. This list will vary depending on the LDAP server directory structure. Select the list of attributes appropriate for the desired import.

**Step 3** Click **OK** to add the new profile.

**NOTE**

*If you cannot find the attribute string, please contact the LDAP Directory Administrator.*

### Mapping Import Fields

The Data shown in [Figure 5-11](#), displays an example of field mapping from an import file to the OW5000 Database.

After selecting fields within the list of Source Field, select fields to be mapped in the list of Database Fields, right click, and then click the **Bind** button to perform the field mapping between the Source Field and the OW5000 Database. Clicking the **Bind All** icon on the top left enables batch mapping of fields whose name correspond.

To cancel mapping, select the field from the Database Fields list, right click, and then click **Unbind**. Clicking the **UnBind All** icon on the top right enables batch cancellation of mapping. Existing mappings are unaffected when **Bind All** is selected.

Figure 5-11 Example of Import Field Mapping dialog box

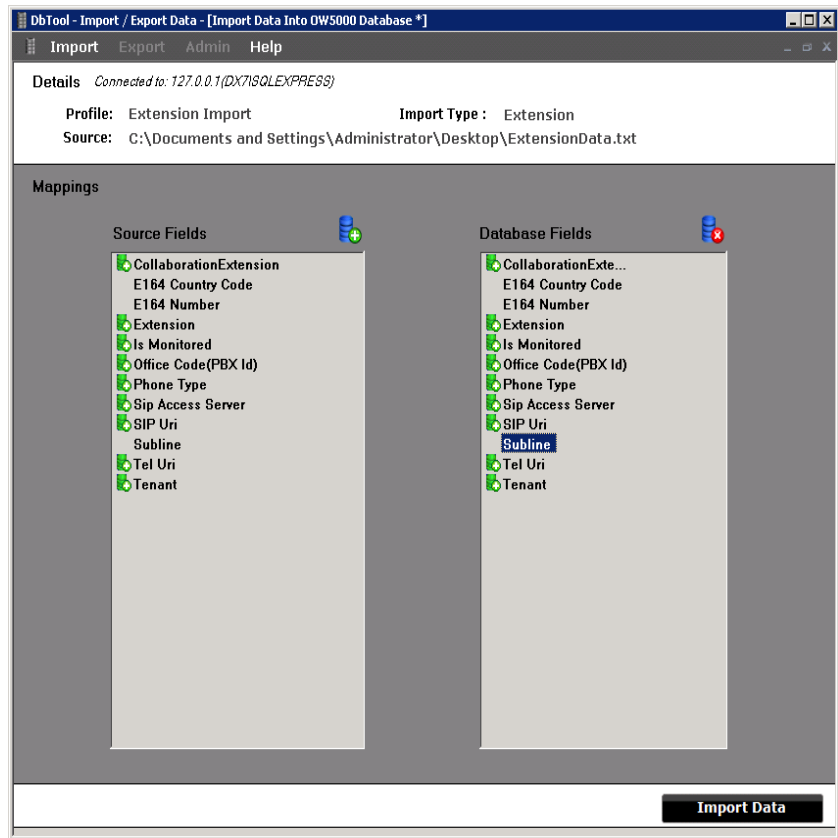



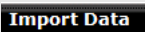


Table 5-10 Import Field Mapping

Icon	Description
	Attempts to bind <b>Source Fields</b> to <b>DataBase Fields</b> by matching names.
	Removes all the bindings between <b>Source Fields</b> and <b>DataBase Fields</b> .
	This mark indicates that the associated field must be mapped.
	Starts the importing.



NOTE

Refer to the [Data Mapping Quick Reference Tables](#) for details on each target import type data.



## Database Import Tool Functions

The following sections describe the functions of the Database import tool. The Database import tool can be configured from the Settings page of the Import menu (Figure 5-12).

General Settings is the common setting for all import types. Also there are several configurations specific to each import type. Table 5-11 describes each parameter's usage.

**Figure 5-12** Import Settings dialog box

**Table 5-11** Import Settings fields

Group	Field	Description
File Options	Use Quoted Fields	If import file data has double quotation mark ("), check this check box.
	Field Delimiter	Please select used field delimiter to divide Import file from following. <ul style="list-style-type: none"> <li>• Comma(,)</li> <li>• Pipe ( )</li> <li>• Space</li> <li>• Tab</li> </ul>
PBX	PBX Wireless PBX (not used in this version)	If a PBX is not specified when an Extension and person are imported, a default value, selected here, is used.

Group	Field	Description
Rules	Extension Derivation	Select to open the form that manages Extension Derivation Rules. Refer to the <a href="#">Extension Derivation</a> section.
	URI Derivation	Select to open the form for managing URI Derivation Rules. Refer to the <a href="#">URI Derivation</a> section.



NOTE

Verify that the *Use Quoted Fields* check box is checked (enabled). The check box needs to be checked when the field names in the header line in the import file are enclosed with double quotations. Also, the check box needs to be checked if an exported file is used as an import file when the *Use Quoted Fields* is enabled.

## Extension Derivation

Extension derivation rules can be created, deleted, or applied using the Extension Derivation Rule Manager Form ([Figure 5-13](#)). Click the **Extension Derivation** button in [Figure 5-12](#) to open.

**Figure 5-13** Extension Derivation Rule Manager Form

Applied	Rule	Begins With	Use Last Digits	Prefix	PBX		
<input checked="" type="checkbox"/>	Dallas Office Rule	2	4	30	SV7K-44	⬆	⬇

**Add New**

Rule Name:

Begins With:  Use Last Digits:  [Help](#)

Prefix:  PBX:  [Help](#)

**Save** **Delete**

**Table 5-12** Extension Derivation fields

Field	Description
Rule Name	Rule name of this derivation rule.
Begins with	Target extension which begins with the value set in this edit box.
Use Last Digits	The number of available digits to use from the source number, starting at the end. If the digits of the Extension is smaller than the "Begins with" field value plus the "Use Last Digits" field value, the Extension Derivation rule does not match.
Prefix	Optional prefix to add to the beginning of the number.
PBX	If the Rule matches, the PBX which is selected from this drop-down is applied. This drop-down list shows the PBXs that were assigned using OW5000 Administrator.
Move Up/Down	Changes the priority of the applied rule.
Add New	When you create a new rule, click the "Add New" button. The field is cleared so you can create a new rule. <b>Note:</b> Cleared rule is NOT saved.
Applied	Select applied rule from the list.
Save	Saves the rule to the list.
Delete	Deletes the rule from the list and saves the rule.



The PBX selected in this dialog box is used as the inserted value, not the query parameter. The OfficeCode is selected as a mapping parameter. If the extension matches this rule, this PBX is used as the OfficeCode.



If the imported Extension does not exist in the OW5000 Database, the DBTool decides on the PBX, based on the Extension Derivation Rule.  
If the imported Extension exists in the OW5000 Database, the current Extension in the database is deleted and DBTool decides the PBX. based on the Extension Derivation Rule.



Extension of URI Derivation means Primary, Secondary, and Tertiary Extension.

## URI Derivation

Clicking the **URI Derivation** button on the Import Settings dialog box (Figure 5-12) opens a URI Derivation dialog box (Figure 5-14).

**Figure 5-14** URI Derivation dialog box

This form is used to create both telURIs and SIPURIs. The data grid shows all rules, and distinction is made using the column type; either telURI or SIP URI.

The rules entered through OW5000 Admin are also shown but cannot be deleted or modified. The delete buttons are disabled when the selection is on Admin rule.

The rule entered through Admin can only be applied for a Profile in DBTool.

The Translation Pattern value demonstrates the type of values that will be generated when the Rule is used. Only one rule may be applied to a telURI or SIP URI at a time.

**Table 5-13** URI Derivation fields

Field	Description
Add New	When you click <b>Add New</b> to create a new rule, the field is cleared to be able to create a new rule. The value cleared is not saved.
Apply (tel URI or SIP URI)	Select which URI applies to this rule.
Regular Expression (\$0)	This determines the first half of the rule, to extract or modify the extension.
Translation Pattern	Gives an example of the URI generated after applying the rule. \$0 has to be included if the telURL and SIPURI have both \$0 and @.
Save	Saves the rule to the list.
Delete	Deletes the rule from the list and saves the rule.

**Figure 5-15** Locations dialog box

**Table 5-14** Location fields

Field	Description
PBX	PBX for the location
Hierarchy Selector	Choose one of the predefined hierarchies from the list.

### Hierarchies

When OW5000 is installed, a pre-determined set of hierarchies are installed for Location and Unit (organization) data. Hierarchies are discovered by querying the OW5000 database. After the user selects Organization or Location as the IEType, the database will be queried to find available values for either the Unit or Location hierarchies. The user needs to map the fields from the file to these types. While importing, the hierarchy structure is enforced on the data. The record not obeying the hierarchy is rejected.

An example of a virtual hierarchy type for locations is shown below (Table 5-15).

**Table 5-15** Hierarchy Type For Locations

Building	Room	Bed	Telephone	Notes
BL1	A1	BD1	1001	Patient1
BL1			2000	
BL1	A2		2001	Break Room
BL1		BD2	2002	Patient 2
BL1	A2	DB3		Patient 3

The data in row four (Table 5-15) will be rejected because an Area is not assigned for BD2.

## Organization Settings

When OW5000 is installed, a pre-determined set of hierarchies are installed for organization data. Organization has the same hierarchy mechanism as locations.



NOTE

Please open the Settings page and click **OK** at least once; otherwise the Company, Division, and Department will not be imported.

**Figure 5-16** Organization dialog box

**Table 5-16** Location fields

Field	Description
PBX	PBX for the organization.
Hierarchy Selector	Choose one of the predefined hierarchies from the list.
Location Types	Select location type for this organization.

### Organization/Location Hierarchy Settings

The Organization/Location Hierarchy import type provides the import capability of organization and location simultaneously with hierarchy.

**Figure 5-17** Organization/Location Hierarchy Settings

The screenshot shows a window titled "Import Settings". It has two main sections. The first section, "General Settings", contains a "File Options" group with a checkbox for "Use Quoted Fields" (which is unchecked) and a "Field Delimiter" dropdown menu set to "Pipe (|)". The second section, "Import Type : Organization/Location Hierarchy", contains a "PBX:" dropdown menu set to "SV7000-44", a "Hierarchy Selector" group with a label "Choose one of the following hierarchies :" and a dropdown menu set to "None", and another group with a label "Choose one of the following unit types :" and a dropdown menu set to "None". An "OK" button is at the bottom right.

**Table 5-17** Organization/Location Hierarchy fields

Field	Description
PBX	PBX for this hierarchy.
Hierarchy Selector	Choose one of the hierarchies from the list.
Unit Types	Select unit type for this hierarchy.

**Figure 5-18** Person Settings dialog box

**Table 5-18** Person Settings fields

Group Name	Field	Description
General Options	Person Access Server	Set the default Person Access Server in the following cases: <ul style="list-style-type: none"> <li>• Person Access Server is mapped but the imported value is incorrect.</li> <li>• Person Access Server is not mapped.</li> </ul>
	IM Access Server	Set the default IM Access Server in the following cases: <ul style="list-style-type: none"> <li>• IM Access Server is mapped but the imported value is incorrect.</li> <li>• IM Access Server is not mapped.</li> </ul> <p><b>Note:</b> IM Access Server is not set when the user does not have an IM URI.</p>
	Sync or Update Database	Select the desired method of synchronization. <ul style="list-style-type: none"> <li>• Update: Only adding/modifying the data which is in the Profile source.</li> <li>• Sync Method 1: Every Person that was deleted from the Profile source is deleted from the database.</li> <li>• Sync Method 2: Every Person not in the Profile source is deleted from the database.</li> </ul>



Group Name	Field	Description
Case Conversion		<p>The case conversion options allow the user to decide if the records in the database will be in mixed case, only upper case, only lower case, or left as they are when imported.</p> <ul style="list-style-type: none"> <li>• Mixed: Imports names with the leading character in uppercase (capitalized).</li> <li>• Upper: Converts the mapped fields to all upper case characters.</li> <li>• Lower: Converts the mapped fields to all lower case characters.</li> <li>• Leave As Is.</li> </ul> <p><b>Note:</b> This feature is applied to First Name, Last Name and Middle Name.</p>
Display Name Generation		<p>This option defines how to create the Display Name from the Display Name Generation dialog box, using the drop-down menu.</p> <ul style="list-style-type: none"> <li>• Update Display Names in all records This selection looks at a flag in the database to determine if the existing Display Name has been modified. If so, then it is not updated during the import.</li> <li>• Update non-modified Display Names only This results in the regeneration of Display Name based on the import data regardless of the modified flag.</li> <li>• Do not update the Display Names When this option is selected, the Display Name is not built from Full Name for any matching employee.</li> </ul> <p><b>Note:</b> Updates non-modified Display Name only and does not update the Display Names. Works only when DBTool can determine the target Person.</p>
Advanced Settings	Contact Method Settings	Select imported Contact Methods along with the person. See <a href="#">“Person Contact Method Settings dialog box” on page 5-28.</a>
	URI Derivation	Select to open the form that manages Person Uri Derivation. See <a href="#">“URI Derivation” on page 5-20.</a>
	Roles	Select the roles to be imported. Each selected role adds the role-related fields to the Database Fields list.

## Update and Synchronization

The OW5000 database may be synchronized with customer data sources. This means that users can choose to have records that were previously available in a data source to automatically be deleted by DBTool.

Data synchronization occurs as a part of importing data. The most significant differences when comparing Update mode to Synchronization mode is that a unique identifier (Unique Id) is required for

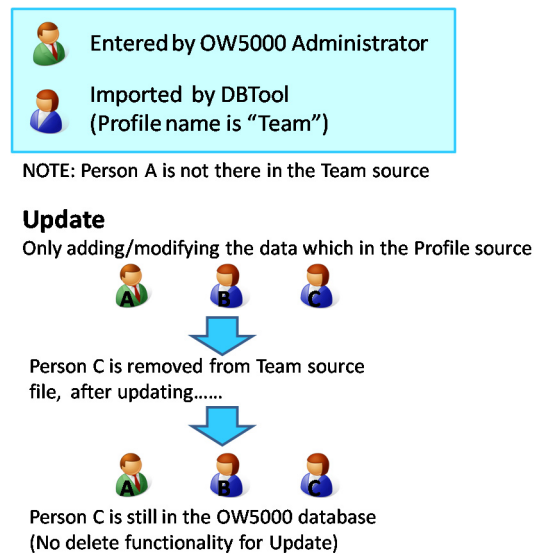
Synchronization mode and data may be deleted in Synchronization mode. In Update mode, mapping the unique identifier is optional.



Synchronization mode is only available for **Person** import type.

The following example shows how Update, SyncMethod1, and SyncMethod2 should work.

