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

Network Application Middleware

Getting Started Guide

NEC Corporation

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Introduction

The UNIVERGE OW5000 Getting Started Guide provides the information you need to operate the OW5000 Platform and its basic suite of software utilities.

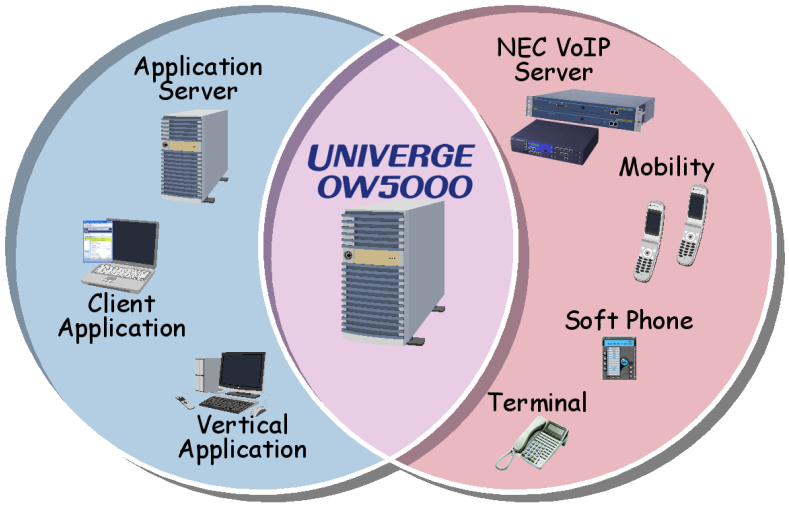
The following topics are included in this chapter:

Chapter Topics

UNIVERGE OW5000 Getting Started 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*



How This Guide is Organized

Chapter 1 *Introduction*	This chapter outlines how to use the Getting Started Guide, including the organization and chapter layout.
Chapter 2 *Requirements*	This chapter provides *OW5000 Platform* hardware and software requirements.
Appendix A *PBX Requirements*	This chapter provides *OW5000 Platform* PBX requirements.
Appendix B *Required License*	This chapter provides *OW5000 Platform* license requirements.
Appendix C *Server Sizing*	This chapter provides server sizing information.
Appendix D *System Configuration Example*	This chapter provides system configuration examples.

UNIVERGE OW5000 Getting Started Setup and Configuration

Use the following illustrations as a quick reference to setup and configure the UNIVERGE OW5000. For more details on the System Configuration, refer to the "OW5000 Requirements" on page 2-1 and the OW5000 Configuration Guide.

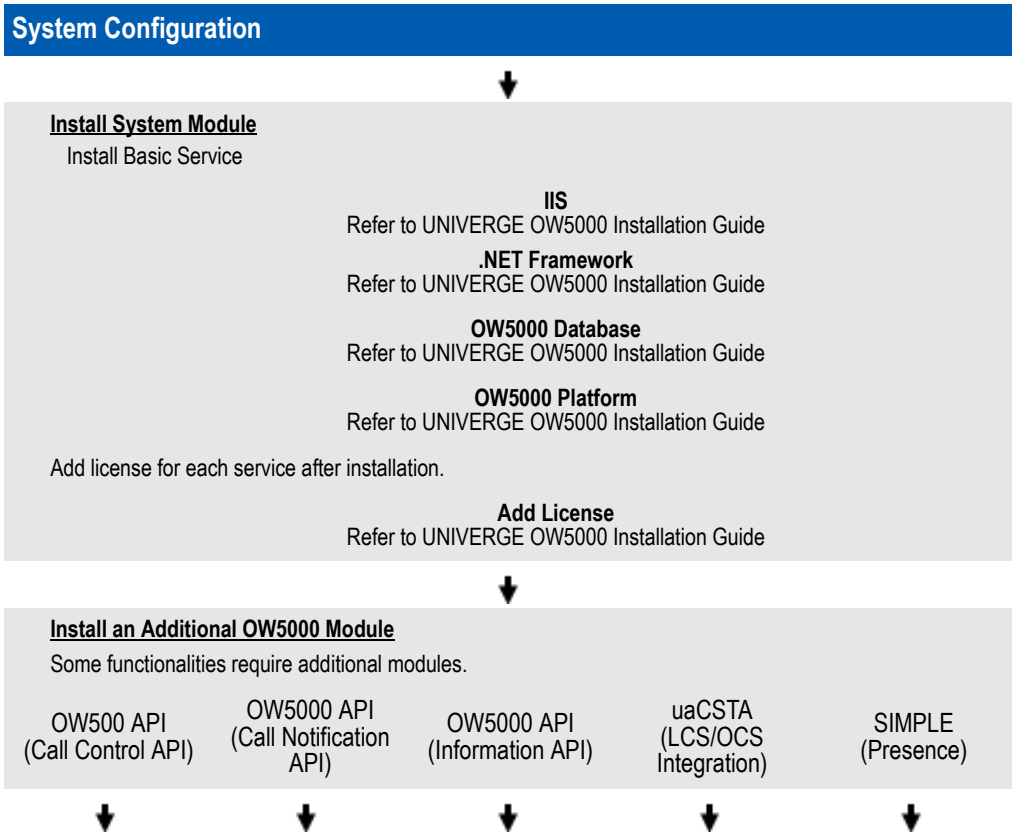
IMPORTANT

If the PBX network is a fusion network and the OAI configuration is localized OAI instead of centralized OAI, then certain know issues may arise:

As extension/trunks make calls across nodes, additional monitoring slots will be used for those extensions/trunks. Eventually all monitoring slots may be taken, causing adverse affects on other OAI applications including ACD in the network to fail trying to monitor those extensions/trunks.

OAI applications with features that attempt to control extensions/trunks on remote nodes such as hold call, move a call from a monitored number to a physical extension, or redirect a call to voice mail may not be able to do so, causing those features not to work or may work but then cause other applications that were previously controlling an extension/trunk to now fail.

Figure 1-2 *System Configuration Setup*



System Configuration

			Remote Call Control	Access Server
Not Required	Not Required	Not Required	Refer to the UNIVERGE OW5000 Configuration Guide.	Refer to the UNIVERGE OW5000 Configuration Guide.

Note: *OW5000 API (Information API) requires Access Server installation to use presence related methods.*

↓

OW5000 Configuration

Check OW5000 Administrator Status
Refer to the UNIVERGE OW5000 Configuration Guide.

OW5000 Administrator Login
Refer to the UNIVERGE OW5000 Configuration Guide.

↓

OW5000 Server Configuration

OW5000 API (Call Control API)	**OW5000 API** (Call Notification API)	**OW5000 API** (Information API)	**LCS/OCS Integration**	**SIP Presence** (SIMPLE Interface)
↓	↓	↓	↓	↓
A. OW5000 API (Call Control API) Config-uration Setup	B. OW5000 (Call Notification API) Configuration Setup	C. OW5000 API (Information API) Configuration Setup	D. LCS/OCS Integration Configuration Setup	E. SIP Presence Configuration Setup
See Figure 1-3	See Figure 1-4	See Figure 1-5	See Figure 1-6	See Figure 1-7

Note: *Call Log related method of Information API requires the same configuration as the Call Control API. Presence related method of Information API requires the same configuration as the SIP Presence.*

↓

Service Restart

Restart to use the service

Note: *The timing and conditions in which the settings you have finished are enabled differ depending on the setting items.*

Refer to the UNIVERGE OW5000 Configuration Guide.

Start WatchDog Helper
Refer to the UNIVERGE OW5000 Configuration Guide.

Stop WatchDog
Refer to Stopping WatchDog in the UNIVERGE OW5000 Configuration Guide.

Stop Services
Refer to Stopping a Service in the UNIVERGE OW5000 Configuration Guide.

Start WatchDog
Refer to Refer to Starting WatchDog in the UNIVERGE OW5000 Configuration Guide.

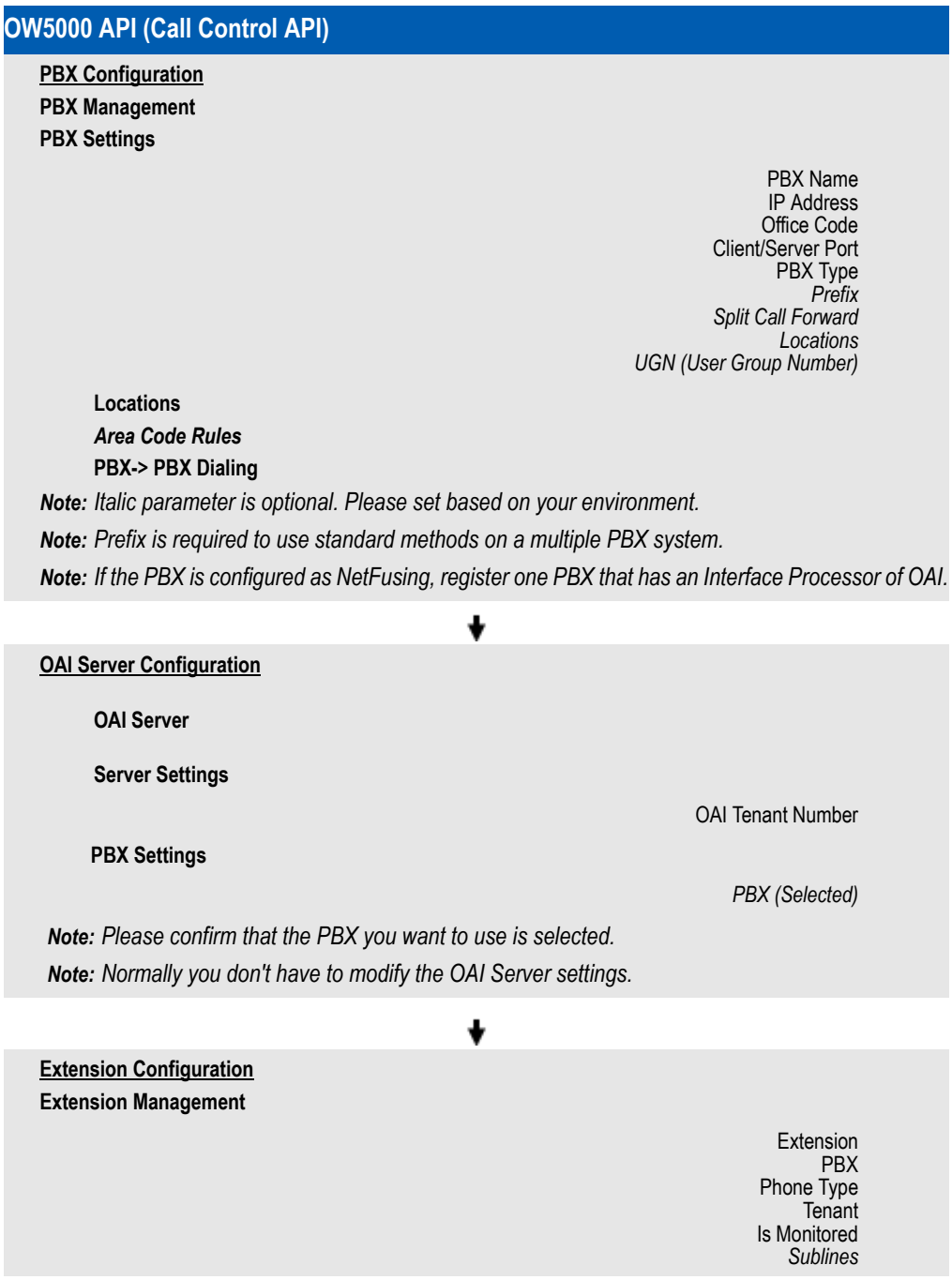
↓

System Configuration

System Administrator
OW5000 Setup is finished. Please configure collaborated applications.

Figure 1-3 illustrates the OW5000 API Configuration Setup (SOAP Call Control).

Figure 1-3 *OW5000 API (Call Control API) Configuration Setup*



OW5000 API (Call Control API)

Note: *To get call logs, please check "Is Monitored".*

Note: *"Sublines" is required to get the call log of sublines.*

Note: *If you are using the "Dial Plan to support IP Centrex Functionality", register the private number as an Extension.*

↓

Person Configuration

Person Management

Person

Last Name
First Name

Role (User)

Login ID
Password

Contact Method
(Primary Extension)

Contact Method
Priority
Pbx Name
Extension

Note: *Person configuration is optional. Please configure based on the application..*

↓

License Configuration

Refer to **License Management** in the UNIVERGE OW5000 Configuration Guide.

License Management

Enable PBXs Tab

Enabled

Enable Extensions Tab

API

Note: *Set **Enable** for the extension that uses SOPA API. For extensions that do not use call control, the API license is not required.*

↓

Service Restart

Figure 1-4 illustrates the OW5000 API Configuration Setup (Call Notification API).

