

UC for Enterprise (UCE) Mobility (UNIVERGE MC550)

MC550 Revision 3.0

Installation Guide

NEC NEC Corporation

November 2010
NDA-31000, Revision 4

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1

Introduction

The UC for Enterprise (UCE) Mobility (UNIVERGE MC550) Installation Guide provides the information you need to install, configure, and operate the MC550.

The MC550 is a fixed mobile solution for the enterprise, delivering a Customer Premise Equipment (CPE) based or hosted solution. For end users, the MC550 twins with the user's enterprise telephone number on devices of their choosing. All incoming calls are routed through the PBX Trunks (PRI and/or SIP) to all twinned devices. This leverages the PBX infrastructure such as call distribution, call coverage, enterprise voice mail, call detailing recording, and least cost routing while providing mobility. With a mobile solution, the employees will never need to give out their mobile number for work purposes.

The solution has no dependencies on the mobile network operator and users, within an enterprise, can use most cellular devices which have an enabled voice plan. MC550 also provides a web interface to make use of enterprise presence, status, Directory, and call logs. This web interface can be used to provide a mobile UCE experience.

**NOTE**

From R3, MC550 can also be used as a basic unified communications client in a desktop browser. In this mode, MC550 can preform call control on a users' primary extension, giving them access to Corporate and Personal contacts, contact lists, call logs, and user settings all through a web browser interface. Voice twinning will work regardless if a data plan is active for the mobile device or not.

The following topics are included in this chapter:

Chapter Topics

- [MC550 System Overview](#)
- [MC550 User Types Overview](#)
- [How This Guide is Organized](#)

MC550 System Overview

The MC550 system allows Enterprise users to have a single point of contact to take enterprise phone calls. By combining the use of contact rules and the ability to ring multiple devices simultaneously, the MC550 system provides users the flexibility needed to always be in touch in today's mobile world.

The MC550 system is composed of four major components:

- **OW5000 Platform**

The OW5000 Platform provides the overall Database and administration of the MC550 system. This includes providing data to both the MC550 Server and the MC550 Status Control Web Page.

- **MC550 Server**

The MC550 Server provides the call control features of the MC550 system, including Multi-Ringing and Voice Mail Avoidance (VMA).

- **MC5550 Client Service**

The MC550 Client service provides desktop browsers with real time presence updates and provides for UC function in the desktop browser.

- **MC550 Web Site**

The MC550 Web Site provides MC550 users the ability to have a UCE experience while mobile; including Corporate and personal directory, enterprise dialing, click to call from directory, contact lists, and call logs. The MC550 Web Site also provides status change functionality.

MC550 User Types Overview

This section explains the User types available for MC550. The MC550 application is capable of integrating with UC700 to take advantage of statuses and rules based routing. A MC550 User with uMobility and MC550 User with uMobility and UC700 is available.

MC550 can also exist without UC700. Please see the UC700 Quick Start Guide for more information on rules and statuses.

MC550 Users Using Contact Rules

- Calls to these users use the Contact Rules to decide if a call should be presented to mobile contacts.
- This type of user can have a desk phone and up to 5 external phone contacts and 4 internal extensions ring on incoming calls based on the user's contact rule.
- UC700 or MC550 can be used to configure these contact rules.

- For the mobility contacts to be presented with calls, the first contact method must be the users Primary Extension and then the next nine phone number contacts can also ring.



NOTE

**By default, all UC700 users using MC550 are this type of user.*

MC550 Users Not Using Contact Rules

- When MC550 users are not using Contact Rules, the OW5000 Location Status Default Mobile status is used to route dual ring calls to the Primary Extension and the current MC550 endpoint of the user.



NOTE

The MC550 will only dual ring when the user is in the Default Mobile Status. Any other status will ring the Primary Extension only.

- Advanced UCE functions, such as contacts and directory, will not be available to these users.
- The OW5000 Administrator must assign the Location Status Information Default Mobile status. See ["Configuring the MC550 System" on page 4-1](#) for more information.