**Figure 5-19** Update Mode



**Figure 5-20** Sync Method 1

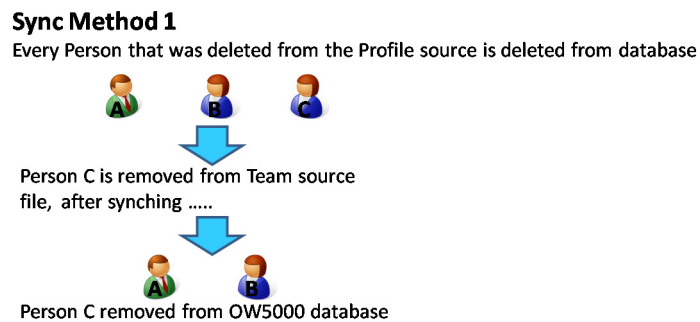
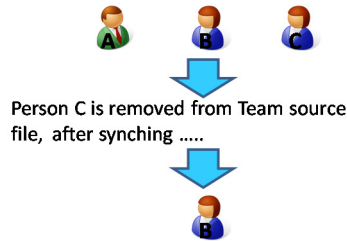


Figure 5-21 Sync Method2

**Sync Method 2**

Every Person not in the Profile source is deleted from database

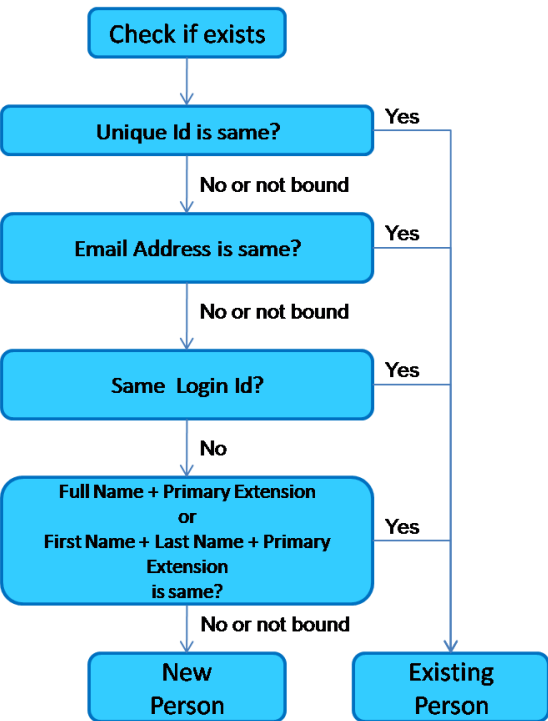


Person A and C removed from OW5000 database

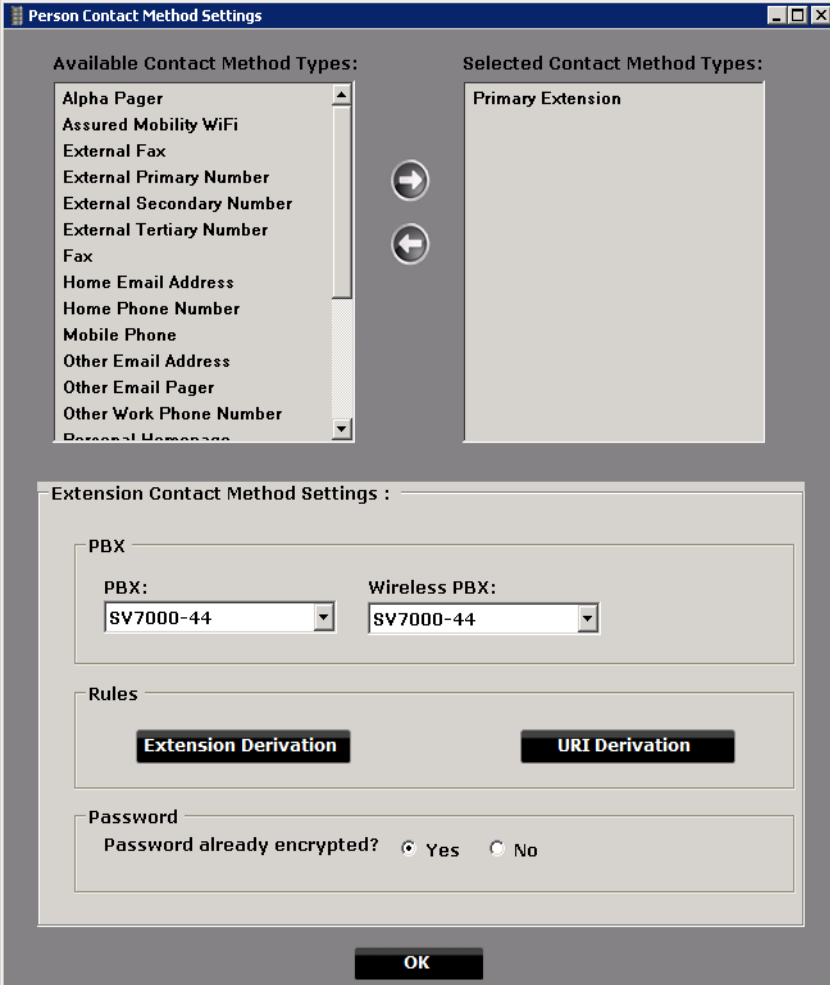
NOTE: If Person A is also in the Team source file, Person A will not be removed

DBTool determines whether or not the data exists in the OW5000 database using following logic.

Figure 5-22 OW5000 Database Check



Only the Work Email Address is checked. Home Email Address and Other Email Addresses are not checked.

**Figure 5-23** Person Contact Method Settings dialog box

The dialog box is titled "Person Contact Method Settings". It features two main columns: "Available Contact Method Types:" on the left and "Selected Contact Method Types:" on the right. The left column contains a list of contact methods: Alpha Pager, Assured Mobility WiFi, External Fax, External Primary Number, External Secondary Number, External Tertiary Number, Fax, Home Email Address, Home Phone Number, Mobile Phone, Other Email Address, Other Email Pager, Other Work Phone Number, and Personal Homepage. The right column contains a single entry: Primary Extension. Between the columns are two circular arrows, one pointing right and one pointing left. Below these columns is a section titled "Extension Contact Method Settings :". This section contains three sub-sections: "PBX" with two dropdown menus labeled "PBX:" and "Wireless PBX:" both showing "SV7000-44"; "Rules" with two buttons labeled "Extension Derivation" and "URI Derivation"; and "Password" with a label "Password already encrypted?" and two radio buttons, "Yes" (selected) and "No". An "OK" button is located at the bottom center of the dialog box.

Available Contact Method Types:	Selected Contact Method Types:
Alpha Pager	Primary Extension
Assured Mobility WiFi	
External Fax	
External Primary Number	
External Secondary Number	
External Tertiary Number	
Fax	
Home Email Address	
Home Phone Number	
Mobile Phone	
Other Email Address	
Other Email Pager	
Other Work Phone Number	
Personal Homepage	

Extension Contact Method Settings :

PBX

PBX: SV7000-44 Wireless PBX: SV7000-44

Rules

Extension Derivation URI Derivation

Password

Password already encrypted? ☒ Yes ☐ No

OK

**Table 5-19** Person Contact Method Settings fields

Person Contact Method Setting		
Available Contact Method Types		Set default Person Access Server if the imported person does not have Person Access Server information.
Selected Contact Method Types Move Left/Right		Contact Method type which is the target of import. Move Contact Method between Available Contact Method Types and Selected Contact Method Types field.
Extension Contact Method Settings	PBX	<p>If a PBX is not specified when a Contact Method and person are imported, a default value selected here is used.</p> <ul style="list-style-type: none"> <li>• PBX</li> <li>• Wireless PBX (Not used in this version)</li> </ul> <p>This setting is applied only when importing extension contact methods for a Person like Primary or Secondary Extensions, and when a DTerm password is mapped. Also this is applied only in the following cases:</p> <ul style="list-style-type: none"> <li>• PBX is mapped but imported PBX value is incorrect.</li> <li>• PBX is not mapped.</li> </ul>
	Password already encrypted?	<p>It is used by the user to indicate whether or not the source password for the Extension is encrypted.</p> <p>If the setting is selected as "NO", the source password is not encrypted so DBTool will encrypt the password using encryption OW5000 algorithm (not SHA-1) before storing it.</p> <p>If it is "YES", the password is assumed to have been previously encrypted with OW5000 algorithm so it is not modified.</p>
	Extension Derivation	<p>Select to open the form that manages Extension Derivation Rules.</p> <p>See description in <a href="#">Extension Derivation</a> of Extension Settings section.</p>
	URI Derivation	<p>Select to open the form for managing URI Derivation Rules.</p> <p>See description in <a href="#">URI Derivation</a> of Extension Setting section.</p>

**Figure 5-24** Person URI Derivation dialog box

**Table 5-20** Person URI Derivation fields

Field	Description
Apply IM URI	Select applying rule from created rule.
Apply SIPURI	Select applying rule from created rule.
URI Key Parameter	Provides a list of available Key parameters. <ul style="list-style-type: none"> <li>• First character of First Name + Last Name</li> <li>• First Name</li> <li>• Last Name</li> <li>• LoginId</li> <li>• Prefix + Primary Extension</li> <li>• Primary Extension</li> </ul> <i>Note: Primary Extension and Prefix + Primary Extension keys are only available and displayed in the US Market.</i>
Translation	Gives an example of URI generated after applying rule. \$0 and @ must be included in this field.
Add New	When you click the "Add New" button to create a new rule, the field is cleared in order to create a new rule. The value cleared is not saved.
Save	Saves the rule and adds to data grid.
Delete	Deletes the selected rule in data grid.

**NOTE**

Licenses, Route/Trunk and SIPUA Group Import types do not have specific configurations.



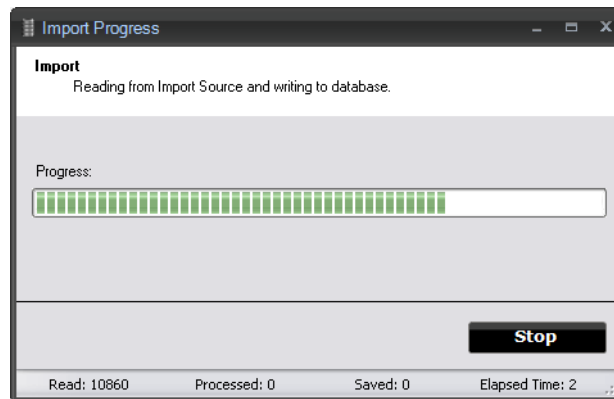
If **Login ID** is selected as the URI Key Parameter in Person URI Derivation, **User** roles must be selected for creation in Import Settings so that the **Login ID** database field can be mapped to a Login ID column in the Input File. This column **MUST** contain unique Login IDs for each person being added or updated. If an input record specifies a Login ID that is already in use in the OW5000 database, data associated with the existing Person can be overwritten by the data that's being imported for that Login ID. Please ensure that if you are attempting to add a new Person to the database, that the specified Login ID is unique relative to existing Login IDs in the database and relative to other Login IDs in the DBTool Input File.

## Importing Data

After mapping all of the fields, data can now be imported.

- Step 1** Click **Import Data** (Figure 5-11) to start an import operation. An Import Progress dialog box displays (Figure 5-25) showing the progress of the import.

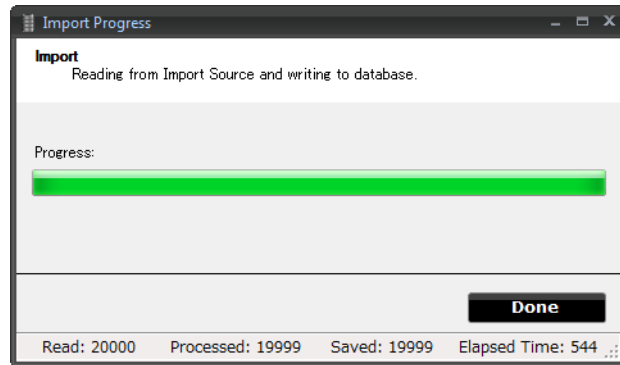
**Figure 5-25** Import Progress dialog box



Depending on the selected Import Type and the number of fields mapped, the import operation may take several minutes for the import operation.

- Step 2** Click the **Stop** button to cancel the import when changing a mapping or when canceling an import. The main screen of the import displays. When an import is stopped, data processed up to that point will remain in the database.

- Step 3** When the import is finished, **Done** is displayed in the Import Progress dialog. From the bottom of the dialog, the user can know how much data has been correctly stored in the database.



- Step 4** Click **Done** button to return to the import main screen.

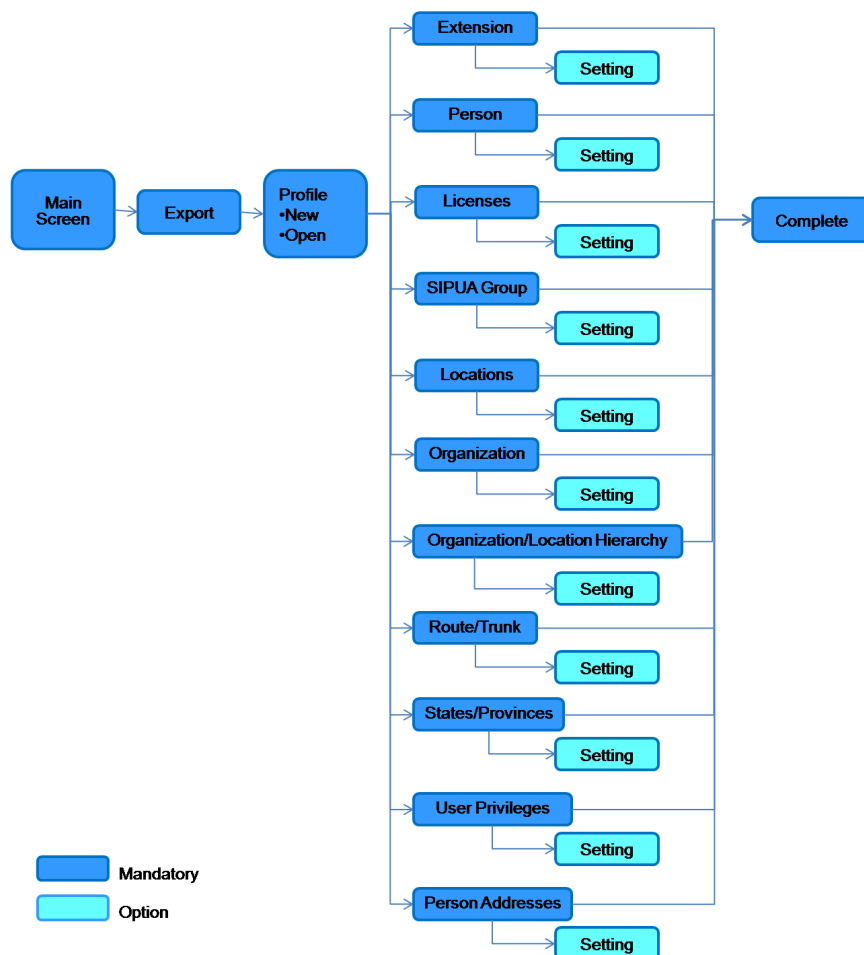
If an error occurred, check the import log via OW5000 LogViewer and recheck the import file format.



## Export Data

Figure 5-26 shows the data export flow using DBTool. In OW5000 R4, DBTool supports seven export types, which are the same as import.

Figure 5-26 Data Export using DBTool



NOTE

If UC700/MC550 is not installed and it is a Japanese market, States/Provinces, User Privileges and Person Addresses are not displayed.

## Create Export Profile

**Step 1** To create or open a profile for export, click **Export** on the menu bar (Figure 5-2). A Create Export Profile dialog box displays when a user selects **New** from the menu (Figure 5-27).

**Figure 5-27** Create Export Profile dialog box

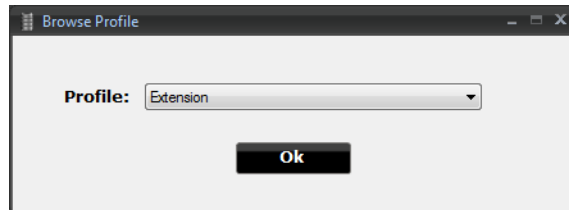
**Table 5-21** Create Export Profile fields

Field	Description
Profile Name	The unique name for the Export profile. This profile saves the information set in this export process. This created profile can be used in the Schedule page of the OW5000 Administrator.
Export Type	The type of export (e.g. Extension, Person). Please refer to <a href="#">“Data Mapping Quick Reference Tables” on page 5-42</a> for details regarding Import and Export Types.
Output File	The full path, including file name, of the file that will be exported.
Column Delimiter	The following delimiters are available as an import file: <ul style="list-style-type: none"> <li>• Comma (,)</li> <li>• Pipe ( )</li> <li>• Space</li> <li>• Tab</li> </ul>
Use Quoted Field	You may also have DBExport insert quotes around each value by checking the <b>Use Quoted Fields</b> box. Check by default.

## Open Profile

Once the user creates a profile, anyone with DBTool privileges can select the profile by selecting **Open** from **Export > Profile > Open** (Figure 5-28).

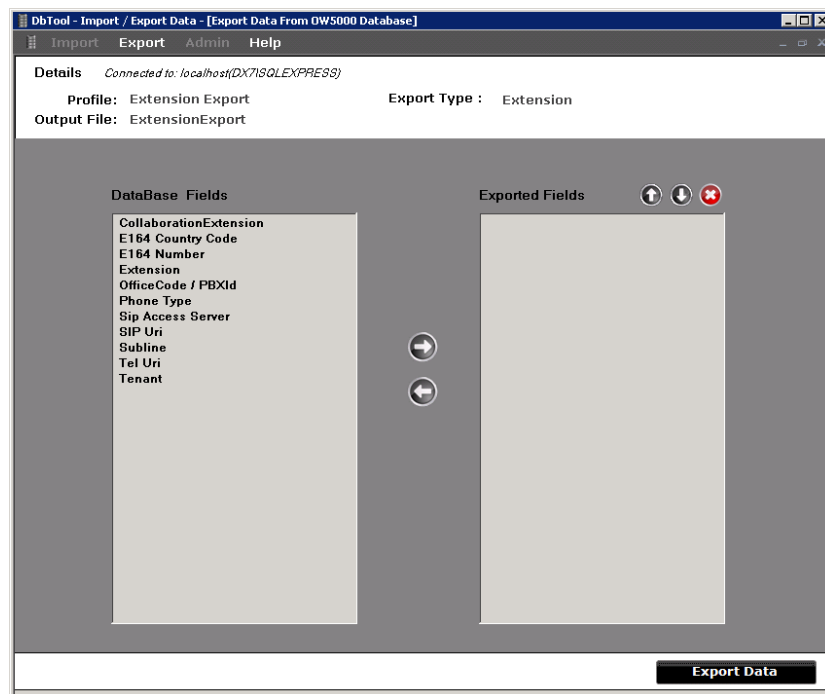
**Figure 5-28** Open Export Profile dialog box








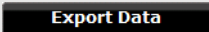
**Table 5-22** Profile fields

Field	Description
Profile	List of profiles already created for export.