Figure 1-4 *OW5000 API (Call Notification API) Configuration Setup*

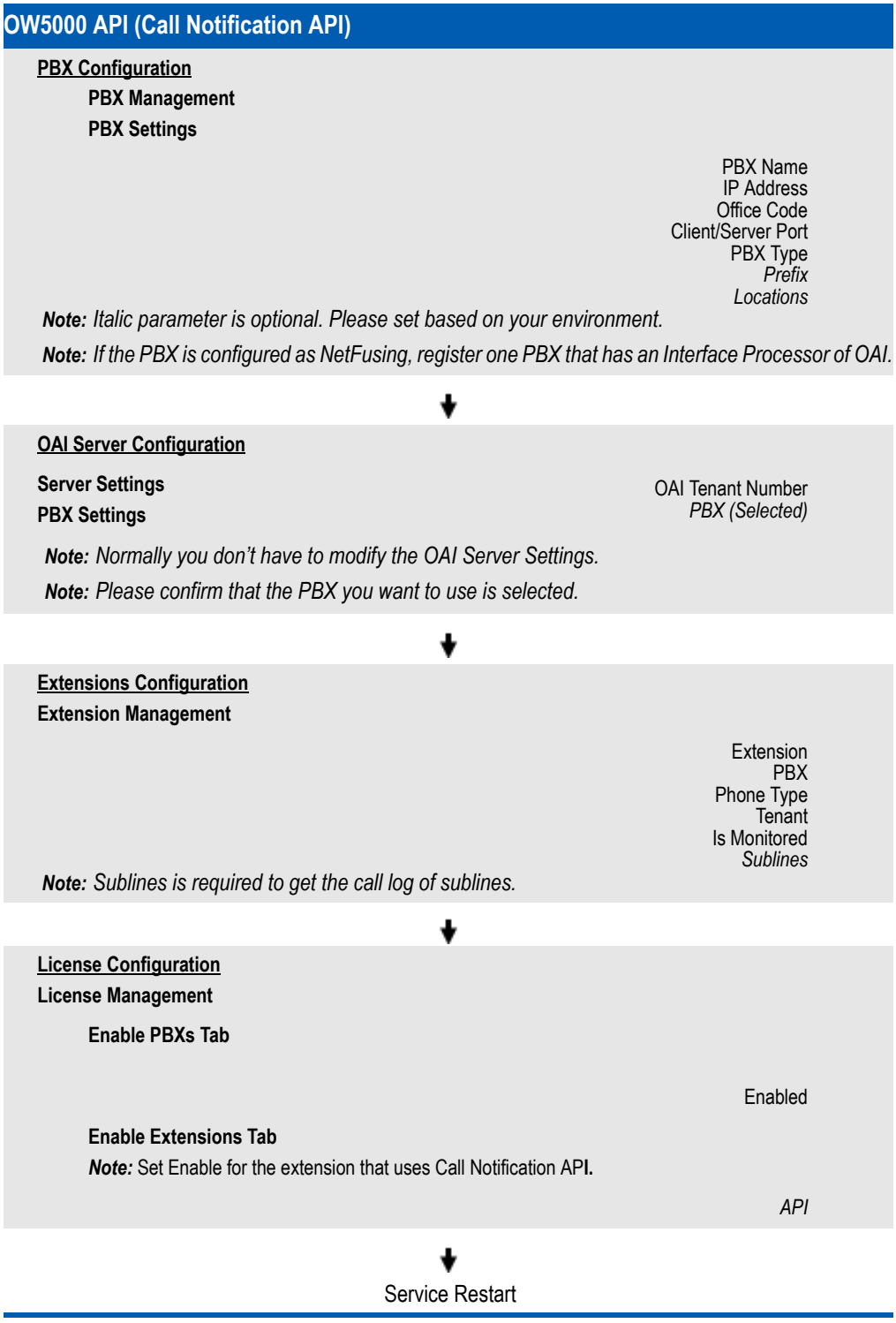


Figure 1-5 illustrates the OW5000 API Configuration Setup (Call Notification).

NOTE

To use call history related methods using OW5000 (Information API), the same configuration as the OW5000 (Call Control API) is required. Also, to use a presence related method, the same configuration as the SIP Presence Configuration Setup is required.

Figure 1-5 *OW5000 API (Information API) Configuration Setup*

OW5000 API (Information API)

PBX Configuration

PBX Management

PBX Settings

PBX Name
IP Address
Office Code
Client/Server Port
PBX Type
Split Call Forward
Locations
UGN (User Group Number)

Locations

Area Code Rules

PBX-> PBX Dialing

Note: *Italic parameter is optional. Please set based on your environment.*

Note: *If the PBX is configured as NetFusing, register one PBX that has an Interface Processor of OAI.*

↓

Extensions Configuration

Extension Management

Extension
PBX
Phone Type
Tenant
Is Monitored
Sublines

Note: ***Sublines*** *is required to get the call log of sublines.*

Note: *If you are using the "Dial Plan to support IP Centrex Functionality", register the private number as an Extension.*

Note: *Is Monitored must be set in order to get call history and to get presence of a non SIP terminal*

↓

Person Configuration

Person Management

Person Tab

Last Name
First Name

Roles Tab (User)

Login ID
Password

Role Tab (Employee)

OW5000 API (Information API)

Employee ID

Contact Methods

(Primary Extension)

Contact Method
Priority
Pbx Name
Extension

Note: *Assign another contact method if required.*

↓

License Configuration

License Management

Refer to **License Management** in the UNIVERGE OW5000 Configuration Guide.

Enable PBXs Tab

Enabled

Enable Extensions Tab

Note: *A presence related Information API requires a PRESENCE license.*

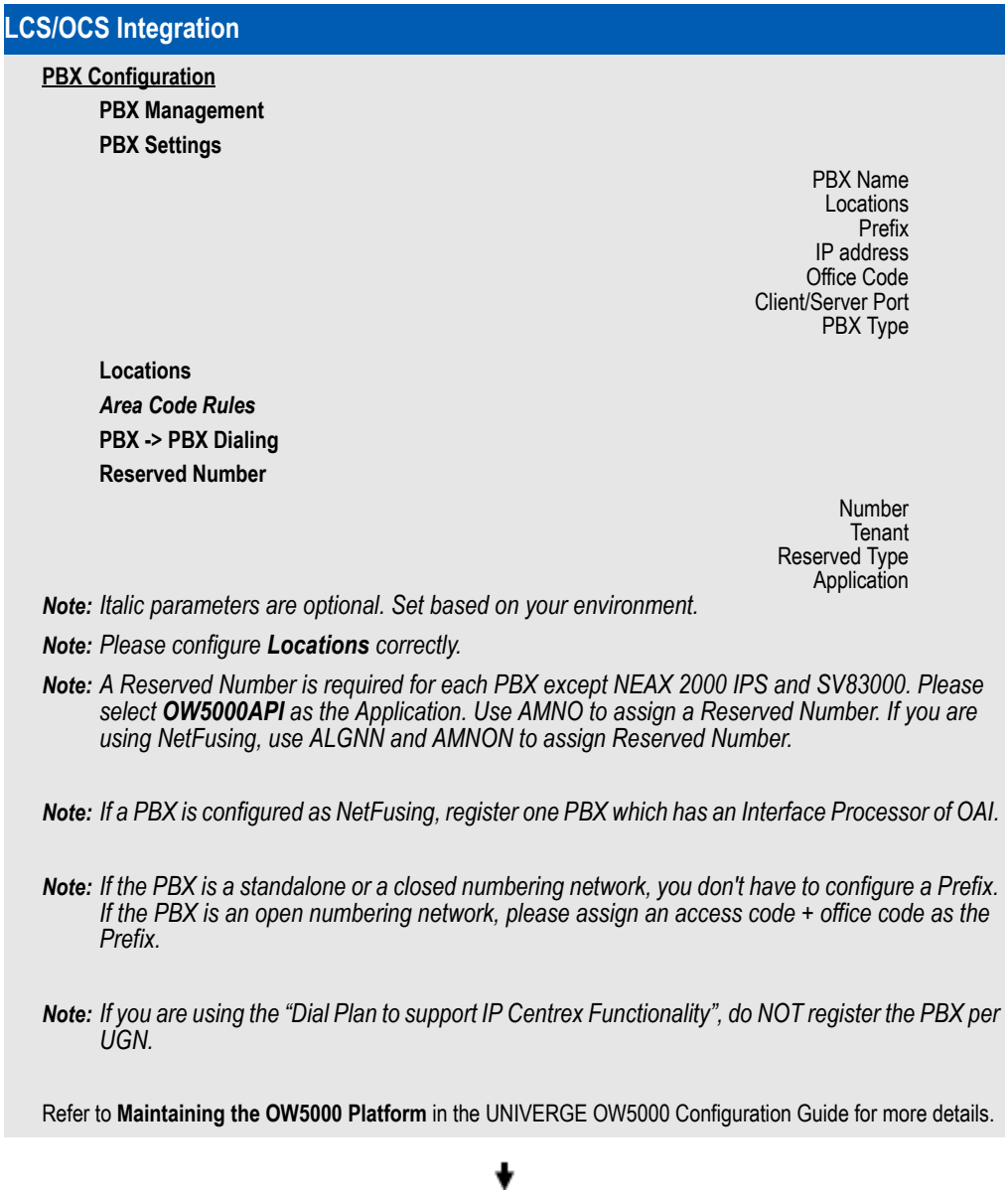
API

↓

Service Restart

Use the illustration below (Figure 1-6) for the LCS/OCS Integration Configuration Setup (uaCSTA).

Figure 1-6 LCS/OCS Integration Configuration Setup



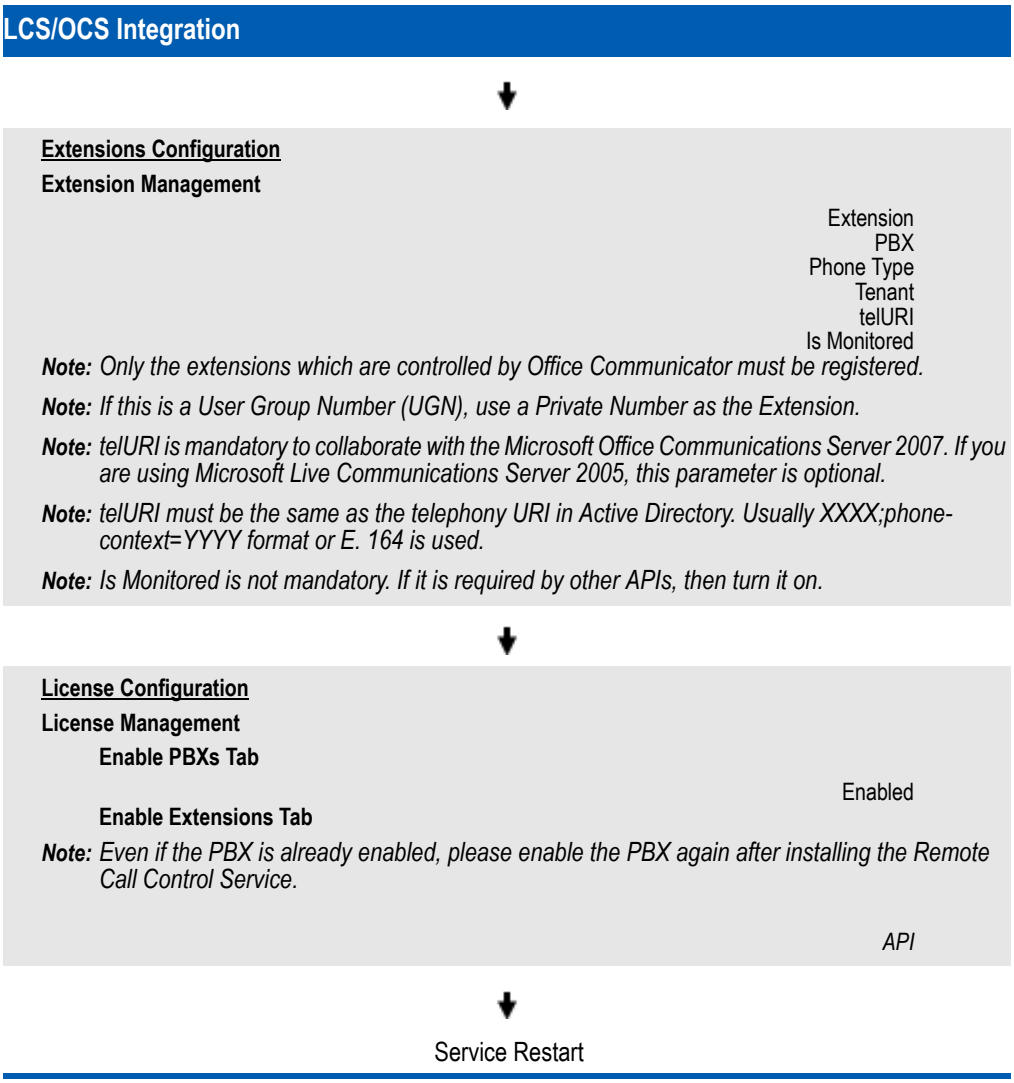
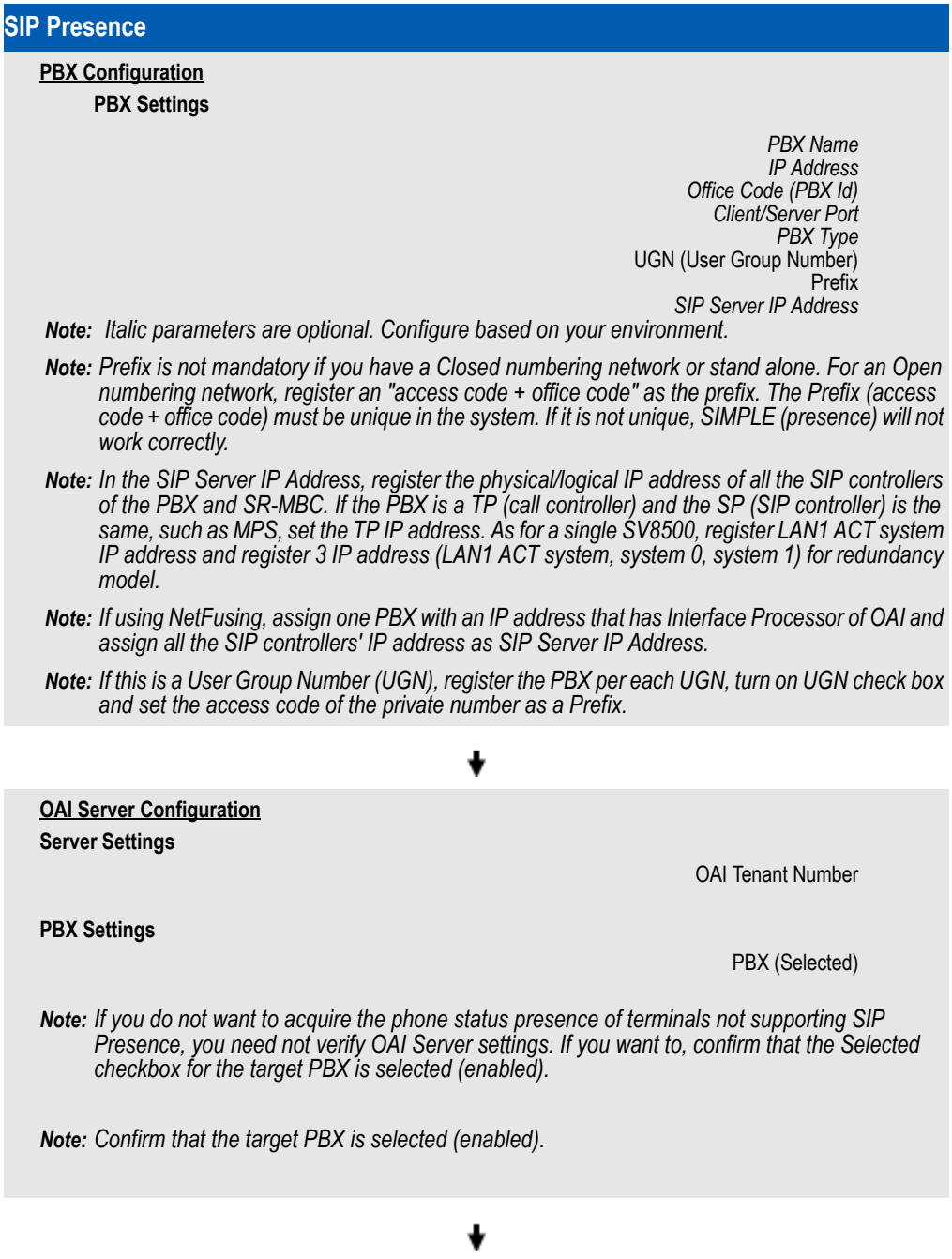


Figure 1-7 illustrates the SIP Presence Configuration Setup.