**Figure 5-29** Selecting Exported Data dialog box

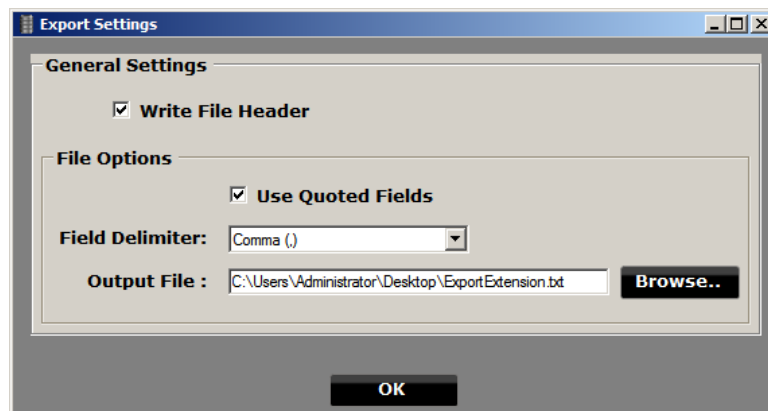


**Table 5-23** Exported Data fields

Icon	Description
	Moves the DataBase Field selected to Exported Fields list box, indicating this field would be exported.
	Moves the Exported field selected to DataBase Fields list box, indicating this Field would not be exported.
	Moves the selected field in Exported Fields up in the list box. Indicates the order in which columns would be exported.
	Moves the selected field in Exported Fields down in the list box. Indicates the order in which columns would be exported.
	Removes a field from Exported Fields list box and adds it back to the DataBase Fields list box indicating the field would not be exported.
	Starts the Exporting.

### Database Export Tool Functions

The following sections describe the functions of the Database export tool. The Database export tool can be configured from the Settings page of the Export menu.

**Figure 5-30** Export Settings dialog box

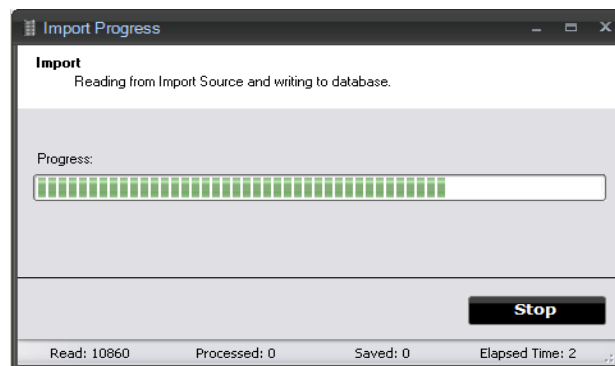
**Table 5-24** Export Settings fields

Field	Description
Write File Header	Determines whether or not a header (column names) should be added to the beginning of the file.
Field Delimiter	The following delimiters are available for Export file. <ul style="list-style-type: none"> <li>• Comma(,)</li> <li>• Pipe ( )</li> <li>• Space</li> <li>• Tab</li> </ul>
Use Quoted Fields	Determines whether or not each exported value should have double quotes (") surrounding it.
Output File	Output file path and name
Hierarchy Selector	Choose one of the predefined hierarchies from the list. This parameter displays only when Location or Organization is selected as the Export Type. Select the correct hierarchy based on the configuration.
Location Types	Select the location type for this organization. This parameter is displayed only when Organization is selected as the Export Type. Select the correct location type based on the configuration.

## Exporting Data

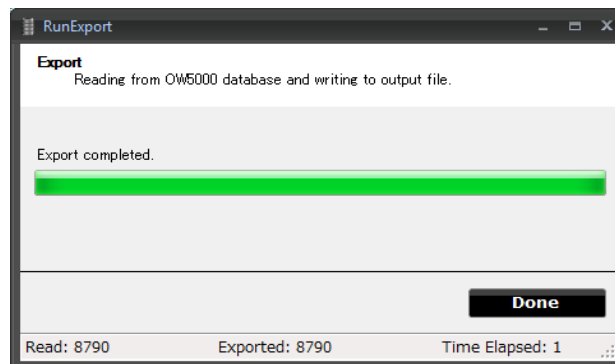
After selecting the exported fields, data can now be exported.

- Step 1** Click **Export Data** to start an export operation. An Export Progress dialog box displays (Figure 5-31) showing the progress of the import.

**Figure 5-31** Export Progress dialog box

Depending on the selected Export Type and the number of fields selected, it may take several minutes for the export to complete.

- Step 2** Click the **Stop** button to cancel the export when changing exporting data or when stopping an export. The main screen of the export displays. When an export is stopped before finishing, the data processed up to that point will be written to the exported data file.

**Figure 5-32** Export Complete dialog box

When the export is finished, **Export Completed** is displayed in the Export Progress dialog. The amount of data correctly written in the file is displayed at the bottom of the dialog box.

**Step 3** Click **Done** to return to the export main screen.

If an error occurs, check the export log via OW5000 LogViewer.

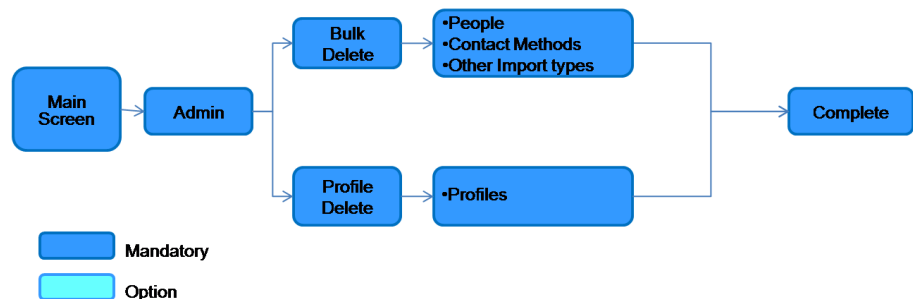


NOTE

When you select an existing file name, the file is overwritten by the Exported file.

## Admin

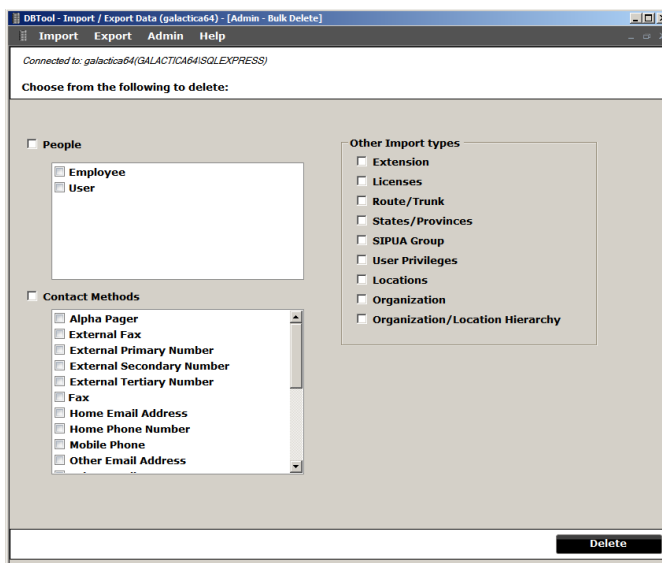
The Delete Options screen (Figure 5-33) shows the Admin flow using DBTool. In OW5000 R4, two delete functions are supported.

**Figure 5-33** Delete Options

## Bulk Delete

To delete records using bulk delete, a Delete Options dialog box displays (Figure 5-34). The objects are segregated by category.

**Figure 5-34** Delete Options dialog box



NOTE

Parameters displayed in [Figure 5-34](#) are different depending on the market and conditions.

- Step 1** Select the desired objects and then click **Delete**. A Delete Confirmation dialog box displays ([Figure 5-35](#)).

**Figure 5-35** Delete Confirmation dialog box

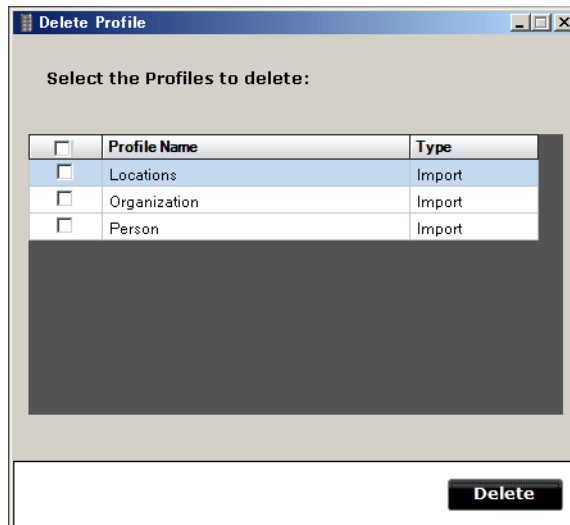


- Step 2** Click **Yes** to delete or **No** to cancel the deletion. The process begins. The process is interruptible, but any deletes that have occurred to that point will be committed.
- Step 3** Click **Done** to finish the process.

## Delete Profile

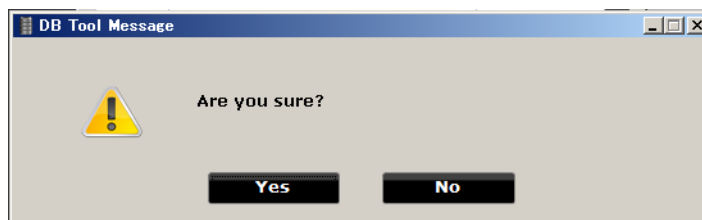
Selecting **Delete Profile** displays [Figure 5-36](#).

**Figure 5-36** DbTool Profiles Deletion dialog box



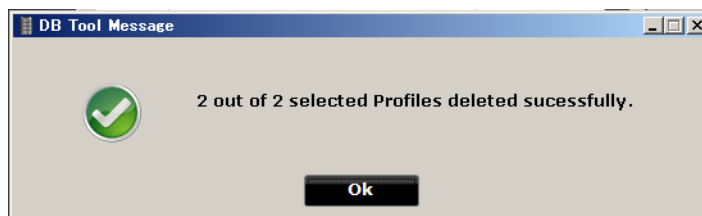
**Step 1** Click the desired profile to delete and then click **Delete**. [Figure 5-37](#) displays.

**Figure 5-37** Delete Profile Confirmation dialog box



**Step 2** Click **Yes**. A Confirmation Display dialog box displays ([Figure 5-38](#)).

**Figure 5-38** Confirmation Display dialog box



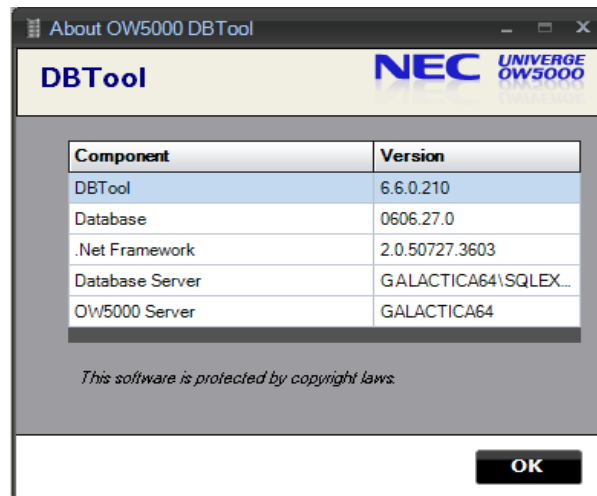
**Step 3** Click **OK** to finish.



## Help

Selecting **Help** from the DBTools Options dialog box (Figure 5-2) displays basic version information in an About dialog box.

**Figure 5-39** About dialog box



**Table 5-25** Help fields

Field	Description
DBTool	OW5000 DBTool software build version
Database	OW5000 database version
Database Server	The SQL Server instance name.
OW5000 Server	The name of the OW5000 server.
.NET Framework	.NET Framework version used by DBTool

## Data Mapping Quick Reference Tables

### Database Field Reference

Database fields are described for each type.

**Table 5-26** Extension Type Database Fields

Type	SubType	Database Field
Extension		CollaborationExtension
		E164 Country code
		E164 Number
		<b>Extension</b>
		Is Monitored
		Office Code(PBX Id)
		Phone Type
		SIP Access Server
		SIP URI
		Subline
		Tel URI
		Tenant

**Table 5-27** License Type Database Fields

Type	SubType	Database Field
License		API
		CSTA
		<b>Extension</b>
		GCP
		<b>Office Code (PBX Id)</b>
		PRESENCE
		SOAP

**Table 5-28** Locations Type Database Fields

Type	SubType	Database Field
Locations		Extension
		Notes
		Office Code(PBX Id)
	Hierarchies	Area
		Building   Room   Bed
		Campus
		External Location
		Hospital Location
		Nurse's Station
		Office
		Unknown Location

**Table 5-29** Organization Type Database Import Fields

Type	SubType	Database Field
Organization		Extension
		Notes
		Office Code(PBX Id)
	Hierarchies	Company   Division   Department
		Hotel
	Location Types	Area
		Building
		Campus
		External
		Hospital
		Nurse's Station
		Office
		Unknown

**Table 5-30** Person Type Database Fields

Type	SubType	Database Field
Person	Base	Add Photo
		Authorization Code
		Display Name
		<b>First Name</b>
		IM Access Server
		IM URI
		<b>Last Name</b>
		Middle Name
		Note
		Prefix
		SIP Access Server
		SIP URI(Person)
		SIPUA Group
		Suffix
		Unique Id
		User Defined 1
		User Defined 2
		User Defined 3
		User Defined 4
		User Defined 5
		User Defined 6
	Employee	Employee Confidentiality Status
		Employee ID
		Employee Location
		Employee Organization
		Employee Position
		Employee Type
	Patient	Allow Visitors
		Nurse Desk Location
		Nurse Desk Unit
		Patient Account
		Patient Admit Date

Type	SubType	Database Field
		Patient Birth Date
		Patient Confidentiality Status
		Patient Discharge Date
		Patient Gender
		Patient Location
		Patient Number
		Patient Unit
		Physician Confidentiality Status
		Physician End Date
		Physician Location
		Physician Organization
		Physician PID
		Physician Specialty
		Physician Start Date
	<b>Student</b>	Student Confidentiality Status
		Student Number
		Student Start Date
		Student Suspend Date
	<b>User</b>	<b>Login ID</b>
		NTLM Login ID
		Password
		Password (Encryption Key)
		Password (Hash Value)
		User Confidentiality Status
<b>Contact Methods</b>	AMW	Assured Mobility WiFi
	AMW	Confidentiality Status (Assured Mobility WiFi)
	AMW	Dterm Password(Assured Mobility WiFi)
	AMW	Office Code(Assured Mobility WiFi)
	AMW	Priority(Assured Mobility WiFi)
	AP	Alpha Pager
	AP	Confidentiality Status(Alpha Pager)
	AP	Country(Alpha Pager)
	AP	Priority(Alpha Pager)
	AP	Is Two Way(Alpha Page)

Type	SubType	Database Field
	AP	PIN(Alpha Pager)
	AP	Provider(Alpha Page)
	EF	Confidentiality Status(External Fax)
	EF	Country(External Fax)
	EF	External Fax
	EF	Priority(External Fax)
	EPN	Confidentiality Status(External Primary Number)
	EPN	Country(External Primary Number)
	EPN	External Primary Number
	EPN	Priority(External Primary Number)
	EXN	Confidentiality Status(External Secondary Number)
	EXN	Country(External Secondary Number)
	EXN	External Secondary Number
	EXN	Priority(External Secondary Number)
	ETN	Confidentiality Status(External Tertiary Number)
	ETN	Country(External Tertiary Number)
	ETN	External Tertiary Number
	ETN	Priority(External Tertiary Number)
	FAX	Confidentiality Status(Fax)
	FAX	Dterm Password(Fax)
	FAX	Fax
	FAX	Office Code(Fax)
	FAX	Priority(Fax)
	HEA	Confidentiality Status(Home Email Address)
	HEA	Internet Address(Home Email Address)
	HEA	Priority(Home Email Address)
	HPN	Confidentiality Status(Home Phone Number)
	HPN	Country(Home Phone Number)
	HPN	Home Phone Number
	HPN	Priority(Home Phone Number)
	MP	Confidentiality Status(Mobile Phone)
	MP	Country(Mobile Phone)
	MP	Mobile Phone
	MP	Priority(Mobile Phone)

Type	SubType	Database Field
	OEA	Confidentiality Status(Other Email Address)
	OEA	Internet Address(Other Email Address)
	OEA	Priority(Other Email Address)
	OEP	Confidentiality Status(Other Email Pager)
	OEP	Internet Address(Other Email Pager)
	OEP	Priority(Other Email Pager)
	OWPN	Confidentiality Status (Other Work Phone Number)
	OWPN	Dterm Password (Other Work Phone Number)
	OWPN	Office Code(Other Work Phone Number)
	OWPN	Other Work Phone Number
	OWPN	Priority(Other Work Phone Number)
	PE	Confidentiality Status(Primary Extension)
	PE	Dterm Password(Primary Extension)
	PE	Office Code(Primary Extension)
	PE	Primary Extension
	PE	Priority(Primary Extension)
	PHP	Confidentiality Status (Personal Homepage)
	PHP	Internet Address (Personal Homepage)
	PHP	Priority (Personal Homepage)
	PP	Confidentiality Status (Phone Pager)
	PP	Country (Phone Pager)
	PP	Phone Pager
	PP	Priority (Phone Pager)
	SE	Confidentiality Status (Secondary Extension)
	SE	Dterm Password (Secondary Extension)
	SE	Office Code (Secondary Extension)
	SE	Priority(Secondary Extension)
	SE	Secondary Extension
	TE	Confidentiality Status (Tertiary Extension)
	TE	Dterm Password (Tertiary Extension)
	TE	Office Code (Tertiary Extension)
	TE	Priority(Tertiary Extension)
	TE	Tertiary Extension
	TM	Confidentiality Status (Text Messaging)

Type	SubType	Database Field
	TM	Internet Address (Text Messaging)
	TM	Priority (Text Messaging)
	WEA	Confidentiality Status (Work Email Address)
	WEA	Internet Address (Work Email Address)
	WEA	Priority (Work Email Address)
	WEP	Confidentiality Status (Work Email Pager)
	WEP	Internet Address (Work Email Pager)
	WEP	Priority (Work Email Pager)
	WL	Confidentiality Status (Wireless)
	WL	Office Code (Wireless)
	WL	Priority (Wireless)
	WL	Wireless

**Table 5-31** Description of Contact Method Name

Description	
AMW	Assured Mobility WiFi
AP	Alpha Pager
EF	External Fax
EPN	External Primary Number
EXN	External Secondary Number
ETN	External Tertiary Number
FAX	FAX
HEA	Home Email Address
HPN	Home Phone Number
MP	Mobile Phone
OEA	Other Email Address
OEP	Other Email Pager
OWPN	Other Work Phone Number
PE	Primary Extension
PHP	Personal Homepage
PP	Phone Pager
SE	Secondary Extension
TE	Tertiary Extension
TM	Text Messaging



Description	
WEA	Work Email Address
WEP	Work Email Pager
WL	Wireless

**Table 5-32** Route/Trunk Type Database Fields

Type	SubType	Database Field
Route/Trunk		<b>Beginning Trunk</b>
		<b>Ending Trunk</b>
		<b>Office Code(PBX Id)</b>
		<b>Route Name</b>
		<b>Route Number</b>
		<b>Tenant</b>
		User Defined 1
		User Defined 2
		User Defined 3
		User Defined 4



Fields in **bold** are mandatory parameters.

**Table 5-33** SIPUA Group Type Database Fields

Type	Database Field
SIPUA Group	Group Name

**Table 5-34** Organization/Location Hierarchy

Type	SubType	Database Field
Organization/Location Hierarchy	Hierarchies	Extension
		Note
		Office Code
		Hotel
		Company
		Area
		Area Extension
		Area Note
		Area Office Code
		Campus
		Campus Extension
		Campus Note
		Campus Office Code
		Office
		Office Extension
		Office Note
		Office Code
		Hospital
		Nurse Station
		Room
		Bed
		Hospital Extension
		Hospital Note
		Hospital Office Code
		Nurse Station Extension
		Room Extension
		Nurse Station Note
		Room Note
		Nurse Station Office Code
		Room Office Code
		Bed Extension
		Bed Note
		Bed Office Code

**Table 5-35** *Person Addresses*

Type	SubType	Database Field
Organization/Location Hierarchy		First Name
		Last Name
		Middle Name
		Full Name
		Person SIP URI
		LoginId
		Primary Extension
		Office Code
		Work Email
		Billing Street
		Billing City
		Billing State
		Billing CountryOrRegion
		Billing Postal Code
		Home Street
		Home City
		Home State
		Home CountryOrRegion
		Home Postal Code
		Shipping Street
		Shipping City
		Shipping State
		Shipping CountryOrRegion
		Shipping Postal Code
		Work Street
		Work City
		Work State
		Work CountryOrRegion
		Work Postal Code

**Table 5-36** *States/Provinces*

Type	SubType	Database Field
States/Provinces		Country Code
		Name
		State/Province

**Table 5-37** *User Privilege*

Type	SubType	Database Field
User Privilege		Application Description
		LoginId
		Privilege

## 6

## OW5000-MA4000 Integration

OW5000 consists of a base platform (OW5000 platform) and a suite of applications that utilize this platform. The base platform consists of the OW5000 database, the OW5000 web administrator tool, and various system services and web services. The applications include UA5200, On-Call, Message Center, Procedure Manager, Room Direct, Calendar Link, and UC700.

The OW5000 platform requires an administrator to enter the PBX, extension and user information into the OW5000 Administrator web application to populate the OW5000 database. The MA4000 already has information that the OW5000 needs. When OW5000 is integrated into UC Suite as a participating application (PA), this information can be obtained from MA4000. OW5000 can be notified of changes in order to keep the data current. The following topics are included in the chapter.

- Chapter Topics:
- [Integration Configuration](#)
  - [Synchronization Entities](#)
  - [Organization](#)
  - [VoiceMail Server](#)
  - [User](#)

The OW5000 database synchronization (DBSync) service for MA4000 Integration is installed with the OW5000 platform. The following entities and sub-entities in MA4000 will be synchronized into OW5000, as shown in [Table 6-1](#) and [Table 6-2](#).

**Table 6-1** MA4000 to OW5000 Integration

MA4000 Entity	OW5000 Entity
PBX	PBX
Extension	TelephoneNumber (Extension)
User	Person
Organization	Unit (Organization)
Voicemail Server	VoiceMail Server

**Table 6-2** MA4000 to OW5000 Integration—Sub-Entity

MA4000 Sub-Entity	OW5000 Sub-Entity
Line appearance on an Extension	Sub-line on an Extension
VoiceMailbox of a User	VoiceMail subscriber ID of a Person

**NOTE**

Only one OW5000 server can be integrated to any given MA4000.

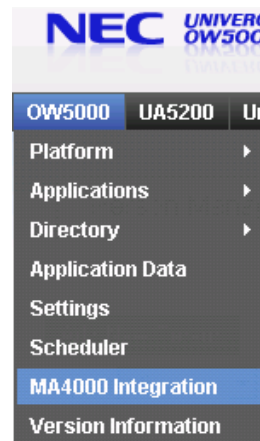
The availability of an MA4000 and OW5000 server is critical. If an OW5000 Server is not running, change notifications from the MA4000 may be missed and a full-sync must be performed again to sync the OW5000 with the MA4000.

## Integration Configuration

To configure the MA4000, select **MA4000 Integration** as shown in [Figure 6-1](#).

**NOTE**

Before setting up MA4000 Integration, OW5000 Administrator should make sure all OW5000 admin logins are also in the NEC CAS (Centralized Authentication Service). Please ensure that the passwords are the same for a login in both OW5000 and CAS.

**Figure 6-1** OW5000 Options—MA4000 Integration

An MA4000 Integration Configuration dialog box displays ([Figure 6-2](#)).

**NOTE**

If this is the first time you are logging into the OW5000 Administrator, use the default login ID **admin** and the default password **admin**.

Figure 6-2 MA4000 Integration Configuration dialog box

MA4000 Integration

Current State: Enabled  
Synchronization Status: Current  
☒ Enable MA4000 Integration

OW5000

OW5000 Base URL: http://AMBASSADOR32/OW5000

MA4000

\* MA4000 Base URL: http://AMBASSADOR32/MA4000  
\* Login: admin  
\* Password: .....  
NECCAS URL: http://ambassador32/NECCAS/

MA4000 SQL SERVER

\* Server Name: AMBASSADOR32  
Server Instance: .....  
\* Login: reader  
\* Password: .....  
\* Database Name: MA4000

DATABASE SYNCHRONIZATION

\* DB Sync Listen Port: 9657

Synchronize Prime Lines in MA4000 as Extensions in OW5000  
☒ In Ascending Order (Primary is lowest number for each Person)  
☐ In Descending Order (Primary is highest number for each Person)  
*Note: The ordering can be manually changed for any extension.*

☒ Synchronize Line Appearances in MA4000 as Sublines in OW5000  
☒ Only ringing Line Appearances  
☐ All Line Appearances

Test MA4000 Database Mapping

Apply Cancel

The information below describes the MA4000 Integration Configuration dialog box (Figure 6-2).

Current State

This will have a value of either **Enabled** or **Disabled** depending on the state of the integration.

---

## Synchronization Status

Synchronization Status displays the current status of the data synchronization between MA4000 and OW5000. The status can have the following three values:

**Disabled** - the integration is disabled.

**In-Progress** - the full synchronization is in progress.

**Current** - the full synchronization is complete and the OW5000 database is current. In this mode, the synchronization is listening to change notifications from MA4000 and will update the corresponding data. For example, the change notifications can include User update and Extension update in OW5000, as they are received.

---

## Enable MA4000 Integration

To enable MA4000 integration with the OW5000, click the **Enable MA4000 Integration** check box.

---

## OW5000 Connection

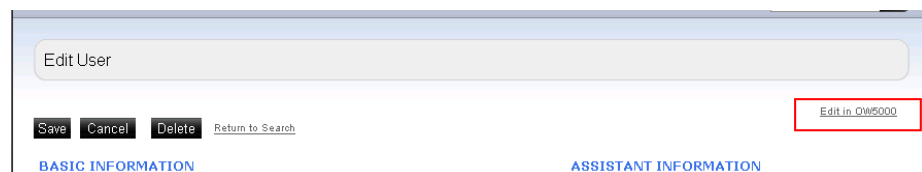
This is the OW5000 URL of the format `http://%SERVER_NAME%/OW5000`. This URL is registered with MA4000 and used by MA4000 for deep links.

## Deep Links in MA4000

A Deep Link is a link in the MA4000 application for a PBX, Extension, or a User. When selected, the user is taken to the corresponding OW5000 page. In MA4000, the deep link appears as **Edit in OW5000**.

---

**Figure 6-3** Deep Link in MA4000





## MA4000 Connection

Fields in the MA4000 section are described below:

**MA4000 Base URL** - This is the URL to the MA4000 application. For example, `http://<servername>/MA4000`).

**Login** - A login with Administrator privileges is required.

**Password** - The password for the above login.



*The default value for both the login name and the password is **admin**.*

## MA4000 SQL Server Connection

The OW5000 needs the MA4000 SQL Server details and a read-only SQL Server Login. This login is used by the OW5000 database synchronization service to read the MA4000 database.

The following information describes the MA4000 fields in [Figure 6-2](#).

**Server Name** - The server name where the MA4000 SQL Server is located.

**Server Instance** - The named instance of the SQL Server where the MA4000 Database is installed. If this is the default instance, the value is not required.

**Login** - A login for the SQL Server which has read-only user access to the MA4000 database.

**Password** - The password for the SQL Server login.

**Database Name** - The MA4000 database name.

## Database Synchronization

**DB Sync Listen Port** - This is the port where the OW5000 DBSync is listening to the change notifications from MA4000. This is an http port hosted by the DBSync service itself and is not IIS dependent.



*If MA4000 and OW5000 are installed on different servers, the firewall will have to be opened on this port for incoming connections in the OW5000 server.*

**Synchronize Prime Lines in MA4000 as Extensions in OW5000** - Prime line extensions can be imported into OW5000 in ascending or descending order. In ascending order, the Primary Extension in OW5000 will have the lowest number for the Person. In descending order, the Primary Extension will have the highest number. For example, if extensions 2001 and 1001 are assigned to User A in MA4000 and the user is imported as Person A in

OW5000, the Primary Extension will be either 1001 if it is ascending order, or 2001 if it is in the descending order.



NOTE

*The ordering of the extensions for each person can be changed in OW5000 using the **Person** page.*

### **Synchronize Line Appearances in MA4000 as Sublines in OW5000 -**

The line appearances in MA4000 can be ringing or non-ringing appearances. Line appearances on an extension in MA4000 are imported as sub-lines on the extension in OW5000. This allows the option of either importing only ringing line appearances or all line appearances.

---

## **Testing the Configuration**

The configuration must be tested before it can be saved. After entering all the appropriate values, click the **Test** button. This **Test** runs four separate tests for verification.

**Verify the MA4000 URL** - This is done by the system connecting to the MA4000 web services to retrieve the NECCAS URL. If the MA4000 URL is not specified or is invalid, this test will fail.

**Verify the MA4000 login and password** - This is done by connecting to the MA4000 private web services. This test is executed only if the MA4000 URL is verified successfully.

**Verify the SQL server machine name, instance name, login, and password** - This is done by the system connecting to the SQL server and querying the SQL server version. There is no connection to the MA4000. If the SQL connection information is not specified, this test will fail.

**Verify the MA4000 database name** - This is done by connecting to the SQL server and querying a value from the MA4000 database. This test is only executed if the SQL server information was verified successfully.

When the test is complete, the results are shown for each piece of information. For example, the MA4000 URL may have passed but the MA4000 login and password failed. In this case, the MA4000 URL will be shown as valid and the MA4000 login and password will be shown as invalid.

Clicking **Save** without performing a successful test displays an error and the configuration will not be saved.

—A configuration failure displays as a red X icon.

—A correct configuration displays as a green check-mark icon.

OW5000 performs a registration with MA4000 when the test is successful. The menu structure, deep links, database change notification URLs, and other integration information is registered with MA4000. If the registration is successful, the integration information will

be stored in the OW5000 database and the database synchronization service will be notified of the change.



*The synchronization time depends on the number of Users newly defined or modified in MA4000 since the last synchronization.*

NOTE

## MA4000 Database Mapping

This link is enabled only after the basic configuration settings in the MA4000 Integration are applied and saved. This link opens another page and provides options to map MA4000 fields to the OW5000 fields.

**Contact Method Email** - The email address for the user in MA4000 is mapped to this email address field in the OW5000 database for the Person.

**Contact Method Extension 1** - The first available extension for the user in MA4000 is mapped to this field in the OW5000 database for the Person.

**Contact Method Extension 2** - The second or next available extension for the user in MA4000 is mapped to this field in the OW5000 database for the Person.

**Contact Method Extension 3** - The third or next available extension for the user in MA4000 is mapped to this field in the OW5000 database for the Person.



*if the Contact Method Extension 1 is not mapped, the first extension will be mapped to Contact Method Extension 2. The 1, 2, and 3 signifies the order of the extensions being assigned first.*

NOTE

**Unit Type Hierarchy** - In MA4000, organizations are created as Org Levels and there is no type associated with them. OW5000 Orgs or Units are defined as a certain type—for example, Company or Division. The hierarchy of the Org in OW5000 has to follow a rigid type defined in this page.

This allows you to select the unit type hierarchy when Org is imported to OW5000. If this option is not set, the Org will not be imported from MA4000. Refer to [“Organization” on page 6-12](#).

## UC700 Users

This section of [Figure 6-2](#) allows you to enable the automatic creation of UC700 users during the import of MA4000 users.



*This option is not available unless UC700 is installed on the OW5000 Server.*

NOTE

The SIP and IM Access Servers should be defined in [“Access Server Configuration” on page 2-48](#).

The SIP and IM URI parameters and translation patterns are defined in [“Person Management” on page 2-81](#).

## Additional Mapping Fields

This section allows the various User Defined Fields or Custom Fields (UDF) for a User in MA4000 to a predefined set of OW5000 fields of a Person. The same MA4000 UDF fields can be mapped to more than one OW5000 field.

For example, a custom field called **DID** can be imported to the External Primary Number of an OW5000 person.

MA4000 supports LDAP integration. This allows certain employee-related data to be imported into MA4000 as custom fields, which can then be imported into OW5000 fields using the above mapping. The data can include Employee Title, Position, Type, Mobile phone number, or home phone number.

The Override Blank/Null data option allows blank data in MA4000 to be overwritten in the OW5000 database.



NOTE

*The "...From MA4000" drop-down entries are populated from the User Defined Field names in MA4000. If they are empty, refresh the page or navigate to it again. Sometimes the entries may take a minute or two after the integration is enabled and applied on the main integration page.*

## Synchronization

When a configuration is applied or saved in the MA4000 Integration page or MA4000 Database Mapping page, a full synchronization is initiated. A full re-sync will happen if it was already synchronized before. The entities will be synchronized as per the rules and matching algorithms.

If a full synchronization was completed, at least once before, and when a full re-synchronization is initiated again, the following will apply:

- 1 The link between the MA4000 entity and OW5000 entity is lost until the full sync is completed again. When the link is lost, any update to the MA4000 entity may or may not update the same OW5000 entity created by the previous sync. It will follow the matching algorithms again. For Example: During the first sync User A in MA4000 is created as Person A in OW5000.