Figure 1-7 *SIP Presence Configuration Setup*



SIP Presence

Access Server

General Settings

Server Name
IP Address
Listen Port
RPC Listen Port
TOS
Timer T1
Keep Alive

Routing Info

Routing Rule
Translation Pattern
IP Address
Port

Note: *PSGW (PSGWlocal) is assigned for a non-SIP terminal. Do NOT delete this setting.*

Note: *TOS value change is available only when using Windows 2003 server. Also need to change the registry value.*

Note: *One physical box can run one instance of Access Server. Register the IP address of the box which hosts Access Server. If Access Server is installed on the same box as the OW5000 Platform, enter the IP Address of the OW5000 Platform and do NOT turn on the Is PSGW check box.*

Note: *An Access Server that is not listed in this setting cannot be started.*

Note: *Routing Info Option is required only if the SIP Presence federation feature is used.*

SIP UA Group Access Control

SIPUA Group Tab

Group Name
Deny as Default

Group Access Control Tab

Allow List
Deny List

PBX Access Control Tab

Allow List
Deny List

Note: *This setting is not required if the access control is not used.*

Note: *This setting is required if the access control is used in SIP federation.*

Extensions Configuration

Extension Management

Extension
PBX
Phone Type
Tenant
SIPURI
SIP Access Server
Collaboration
Is Monitored

SIP Presence

Extension Management (cont'd)

Note: *If this is a User Group Number (UGN), register a Private Number as the Extension.*

Note: *SIPURI must be XXXX@domain name. (XXXX is same as extension) Ex) 12345@sv.necinfrontia.co.jp*

Note: *If the terminal supports SIP presence (VoWLAN, SP30(SIP), SIMPLE), register the terminal's SIPURI as SIPURI and select the appropriate Access Server which is configured before hand. Is Monitored is optional. If another API is required, please turn it on.*

Note: *If the terminal doesn't support SIP Presence (DTerm, Analog, PS and other SIP terminal), assigning SIPURI (extension@domain, domain accepts any string) and selecting PSGWlocal as Access Server enables to notify telephony status (idle/busy). In this case, Is Monitored must be turned on.*

Note: *For VoWLAN-Softphone integration, register the VoWLAN terminal first. To enable collaboration, select the softphone's myline as the extension, turn on the collaboration check box, and select a VoWLAN number. Both terminals must belong to the same Access Server.*

Note: *For PS/DTerm-Softphone collaboration, use the softphone's prime line as the Extension and set "SP30(SIP)" as the Phone Type. The Collaboration check box is not required. Registering the softphone's myline as the extension is not required.*

Note: *For Softphone collaboration, the Is Monitored check box must be turned off. Is Monitored must be checked if you use presence for a non SIP terminal.*

Note: *If the PBX type is NEAX 2000 IPS, add an "*" in front of the extension and SIPURI.Ex) Extension=*2000, SIPURI=*2000@ips.necinfrontia.co.jp*

Note: *Is Monitored must be set in order to get presence of non SIP terminal.*

Person Configuration

Person Management

Person Tab

Last Name
First Name
SIPURI
SIP Access Server
SIPUA Group

Role (User)

Login ID
Password

Contact Methods Tab

(Primary Extension, Secondary/Tertiary Extension)

Contact Method
Priority
Pbx Name
Extension

To provide presence information, you have to create a Person (User) which has Person SIPURI and then assign the Extension to the person. A maximum of three extensions can be assigned for one person. The person who has VoWLAN, SP30(SIP) and SIMPLE must belong to the same Access Server of the extension. If one person has multiple SIP terminals, the aggregated status will be notified as person status. If One person has both a SIP terminal and a non SIP terminal, the person must belong to the PSGWLocal. The following shows an example of the configuration.

SIP Presence

Examples

- In case the user has multiple PS/Dterm
  SIP Access Server : PSGWLocal
  Primary Extension : PS/Dterm Extension
  Secondary Extension : None
- In case the user has presence enabled SIP terminal
  SIP Access Server : pre-defined Access Server
  Primary Extension : presence enabled SIP terminal extension (NOTE)
  Secondary Extension : None
- In case the user has both PS/Extension and presence enabled SIP terminal
  SIP Access Server : PSGWLocal
  Primary Extension : PS/Extension
  Secondary Extension : presence enabled SIP terminal
- In case the user has multiple PS/Extension
  SIP Access Server : PSGWLocal
  Primary Extension : first Extension
  Secondary Extension : second Extension
- In case the user has PS/Extension-Softphone collaboration
  SIP Access Server : pre-defined Access Server
  Primary Extension : PS/Extension
  Secondary Extension : None
- In case the user has VoWLAN dual terminal/VoWLAN terminal-Softphone collaboration
  SIP Access Server : pre-defined Access Server
  Primary Extension : VoWLAN dual terminal/VoWLAN terminal
  Secondary Extension : Softphone

Note: *A Presence enabled SIP terminal means a VoWLAN dual terminal, VoWLAN terminal and SIP Softphone.*

Note: *For VoWLAN-Softphone collaboration, set the handset extension as the Primary Extension and softphone as the Secondary Extension.*

Note: *For DTerm/PS-Softphone collaboration, set the softphone's prime line (extension of DTerm/PS) as the Primary Extension. The Secondary Extension doesn't have to be assigned.*

Note: *If the PBX is a standalone or UGN, SIPURI of the Person should be the same as the Primary Extension's SIPURI. For an Open Numbering Network, the Person SIPURI should be "Prefix" + Primary Extension's SIPURI. "Prefix" is set in PBX Management.Ex) Primary Extension SIPURI = 7000@sv.necinfrontia.co.jp, Prefix = 8159 Person SIPURI = 81597000@sv.necinfrontia.co.jp*

Note: *For of VoWLAN Dual terminal /VoWLAN terminal for IPS, set the URI without * as follows.*
*Primary Extension SIPURI = *2000@ips.necinfrontia.co.jp*
Prefix=8157
Person SIPURI = 81572000@ips.necinfrontia.co.jp

Note: *To enable access control, assign a SIPUA Group to the person.*

Note: *The Role (User) setting is not mandatory in order to use the Presence function but the assignment is recommended because the DBTool requires it.*

Note: *One person can have a maximum of 3 extensions. But, if the person has both presence enabled; SIP terminal and non SIP terminal (PS/Extension), the maximum is 2 extensions.*

SIP Presence

License Configuration

License Management

Enable PBXs Tab

Enabled

Enable Extensions Tab

PRESENCE

Note: *For VoWLAN-Softphone collaboration, myline of the softphone will not be shown in the list. Enable the VoWLAN terminal to use this terminal.*

↓

Service Restart

Procedures for Output Detail Log

This section describes the procedures necessary to change the output detail log.

Starting the Log Viewer

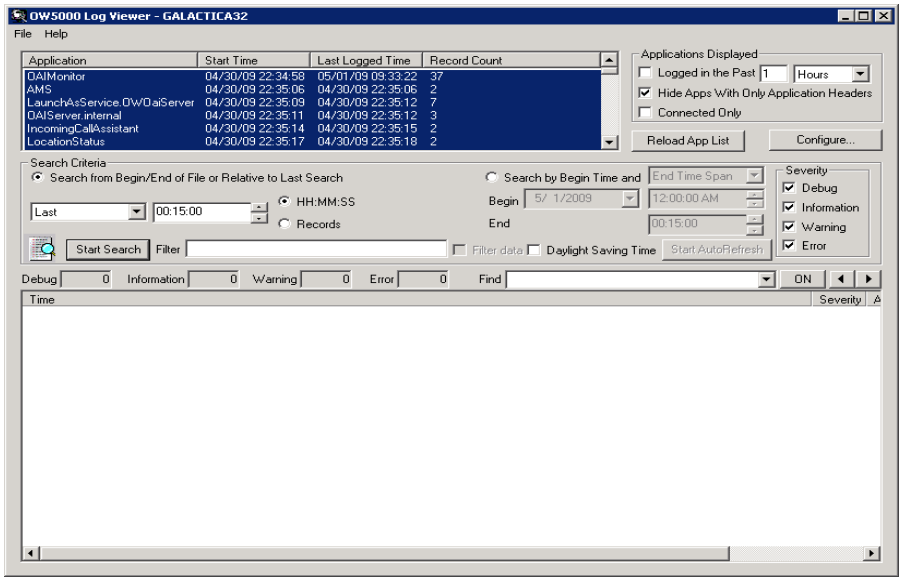
Step 1 Click **Start > All programs > NEC OW5000 > Platform > Log Viewer**. A Connect to OW5000 Log screen displays.

Step 2 Click **Connect**. An OW5000 Log Viewer dialog box displays (Figure 1-8).

Configuring the Output Log Level

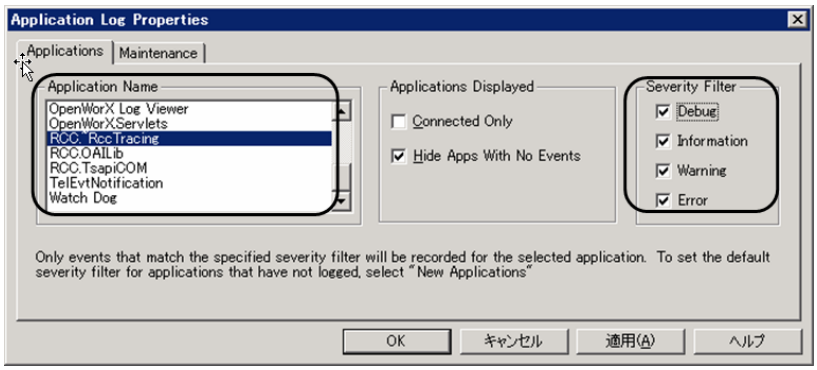
Follow the steps below to setup the output log level.

Figure 1-8 *OW5000 Log Viewer dialog box*



Step 1 Click **Configure**. An Application Log Properties dialog box displays (Figure 1-9).

Figure 1-9 *Application Log Properties dialog box*



Step 2 To set the log output level for each application, click the **Applications** tab and then select the desired **Application Name** from the scroll-down list.

Step 3 Click to select the desired **Severity Filter** options, as listed in Figure 1-9. The following Severity Filter is applied for each application.

Table 1-1 *Severity Filter—Applications*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
AMS		X	X	X
CallNotificationAPI		X	X	X
InfoAPI		X	X	X
InfoAPI.sipstack		X	X	X
LaunchAsService.OAIServer		X	X	X
LaunchAsService.OWXRmid		X	X	X
LaunchAsService.OWXRmidRegistry		X	X	X
OAIMonitor		X	X	X
OAIServer.internal			X	X
OAIServer.pbx.internal			X	X
OAIServer.pbx.heartbeat			X	X
OAIServer.pbx.x409		X	X	X
OW5000 Log Viewer		X	X	X
PSGW		X	X	X
PresenceGateway.sipstack		X	X	X
Rcc.~RccTracing		X	X	X
RCC.OAILib		X	X	X

Application Name	Severity Filter			
	Debug	Information	Warning	Error
RCC.TsapiCOM		X	X	X
(Server Name).AccessServer		X	X	X
(Server Name).RPCGW		X	X	X
(Server Name).sipstack		X	X	X
TelEvtNotification		X	X	X
VCMWebService		X	X	X
Watch Dog		X	X	X
DB Tool		X	X	X
IncomingCallAssistant		X	X	X
OW5000Admin		X	X	X
OwxPlatform		X	X	X
Scheduler		X	X	X

NOTE *All applications have no Debug setting as the default.*

Step 4 Activate the Debug level of the following applications to output the detail log for each functions. These setting are also recommended for normal operation.

Table 1-2 *OW5000 API (Call Control API)*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
OAI Server.pbx.x409	X	X	X	X
VCMWebService	X	X	X	X

Table 1-3 *OW5000 API (Call Notification API)*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
CallNotificationAPI	X	X	X	X
OAIServer.pbx.x409	X	X	X	X
VCMWebService	X	X	X	X

Table 1-4 *LCS/OCS Integration*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
RCC.~RccTracing	X	X	X	X
RCC.OAILib	X	X	X	X
RCC.TsapiCOM	X	X	X	X

Table 1-5 *SIP Presence (SIP Presence Terminal)*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
(Server Name).AccessServer	X	X	X	X
(Server Name).RPCGW	X	X	X	X
(Server Name).sipstack	X	X	X	X

Table 1-6 *SIP Presence (non SIP Presence Terminal)*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
PSGW	X	X	X	X
PresenceGateWay.sipstack	X	X	X	X
(Server Name).AccessServer	X	X	X	X
(Server Name).RPCGW	X	X	X	X
(Server Name).sipstack	X	X	X	X

Table 1-7 *OW5000 API (Information API)*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
InfoAPI	X	X	X	X
InfoAPI.sipstack	X	X	X	X
(Server Name).AccessServer	X	X	X	X
(Server Name).RPCGW	X	X	X	X
(Server Name).sipstack	X	X	X	X
VCMWebService	X	X	X	X

Table 1-8 *Debug Level for Presence*

Application Name	Severity Filter			
	Debug	Information	Warning	Error
AccessServer	X	X	X	X
PSGW	X	X	X	X
InfoAPI		X	X	X
PS1000WebService		X	X	X

2

Requirements

For the OW5000 Platform and OW5000 applications to operate properly, your operating environment must meet the requirements outlined in this chapter.

The following topics are included in this chapter:

Chapter Topics

OW5000 Requirements

Ensure your operating environment meets the following requirements.