During a full re-sync, if you change any field in User A that participates in the matching algorithm like FirstName or LastName, and when the link is not yet re-established, then the matching algorithm may not match the User A record with Person A. Instead, it will match it to Person B, or create a new Person if a match is not found.

- 2 All the matching algorithms for PBX, Extension, User, Org, and so forth are executed again.

For additional fields mapping for custom fields (UDF), the values imported by the old mapping rules will remain in OW5000.

## Synchronization Entities

### PBX

The PBX is the most basic entity in both the OW5000 and MA4000 application. All the other entities are either directly or indirectly dependent on the PBX. The PBX holds specific attributes like IP address and OfficeCode.

#### PBX Matching Algorithm

- MA4000 PBX is matched by the IP address with a PBX in the OW5000 database. Multiple MA4000 PBXs with the same IP address are matched to the same (single) PBX in OW5000.
- If no matching PBX is found using the IP address, it is matched by PBX name. The PBX Name is unique in OW5000. This OW5000 PBX should not already be matched to a different MA4000 PBX.
- If no match is found, a new OW5000 PBX is created.

**Table 6-3** Fields Mapping—PBX

MA4000 Field	OW5000 Field	Data Type/Length	Comment
Name	Name	String / 50	
Name	RMIBindName	String / 50	Formed as "OaiServer" + PBXName
PBXType	PBXType	N/A	Predefined types in OW5000
HostIP or OaiHostIP	IPAddress	String / 15	Uses OaiHostIP first. If blank, HostIP is used.
PBXOfficeCode	OfficeCode	String / 4	OfficeCode is unique in OW5000. The value is set only if a new PBX is created in OW5000.
CallForward	IsSplitCallForward	Bool	
N/A	PBXClientServerPort	Int	Finds the max in OW5000 DB and increments it by 1. If none is found, assign 44000.

### Other Import Rules and Algorithms

#### PBX Type Matching

Regardless of a PBX being created or updated in OW5000, the type of the PBX is matched to the type in MA4000.

```

If MA4000 PBX Type = 71 (PBX 2000), Then
    Match it to NEAX 2000 IPS in OW5000.
If MA4000 PBX Type = 51 (SV7000 MPS)
Begin
    If IsMPS flag is set Then
        Match it to SV7000 MPS in OW5000
    Else
        Begin
            If LicensedPirCount = 0 And LicensedVpimCount =0 Then
                Match it to NEAX 2400 IPS in OW5000
            ElseIf LicensedPirCount is between 1 and 4
                And LicensedVpimCount is between 1 and 16 Then
                    Match it to SV7000 in OW5000
            End
        End
    End
End

```



NOTE

The PBX type is not supported if it is not matched by the above algorithm. The PBX will not be imported when the PBX type is not supported.

### OfficeCode Import

The Officecode value is set in OW5000 only when a PBX is being created. If the PBX is being updated, it will retain the existing value.

Officecode is unique in OW5000 and is set to the PBXOfficeCode in MA4000. If the value of Officecode is already set for another PBX in OW5000, a new, unique Officecode is formed and set in OW5000.

A unique Officecode is created by taking the first 4 characters of the PBX name. If that officecode already exists, a unique 4 digit number starting from 1234 is assigned.

---

### Extension

The Extension is dependent on a PBX. The same extension number can exist on multiple PBXs. Before synchronizing an extension, the DBSync will synchronize the PBX of the extension. Other attributes of the extension are also imported—for example, phone equipment type and line appearances (sub-lines).

### Extension Matching Algorithm

- The MA4000 extension is matched to OW5000 by the number and the PBX it belongs to.
- The Extension number is unique in a PBX.

- If the extension number for the PBX does not already exist in OW5000, a new extension is created.

**Table 6-4** Fields Mapping—Extensions

MA4000 Field	OW5000 Field	Data Type/Length	Comment
Number/NetworkNumber / Physical Number / Station Number	Number	String / 32	For PBX Type = 51 (SV7000 or NEAX 2400), the NetworkNumber is used. If not available, PhysicalNumber(Station Number) is used.
Tenant	Tenant	int	
StationNumber	Number / NetworkNumber / PhysicalNumber/ StationNumber		
Line Appearance	Sub-line	String / 32	
Phone Type	Phone Equipment Type	N/A	Predefined types in OW5000
Emergency Data Location XML	NENA Emergency Data XML		Not visible in OW5000 Admin; used by the E-OSN application (Emergency On-Site Notification).

### Other Import Rules & Algorithm

#### Conference Extension Import

If an Extension in MA4000 is a conference extension, it is not imported to OW5000.

#### Phone Equipment Type Matching:

*If* MA4000 Phone Type ID = 1 or 50 or 51 (Analog) *Then*

OW5000 Phone Equipment type of the extension is *Analog*.

*ElseIf* MA4000 Phone Type ID = 38 (SP30) *Then*

OW5000 Phone Equipment type of the extension is *SP30(SIP)*.

*ElseIf* MA4000 Phone Type ID = 43 (SIP-BASIC) *Then*

OW5000 Phone Equipment type of the extension is *SIMPLE*.

*ElseIf* MA4000 Phone Type ID = 14 (DTR-16D) *Then*

OW5000 Phone Equipment type of the extension is *DTerm*.

*ElseIf* MA4000 Phone Type ID is any other *Then*

OW5000 Phone Equipment type of the extension is *DTerm*.

### Line Appearances (Sub-lines)

The line appearances in MA4000 can be ringing or non-ringing appearances. Line appearances on an extension in MA4000 are imported as sub-lines on the extension in OW5000.

Depending on the settings in the MA4000 integration page in OW5000 Admin, either only ringing or all line appearances are imported for an extension. Refer to ["Database Synchronization" on page 6-5](#) for more information.

If the extension already exists in OW5000, the sub-lines are exactly matched with the MA4000. Therefore, depending on the pre-existing sublines on the extension, sub-lines may be added or removed from the extension in OW5000.

For each extension on the Extension page in OW5000 Admin, there is an option called **Synchronize Subline from MA4000**. If this setting is turned OFF for an extension, the MA4000 line appearances are not imported as sub-lines in OW5000 for that extension. Refer to ["Extension Management" on page 2-17](#) for more information.

### NENA Emergency Location Data

MA4000 captures location information for an Extension for emergency purposes. The location data is stored as XMLs in the NENA format. Currently, only NENA versions 2.1 and 3 are supported.

The location XML is stored 'as is' in the OW5000 DB. Certain fields are parsed out and stored separately as well. The fields ANI, Address (formed by linking various fields like house number, street, city, state, zip and so forth), Location Name, and Comments are parsed out from the XML and stored separately.

This data is not shown on the OW5000 Admin. It is only available to the E-OSN application (Emergency On Site Notification). The E-OSN client displays these details.

---

### Organization

Organization in MA4000 is defined as the Organization-Level. It is a hierarchical representation of the orgs. The user is assigned to an org in MA4000 and the corresponding person in OW5000 is assigned after importing.

In MA4000, organizations are created as Org Levels and there are no types associated with them. In OW5000, Orgs or Units are defined as certain types, such as Company, Division and so forth. The hierarchy of the Org in OW5000 has to follow a rigid type defined in the Unit Type Hierarchy page.

To import Orgs into OW5000, the Unit Type Hierarchy should be selected in the MA4000 Integration page in OW5000 Admin. Refer to ["MA4000 Database Mapping" on page 6-7](#).



The number of levels of the Orgs that are imported from MA4000 depends on the number of levels selected that the type hierarchy actually supports.

For example, assume MA4000 contains a 5 level org hierarchy as follows:

```

    NEC
      NEC America
        CTG
          Enterprise Apps
            Development
  
```

In OW5000, a unit type hierarchy of Company | Division | Department is selected.

After the sync, OW5000 will only have 3 levels of the Org since the unit type hierarchy supports only 3 levels. The root Org **NEC** will be created as type Company, **NEC America** will be created as type Division and **CTG** will be as type Department. The next two levels **Enterprise Apps** and **Development** will not be imported. A 5 level unit type hierarchy should be selected in order for them to be imported.

### Organization Matching Algorithm

The root Org level is matched by the Org Name to a root level Unit(Org) in OW5000.

All other orgs are matched to the name and parent org in that particular level.

**Table 6-5** Fields Mapping—Organization

MA4000 Field	OW5000 Field	Data Type/Length	Comment
Name	UnitName	String /100	
Description	Note	String / 1000	
N/A	UnitType	N/A	Assigned based on the Unit Type Hierarchy selected.
Parent	Parent	N/A	Parents should be the same.

### Other Import Rules & Algorithm

**Unit Type Hierarchy** - If a Unit Type Hierarchy is not selected in the MA4000 Integration page, the Orgs are not imported.

**Employee Role** - In OW5000, the Orgs are assigned to the Person via Employee Role.

## VoiceMail Server

VoiceMails in UC can be stored in external NEC voicemail server systems or 3rd party voicemail server systems. Every User is assigned a VoiceMail box which is associated with a VoiceMail server.

### VoiceMail Server Matching Algorithm

The criteria to match an MA4000 voicemail server to OW5000 is the name of the voicemail server.

If a voicemail server does not exist, a new voicemail server is created in OW5000. The name is unique in OW5000.

The type of voicemail server is also imported to OW5000. OW5000 only supports the following VoiceMail server types. All other VoiceMail server types are stored as "Other" when synchronized from MA4000:

- UNIVERGE UM8500 (Exchange-based)
- UNIVERGE UM8500 (SQL-based)
- NEAXMail AD-64
- NEAXMail AD-120
- UNIVERGE UM4730
- Other

**Table 6-6** Fields Mapping—VoiceMail

MA4000 Field	OW5000 Field	Data Type/Length	Comment
Name	Description	String / 50	
VMS Type	VoiceMailServerType	N/A	Assigned based on the voicemail server types.

## User

Users in MA4000 are imported as Persons in OW5000. The extensions assigned to a User in MA4000 are imported as Contact Methods in OW5000, depending on the mapping defined in the Database Mapping section in the MA4000 Integration page in OW5000 Admin. Refer to ["MA4000 Database Mapping" on page 6-7](#) for more information.

The Custom Fields or UDF defined in MA4000 can also be imported to OW5000 to one or many of predefined fields in OW5000.

### User Matching Algorithm

A MA4000 User is matched to an OW5000 Person by the combination of FirstName, LastName and the extension assigned in MA4000. If the extension is not empty in MA4000, then find the person in OW5000 with same FirstName, LastName and Extension and in unsynchronized state. Any one extension of the MA4000 user can match to any extension of the OW5000 person.

If not found, or if there is no extension for the MA4000 user, find a person with the same FirstName, LastName and no extensions (no primary, secondary or tertiary) and in unsynchronized state.

If no matching Person is found, or if the Person is already associated with a different User of MA4000, then a new OW5000 Person is created.

If no matching User is found, or if the matched Person is already associated with a different User of MA4000, a new OW5000 Person is created.

**Table 6-7** Fields Mapping—User

MA4000 Field	OW5000 Field	Data Type/Length	Comment
FirstName	FirstName	String / 30	
MiddleInit	MiddleName	String / 30	
LastName	LastName	String / 30	
Email	ContactMethod Email	String / 100	It is mapped based on the ContactMethod defined.
Extension	Primary/Secondary / Tertiary extension	String / 16	Extensions are assigned depending on the contact method defined.
OrgLevel	Organization of the Employee Role or any other role		
VoiceMail box subscriber id	VoiceMailBoxNumber	String / 16	
Custom or User Defined Fields	Various fields in OW5000	N/A	Values are imported based on the mapping of Additional Fields in the Admin.
N/A	UserRole		UC700 User: UserRole with UC700 security authorizations; SIP and IM URIs are also assigned.

### Extension Assignment Algorithm

Extensions in MA4000 are imported as Primary, Secondary or Tertiary Extensions in OW5000. The order and mapping is determined by how the Contact Method for Extensions is mapped in the MA4000 integration page in OW5000 Admin. Refer to [“MA4000 Database Mapping” on page 6-7](#) for more information.

If an extension for an MA4000 user is a virtual extension and if it is a sub-line of another prime-line extension for the same user, it will not be assigned separately as an extension.

If certain extensions are assigned to an OW5000 person but are not part of the MA4000 user, they are removed from the OW5000 person.

If an extension is already assigned to the OW5000 person before synchronizing with MA4000 as one of the Primary, Secondary or Tertiary extensions, their order of assignment will not be changed irrespective of the MA4000 database mapping for the contact methods. For example, Person A has extension 2555 as Primary and 3555 as Secondary extension in OW5000 and the corresponding User A in MA4000 has 3555 as the first extension and 2555 as the second. In this case, the extension assignment of Person A in OW5000 is preserved. The order of extensions assigned follows the database mapping rules only for newly imported persons and not for the existing persons in the OW5000.

### Other Import Rules & Algorithm

**Empty FirstName and LastName not Imported** - If an MA4000 user has both first and last names blank, the user is not synchronized to OW5000.

**Empty LastName** - If an MA4000 user has only the last name blank, the last name in OW5000 is formed as "x" + extension number.

**NEW USER not Imported** - If an MA4000 user has the first name as *NEW USER*, the synchronized is not imported to OW5000.

**Employee Role** - If a Person is added to OW5000, by default the Person in OW5000 is associated with an EmployeeRole.

If the Person exists in OW5000 and has a Role other than Employee Role associated with it (like Physician Role, Student Role, Patient Role and so forth), the Employee Role is not assigned to the Person.

**MA4000 Publish To Directory Option** - MA4000 has a global option called **Show a Publish checkbox for each User** in the MA4000 Setup. If this option is not checked, all users are published and are candidates for synchronization with OW5000.

If the option is checked, each user in MA4000 has an option called **Publish To Directory**. If this option is set as ON, the user is a candidate to be synchronized to OW5000. If the option is set as OFF, the user is not synchronized to OW5000.

### UC700 Users

A UC700 user can be automatically created if the settings described in ["MA4000 Database Mapping" on page 6-7](#) are configured. A UC700 user is created by adding a UserRole for a Person in OW5000 and assigning the credentials.

### Voice Mailbox

OW5000 supports only one Voice Mailbox per person and it should be unique. It cannot be shared with another person.

In MA4000, if there are multiple users associated to the same mailbox or multiple mailboxes for the same user, then OW5000 will generate errors in the Error Log during synchronization. To correct, go to MA4000 and remove the extra User associations for the offending mailboxes.

### Custom Fields or User Defined Fields (UDF)

Custom fields defined for a User are imported and assigned to the OW5000 person, provided they are mapped using the Additional Fields Mapping section in the MA4000 Integration page in OW5000 Admin.

Custom fields in MA4000 can be mapped to one or many of the following OW5000 fields ([Table 6-8](#)).

**Table 6-8** Fields Mapping—Custom Fields

OW5000 Fields	Comments
Employee ID	
Employee Position	If this field does not exist in OW5000, it is dynamically created.
Employee Type	The Employee Types must be predefined in OW5000.
Title Prefix	
Title Suffix	
External Primary Number	
External Secondary Number	
External Tertiary Number	
Fax	
External Fax	
Mobile Phone Number	
Home Phone Number	
Work Email Address	
Home Email Address	
Other Email Pager	
UserDefined1	
UserDefined2	
UserDefined3	
UserDefined4	
UserDefined5	
UserDefined6	
NTLM Login ID	This is assigned to the UserRole only if the UC700 user auto creation is enabled.
Work Address	
Work City	
Work State	State should be predefined using OW5000 Administrator.
Work Zip	
Work Country	Country should be predefined using OW5000 Administrator.

OW5000 Fields	Comments
Home Address	
Home City	
Home State	State should be predefined using OW5000 Administrator.
Home Zip	
Home Country	Country should be predefined using OW5000 Administrator.
Billing Address	
Billing City	
Billing State	State should be predefined using OW5000 Administrator.
Billing Zip	
Billing Country	Country should be predefined using OW5000 Administrator.
Shipping Address	
Shipping City	
Shipping State	State should be predefined using OW5000 Administrator.
Shipping Zip	
Shipping Country	Country should be predefined using OW5000 Administrator.

### Limitations

When MA4000 is synchronized with a PBX, where the extensions have a sub-line, MA4000 creates two user records. One User is associated with the extension and the other (dummy) user is associated with the sub-line.

OW5000 has no way to automatically recognize and distinguish whether or not the second (dummy) user should be imported.

### Virtual As A Published Number

For Example: USER(Mike)-EXTN(virtual,Mike) - Mike should be in the directory.

USER(Katherine) - EXTN(prime,Katherine) with  
BUTTON(2=Mike)

### Virtual As A Subline

USER(BobRollover)-EXTN(virtual,BobRollover) -  
BobRollover should **not** be in the directory

USER(Bob) - EXTN(prime,Bob) with  
BUTTON(2=BobRollover)

Currently, OW5000 creates a person record for each MA4000 user. In the BobRollover instance, it is not desirable. In the future, MA4000 will become smart enough to associate sub-lines to the same user record as the physical phone.