Table 2-1 *OW5000 Server Requirements (for OW5000 API and LCS/OCS Integration)*

Operating System
Windows Server 2003 SP2 or later 32bit/64bit Windows Server 2008 32bit /64bit Windows Server 2008 R2 (latest Service Pack and Critical Updates) Appropriate ports must be opened as described in "Microsoft Windows Firewall Configuration" on page 2-6.
Note: *The OW5000 server should **NOT** be the Primary Domain Controller.*
Note: *Microsoft Services for NFS is not available in the OW5000 Server. An Uninstall is required before installing the OW5000 system.*
Note: *If using Windows Server 2008, the WCF Activation feature (for HTTP) must be installed from Server Manager > Add Features >.NET Framework 3.0 Features.*
Processor
Pentium 4 2GHz or faster
Note: *The OW5000 Enterprise Application Environment requires a server class system.*

Memory
1 GB RAM (dependant on feature set)
Note: *If 2000 or more extensions are assigned, more than 2GB of memory is required.*
Hard Drive Space (available before installation)
10 GB or more available space
Additional Hardware and Software
NIC
Web Server
Microsoft Internet Information Server (IIS) 6.0, 7.0 or higher
Note: *IIS requires installation of the current security patches located at www.microsoft.com.*
Web Browser
Microsoft Internet Explorer 6.0, 7.0 and 8.0 (latest Service Pack and Critical Updates) for Windows (Macintosh systems not supported)
.NET Framework
.NET Framework 3.5 SP1 or later
ASP
ASP .NET registered in IIS
SOAP
SOAP 1.2
Database
Microsoft SQL Server 2005 Express Edition SP2 or later Microsoft SQL Server 2005 Standard Edition SP2 or later Microsoft SQL Server 2008 Express Edition SP1 Microsoft SQL Server 2008 Standard Edition SP1
Note: *Refer to the UNIVERGE OW5000 Installation Guide. This section contains important information regarding installing and configuring Microsoft SQL Server 2005/2008 for use with the OW5000 Platform and applications. SQL Standard Edition is required if more than 5,000 extensions will be defined to the system.*
Server Name Resolution
The OW5000 Server must be accessible by name to clients through a DNS server or a host file.

Table 2-2 *OW5000 Server Requirement (for SIP presence)*

Operating System
Windows Server 2003 SP2 or later 32bit/64bit Windows Server 2008 32bit/64bit Windows Server 2008 R2 (latest Service Pack and Critical Updates) Appropriate ports must be opened as described in "Microsoft Windows Firewall Configuration" on page 2-6 ***Note:*** *The OW5000 server should **NOT** be the Primary Domain Controller.* ***Note:*** *Microsoft Services for NFS is not available in the OW5000 Server. An Uninstall is required before installing the OW5000 system.* ***Note:*** *If using Windows Server 2008, the WCF Activation feature (for HTTP) must be installed from Server Manager > Add Features > .NET Framework 3.0 Features.*
Processor
Dual Core 1.8GHz or faster **Note:** Dual Processor is required if more than 3000 extensions are assigned.
Memory
2 GB RAM (dependant on the feature) **Note:** Required memory size is dependent on the number of SIP Clients. **Note:** 4 GB memory is required if more than 3000 extensions are assigned.
Hard Drive Space (available before installation)
10 GB or more available space
Additional Hardware and Software
NIC
Web Server
Microsoft Internet Information Server (IIS) 6.0, 7.0, or higher ***Note:*** *IIS requires installation of the current security patches located at www.microsoft.com.*
Web Browser
Microsoft Internet Explorer 6.0, 7.0 and 8.0 (latest Service Pack and Critical Updates) for Windows (Macintosh systems not supported)
.NET Framework
.NET Framework 3.5 SP1 or later
ASP
ASP .NET registered in IIS
SOAP
SOAP 1.2
Database

Microsoft SQL Server 2005 Express Edition SP2 or later
Microsoft SQL Server 2005 Standard Edition SP2 or later
Microsoft SQL Server 2008 Express Edition SP1
Microsoft SQL Server 2008 Standard Edition SP1
Note: *Refer to the UNIVERGE OW5000 Installation Guide. This section contains important information regarding installing and configuring Microsoft SQL Server 2005/2008 for use with the OW5000 Platform and applications. SQL Standard Edition is required when more than 5,000 extensions will be defined to the system.*
Server Name Resolution
The OW5000 Server must be accessible by name to clients through a DNS server or a host file.

Table 2-3 *Additional Server Requirements (for Access Server)*

Operating System
Windows Server 2003 SP2 or later 32bit/64bit Windows Server 2008 32bit/64bit Windows Server 2008 R2 (latest Service Pack and Critical Updates)
Appropriate ports must be opened as described in "Microsoft Windows Firewall Configuration" on page 2-6
Note: *The OW5000 server should **NOT** be the Primary Domain Controller.*
Note: *Microsoft Services for NFS is not available in the OW5000 Server. An Uninstall is required before installing the OW5000 system.*
Processor
Dual Core 1.8GHz or faster
Note: Dual Processor is required if more than 3000 extensions are assigned.
Memory
2 GB RAM (dependant on the feature set) **Note:** Required memory size is dependent on the number of SIP Clients.
Note: 4 GB memory is required if more than 3000 extensions are assigned.
Hard Drive Space (available before installation)
10 GB or more available space
Additional Hardware and Software
NIC
.NET Framework
.NET Framework 3.5 SP1 or later
SOAP
SOAP 1.2
Server Name Resolution

The OW5000 Server must be accessible, by name, to clients through a DNS server or a host file.

Table 2-4 *Client Requirements (for LogViewer and DBTool)*

Operating System
Windows XP SP3
Windows Vista (32bit/64bit) SP1
Windows 7 (32bit/64bit)
(latest Service Pack and Critical Updates)
Appropriate ports must be opened as described in "Microsoft Windows Firewall Configuration" on page 2-6
.NET Framework
.NET Framework 3.5 SP1 or later

PBX Requirements

PBX Requirements for the following items are defined in the table in Appendix A.

- *OW5000 API (Call Control API)*
- *OW5000 API (Call Notification API)*
- *LCS Integration*
- *OCS Integration*
- *SIP Presence (SIMPLE Interface)*

LAN Requirements

In order to run OW5000 applications, the OW5000 server must be able to access the LAN where the PBX is located. For applications with a client component, the client computer must be able to access the OW5000 server.

The OW5000 server uses the server name, therefore a DNS host name must be defined.

Microsoft Windows Firewall Configuration

Because the firewall restricts communication between your computer and the Internet, the following port exceptions must be made to allow connection.

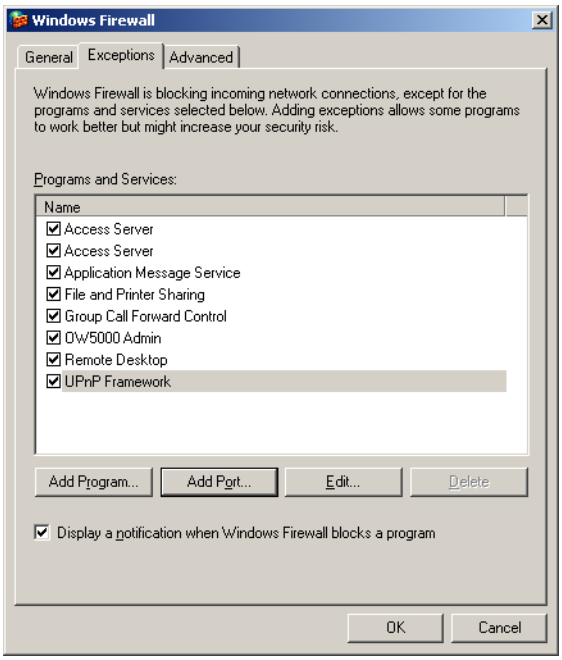
The following server types are supported:

- *Microsoft Windows Server 2003*
- *Microsoft Windows Server 2008*
- *Microsoft Windows Server 2008 R2*

Microsoft Windows Server 2003

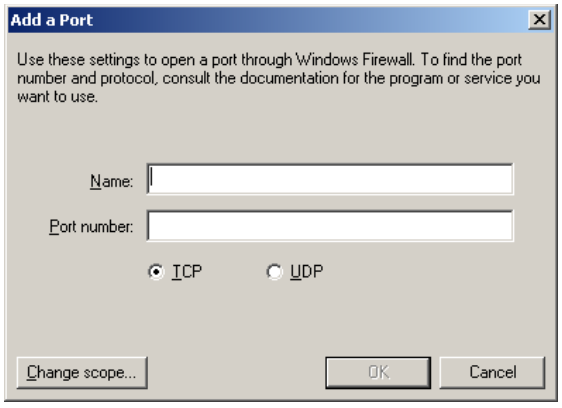
Step 1 From the **Control Panel**, select **Windows Firewall** and then click the **Exceptions** tab. A Firewall Configuration—Exceptions Tab dialog box displays (Figure 2-1).

Figure 2-1 *Firewall Configuration—Exceptions Tab dialog box*



Step 2 Click **Add Port** to display an Add Port dialog box (Figure 2-2).

Figure 2-2 *Add Port dialog box*



Step 3 Add the following port exceptions:

Table 2-5 *Port Exceptions*

	Source Service	Src Port	Destination Service	Destination Port	Protocol
Platform	All Modules	-	OAI Monitor	5690	TCP
	All Modules	-	SQL Server	1433	TCP/UDP
	All Modules	-	SQL Server Browser	1434	TCP/UDP
	Access Server	-	Access Server (Same OW5000)	6060	UDP
	Access Server	-	Access Server (Federation)	6060	TCP
	Access Server	-	AMS	5425	TCP
	Access Server	-	PBX	62000	UDP
	Access Server	6060	PresenceGateway	6061	UDP
	Call Notification API	-	Java OAI Server	44000-44099	TCP
	ICA	-	AMS	5425	TCP
	ICA	-	Java OAI Server	44000-44099	TCP
	ICA	-	PBX	60030	TCP
	InfoAPI	5061	Access Server	6060	UDP
	Java OAI Server	-	PBX	60030	TCP
	LSI	-	Application Message Service	5425	TCP
	LSI	-	PBX	60030	TCP

	Source Service	Src Port	Destination Service	Destination Port	Protocol
	MS OCS/LCS	-	Remote Call Control	5060	UDP
	PS1000 API	5062-5066	Access Server	6060	UDP
	PresenceGateway	-	AMS	5425	TCP
	TelEventNotification	-	AMS	5425	TCP
	TelEventNotification	-	ICA	5242	TCP
	TelEventNotification	-	Java OAI Server	44000-44099	TCP
	VCM Web Service	-	TelEventNotification	5676	TCP
		-	Port Mapper	111	UDP
	-	-	LSI	5241	TCP
	-	-	RMI	1098	TCP
	-	-	RMI Registry	1099	TCP
	-	-	Short Text Messaging	5677	TCP
LogViewer (Remote)	Log Viewer	-	OAI Monitor	5690	TCP
DBTool (Remote)	DB Tool	-	SQL Server	1433	TCP/UDP
	DB Tool	-	SQL Server Browser	1434	TCP/UDP
Access Server (Remote)	Access Server	-	Access Server (Same OW5000)	6060	UDP
	Access Server	-	Access Server (Federation)	6060	TCP
	Access Server	-	Application Message Service	5425	TCP
	Access Server	-	PBX	62000	UDP
	Access Server	6060	PresenceGateway	6061	UDP
	Access Server	-	PresenceGateway	1293	TCP
3rd Party Apps	3rd Party Application	-	Call Notification API	8081	HTTP

	Source Service	Src Port	Destination Service	Destination Port	Protocol
	3rd Party Application	-	InfoAPI	8080	HTTP
	3rd Party Application	-	PS1000 API	8080	HTTP
	3rd Party Application	-	SIP/SIMPLE (Access Server)	6060	UDP

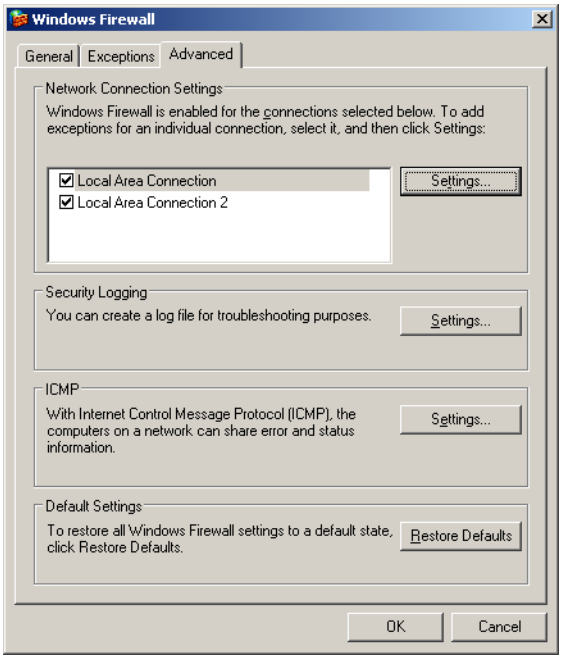
*If the Web server is configured for a different port, other than 80, that port should be opened instead.

**If using Microsoft SQL Express Edition, either configure SQL to force use of ports 1433/1434 (not dynamic), or ensure any possible ports that SQL may dynamically select are open in the fire wall. Ensure SQL Server Express Edition listens for an incoming client connection.

NOTE *Please make sure that configurable ports such as the Access Server Listen Port is also added properly.*

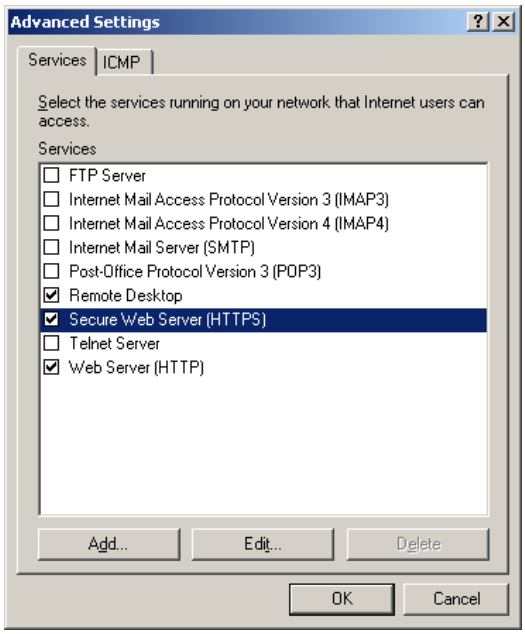
Step 4 Click the **Advanced** tab. A Firewall Configuration—Advanced Tab dialog box displays (Figure 2-3).

Figure 2-3 *Firewall Configuration—Advanced Tab dialog box*



Step 5 Select Local Area Connection and then click **Settings**. A Firewall Configuration—Settings dialog box displays (Figure 2-4).

Figure 2-4 *Firewall Configuration—Setting dialog box*



Step 6 Click on the appropriate box to open the following ports:

80 (Web Server (HTTP))

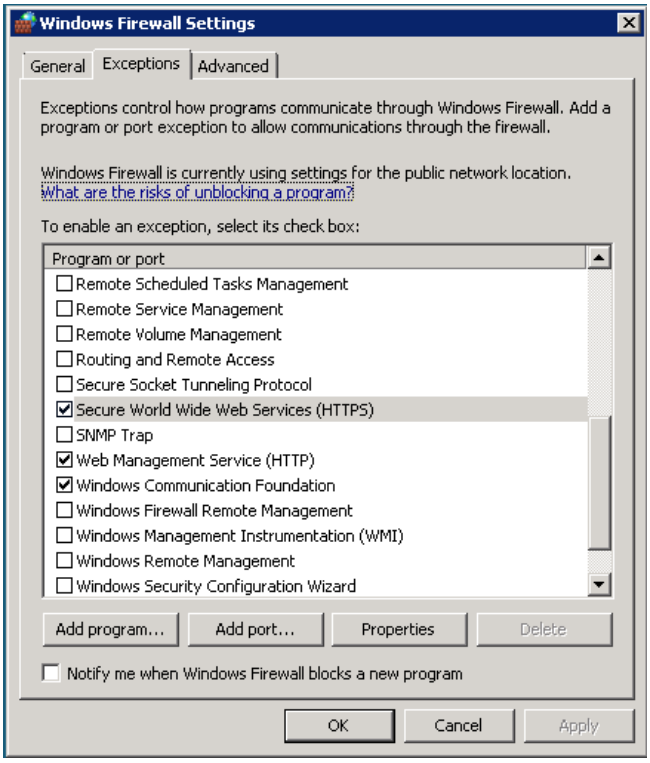
443 (Secure Web Server (HTTPS))

Step 7 Click **OK** to save your settings and then click **OK** again to close the dialog box (Figure 2-3).

Microsoft Windows Server 2008

Step 1 From the **Control Panel**, select **Windows Firewall**, click **Allow a program through Windows Firewall** and then click the **Exceptions** tab. A Windows Firewall Settings—Exceptions Tab dialog box displays (Figure 2-5).

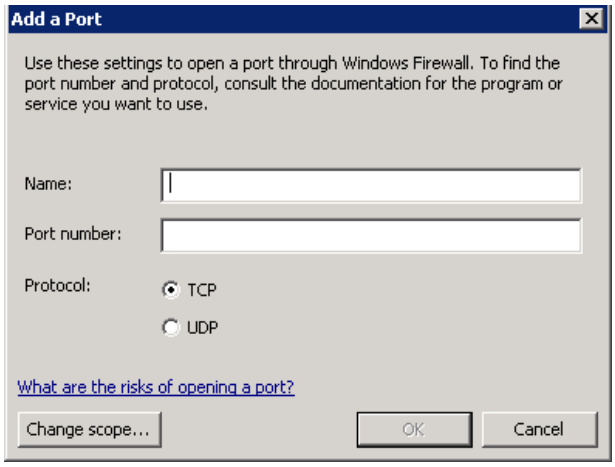
Figure 2-5 *Windows Firewall Settings—Exceptions Tab dialog box*



Step 2 Confirm that the options **Web Management Service (HTTP)** and **Secure World Wide Web Services (HTTPS)** are checked.

Step 3 Click **Add Port** to display an Add Port dialog box (Figure 2-2).

Figure 2-6 *Add Port dialog box*

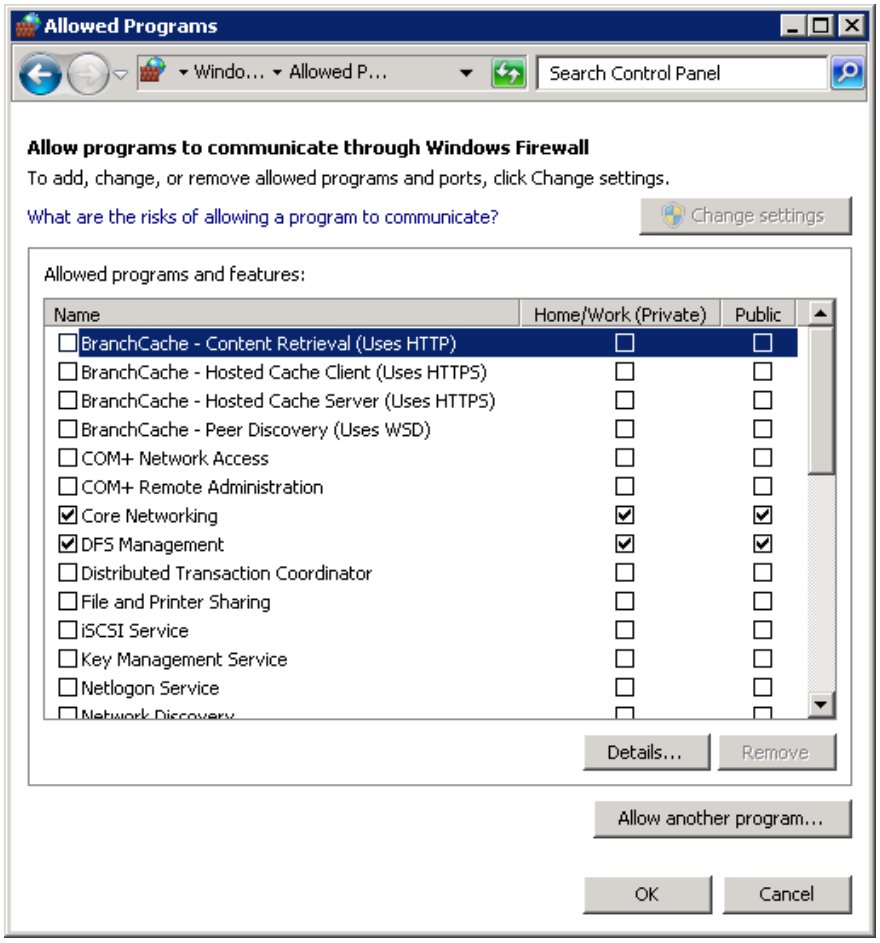


Step 4 Add the port information. Refer to “Port Exceptions” on page 2-7 for a list of port exceptions.

Microsoft Windows Server 2008 R2

Step 1 Select **Control Panel > System and Security**; select **Check firewall status** and then click **Allow program or feature through Windows Firewall**. Figure 2-7 displays.

Figure 2-7 *Allowed Programs and Features dialog box*



Step 2 Select the following and then click to select the check box under the columns: **Home/Work (Private)** and **Public**.

- World Wide Web Service (HTTP)
- Secure World Wide Web Service (HTTPS)

Step 3 Click **OK**.

NOTE

The Windows Firewall of Microsoft Server 2008 R2 must also be configured to allow communication with SQL Server 2008 Enterprise, Standard, or Express editions. Please refer to Microsoft documentation for configuring the firewall to support communications with Microsoft SQL Server 2008.

OW5000 Server Name Changes

In the event you must rename your OW5000 server or change its DNS configuration, some OW5000 applications must be reinstalled for the changes to take effect. Refer to the documentation on the specific application you are installing for more information.

OW5000 Server IP Address Changes

In the event you must change the IP address of your OW5000 server, please follow the steps below:

Step 1 Select **Start > Control Panel > Administrative Tool > Service** and stop following services:

OWWatch Dog
OWCallNotificationAPI
OWPSGateWayService
OWAccessServer (if installed).

For complete details on stopping a service, please refer to Stopping a Service in the UNIVERGE OW5000 Configuration Guide.

Step 2 From OW5000 Administrator, modify the IP address of PSGW (PSGWlocal) and Access Server (if they are installed on the same box as the OW5000 server).

Step 3 Open the following file and replace the IP address information of line 97, 102, and 107 with the new IP address and then save it.

(OW5000 installed folder)
\CallNotificationAPI\CallNotificationServiceHost.exe.config

Line 97
<endpoint address="net.tcp://**XX.XX.XX.XX**:9020/
CallNotificationAPIService"

Line 102
<endpoint address="http://**XX.XX.XX.XX**:8081/
CallNotificationAPIService" binding="basicHttpBinding"

Line 107
<add baseAddress="http://**XX.XX.XX.XX**:8081/
CallNotificationAPIService" />

Step 4 Change the OW5000 server's IP address and restart the system.

Step 5 If Access Server is installed on a separate server, please reinstall Access Server and set the OW5000 Platform information again.

OW5000 Server/Part Replacement

Asian Market

The Hardware Key Code, which is used for license activation, checks the OW5000 server hardware information. So once the server hardware is replaced, please confirm the Hardware Key Code using **Start** > **All Programs** > **NEC OW5000** > **Platform** > **License Installer**. If the Hardware Key Code displayed in this tool is different from the one already registered, reactivation is needed.

Other market

The PBX Hardware Key Code is used so reactivation is not required.

PBX System Configuration

This guide assumes that data settings that affect the operation of all OAI software on a system-wide basis have already been assigned on the SV8500 and SV8300. Such settings include, for instance, system index values and assignments of Interface I/O Port Data in the Interface Processor (IP). For more information about the system data settings, refer to the following technical manuals for the specific NEAX system in use:

- OAI System Manual
- Command Manual
- Job Specification
- Feature Programming Manual
- UNIVERGE OW5000 Installation Guide
- UNIVERGE OW5000 Configuration Guide

If only the SIMPLE (presence) feature is used and no legacy terminal (non-SIP support) presence is required, the OAI system data (described in this section) is not mandatory. In this case, remove OW OaiServer, OW Telephony Event Notification, and OWConference Server from WatchDog Helper.

*To disable OW OaiServer, use **OW5000 Administrator Applications** > **OAI Server** > **PBX Settings**, uncheck the **Selected** box for all PBXs, and then click **Apply**.*

See the WatchDog Helper section in the OW5000 Configuration Guide for details.

SV8500/SV700/NEAX 2400 Settings

ASYD Command: (Assignment of System Indices)

Use ASYD to assign certain bits in System Index data as indicated below.

Index 31	06(hex)	Mounting capacity of Common Memory (CM) 1~4 Mbyte (01~04)
Index 32	Bit 7	
	1	Enable SMDR and CS Report service

For SV7000, assign 02 HEX and for SV7000 with OAI Name Display, assign 04 HEX. Assign 06 HEX when FLF FCCS service is used in OAI features.

Index 63	Bit 6	
	1	Provides call forwarding detail
Index 79	Bit 6	
	0	Enables OAI/ACD
Index 207	Bit 0	
	1	Enables IP side 0 of the OAI/ACD interface processor. Only the OW5000 connected node must be set to 1 in the fusion network system.
	Bit 1	
	0 or 1	Depending on the physical PBX configuration, if using 2 CPUs, enables IP side 1 of the OAI/ACD interface processor. 0 means not mounted, 1 means mounted
Index 241	Bit 2	
	1	LP sends SMFNs to IP
	Bit 3	
	1	Enable Detail Error Codes
	Bit 7	
	1	Enable OAI SSFN
Index 370	Bit 0	
	1	Send expanded SMFNs including CCIS Link reconnect SMFNs needed
Index 449	Bit 0	
	1	Send off hook notification when using OAI to place a call
	Bit 3	
	0	Send ANI in normal format, not ASCII

Index 450	Bit 1	
	1	Enables TEC 26 stations to be monitored as Dterms. This setting is required for UM8500 Unified Communications integration to call logs (US market only).

ASYDL Command: (Extended Assignment of System Indices)

This command is used to set system index bits as needed by most OW5000 applications. This command is not available on earlier versions of the PBX, such as the HDS.

Index 864	Bit 0	
	1	Indicates Internal IP/ACD is in service. 0 means external, 1 means internal. Only OW5000 connected node must be set 1 in fusion network system.
	Bit 1	Enable TCP/IP disconnect system message (4-R). 0 means disable, 1 means enable.
	Bit 4	
	1	Enable 8-port mode to allow more than two applications to monitor the same device. Same configuration must be applied to all nodes in net fusion system.
	Bit 5	
	0	Clear monitor request when OAI is disconnected. Same configuration must be applied to all nodes in net fusion system.
Index 867	Bit 0	
	1	Send OAI SMFNs for Call Forward No Answer.
	Bit 4	
	1	Enable 16 digit extensions. (US Market Only)
	Bit 7	
	1	Enable 16 digit extensions. (Other Markets)
Index 869	Bit 4	
	1	Enable SMFN for Station Recall.
Index 871	Bit 5	IP Centrex for OAIAssign 1 only when
	0, or 1	Dial Plan to support IP Centrex Functionality is used.

Index 874	Bit 2	
	1	Enable OAI CCIS Remote Terminal Notification.

The following configuration is required for the fusion network system:

Index 533		The FPC of the OAI node (or ACD if it exists) for all systems in the network.
Index 864	Bit 3	Multiple IP. Set 1 when another OAI application connects to a different PBX which is connected to OW5000.
Index 865		The FPC of the OAI node.
Index 877	Bit 5	Alternate Termination to Voice Mail
	0, or 1	0/1 = Out of service/In service

When using Alternate Termination to Voice Mail by OAI, assign b5 as 1.

	Bit 6	
	0, or 1	Voice Mail for 2nd Party of SCF FN=3
		0/1 = Out of service/In service

When using Alternate Termination to Voice Mail by OAI, assign b6 as 1.

	Bit 7	
	0, or 1	Control Restriction for Voice Mail by SCF 0/1 = Not restricted/Restricted

When using Alternate Termination to Voice Mail by OAI, assign b7 as 1.

SIMPLE (Presence) Setting for SV8500/SV7000/NEAX2400

ASDIN Command: (Assignment of Presence Domain)

Use this command for NEC's softphone to assign the OW5000 presence server's IP address and port to the domain for softphone presence integration when the softphone is in SIP mode.

ALGSN Command: (Assignment of Logical Station Number)

Use this command for NEC's softphone to assign a logical number to the softphone. This is usually the same as the extension number.

ADNIN Command: (Assignment of Domain Name)

Use this command for NEC's softphone using OW5000 presence integration to assign a domain name to the softphone.

ASSDL/ASSDN Commands

Use this command for voice over wireless LAN (VoWLAN) to configure the OW5000 SIP Server information (LDM/NDM).

Select the **PRESENCE SERVER** tab and assign the OW5000 presence server's IP address and port. This allows the NEC softphone to use OW5000 for presence integration.