# Appendix A

## Acronmys and Descriptions

### **3rd Party SIMPLE Terminal**

The terminal which communicates with Access Server via Standard SIP/SIMPLE Interface.

### **Access Server**

The SIP Terminals communicate with this server.

### **BLL**

Business Logic Layer - A code repository where common functionality is added to reduce duplication by increasing re-use.

### **DAL**

Data Access Layer - A set of code-generated DLLs that provide simple physical database access and manipulation.

### **ML-SIP Terminal**

The terminal which communicates with SV7000 via Extended SIP Multi Line Interface. Means DtermSP30 (SIP).

### **OW5000 Administrator**

Refers to an individual who has access privileges to system configuration features in OW5000.

### **Presence Server**

Total system of the presence server which consists of single or multiple Access Servers and single DB Server (OW5000 Platform).

### **STD-SIP Terminal**

The terminal which communicates with SV7000 via Standard SIP Interface.

### **UNIVERGE SIP Terminal**

Indicates both WL-SIP terminal, ML-SIP terminal, and STD-SIP terminal.

### **WL-SIP Terminal**

The terminal which communicates with SV7000 via Extended SIP Single Line Interface. Include MH250, FOMA N900iL and FOMA N902iL.





# Appendix B

## Person Database

Refer to the table below for the field name and size of each database field in the Person database.

**Appendix B-1** Person Database Field Names and Size

Employee	Physician	Patient	Student	Internal	External	Size	Notes
FirstName	FirstName	FirstName	FirstName			60	
MiddleName	MiddleName	MiddleName	MiddleName			60	
LastName	LastName	LastName	LastName			60	
FullName	FullName	FullName	FullName			256	can be imported or auto-generated
Email	Email	Email	Email			100	
Confidentiality Status	Confidentiality Status	Confidentiality Status	Confidentiality Status			100	will be pre-populated with predefined statuses
PersonalIdentifier(PID)	PersonalIdentifier(PID)					30	
Photo	Photo		Photo			510	
OfficeCode (PBXID)	OfficeCode (PBXID)	OfficeCode (PBXID)	OfficeCode (PBXID)	OfficeCode (PBXID)		4	if office code is not provided, dialing rules will route calls
Primary Extension	Primary Extension	Primary Extension	Primary Extension	Primary Extension	Primary Extension		
Note	Note	Note	Note	Note	Note	2000	
					Number		
Mobile Phone	Mobile Phone	Mobile Phone	Mobile Phone			50	
Home Email Address	Home Email Address	Home Email Address	Home Email Address			50	
Home Phone Number	Home Phone Number	Home Phone Number	Home Phone Number			50	

Employee	Physician	Patient	Student	Internal	External	Size	Notes
Other Email Address	Other Email Address	Other Email Address	Other Email Address			50	
Other Email Pager	Other Email Pager	Other Email Pager	Other Email Pager			50	
Other Work Phone Number	Other Work Phone Number	Other Work Phone Number	Other Work Phone Number			16	
Personal Homepage	Personal Homepage	Personal Homepage	Personal Homepage			50	
Phone Pager	Phone Pager	Phone Pager	Phone Pager			50	
Primary Extension	Primary Extension	Primary Extension	Primary Extension			16	
Text Messaging	Text Messaging	Text Messaging	Text Messaging			50	
Work Email Address	Work Email Address	Work Email Address	Work Email Address			50	
Work Email Pager	Work Email Pager	Work Email Pager	Work Email Pager			50	
Wireless	Wireless	Wireless	Wireless			16	
Secondary Extension	Secondary Extension	Secondary Extension	Secondary Extension			16	
Tertiary Extension	Tertiary Extension	Tertiary Extension	Tertiary Extension			16	
Fax	Fax	Fax	Fax			50	
Alpha Pager	Alpha Pager	Alpha Pager	Alpha Pager			16	
External Primary Number	External Primary Number	External Primary Number	External Primary Number			50	
External Secondary Number	External Secondary Number	External Secondary Number	External Secondary Number			50	
External Tertiary Number	External Tertiary Number	External Tertiary Number	External Tertiary Number			50	
BillingAddr Line1	BillingAddr Line1			BillingAddr Line1		100	
BillingAddr Line2	BillingAddr Line2			BillingAddr Line2		100	
BillingAddr City	BillingAddr City			BillingAddr City		100	
BillingAddr StateName	BillingAddr StateName			BillingAddr StateName		100	
BillingAddr Zip	BillingAddr Zip			BillingAddr Zip		10	

Employee	Physician	Patient	Student	Internal	External	Size	Notes
HomeAddr Line1	HomeAddr Line1	HomeAddr Line1	HomeAddr Line1	HomeAddr Line1		100	
HomeAddr Line2	HomeAddr Line2	HomeAddr Line2	HomeAddr Line2	HomeAddr Line2		100	
HomeAddr City	HomeAddr City	HomeAddr City	HomeAddr City	HomeAddr City		100	
HomeAddr StateName	HomeAddr StateName	HomeAddr StateName	HomeAddr StateName	HomeAddr StateName		100	
HomeAddrZip	HomeAddrZip	HomeAddrZip	HomeAddrZip	HomeAddrZip		10	
ShippingAddr Line1	ShippingAddr Line1			ShippingAddr Line1		100	
ShippingAddr Line2	ShippingAddr Line2			ShippingAddr Line2		100	
ShippingAddr City	ShippingAddr City			ShippingAddr City		100	
ShippingAddr StateName	ShippingAddr StateName			ShippingAddr StateName		100	
ShippingAddr Zip	ShippingAddr Zip			ShippingAddr Zip		10	
WorkAddr Line1	WorkAddr Line1			WorkAddr Line1		100	
WorkAddr Line2	WorkAddr Line2			WorkAddr Line2		100	
WorkAddrCity	WorkAddrCity			WorkAddrCity		100	
WorkAddr StateName	WorkAddr StateName			WorkAddr StateName		100	
WorkAddrZip	WorkAddrZip			WorkAddrZip		10	
					Company AddrLine1	100	
					Company AddrLine2	100	
					Company AddrCity	100	
					Company AddrState Name	100	
					Company AddZip	10	
Employee Number						40	
Employee Type						40	
PositionTitle						100	

Employee	Physician	Patient	Student	Internal	External	Size	Notes
PositionTitle Abbrev						30	
	AssociateFirst Name					60	
	AssociateLast Name					60	
	Associate MiddleName					60	
	Associate Phone Number					32	
	Specialty					150	
		Account				40	
		AdmitDate				8	
		Discharge Date				8	
		Age				4	
		BirthDate				8	
		Nursing Station				2000	
		Patient Number				40	
		PhysicianFirst Name				60	
		PhysicianLast Name				60	
		Physician MiddleName				60	
		Sex				2	
		Special				2	
		Visitors				1	
			Student Number			40	
Location Level1	Location Level1			Location Level1	Location Level1	50	
Location Level2	Location Level2			Location Level2	Location Level2	50	
Location Level3	Location Level3			Location Level3	Location Level3	50	
Location Level4	Location Level4			Location Level4	Location Level4	50	

Employee	Physician	Patient	Student	Internal	External	Size	Notes
Location Level5	Location Level5			Location Level5	Location Level5	50	
Location Level6	Location Level6			Location Level6	Location Level6	50	
Location Level7	Location Level7			Location Level7	Location Level7	50	
Location Level8	Location Level8			Location Level8	Location Level8	50	
Organization Level1	Organization Level1			Organization Level1		100	
Organization Level2	Organization Level2			Organization Level2		100	
Organization Level3	Organization Level3			Organization Level3		100	
Organization Level4	Organization Level4			Organization Level4		100	
Organization Level5	Organization Level5			Organization Level5		100	
Organization Level6	Organization Level6			Organization Level6		100	
Organization Level7	Organization Level7			Organization Level7		100	
Organization Level8	Organization Level8			Organization Level8		100	



# Appendix C

## Regular Expressions

The normalization rules are created using regular expressions. [Table Appendix C-1](#) lists representative regular expressions.

**Table Appendix C-1** Regular Expressions

Regular Expression	Meaning
^	The line head is matched.
\$	The line end is matched.
()	Means to group, record, and call the content in the parentheses later.
[]	One character in the brackets is matched. A range can be specified using a hyphen.
.	Any one character is matched.
	One character string or another is matched.
*	The immediately preceding expression appears zero or more times.
+	The immediately preceding expression appears one or more times.
?	The immediately preceding expression appears zero or one time.
{m}	The immediately preceding expression appears m times.
{m,}	The immediately preceding expression appears m times or more.
{m,n}	The immediately preceding expression appears m times or more, n times or less.
\d	Digits 0 to 9 are matched. Same as [0-9].
\s	A space character is matched.

When a special character used in regular expressions, ^, \$, [, ], \*, +, ?, |, (, or ) is to be treated as a normal character, each one needs to be preceded by \ as follows: \., \^, \\$, \[, \], \\*, \+, \?, \, \, or \). When a special character is treated as a normal character within [ ], \ need not be appended (except for \, ^, and ]). When - is used as a normal character within [ ], it is represented as \-.

A character string grouped by () can be referenced by \$n. \$n means that the nth group from the line head is to be referenced. \$0 means that the whole line is to be referenced.

[Table Appendix C-2](#) and [Table Appendix C-3](#) show examples of normalization rules, which are only for reference and need not be followed to create the normalization rules for your system.

**Table Appendix C-2** Normalization Rules (Global Numbers)

Regular Expression	Conversion	Examples
<code>^0([0-9]{10})\$</code>	+81\$1	09012345678 -> +819012345678
<code>^0([0-9]{9})\$</code>	+81\$1	0312345678 -> +81312345678
<code>^0(\d\d)-(\d\d\d\d)-(\d\d\d\d)\$</code>	+81\$1\$2\$3	090-1234-5678 -> +819012345678
<code>^(0(\d)(\d\d\d\d)-(\d\d\d\d\d))\$</code>	+81\$1\$2\$3	03-1234-5678 -> +81312345678 (03)1234-5678 -> +81312345678 03(1234)5678 -> +81312345678
<code>^1+(\d)-(\d\d\d)-(\d\d\d)-(\d\d\d\d)\$</code>	+\$1\$2\$3\$4	+1-212-345-6789 -> +12123456789
<code>^0(\d)-(\d\d\d\d)-(\d\d\d\d)\sX(\d\d\d\d)\$</code>	+81\$1\$2\$3;ext=\$4	03-1234-5678 X2000 -> +81312345678;ext=2000

**Table Appendix C-3** Normalization Rules (Local Numbers)

Regular Expression	Conversion	Examples
<code>^([0-9*#]{4})\$</code>	\$1;phone-context=nec.com	2000 -> 2000;phone-context=nec.com
<code>^2([0-9*#]{4})\$</code>	2\$1;phone-context=nec.com	20000 -> 20000;phone-context=nec.com
<code>^8([0-9*#]{7})\$</code>	\$0;phone-context=nec.com	81070000 -> 81070000;phone-context=nec.com
<code>^8-(\d\d)-([0-9*#]{5})\$</code>	8\$1\$2;phone-context=nec.com	8-10-70000 -> 81070000;phone-context=nec.com
<code>^\$</code>	notknown;phone-context=nec.com	No caller number (anonymous) -> notknown;phone-context=nec.com

^\$ indicates a blank line. When the caller number cannot be acquired at termination, the regular expression for a blank line is matched. When the conversion result is tel:notknown;phone-context=~, "unknown" is displayed on the MOC.



# Appendix D

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## Specifications for OW5000 Admin

Table Appendix D-1 OW5000 Configuration Specifications

Acceptable Chars															Sales Regions							
Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Number	Alphabet	*#	Special Chars	2byte KANA	1byte KANA	Length	Range	Default Value	United States	Japan	Australian, Eurose	Asia (Other)	Note		
Platform	Access Control	SIPUA Group	Add New Group	Group Name	Input	M	X	X	X	X	-	-	25	-		X	X	X	X	*ASCII only		
				Deny as Default	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
		Group Access Control	--	Show Allow List	Select	M	-	-	-	-	-	-	-	-			X	X	X	X		
				Show Deny List	Select	M	-	-	-	-	-	-	-	-			X	X	X	X		
		PBX based Control	--	Show Allow List	Select	M	-	-	-	-	-	-	-	-			X	X	X	X		
				Show Deny List	Select	M	-	-	-	-	-	-	-	-	-			X	X	X	X	
	Conference Server	Conference Manager	Add New Bridge	--	PBX	Select	M	-	-	-	-	-	-	-	-	-	X	-	-	-		
				Bridge Name	Input	M	X	X	X	X	-	-	25	-			X	-	-	-	ASCII only	
				Tenant	Select	M	-	-	-	-	-	-	2	1-63			X	-	-	-		
				Monitored Number	Select	M	X	-	X	-	-	-	-	-		Top of the list	X	-	-	-		
				Ports	Input	M	X	-	X	-	-	-	16	-			X	-	-	-	*0-9, #, *, 16chars	
				Is Host Controlled	Check	O	-	-	-	-	-	-	-	-		Off	X	-	-	-		
	Extensions	--	Add New Extension	Extension	Input	M	X	-	X	-	-	-	16	-			X	X	X	X	0-9, #, *, 16 chars	
				PBX	Select	M	-	-	-	-	-	-	-	-		Top of the list	X	X	X	X		
				Phone Type	Select	M	-	-	-	-	-	-	-	-		Dterm	X	X	X	X		
				Tenant	Select	M	-	-	-	-	-	-	2	1-63		1	X	X	X	X		
				E.164 Country	Select	M	-	-	-	-	-	-	-	-		JP	X	X	X	X		
				E.164 Number	Input	O	X	X	X	X	-	-	50	-			X	X	X	X	*ASCII only	
				telURI	Input	If LCS/OCS, M	X	X	X	X	-	-	128	-			X	X	X	X	*ASCII only	
				SIPURI	Input	If AS, M	X	X	X	X	-	-	50	-			X	X	X	X	*only one ""@"" must be required Case-sensitive"	
				SIP Access Server	Select	If AS, M	-	-	-	-	-	-	-	-		NotAssigned	X	X	X	X		
				Collaboration	Check	O	-	-	-	-	-	-	-	-		Off	X	X	X	X		
				(Collaborated Extension)	Select	O	-	-	-	-	-	-	-	-			X	X	X	X		
				Is Monitored	Check	O	-	-	-	-	-	-	-	-		On	X	X	X	X		
				Subline	Input	O	X	-	X	-	-	-	16	-			X	X	X	X	0-9, #, *, 16 chars, Max number of sublines is 32"	
				Range Delete	PBX	Select	M	-	-	-	-	-	-	-	-		Top of the list	X	X	X	X	
					Tenant	Select	M	-	-	-	-	-	-	2	1-63		1	X	X	X	X	
					Starting Extension	Input	M	X	-	X	-	-	-	16	-			X	X	X	X	
					Ending Extension	Input	M	X	-	X	-	-	-	16	-			X	X	X	X	
				URI Format	Extension pattern Regular expression(for telURI)			X	X	X	X	-	-	100	-		^([0-9,#,*)(1-16))\$	X	X	X	X	Default value should be ^([0-9,#,*)(1-16))\$
					Translation pattern regular expression(for telURI)			X	X	X	X	-	-	100	-			X	X	X	X	Not-editable
					Extension pattern regular expression(for SIPURI)			X	X	X	X	-	-	100	-		^([0-9,#,*)(1-16))\$	X	X	X	X	Default value should be ^([0-9,#,*)(1-16))\$
					Translation pattern regular expression(for			X	X	X	X	-	-	100	-			X	X	X	X	Not-editable
	Licenses	Enable PBXs	--	Enabled	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
				PBX	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
		Enable Extensions	--	Check All	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
				SOAP	Check	O	-	-	-	-	-	-	-	-	Off	-	X	-	-			
				CSTA	Check	O	-	-	-	-	-	-	-	-	Off	-	X	-	-			
				GCP	Check	O	-	-	-	-	-	-	-	-	Off	-	X	-	-			
				PRESENCE	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
				API	Check	O	-	-	-	-	-	-	-	-	Off	X	-	X	X			