NOTE *Add the following function key when SP30(SIP mode)/SP350 is used for SIP Presence: AKYD FKY 142:Logout*

NOTE *In addition to these settings, softphone (SIP mode) and VoWLAN Dual/VoWLAN terminal configuration is required.*

SV8300 / NEAX 2000 Settings

OAI and the AP01 card must be installed and configured prior to programming the application on the SV8300/NEAX 2000 IPS.

Use the SV8300/NEAX 2000 Customer Administration Terminal (CAT) or the NEAX 2000 Maintenance Operations Console (MOC) to enter the following commands. (Refer to the SV8300/NEAX 2000 System Manuals for more information.)

Phone in CAT mode: (Assignment of CAT Mode)

Use this command to place the phone in CAT mode:

Trans + Conf + * + Trans + Conf + #

Once you are in CAT mode, the Buttons on the Dterm perform the actions listed in Table 2-6.

Table 2-6 *Dterm Buttons—CAT Mode*

Button	Action
LNR/SPD or Redial	Sets the PBX to command mode.
Conf	Writes the data to memory.
Recall	Acts like the Enter key to accept a selection.

CM08 Command: (System Data)

The following settings should be configured to ensure proper behavior of OW5000 applications.

1st data	117	
2nd data	0:	When Station A is talking to Station B with external call on consultation hold screened transfer, and Station B hangs up, reconnect Station A to the held trunk call.
1st data	177	
2nd data	0:	Allow re-outbound call from the terminal.
1st data	460	
2nd data	0:	Send OAI SMFN-1 (Incoming) STS=7 (Blind Transfer) after a blind transfer.
1st data	461	
2nd data	0	Send OAI SMFN-2 (Answer) STS=2 (Held Call) when unholding a held call.
1st data	462	
2nd data	0	Send ANI/Caller ID/CPN to OAI terminal.
1st data	464	
2nd data	0:	Do not send SMFN Off hook notification after SCF.
1st data	465	
2nd data	0:	Send SCF error detail.
1st data	804	
2nd data	1	Send station type (0=single line, 1=PS terminal) in OAI SMFNs.

1st data	805	
2nd data	0	Send OAI SMFN-3 (Release) STS=5 (Abandon Call Forward) and SMFN-1 (Incoming) STS=6 (Call Forward No Answer) when a monitored extension call forwards no answer.
1st data	808	
2nd data	0	Send OAI SMFN-2 (Answer) STS=5,6,7 for answering Call Forward All/Busy/No Answer.
1st data	809	
2nd data	1	When answering a held call by SCF11, exchange the line information.
1st data	811	
2nd data	0	Send OAI SMFN-1 (Incoming) STS=4,5 for incoming call that is Call Forward All/ Busy.
1st data	815	
2nd data:	0	Send OAI SMFN-1 (Incoming), STS=2 (Recall) when held call recalls.
1st data	817	NEAX2000IPS R9 or later
2nd data	0	Send OAI SMFN-1 (Incoming) and SMFN-2 (Answer), STS=4,5,6/5,6,7 (Call Forward All/Busy/No Answer) when CF-All Calls/Busy Line/No Answer call via CCIS is ringing/answered, and send the forwarded CCIS extension number.
1st data	818	NEAX2000IPS R9 or later
2nd data	0	Send OAI SMFN-6 (Hold), STS=2 (Exclusive Hold) when call is put on exclusive hold.

Appendix A

PBX Requirements

The following tables list the PBX requirements for OW5000 API (Call Control API) for each of the markets below.

OW5000 API (Call Control API)

Table Appendix A-1 *Call Control API—US Market*

Description	UGN		OAI Option US (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later note 3	Proper OAI option is required
UNIVERGE SV7000	R21 or later note 2	R21 or later note 3	Proper OAI option is required
UNIVERGE SV7000 MPS	R21 or later note 2	-	Proper OAI option is required
UNIVERGE NEAX2400 IPX	R21 or later note 2	R21 or later note 3	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12.2 or later	-	-
UNIVERGE NEAX IPS^{DM}	R12.2 or later	-	-
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000,UNIVERGE SV7000 MPS, and UNIVERGE NEAX2400).

NOTE

2. R22 (Issue 4~) is required for MH250 use.

NOTE

3. There is a condition in UGN Functionality.

Table Appendix A-2 *Call Control API—Australian Market*

Description	UGN		OAI Option Lic.
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 2	Proper OAI option is required
UNIVERGE SV7000	R21 or later Note 1	R21 or later Note 2	Proper OAI option is required
UNIVERGE SV7000 MPS	R21 or later Note 1	-	-
UNIVERGE NEAX2400 IPX	R21 or later Note 1	R21 or later Note 2	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12 or later	-	Proper OAI option is required
UNIVERGE NEAX IPS^{DM}	R12 or later	-	Proper OAI opotion is required
UNIVERGE SV8100	-	-	-

1. R22 (Issue 4~) is required for MH250 use.

2. There is a condition in UGN Functionality.

Table Appendix A-3 *Call Control API—European Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 3	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R22 or later Note 2	R24E or later Note 3	SB-1521 UV70 APL-OAI-B
SOPHO SV7000	R21	R21 Note 3	SB-1521 UV70 APL-OAI-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
SOPHO NEAX2000 IPS	R12.2 or later	-	-
SOPHO NEAX IPS^{DM}	R12.2 or later	-	-
UNIVERGE SV8100	-	-	-

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500, UNIVERGE SV7000, and SOPHO SV7000).

2. R22 (Issue 4~) is required for MH250 use.

3. There is a condition in UGN Functionality.

Table Appendix A-4 *Call Control API—Asian and Russian Markets*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 3	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R21 or later Note 2	R21 or later Note 3	SB-1521 UV70 APL-OAI-B
UNIVERGE SV7000 MPS	R21 or later Note 2	-	SV7K MPS APL-OAI LIC
UNIVERGE NEAX2400 IPX	R21 or later Note 2	R21 or later Note 3	SB-1519 IPX APL-OAIF-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12 or later	-	SB-1022 IPS FOAI PROG-B1
UNIVERGE NEAX IPS^{DM}	R12 or later	-	Ditto
UNIVERGE SV8100	-	-	-

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, UNIVERGE SV7000 MPS, UNIVERGE NEAX2400 IPX, UNIVERGE NEAX2400 IPS, and UNIVERGE NEAX2400 IPS^{DM}.

2. R22 (Issue 4~) is required for MH250 use.

3. There is a condition in UGN Functionality.

OW5000 API (Call Notification API)

The following tables list the PBX requirements for OW5000 API (Call Notification API) for each of the markets below.

Table Appendix A-5 *Call Notification API—US Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	Proper OAI option is required
UNIVERGE SV7000	R24 or later	R24 or later	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24E or later	R24E or later	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R4 or later	-	-
UNIVERGE NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, and UNIVERGE NEAX2400).

Table Appendix A-6 *Call Notification API—Australian Market*

Description	UGN		OAI Option Lic.
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	Proper OAI option is required
UNIVERGE SV7000	R24 or later	R2E or later	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24E or later	R24E or later	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R4 or later	-	Proper OAI option is required
UNIVERGE NEAX IPS^{DM}	R14 or later	-	Proper OAI option is required
UNIVERGE SV8100	-	-	-

Table Appendix A-7 *Call Notification API—European Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R24 or later	R24 or later	SB-1521 UV70 APL-OAI-B
SOPHO SV7000	-	-	-
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
SOPHO NEAX2000 IPS	R14 or later	-	-
SOPHO NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500 and UNIVERGE SV7000).

Table Appendix A-8 *Call Notification API—Asian and Russian Markets*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R24 or later	R24 or later	SB-1521 UV70 APL-OAI-B
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24E or later	R24E or later	SB-1519 IPX APL-OAIF-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R14 or later	-	SB-1022 IPS FOAI PROG-B1
UNIVERGE NEAX IPS^{DM}	R14 or later	-	Ditto
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, and UNIVERGE NEAX2400 IPX, UNIVERGE NEAX2000 IPS, UNIVERGE NEAX IPS^{DM}).

LCS Integration

The following tables list the PBX requirements for LCS Integration for each of the markets below.

Table Appendix A-9 *LCS Integration—US Market*

Description	UGN		OAI Option US (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later note3	Proper OAI option is required
UNIVERGE SV7000	R21 or later note2	R21 or later note3	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R21 or later note2	R21 or later note3	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12.2 or later	-	-
UNIVERGE NEAX IPS^{DM}	R12.2 or later	-	-
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, and UNIVERGE NEAX2400).

NOTE

2. R22 (Issue 4~) is required for MH250 use.

NOTE

3. There is a condition in UGN Functionality.

Table Appendix A-10 *LCS Integration—Australian Market*

Description	UGN		OAI Option Lic.
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 2	Proper OAI option is required
UNIVERGE SV7000	R21 or later Note 1	R21 or later Note 2	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R21 or later Note 1	R21 or later Note 2	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12 or later	-	Proper OAI option is required
UNIVERGE NEAX IPS^{DM}	R12 or later	-	Proper OAI option is required
UNIVERGE SV8100	-	-	-

1. R22 (Issue 4~) is required for MH250 use.

2. There is a condition in UGN Functionality.

Table Appendix A-11 *LCS Integration—European Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 3	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R22 or later Note 2	R22 or later Note 3	SB-1521 UV70 APL-OAI-B
SOPHO SV7000	R21	R21 Note 3	SB-1521 UV70 APL-OAI-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
SOPHO NEAX2000 IPS	R12.2 or later	-	-
SOPHO NEAX IPS^{DM}	R12.2 or later	-	-
UNIVERGE SV8100	-	-	-

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500, UNIVERGE SV7000, and SOPHO SV7000).

2. R22 (Issue 4~) is required for MH250 use.

3. There is a condition in UGN Functionality.

Table Appendix A-12 *LCS Integration—Asian and Russian Markets*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 2	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R21 or later	R21 or later Note 2	SB-1521 UV70 APL-OAI-B
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R21 or later	R21 or later Note 2	SB-1519 IPX APL-OAIF-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R12 or later	-	SB-1022 IPS FOAI PROG-B1
UNIVERGE NEAX IPS^{DM}	R12 or later	-	Ditto
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, and UNIVERGE NEAX2400 IPX, UNIVERGE NEAX2000 IPS, UNIVERGE NEAX IPS^{DM}).

NOTE

2. R22 (Issue 4~) is required for MH250 use.

NOTE

3. There is a condition in UGN Functionality.

OCS Integration

The following tables list the PBX requirements for OCS Integration for each of the markets below.

Table Appendix A-13 *OCS Integration—US Market*

Description	UGN		OAI Option US (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later note 2	Proper OAI option is required
UNIVERGE SV7000	R24 or later	R24 or later note 2	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24 or later	R21 or later note2	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R14 or later	-	-
UNIVERGE NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500,UNIVERGE SV7000, and UNIVERGE NEAX2400).

NOTE

2. There is a condition in UGN Functionality.

Table Appendix A-14 *OCS Integration—Australian Market*

Description	UGN		OAI Option Lic.
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 1	Proper OAI option is required
UNIVERGE SV7000	R24 or later	R24 or later Note 1	Proper OAI option is required
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24 or later	R24 or later Note 1	Proper OAI option is required
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
UNIVERGE NEAX2000 IPS	R14 or later	-	Proper OAI option is required

Description	UGN		OAI Option Lic.
	Out of Service	In Service	
UNIVERGE NEAX IPS^{DM}	R14 or later	-	Proper OAI option is required
UNIVERGE SV8100	-	-	-

NOTE

1. There is a condition in UGN Functionality.

Table Appendix A-15 *OCS Integration—European Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 2	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R24 or later	R24 or later Note 2	SB-1521 UV70 APL-OAI-B
SOPHO SV7000	-	-	-
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC
SOPHO NEAX2000 IPS	R14 or later	-	-
SOPHO NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500, UNIVERGE SV7000, and SOPHO SV7000).

NOTE

2. There is a condition in UGN Functionality.

Table Appendix A-16 *OCS Integration—Asian and Russian Markets*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later Note 3	SB-1662 NX-OP OAIUN
UNIVERGE SV7000	R24 or late r Note 2	R24 or later Note 3	SB-1521 UV70 APL-OAI-B
UNIVERGE SV7000 MPS	-	-	-
UNIVERGE NEAX2400 IPX	R24 or later Note 2	R24 or later Note 3	SB-1519 IPX APL-OAIF-B
UNIVERGE SV8300	R1 or later	-	LS-FEA-OAI-LIC

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE NEAX2000 IPS	R14 or later	-	SB-1022 IPS FOAI PROG-B1
UNIVERGE NEAX IPS^{DM}	R14 or later	-	Ditto
UNIVERGE SV8100	-	-	-

NOTE

1. OAI optional license is required for each model (UNIVERGE SV8300,UNIVERGE SV8500, UNIVERGE SV7000, UNIVERGE SV7000 MPS and UNIVERGE NEAX2400 IPX, UNIVERGE NEAX2000 IPS, UNIVERGE NEAX IPS^{DM}).

NOTE

2. There is a condition in UGN Functionality.

SIP Presence (SIMPLE Interface)

The following tables list the PBX requirements for SIP Presence (SIMPLE Interface) for each of the markets below.

Table Appendix A-17 *SIP Presence (SIMPLE Interface)—US Market*

Description	UGN		OAI Option US (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	
UNIVERGE SV7000	R24 or later	R24 or later	
UNIVERGE SV7000 MPS	R24 or later	R24 or later	
UNIVERGE NEAX2400 IPX	R24 or later	R24 or later	
UNIVERGE SV8300	R1 or later	-	
UNIVERGE NEAX2000 IPS	R14 or later	-	-
UNIVERGE NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

Table Appendix A-18 *SIP Presence (SIMPLE Interface)—Australian Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	
UNIVERGE SV7000	R24 or later	R24 or later	
UNIVERGE SV7000 MPS	R24 or later	R24 or later	
UNIVERGE NEAX2400 IPX	R24 or later	R24 or later	
UNIVERGE SV8300	R1 or later	-	
UNIVERGE NEAX2000 IPS	R14 or later	-	-
UNIVERGE NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

Table Appendix A-19 *SIP Presence (SIMPLE Interface)—European Market*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	
UNIVERGE SV7000	R24 or later	R24 or later	
SOPHO SV7000	-	-	
UNIVERGE SV8300	R1 or later	-	
SOPHO NEAX2000 IPS	R14 or later	-	-
SOPHO NEAX IPS^{DM}	R14 or later	-	-
UNIVERGE SV8100	-	-	-

Table Appendix A-20 *SIP Presence (SIMPLE Interface)—Asian and Russian Markets*

Description	UGN		OAI Option Lic. (Note1)
	Out of Service	In Service	
UNIVERGE SV8500	S1 or later	S1 or later	
UNIVERGE SV7000	R24 or later	R24 or later	
UNIVERGE SV7000 MPS	R24 or later	R24 or later	
UNIVERGE NEAX2400 IPX	R24 or later	R24 or later	
UNIVERGE SV8300	R1 or later	-	
UNIVERGE NEAX2000 IPS	R14 or later	-	
UNIVERGE NEAX IPS^{DM}	R14 or later	-	
UNIVERGE SV8100	-	-	-

Appendix B

Required License

Table Appendix B-1 *Services and Required License—1*

SERVICE	BASIC	CLIENT	PRESENCE	LDAP	NODE	CLUSTER
OW5000 Platform	X	-	-	-	-	-
OW5000 API (Call Control API)	-	X	-	-	-	-
OW5000 API (Call Notification API)	-	X	-	-	-	-
OW5000 API (Information API)	-	X #1	X#1	-	-	-
LCS/OCS Integration	-	X	-	-	-	-
SIP Presence	-	X #1	X#1	-	-	-
DB Tool without LDAP	-	-	-	-	-	-
DB Tool with LDAP	-	-	-	X #3	-	-
Multi IP Telephony Server	-	-	-	-	X #2	-
Netfusing system	-	-	-	-	X #2	-
Cluster system	-	-	-	-	-	X

#1: Refer to Table Appendix B-2 for more detailed information.

#2: Number of PBX-1 NODE licenses are required when OW5000 server connects with multiple PBX Systems.

(One license is available per platform license).

For a Net fusing system, the PBX node -1 NODE licenses are required for OW5000 API(Call Control API), OW5000 API(Call Notification API) and LCS/OCS Integration. Access Server connected PBX node -1 NODE license is required for SIP Presence and OW5000 API(Information API).

#3: Asian market is out of service.

Table Appendix B-2 *Services and Required License—2*

Terminal Application	Set / Get Presence Information	Use OW5000 API(Information API)	Required License	
			Client	Presence
Legacy Terminal (Dterm/PS/Analog)	X	-	-	-
SIP Presence Terminal (SP30/350, MH250)	X	-	-	X
3rd Party SIP/ SIMPLE Application (registered to OW, Using the Person URI)	X	-	-	X
3rd Party SIP/ SIMPLE Device (registered to SV)	X	-	-	X
3rd party SOAP (Information API) application (Disable authentication)	X	X	X	-
3rd party SOAP (Information API) application (Enable authentication and use SetPresence method)	X	X	X	-
3rd party SOAP (Information API) application (Enable authentication and don't use SetPresence method)	X	X	X	-

Appendix C

Server Sizing

The configuration of a server used for the UNIVERGE OW5000 varies according to the number of extensions used and whether or not the Presence (SIMPLE) feature is used.

The capacity of an access server for the presence feature depends on the number of entries of a Buddy List. The maximum number of a Buddy List registration depends on the terminal in use.

Choosing a Server

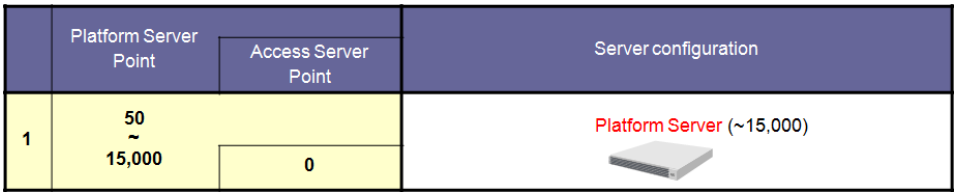
Choose a server according to the consumption point in the table below, and the required point and server configurations in Figure Appendix C-1, Figure Appendix C-2, and Figure Appendix C-3.

When you use a VoWLAN phone with presence as the handset of a softphone, both items (handset and softphone) will require a license instance.

Terminal Type	Max # of Buddy List entry	Consumption Point			
		Platform Server			Access Server
		OW5000 API(Call Control API, Call Notification API, Information API)	LCS/OCS integration	SIMPLE (Presence)	SIMPLE (Presence)
UNIVERGE Soft Client SP350	100	1	1	1	8
DtermSP30 (Desktop toolbar skin)	50	1	1	1	4
DtermSP30 (Default skin)	22	1	1	1	2
MH250	1	1	1	1	1
SIP presence unsupported terminal except the above	-	1	1	1	-

Using a 1-way/2-way Rack Mount Type (Presence is Not Used)

Figure Appendix C-1 *Required Point and Server Configuration—1-way/2-way (Presence is Not Used)*



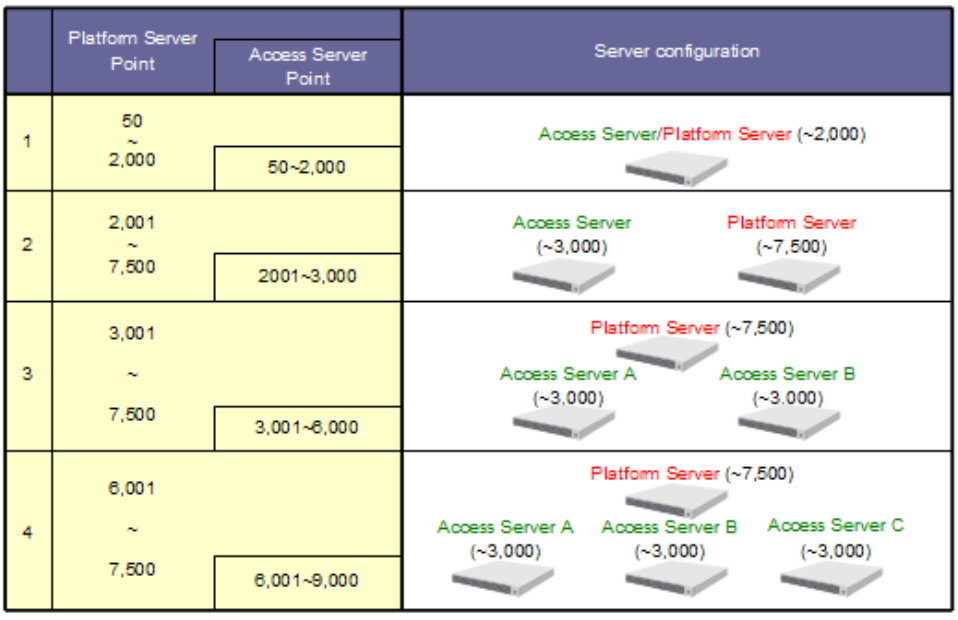
Conditions for Server Configuration and Precautions

- When you don't use the Presence feature, the maximum number of admin extensions is 15,000 per server (Platform server).
- When using a SOAP feature and an OCS/LCS integration together, the consumption point must be 15,000 or less.

  For example: When you use a SOAP feature and an OCS/LCS integration for all extensions, the maximum extension numbers drop to 7,500.

Using a 1-way Rack Mount Type (Presence is Used)

Figure Appendix C-2 *Required Point and Server Configuration—1-way (Presence is Used)*

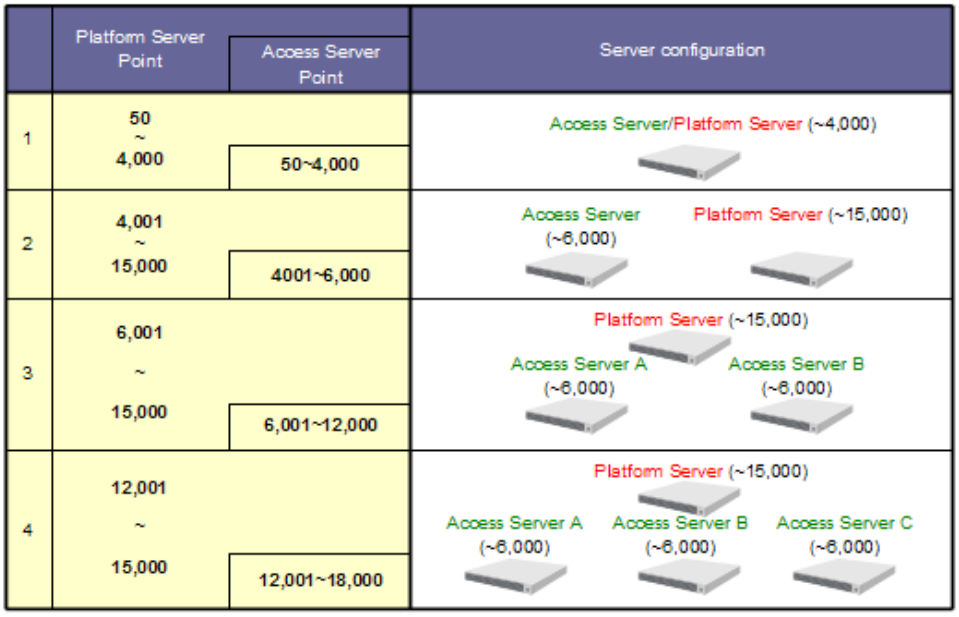


Conditions for Server Configuration and Precautions

- When using a Presence feature (Access Server), OW5000 API and LCS/OCS integration (Platform Server) together, the maximum number of admin extensions per server is 2,000.
- When using a server as an Access Server only, the maximum number of admin extensions is 3,000. When admin extensions exceed 3,000, you have to configure a system with several Access Servers. When using in an Open Numbering Network, you don’t have to install an Access Server per office code. The maximum number of Access Servers is 10.
- The maximum number of admin extensions per Platform Server is 7,500.
- When using the SIMPLE feature with OW5000 API or LCS/OCS integration, the consumption point of the Platform Server should be 7,500 or less. You cannot use the station in Access Server if the number of the extension is not registered in the Platform Server.
  - When using OW5000 API and SIMPLE feature for all extensions, the maximum number of extensions is 3,750.
  - When using OW5000 API integration and SIMPLE for all extensions, the maximum number of extensions is 3,750.
  - When using OW5000 API, LCS/OCS integration and SIMPLE for all extensions, the maximum number of extensions is 2,500.
- Even when more than one Access Server is used, you can use and manage them as one system if you use the same Platform Server. You can also check the presence status managed by another Access Server. Installing Access Servers and DB Servers in the same location is recommended for administrative reasons.
- To run Presence Server stably, do not use other applications together on this server.

Using a 2-way Rack Mount Type (Presence is Used)

Figure Appendix C-3 *Required Point and Server Configuration—2-way (Presence is Used)*



Conditions for the Server Configuration and Precautions

- When using the Presence feature (Access Server), the OW5000 API and LCS/OCS integration (Platform Server) together, the maximum number of admin extensions per server is 4,000.
- When using a server as an Access Server only, the maximum number of admin extensions is 6,000. When admin extensions exceed 6,000, you have to configure a system with several Access Servers. When using in an Open Numbering Network, you do not have to install an Access Server per access code. The maximum number of Access Servers is 10.
- The maximum number of admin extensions per Platform Server is 15,000.
- When using the SIMPLE feature with the OW5000 API or LCS/OCS integration, the consumption point of the Platform Server should be 15,000 or less. You cannot use extensions in the Access Server if the same number of extensions are not registered in the Platform Server.
  - When using OW5000 API and SIMPLE feature for all extensions, the maximum number of extensions is 7,500.
  - When using LCS/OCS integration and SIMPLE for all extensions, the maximum number of extensions is 7,500.
  - When using OW5000 API, LCS/OCS integration and SIMPLE for all extensions, the maximum number of extensions is 5,000.

- Even when more than one Access Server is used, you can use and manage them as one system if you use the same Platform Server. You can also check presence status managed by another Access Server. Installing an Access Server and a DB Server in the same location is recommended for administrative reasons.
- To run the Presence Server stably, do not use other applications together on this server.

Appendix D

System Configuration Example

Table Appendix D-1 *Server Components and Features*

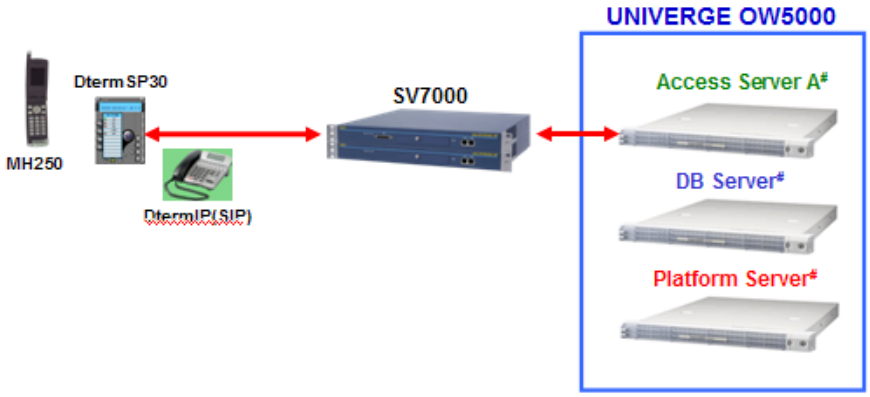
Server	Feature
OW5000 Platform	OW5000 Basic Component All components of the OW5000 platform are included. This provides OW5000 Administrator, OW5000 API (Call Control API, Call Notification API), Legacy terminal presence, Log Viewer, and DB Tool as part of this platform.
Remote Call Control	LCS/OCS Integration Module This provides call control feature integrated with Microsoft Office Communication Server and Live Communication Server This module needs to be installed on the same server as the OW5000 Platform.
Access Server	SIP Presence Module This provides presence for a SIP Presence enabled terminal, presence/instant message for SIMPLE terminal, and OW5000 API (Information API). This module can be installed on the same or a separate server as the OW5000 Platform. Multiple Access Servers provides load balancing in many SIP Presence terminal systems.
Log Viewer	Logging Management Tool This provides a logging feature (log level configuration, log file management, and logged information display). Included in the OW5000 Platform and can also be installed on a separate client PC.
DB Tool	Database Management Tool This provides export/import OW5000 database information from a file or LDAP (Active Directory). Included in the OW5000 Platform and can also be installed on a separate client PC.
Microsoft SQL Server	Database Storing OW5000 Configuration Data This can be installed on the same server as the OW5000 platform or on a separate server.