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Default Value	Sales Regions				Note
							Number	Alphabet	* #	Special Chars	2byte KANA	1byte KANA	Length	Range	United States	Japan		Australian, Eurose	Asia (Other)			
Platform (cont'd)		Licensed Information	-	-	-											X	-	X	Display license information (non-editable)			
	Page Providers		Add New Pager Provider	Name	Input	M										X	-	-				
		TAP Dialup(1-Way)		Input	O									X	-	-	-					
		TAP Dialup(2-Way)		Input	O									X	-	-	-					
		SNPP Host Name		Input	O									X	-	-	-					
		Port (Number)		Input	O									X	-	-	-					
					MAX Length	Input	O									X	-	-				
	PBXs	PBX Settings	Add New PBX	PBX Name	Input	M	X	X	X	X	-	-	40	-		X	X	X	X	*a-z, A-Z, 0-9, - (dash), .(period)		
				IP Address	Input	M	X	-	-	*	-	-	-	-		X	X	X	X	IP Address(Ranges are not checked)		
				Office Code(PBX Id)	Input	M	X	X	X	X	-	-	4	-		X	X	X	X	ASCII only		
				Client/Server Port	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				PBX Type	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				Split Call Forward	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
				Locations	Select	O	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				Pbx Reconnect Delay	Select	O	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				Heartbeat Timeout	Select	O	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				UGN (User Group Number)	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X			
				Prefix	Input	O	X	-	X	-	-	-	16	-		X	X	X	X	0-9, #, *, 16 chars		
				SIP Server IP Address	Input	O	X	-	-	*	-	-	-	-		X	X	X	X	*IP Address(Ranges are not checked)		
				SIP Server IP Address (port)	Input	O	X	-	-	-	-	-	-	-	5060	X	X	X	X	1-65535		
				Locations	Add New Location	Location Name	Input	M	X	X	X	X	-	-	50	-		X	X	X	X	*ASCII only
						Country Code	Input	M	X	-	X	-	-	-	10	-		X	X	X	X	
		City/Area Code	Input			O	X	-	X	-	-	-	24	-		X	X	X	X			
		Long Dist Access Code	Input			M	X	-	X	-	-	-	24	-		X	X	X	X			
		Local Access Code	Input			M	X	-	X	-	-	-	24	-		X	X	X	X			
		Int. Direct Dial Code	Input			O	X	-	X	-	-	-	24	-		X	X	X	X			
		National Code	Input			O	X	-	X	-	-	-	24	-		X	X	X	X			
		AreaCode Rules	Add New AreaCode Rule	Locations	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				Target City/Area Code	Input	M	X	-	X	-	-	-	24	-		X	X	X	X			
				Target Exchange	Input	O	X	-	X	-	-	-	24	-		X	X	X	X			
				Direct Dial Code	Input	O	X	-	X	-	-	-	24	-		X	X	X	X			
				Include City/Area Code	Check	O	-	-	-	-	-	-	-	-		X	X	X	X			
		PBX->PBX Dialing	Add New Destination PB	Destination PBX	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
				Dialing Prefix	Input	O	X	-	X	-	-	-	50	-		X	X	X	X			
			Add New Source PBX	Extensions beginning with	Input	O	X	-	X	-	-	-	16	-		X	X	X	X			
				Source PBX	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X			
		Reserved Numbers	Add New Monitored Number	Incoming Prefix	Input	O	X	-	X	-	-	-	50	-		X	X	X	X			
				Number	Input	M	X	-	-	-	-	-	16	-		X	X	X	X	0-9, #, *, 16 chars		
				Tenant	Select	M	-	-	-	-	-	-	2	1-63		X	X	X	X			
						Reserved Type	Select	M	-	-	-	-	-	-	Monitored Number	X	X	X	X			
						Application	Select	O	-	-	-	-	-	-	Un-assigned	X	X	X	X			
						Voice Mail Pilot Numbers	Add New Pilot Number	Pilot Number	Input	O	X	-	X	-	-	16	-	X	-	-	-	
		Route/Trunks	--	Add New Trunk	Route Number	Input	M	X	-	-	-	-	-	3	1-899		X	-	-	-		
					Name	Input	M	X	X	X	X	-	-	30	-		X	-	-	-		
					Beginning Trunk	Input	M	X	-	-	-	-	-	3	1-255		X	-	-	-		
					Ending Trunk	Input	M	X	-	-	-	-	-	3	1-255		X	-	-	-		
					PBX	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	-	-	-		
	Tenant				Select	M	-	-	-	-	-	-	2	1-63		X	-	-	-			
	Is Monitored				Check	O	-	-	-	-	-	-	-	-	Off	X	-	-	-	Will be hidden		
	UserDefined 1				Input	O	X	X	X	X	X	X	50	-		X	-	-	-			
	UserDefined 2				Input	O	X	X	X	X	X	X	50	-		X	-	-	-			
	UserDefined 3				Input	O	X	X	X	X	X	X	50	-		X	-	-	-			
	UserDefined 4				Input	O	X	X	X	X	X	X	50	-		X	-	-	-			

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Sales Regions				Note
							Number	Alphabet	#	Special Chars	2byte KANA	1byte KANA	Length	Range	Default Value	United States	Japan	Australian	Eurose	Asia (Other)	
Platform (cont'd)	Serial Ports		Add New Serial Port	Serial Port	Select	M	-	-	-	-	-	-	-	-	1	X	-	-	-	-	
				Baud Rate	Select	M	-	-	-	-	-	-	-	-	300	X	-	-	-	-	
				DataBits ID	Select	M	-	-	-	-	-	-	-	-	7	X	-	-	-	-	
				Parity	Select	M	-	-	-	-	-	-	-	-	Even	X	-	-	-	-	
				Stop Bits	Select	O	-	-	-	-	-	-	-	-	None	X	-	-	-	-	
				Flow Control	Select	M	-	-	-	-	-	-	-	-	Hardware	X	-	-	-	-	
	Voice Mail Servers	-	Add New Voice Mail Server	Name	Input	M										X	-	-	-	-	
				Type	Select	O	-	-	-	-	-	-	-	-		X	-	-	-	-	
				System ID	Input	O										X	-	-	-	-	
				Base URL	Input	O										X	-	-	-	-	
Applications	Access Server	General Settings	Add New Access Server	Server Name	Input	M	X	X	X	X	-	-	40	-		X	X	X	X	a-z, A-Z, 0-9, - (dash), .(period)	
				IP Address	Input	M	X	-	-	*	-	-	-	-		X	X	X	X	IP Address	
				Listen Port	Input	M	X	-	-	-	-	-	5	-	6060	X	X	X	X	1025-65535	
				Legacy Port	--	--	X	-	-	-	-	-	5	-	62000	X	X	X	X	1025-65535	
				RPC Listen Port	Input	If AS, M	X	-	-	-	-	-	5	-	60002	X	X	X	X	1025-65535	
				TOS	Input	If AS, M	X	*	-	-	-	-	2	-	00	X	X	X	X	*00-FF	
				Keep Alive	Input	If AS, M	X	-	-	-	-	-	-	-	1800	X	X	X	X	180-72000	
				Timer T1	Input	If AS, M	X	-	-	-	-	-	-	-	500	X	X	X	X	500-4000	
				Is PSGW	Check	O	-	-	-	-	-	-	-	-	Off	X	X	X	X		
				Binding Type	Select	If PSGW, M	-	-	-	-	-	-	-	-	TCP/IP	X	X	X	X		
		Routing Info	Add New Routing Rule	Routing Rule	Input	O	X	X	X	X	-	-	100			X	X	X	X		
				IP Address	Input	O	X	-	-	*	-	-	-	0.0.0.0-		X	X	X	X	IP Address(Ranges are not checked)	
				Port	Input	O	X	-	-	-	-	-	5	1024-65535		X	X	X	X		
				Translation Pattern	Input	O	X	X	X	X	-	-	100			X	X	X	X		
				Test Routing Rule	Input	O	X	X	X	X	-	-	100			X	X	X	X		
	Applications Message Service	--	--	TCP Service Port	Input	M	X	-	-	-	-	-	5	-	5425	X	X	X	X		
	Incoming Call Assistant	Server Settings	--	ICA Name	Input	O										X	-	-	-		
				Legacy TCP/IP Port	Input	M	X	-	-	-	-	-	-	1025-65535	5424	X	-	-	-		
				Name Display Enabled in PBX	Check	O	-	-	-	-	-	-	-	-	On	X	-	-	-		
				Show External Number	Check	O	-	-	-	-	-	-	-	-	Off	X	-	-	-		
				Show DID Information	Check	O	-	-	-	-	-	-	-	-	Off	X	-	-	-		
				Password Required	Check	O	-	-	-	-	-	-	-	-	Off	X	-	-	-		
				Chime on Incoming Call to Subline	Check	O	-	-	-	-	-	-	-	-	Off	X	-	-	-		
				Outbound Call Log Size	Input	O	X	-	-	-	-	-	9	-	100	X	-	-	-		
				Inbound Call Log Size	Input	O	X	-	-	-	-	-	9	-	100	X	-	-	-		
				Max Idle Time (seconds)	Input	O	X	-	-	-	-	-	5	-	15	X	-	-	-		
				Name Display Format for Employee Match	Select	O	-	-	-	-	-	-	-	-	Employee Display Name	X	-	-	-		
		PBX Settings	--	PBX	Select	O	-	-	-	-	-	-	-	-		X	-	-	-		
				Redirect Number	Select	O	-	-	-	-	-	-	-	-		X	-	-	-		
				PBX	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	-	-	-		
				Force Port	Select	M	-	-	-	-	-	-	-	-	Yes	X	-	-	-		
				Heartbeat	Select	M	-	-	-	-	-	-	-	-	Yes	X	-	-	-		
				Selected	Check	O	-	-	-	-	-	-	-	-		X	-	-	-		
				Incremental Retry Delay	Select	M	-	-	-	-	-	-	-	-	30 seconds	X	-	-	-		
				OAI Timeout	Select	M	-	-	-	-	-	-	-	-	10 minutes	X	-	-	-		
				Max Retry Delay	Select	M	X	-	-	-	-	-	-	1-65535	5 seconds	X	-	-	-		
				Data Mode	Select	M	-	-	-	-	-	-	-	-		X	-	-	-		
				LED Number	Select	M	-	-	-	-	-	-	-	-		X	-	-	-		

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars							Default Value	Sales Regions				Note
							Number	Alphabet	Special Chars	2byte KANA	1byte KANA	Length	Range		United States	Japan	Australian	Eurose Asia (Other)	
Applications (cont'd)	Location Status Information	Server Settings	--	LSI Name	Input	O	X	X	X	X	X	X	40		X	-	-	-	
				Legacy TCP/IP Port	Input	M	X	-	-	-	-	-	1025-65535	5421	X	-	-	-	
				Display Status	Check	O	-	-	-	-	-	-	-	On	X	-	-	-	
				Password Required	Check	O	-	-	-	-	-	-	-	Off	X	-	-	-	
				Max Idle Time	Input	O	X	-	-	-	-	-	0-999	15	X	-	-	-	
		Message Setting	--	Default Online	Select	M	-	-	-	-	-	-	-	Online	X	-	-	-	
				Default Offline	Select	M	-	-	-	-	-	-	-	Offline	X	-	-	-	
				Default Idle	Select	M	-	-	-	-	-	-	-	Away from Desk	X	-	-	-	
				Default Busy	Select	M	-	-	-	-	-	-	-	In a Meeting	X	-	-	-	
				Default Out of Office	Select	M	-	-	-	-	-	-	-	Out of Office	X	-	-	-	
				Default Dterm	Select	M	-	-	-	-	-	-	-	Available	X	-	-	-	
				Default Mobility	Select	M	-	-	-	-	-	-	-	Available	X	-	-	-	
			Add New Message	System Presence	Input	O	X	X	X	X	X	X	50		X	-	-	-	
				SIP Presence	Select	O	-	-	-	-	-	-	-	NONE	X	-	-	-	
					Select	M	-	-	-	-	-	-	-	Top of the list	X	-	-	-	
		PBX Settings	--	PBX	Select	M	-	-	-	-	-	-	-	Yes	X	-	-	-	
				Force Port	Select	M	-	-	-	-	-	-	-	Yes	X	-	-	-	
				Heartbeat	Select	M	-	-	-	-	-	-	-	Yes	X	-	-	-	
				Selected	Check	O	-	-	-	-	-	-	-		X	-	-	-	
				Incremental Retry Delay	Select	M	-	-	-	-	-	-	-	30 seconds	X	-	-	-	
				OAI Timeout	Select	M	-	-	-	-	-	-	-	10 minutes	X	-	-	-	
				Max Retry Delay	Select	M	X	-	-	-	-	-	1-65535	5 seconds	X	-	-	-	
				Data Mode	Select	M	-	-	-	-	-	-	-		X	-	-	-	
				LED Number	Select	M	-	-	-	-	-	-	-		X	-	-	-	
	OaiServer	Server Settings	--	OAI Tenant Number	Input	M	X	-	-	-	-	2	0-63	0	X	X	X	X	
		PBX Settings	---	PBX	Select	M	-	-	-	-	-	-	-	Top of the list	X	X	X	X	
				Force Port	Select	M	-	-	-	-	-	-	-	Yes	X	X	X	X	
				Heartbeat	Select	M	-	-	-	-	-	-	-	Yes	X	X	X	X	
				Selected	Check	O	-	-	-	-	-	-	-	On	X	X	X	X	
				Incremental Retry Delay	Select	M	-	-	-	-	-	-	-	30 seconds	X	X	X	X	
				Max Retry Delay	Select	M	-	-	-	-	-	-	-	10 minutes	X	X	X	X	
				Enable Free Location Facility	Check	O	-	-	-	-	-	-	-		X	X	X	X	Use tenant 1
	Remote Call Control	General Settings	--	Listen Port	Input	O	X	-	-	-	-	-	1-65535	0	X	X	X	X	RCC runs on 5060
		Normalization Rule	Add New	Country Code	Sent	O	X	-	X	-	-	3	-		X	X	X	X	
				Phone pattern regular expression	Input	O	X	-	X	-	-	100	-		X	X	X	X	
				Translation pattern	Input	O	X	-	X	-	-	100	-		X	X	X	X	
				Comment	Input	O	X	X	X	X	-	100	-		X	X	X	X	
			Test Rule	Test dialed number	Input	O	X	X	X	X	-	16	-		X	X	X	X	Max 16 digit
				Translated number (for test translation number)	Input	O	-	-	-	-	-	-	-		X	X	X	X	Not editable
				Test ANI	Input	O	X	X	X	X	-	16	-	0	X	X	X	X	Max 16 digit
				Destination PBX	Select	O	-	-	-	-	-	-	-		X	X	X	X	
				Translated number (for test ANI translation)	Input	O	-	-	-	-	-	-	-		X	X	X	X	Not editable

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Default Value	Sales Regions				Note	
							Number	Alphabet	* #	Special Chars	2byte KANA	1byte KANA	Length	Range	United States	Japan		Australian, Eurose	Asia (Other)				
Directory	Categories	-	Add New	Category Name	Input											X	-	-	-				
		Category Description		Input										X	-	-	-						
	DIDs		Add New DID	Name	Input	M										X	-	-	-				
				PBX	Select	M	-	-	-	-	-	-			X	-	-	-					
				Extension	Select	M	-	-	-	-	-	-			X	-	-	-					
				Company	Select	M	-	-	-	-	-	-			X	-	-	-					
	Locations	-	Add New	Name	Select	M	X	X	X		X	X	50			X	X	X	X				
				Type	Select	O	-	-	-	-	-	-		Not Set	X	X	X	X					
				Notes	Input	O	X	X	X	X	X	X	1000			X	X	X	X				
				PHONE NUMBERS	Add New	Select	O	-	-	-	-	-	-			X	X	X	X				
	Organizations	-	Add New	Organization Type	Select	M	-	-	-	-	-	-				X	X	X	X				
				Name		M	X	X	X		X	X	50			X	X	X	X				
				Type		M	-	-	-	-	-	-				X	X	X	X				
				Notes		O	X	X	X	X	X	X	1000			X	X	X	X				
				LOCATIONS	Add New	Select	O	-	-	-	-	-	-				X	X	X	X			
				PHONE NUMBERS	Add New	Select	O	-	-	-	-	-	-				X	X	X	X			
	People	Person		First Name	Input	M	X	X	X	X	X	X	30	-			X	X	X	X			
				Last Name	Input	M	X	X	X	X	X	X	30	-			X	X	X	X			
				Middle Name	Input	O	X	X	X	X	X	X	30	-			X	X	X	X			
				Display Name	Input	O	X	X	X	X	X	X	16	-			X	X	X	X			
				Prefix	Select	O	-	-	-	-	-	-	-	-			X	X	X	X			
				Suffix	Select	O	-	-	-	-	-	-	-	-			X	X	X	X			
				SIP URI	Input	O	X	X	X	X	X	X	X	50	-			X	X	X	X	only one ""@"" must be required Case-sensitive"	
				SIP Access Server	Select	O	-	-	-	-	-	-	-	-		Not Assigned	X	X	X	X			
				SIPUA Group	Select	O	-	-	-	-	-	-	-	-		Not Assigned	X	-	-	-			
				IM URI	Input	O	X	X	X	X	X	X	X	50	-			X	-	-	-	only one ""@"" must be required	
				IM Access Server	Select	O	-	-	-	-	-	-	-	-		Not Assigned	X	-	-	-			
				Voice Mail Server	Select	O	-	-	-	-	-	-	-	-			X	-	-	-	Not selectable before Voice Mail Server setting.		
				Subscriber ID	Input	O	-	-	-	-	-	-	-	-			X	-	-	-	Not editable before Voice Mail Server setting.		
				Special Dial Code	Input	O											X	-	-	-			
				Add Photo	Input	O	-	-	-	-	-	-	-	-			X	-	-	-			
				UserDefined1	Input	O											User Defined 1	X	-	-	-		
				UserDefined2	Input	O											User Defined 2	X	-	-	-		
				UserDefined3	Input	O											User Defined 3	X	-	-	-		
				UserDefined4	Input	O											User Defined 4	X	-	-	-		
				UserDefined5	Input	O											User Defined 5	X	-	-	-		
				UserDefined6	Input	O											User Defined 6	X	-	-	-		
				Note	Input	O	X	X	X	X	X	X	X	1000	-			X	X	X	X		
				URI Format	URI key parameter	Select	O	-	-	-	-	-	-	-	-		Primary Extension	X	X	X	X	Following key can be selected	
					Translation pattern regular expression	Input	O	X	X	X	X	-			100			X	X	X	X		
		Role	Add Role	User	LoginID	Input	M	X	X	X	X	X	X	50	-			X	X	X	X		
					New Password	Input	M	X	X	X	X	-	-	-	-			X	X	X	X	8chars or longer, includes 1 number, 1 capital, 1 small, 1 special	
					Confirm New Password	Input	M	X	X	X	X	-	-	-	-			X	X	X	X	Same as above	
					NTLM Login ID	Check	O											X	-	-	-		
					Login is disabled	Check	O	-	-	-	-	-	-					X	X	X	X		
					Db Tool - Import/ Export OW5000 Data	Check	O	-	-	-	-	-	-					X	X	X	X		
					Password never expires	Check	O	-	-	-	-	-	-					X	X	X	X		
					OW5000 Administrator	Check	O	-	-	-	-	-	-	-	-		Off	X	X	X	X		
					Confidential Status	Select	O	-	-	-	-	-	-	-	-			X	X	X	X		
				Employee	EmployeeID	Input	M	X	X	X	X	X	X	X	20	-			X	X	X	X	
					Employee Position	Select	M	-	-	-	-	-	-	-	-			X	-	-	-		
					Employee Type	Select	O	-	-	-	-	-	-	-	-			X	-	-	-		
					Organization	Select	O	-	-	-	-	-	-	-	-			X	X	X	X		
					Location	Select	O	-	-	-	-	-	-	-	-			X	X	X	X		
					Confidential Status	Select	O	-	-	-	-	-	-	-	-			X	X	X	X		