The following topics are included in this section:

One IP Telephony Server Management

Case 1

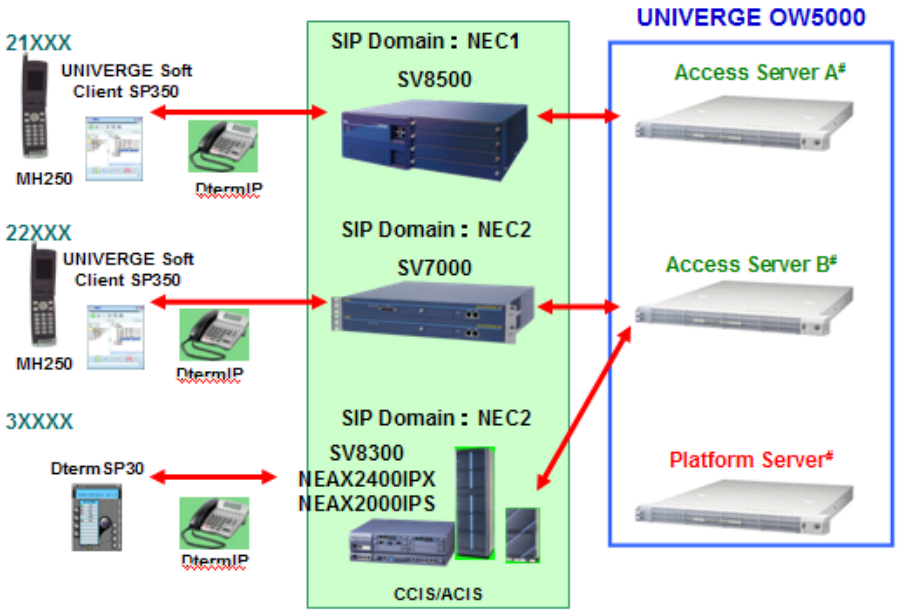
Case 2



- One server supports the Platform server, access server, and the DB server if the server meets the requirement.

Multiple IP Telephony Server (Closed Numbering Network)

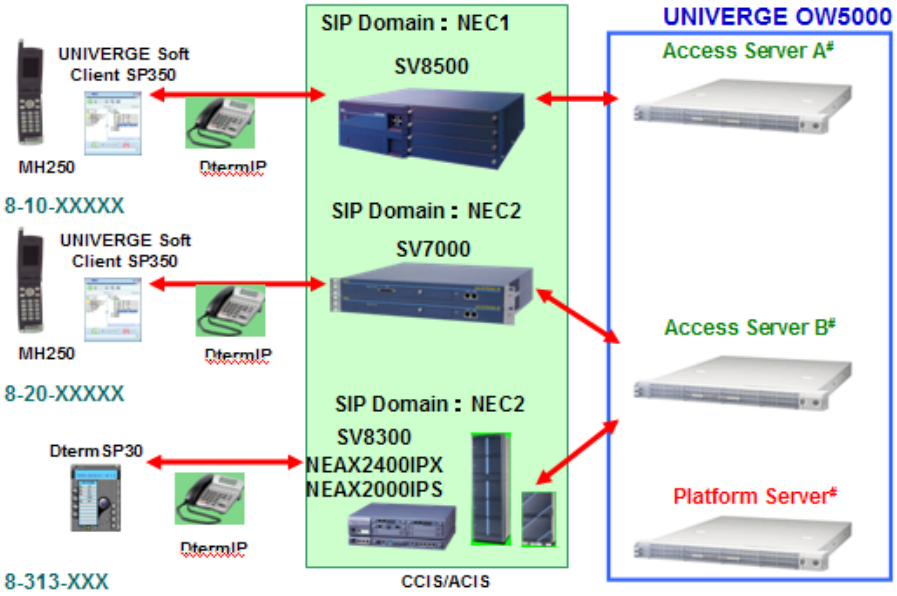
One UNIVERGE OW5000 can manage multiple IP telephony servers.



- One server supports a Platform server, access server, and a DB server if the server meets the requirements.

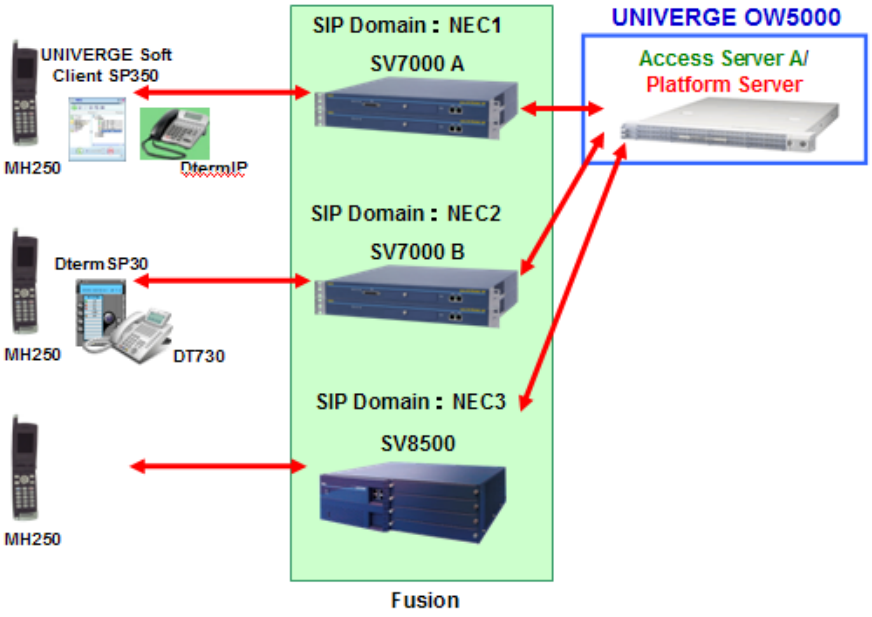
Multiple IP telephony server (Open Numbering Network)

One UNIVERGE OW5000 server must be configured for presence. It is not required to deploy the presence server (Access Server) for each office code.



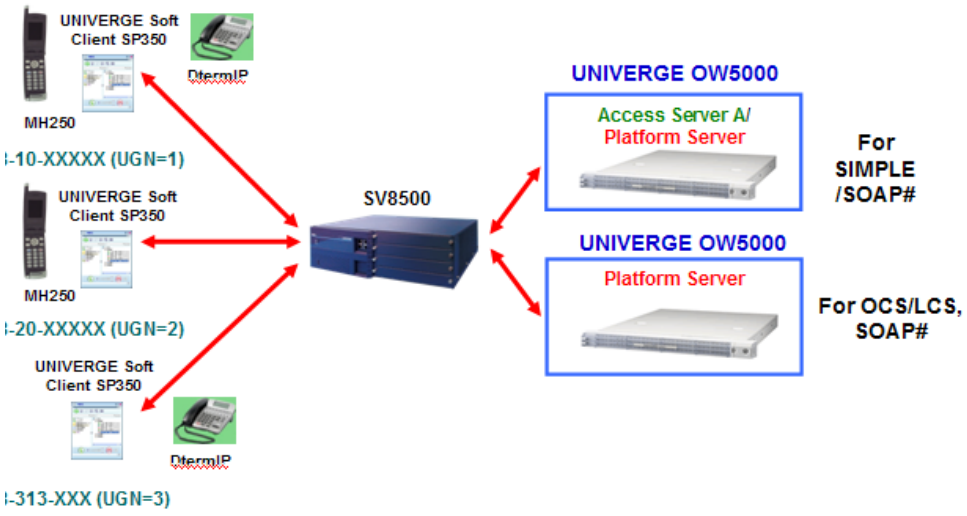
- A SOAP application that is not supporting a multiple IP telephony server integration cannot be used in this configuration.
- One server supports a Platform server, access server, and a DB server if the server meets the requirement.

NetFusing by UNIVERGE SV8500/SV7000

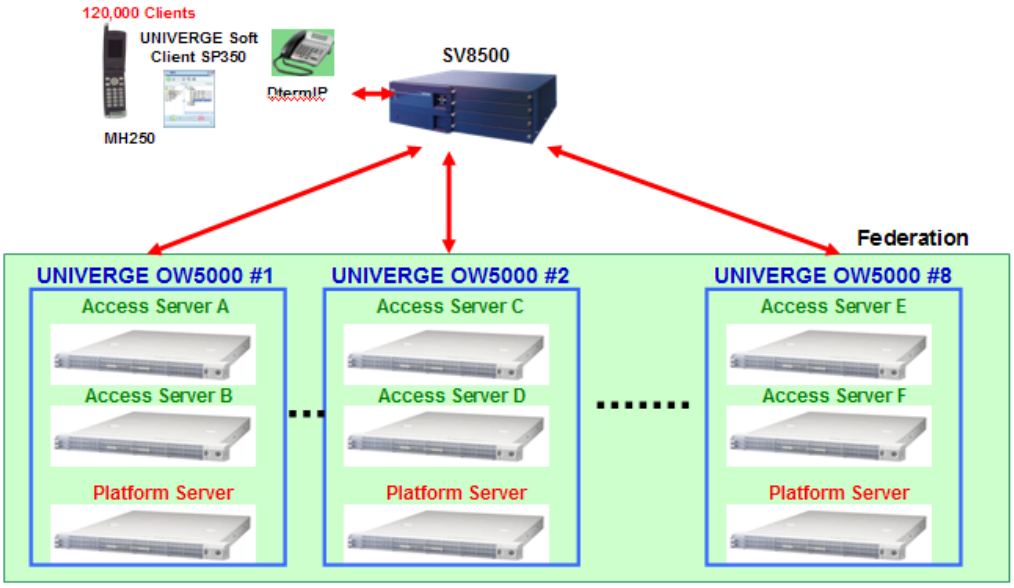


IP Centrex Environment of UNIVERGE SV8500/SV7000

Two sets of UNIVERGE OW5000 servers are required when presence and OCS/LCS integration are used by the Dial Plan to Support IP Centrex Functionality.

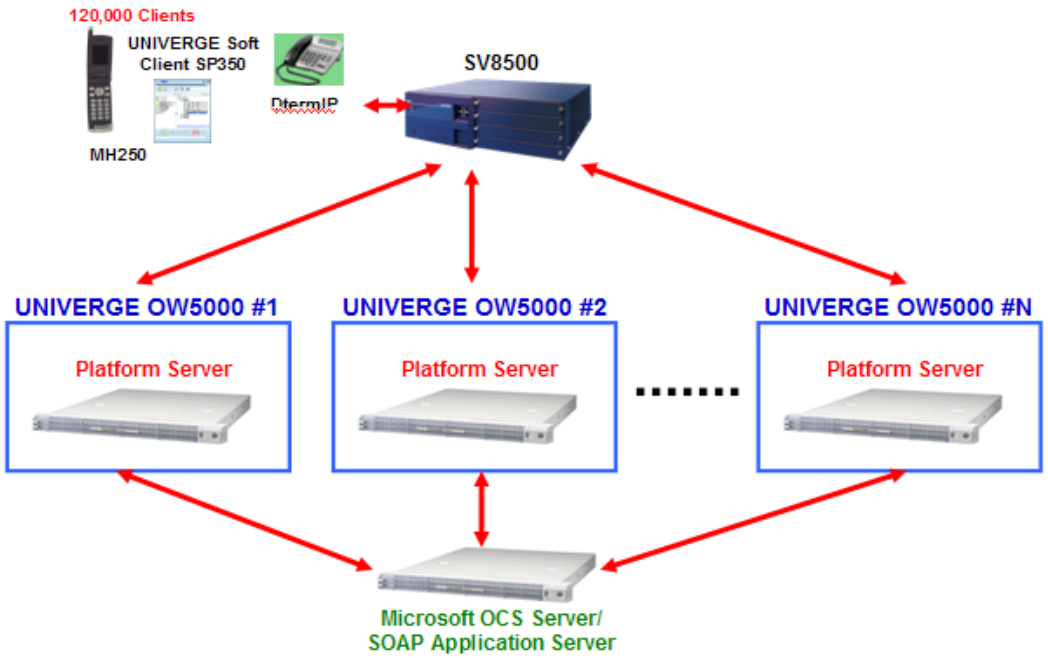


Over 15,000 Clients System (SIP Presence)



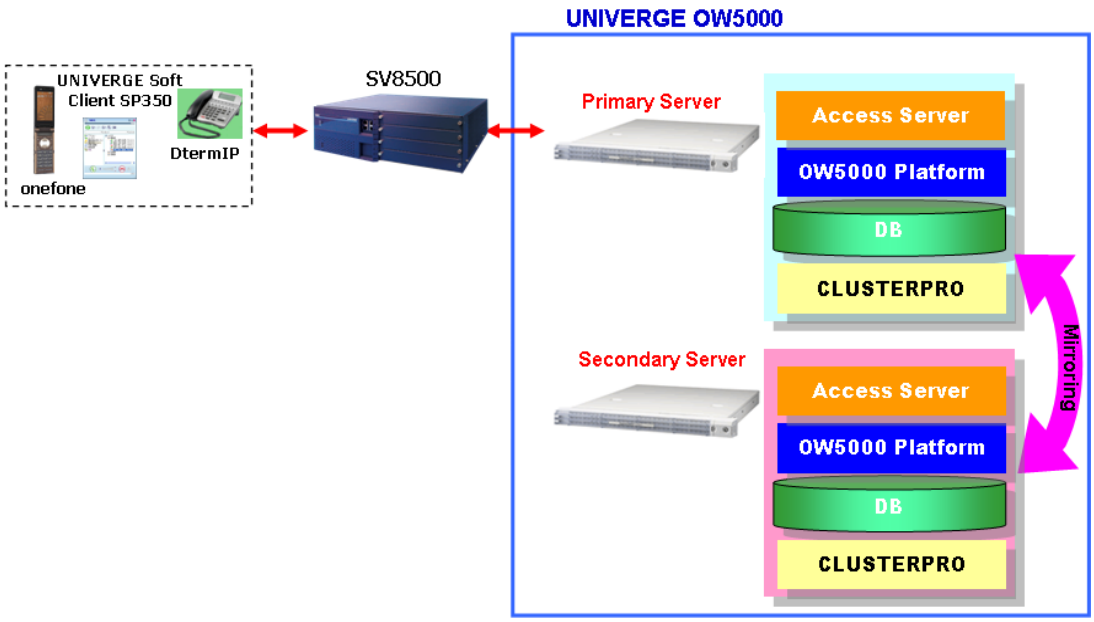
- Maximum number of Platform servers is 8 for SIP federation
- Maximum number of Access Servers is 24 for SIP federation

Over 15,000 Clients System (OCS Integration/OW5000 API)



- Maximum of 16 Platform servers can connect to a single PBX

Clustering Environment



- The Platform Server or Platform Server and Access Server, which is in the same box, can be used for clustering.

NEC Corporation

UC for Enterprise (UCE) Application Platform (UNIVERGE OW5000)
Getting Started Guide

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