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Sales Regions				Note
							Number	Alphabet	#	Special Chars	2byte KANA	1byte KANA	Length	Range	Default Value	United States	Japan	Australian, Eurose	Asia (Other)		
Directory (cont'd)		Contact Method	Add New Contact Method	Primary Extension Secondary Extension Tertiary Extension	Priority	Select	M	-	-	-	-	-	-	-	-		X	X	X	X	
					PBX Name	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X	
					Extension	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	X	X	X	
					* Pilot Number	Select	O	-	-	-	-	-	-	-	-		X	-	-	-	*Primary Extension only
					Dterm Password	Input	O	X	X	X	X	-	-	-	-		X	-	-	-	
				Assured Mobility Phone Other Work Phone Number Wireless	Confidentiality Status	Select	O	-	-	-	-	-	-	-	-		X	X	X	X	
					Priority	Select	M	-	-	-	-	-	-	-	-	1	X	-	-	-	
					Pbx Name	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	-	-	-	
					Extension	Select	M	-	-	-	-	-	-	-	-	Top of the list	X	-	-	-	
					Dterm Password	Input	O	X	X	X	X	-	-	-	-		X	-	-	-	
				Alpha Pager	Confidentiality Status	Select	O	-	-	-	-	-	-	-	-		X	-	-	-	
					Country	Select	M	-	-	-	-	-	-	-	-	Depend of the E164 country	X	-	-	-	
					Number	Input	M										X	-	-	-	
					Priority	Select	M	-	-	-	-	-	-	-	-	1	X	-	-	-	
					PIN	Input	M										X	-	-	-	
					Is 2-way?	Select	O	-	-	-	-	-	-	-	-	No	X	-	-	-	
					Pager Provider	Select	M	-	-	-	-	-	-	-	-	None	X	-	-	-	
					Confidentiality Status	Select	O	-	-	-	-	-	-	-	-	None	X	-	-	-	
				External Fax External Primary Number External Secondary Number External Tertiary Number FAX	Country	Select	M	-	-	-	-	-	-	-	-	Depend of the E164 country	X	-	-	-	
					Number	Input	M	X	-	X	-	-	-	50	-		X	-	-	-	
					Priority	Select	M	-	-	-	-	-	-	-	-	1	X	-	-	-	
				Hone Phone Number Mobile Phone Phone Pager	Confidentiality Status	Select	O	-	-	-	-	-	-	-	-	None	X	-	-	-	
					Home Email Address Instant Messageing Other Email Address Other Email Pager Personal Homepage Text Messaging Voice Mail Work Email Address Work Email Pager	Internet Address	Input	M	X	X	X	X	X	X	50	-		X	-	-	-
				Priority		Select	M	-	-	-	-	-	-	-	-	1	X	-	-	-	
				Confidentiality Status		Select	O	-	-	-	-	-	-	-	-	None	X	-	-	-	

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Default Value	Sales Regions				Note
							Number	Alphabet	*#	Special Chars	2byte KANA	1byte KANA	Length	Range	United States	Japan		Australian	Eurose Asia (Other)			
Directory (cont'd)	People (cont'd)	Addresses	Add New Address	Address Type		Select	M	-	-	-	-	-	-	-			X	-	-	-		
				Country/Regions		Select	M										X	-	-	-		
				Street		Input	O										X	-	-	-		
				City		Input	O										X	-	-	-		
				State/Province		Select	O										X	-	-	-		
				Zipcode A B	A	Input	O										X	-	-	-		
				Zipcode A B	B	Input	O										X	-	-	-		
		--	Range Delete	From		Input	M	X	X	X	X	X	X	128	-		X	X	X	X	"ASCII only Case-insensitive"	
		To			Input	O	X	X	X	X	X	X	128	-		X	X	X	X	"ASCII only Case-insensitive"		
		--	ManageCustomerField	UserDefined 1		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 1(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
				UserDefined 2		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 2(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
				UserDefined 3		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 3(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
				UserDefined 4		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 4(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
				UserDefined 5		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 5(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
				UserDefined 6		Input	O	X	X	X	X	X	X	25	-		X	-	-	-		
				UserDefined 6(Required)		Check	O	-	-	-	-	-	-	-	-	-		X	-	-	-	
		Full Name Format		Full Name Format	Select	M	-	-	-	-	-	-	-	-		X	-	-	-			
	Positions	-	Add New Position	Title		Input	M									X	-	-	-			
				Abbreviation		Input	O									X	-	-	-			
	Specialties	-	Add New Specialty	Description		Input	M									X	-	-	-			
	User Privileges			User		Check	O	X	X	X	X	X	X			X	-	-	-			
				Employee		Check	O	X	X	X	X	X	X			X	-	-	-			
Users	--	--	LoginID		Input	M	X	X	X	X	X	X	50			X	X	X	X			
			New Password		Input	M	X	X	X	X	-	-	-	-		X	X	X	X	8chars or longer, includes 1 number, 1 capital, 1 small, 1 special		
			Confirm New Password		Input	M	X	X	X	X	-	-	-	-		X	X	X	X	Same as above		
			NTLM Login ID													X	-	-	-			
			Login is Disabled		Check	O	-	-	-	-	-	-	-	-	-		X	X	X	X		
			Password never expires		Check	O	-	-	-	-	-	-	-	-	-		X	X	X	X		
			Employee Name		Input	M	-	-	-	-	-	-	-	-	-		X	X	X	X	Only display	
			Db Tool - Import/Export OW5000 Data		Check	O	-	-	-	-	-	-	-	-	-		X	X	X	X		
OW5000 Administrator		Check	O	-	-	-	-	-	-	-	-	-		X	X	X	X					
Application Data	-	-	-	Value		Input	M						2000			X	X	X	X			



Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Default Value	Sales Regions				Note
							Number	Alphabet	Special Chars + #	2byte KANA	1byte KANA	Length	Range	United States	Japan	Australian, Eurose		Asia (Other)				
Settings		General Settings	---	Select the default country code	Select	M	-	-	-	-	-	-	-	-	JP	X	X	X	X			
				Reporting Services URL	Input	M	-	-	-	-	-	-	-	http://(server)/ReportServer	X	X	X	X				
				Select the default home page	Select	M	-	-	-	-	-	-	-	Blank(default)	X	X	X	X				
				IP Address / Name	Input	M	X	-	-	*	-	-	-	0.0.0.0-	X	-	X	-				
				Port	Input	M	X	-	-	-	-	-	-	1025-65535	X	-	X	-				
				Password Never expires	Check	M	X	0	-	-	-	-	-	-	X	X	X	X				
				Default password validity period	Input	O	X	-	-	-	-	-	-	0	X	X	X	X				
		Schedule	Schedule Profile (or click pencil)	Profiles	Select	M	-	-	-	-	-	-	-	-		X	X	X	X	Profiles which has been created by DBtool are listed. The profile which has schedule information is NOT listed. It is selectable when you click <b>Schedule Profile</b> , but not when choosing the pencil icon.		
				Recurring Type	Select	M	-	-	-	-	-	-	-	One Time	X	X	X	X				
				Start Date	Edit with Calendar Control	M	X	-	-	-	-	-	-		X	X	X	X				
				Start Time	Select	M	-	-	-	-	-	-	0:00-23:59		X	X	X	X				
				Recurrence Pattern Occurs	Select	M	-	-	-	-	-	-	0:00-23:59	Daily	X	X	X	X				
				Daily			-	-	-	-	-	-			X	X	X	X				
				Every X Day(s)	Select	O	-	-	-	-	-	-			X	X	X	X				
Settings (cont'd)	Schedule (cont'd)	Schedule Profile (or click pencil) (cont'd)	X	Select	O	X	-	-	-	-	-	2		X	X	X	X	Should be 1 to 12 before release				
			Weekly			-	-	-	-	-	-			X	X	X	X					
			Recurs every X weeks on:	Input	O	X	-	-	-	-	-			X	X	X	X					
			Sunday	Check	O	-	-	-	-	-	-			X	X	X	X					
			Monday	Check	O	-	-	-	-	-	-			X	X	X	X					
			Tuesday	Check	O	-	-	-	-	-	-			X	X	X	X					
			Wednesday	Check	O	-	-	-	-	-	-			X	X	X	X					
Thursday	Check	O	-	-	-	-	-	-			X	X	X	X								
Friday	Check	O	-	-	-	-	-	-			X	X	X	X								
Saturday	Check	O	-	-	-	-	-	-			X	X	X	X								
Monthly			-	-	-	-	-	-			X	X	X	X								
Day A of every B month(s)	Select	O	-	-	-	-	-	-			X	X	X	X								
A	Input	O	X	-	-	-	-	-	2	(blank)	X	X	X	X	Should be 1 to 12 before release							
B	Input	O	X	-	-	-	-	-	2	(blank)	X	X	X	X	Should be 1 to 12 before release							
The C D of every E months(s)	Select	O	-	-	-	-	-	-			X	X	X	X								
C	Select	O	-	-	-	-	-	-		first	X	X	X	X								
D	Select	O	-	-	-	-	-	-		Sunday	X	X	X	X								
E	Input	O	X	-	-	-	-	-	2	(blank)	X	X	X	X	Should be 1 to 12 before release							
Duration of Recurrence			-	-	-	-	-	-	2		X	X	X	X	Available on when #13 is selected							
No end Date	Select	O	-	-	-	-	-	-			X	X	X	X	Default							
End By X	Select	O	-	-	-	-	-	-			X	X	X	X								
X	Edit with Calendar control	O	X	-	-	-	-	-			X	X	X	X								
Start Date	Edit with Calendar control	M	X	-	-	-	-	-			X	X	X	X								
Start Time	Select	-	X	-	-	-	-	-			X	X	X	X								

Group	Application	Tab Name	Button Name	Parameter	Input Method	Is Mandatory	Acceptable Chars										Sales Regions				Note
							Number	Alphabet	+,#	Special Chars	2byte KANA	1byte KANA	Length	Range	Default Value	United States	Japan	Australian, Eurose	Asia (Other)		
MA4000 Integration	-	-	-	Enable MA4000 Integration		Check		-	-	-	-	-	-				X	-	-	-	
				MA4000 Base URL		Input									X	-	-	-			
				Login		Input									X	-	-	-			
				Password		Input									X	-	-	-			
				Server Name		Input									X	-	-	-			
				ServerInstance		Input									X	-	-	-			
				Database Name		Input									X	-	-	-			
				DB Listen Port		Input									X	-	-	-			
				Contact Method Email		Select		-	-	-	-	-	-			X	-	-	-		
				Contact Method Extension 1		Select		-	-	-	-	-	-			X	-	-	-		
				Contact Method Extension 2		Select		-	-	-	-	-	-			X	-	-	-		
				Contact Method Extension 3		Select		-	-	-	-	-	-			X	-	-	-		
				Synchronize Non-Ringing Sublines		Check		-	-	-	-	-	-			X	-	-	-		
Version Information	--	--		-	--											X	X	X	X		

# Appendix E

## OW5000 Administrator Configuration Specification

### Appendix E-1 Configuration Specification

Group	Application	Tab Name	OW5000 API Call Control API Call Notifications API	OW5000 API Information API	usCSTA LCS/OCS Integra- tion	SIMPLE Sip Presence
Platform	Access Control	SIPUA Group	-	-	-	Wait maximum 30 min or Restart All OWAccessServers
		Group Access Control	-	-	-	
		PBX Based Control	-	-	-	
	Extensions	-	Applied Immediately		Applied Immediately	Applied Immediately (except Phone Type and SIPURL. If these values are modified, wait maximum 30 min or Restart All OWAccessServers.)
	External Numbers	-	-	-	-	-
	Licenses	Enable PBXs	-		Restart (Remote Call Control)	
		Enable Extensions	Applied Immediately			Wait maximum 30 min or Restart All OWAccessServers.
		Licensed Information	-	-	-	-
	Pager Providers	-	-	-	-	-
	PBXs	PBX Settings	Restart System			
		Locations	Wait maximum 60 min or Restart IIS and OWTelephony Event Notification		Restart (Remote Call Control)	-
		AreaCode Rules				
		PBX >PBX Dialing				
		Reserved Numbers				
		Voice Mail Pilot Numbers	-	-	-	-
	Route/Trunks	-	-	-	-	-
	Serial Ports	-	-	-	-	-
	Voice Mail Servers	-	-	-	-	-

Group	Application	Tab Name	OW5000 API Call Control API Call Notifications API	OW5000 API Information API	usCSTA LCS/OCS Integra- tion	SIMPLE Sip Presence
Applications	Access Server(Local)		-	-		Wait maximum 30 min or Restart All OW/ AccessServers
	Access Server(REMOTE)		-	-	-	
	Access Server(PSGW)		-	-	-	Restart OW5000 Application Message Service
	Routing Info		-	-	-	Wait maximum 30 min or Restart All OW/ AccessServers
	Conference Server	Conference Manager	-	-	-	-
		PBX Settings	-	-	-	-
	Incoming Call Assistant	Server Settings	-	-	-	-
		Redirect Configurations				
		PBX Settings	-	-	-	-
	Location Status Information	Server Settings	-	-	-	-
		Message Settings	-	-	-	-
		PBX Settings	-	-	-	-
	OaiServer	Server Settings	Restart (OaiServer)	-	-	-
		PBX Settings				
	Remote Call Control	General Settings	-	-	Restart (Remote Call Control)	-
		Normalization Rule	-	-		-
Directory	Categories	-	-	-	-	-
	DIDs	-	-	-	-	-
	Locations	-	-	-	-	-
	Organizations	-	-	-	-	-
	People	Person	Applied Immediately		-	Applied Immediately
		Role				-
		Contact Method				Applied Immediately
		Addresses	-	-	-	-
		Full Name Format	-	-	-	-
	Positions	-	-	-	-	
	Specialties	-	-	-	-	
	User Privileges	Organizations	-	-	-	-
		Locations	-	-	-	-
		Roles	-	-	-	-
		Security	-	-	-	-
	Users	-	Applied Immediately		-	-

Group	Application	Tab Name	OW5000 API Call Control API Call Notifications API	OW5000 API Information API	usCSTA LCS/OCS Integra- tion	SIMPLE Sip Presence
Application Data	-	-	-	-	-	-
Settings	-	General Settings	-	-	-	-
		Schedule	-	-	-	-
MA4000 Integration	-	-	-	-	-	-
Version Information	-	-	-	-	-	-





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**UC for Enterprise (UCE) Application Platform (UNIVERGE OW5000)  
Configuration Guide**

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