How This Guide is Organized

Chapter 1 Introduction	This chapter outlines how to use the manual including the organization and chapter layout of the MC550 Installation Guide.
Chapter 2 Requirements	This chapter outlines the requirements needed for the MC550 Server to operate properly.
Chapter 3 Installing the MC550 System	This chapter describes the necessary steps to install the MC550.
Chapter 4 Configuring the MC550 System	This chapter provides information on configuring the MC550 system.
Chapter 5 Advanced OW5000 Configuration	This chapter provides advanced configuration steps for the MC550 Web Site, and how to configure the OW5000 to use a secure connection to the MC550 Status page.
Chapter 6 Maintaining the MC550 System	This chapter includes information on maintaining the MC550 system, including the log files.
Appendix A MC550 Server PBX Settings Details	This chapter gives specific details for each field used for the PBX settings.

2

Requirements

The MC550 Server must meet the requirements outlined in this chapter to operate properly.

The following topics are included in this chapter:

Chapter Topics

- [OW5000 Platform Requirements](#)
- [MC550 Server Requirements](#)
- [MC550 Web Site](#)
- [PBX Requirements](#)
- [LAN Requirements](#)

OW5000 Platform Requirements

The MC550 product requires a licensed and working OW5000 platform version R4.1 or higher. Additional requirement are listed in [Table 2-1](#).

Table 2-1 *Additional Platform Requirements*

MC550/Platform Requirements
MC550 R1.0 requires OW5000 R3.3.0 or higher
MC550 R2.0 requires OW5000 R.3.3.3 or higher
MC550 R2.1 requires OW5000 R4.1
MC550 R3.0 requires UCE 2010 R2 (OW5000 R5.0)

The MC550 Web Site requires a functioning OW5000 Server and a functioning MC550 Server. The MC500 Server must be installed prior to the MC550 Web Site.

MC550 Server Requirements

The MC550 Server can either be installed on the OW5000 platform server or on a separate server. When installing on the platform server, please refer to the Server Requirements in the UNIVERGE OW5000 Getting Started Guide.



NOTE

The MC550 Client service will also be installed at the same time as the MC550 Server.

When installing on a separate server, follow the requirements listed in [Table 2-2](#).

MC550 Web Site

The MC550 Web Site may or may not be on the same server as the UNIVERGE OW5000 System. If it is installed on the same server as the platform, refer to the OW5000 Getting Started Guide for platform requirements.

If the MC550 Web Site is installed on a separate server, the following requirements apply ([Table 2-2](#)).

Table 2-2 MC550 Server Requirements

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 (80 or 443)
Hard Drive Space (available before installation)
2 GB
Web Server
Microsoft Internet Information Server (IIS) 6.0 or higher (Windows Server 2003)
Note: IIS requires installation of the current security patches located at www.microsoft.com .
.NET Framework
.NET Framework 3.5
ASP
ASP .NET 2.0
SOAP
SOAP 1.2

Server Name Resolution

The MC550 Status Page Web Site Server must be accessible by a public IP address or by a domain name.

PBX Requirements

The following table lists the PBX requirements for the MC550 Server.

Table 2-3 PBX Requirements

UNIVERGE SV7000	UNIVERGE IPX	UNIVERGE SV8500	UNIVERGE SV8300
R26 or later OAI option is required	R26 or later OAI option is required	S2 or later (OAI option is provided with basic option in US Market)	Supported from MC550 R3.0 Requires R4.0 software
MC550 full functionality requires			
R26e or higher		S2e or higher	

Other PBXs and versions are not supported. The feature of multi-ringing stations is only supported on the UNIVERGE SV8500 running R26e, or on the above PBXs running R27 or later.

PBX Trunking Requirements

The SV8500/SV7000/IPX trunking used to dial out to the remote contacts must be ISDN PRI or SIP trunking. SV8300 only supports ISDN PRI trunks for dial out to remote contacts. Other trunk types are not supported. If necessary, a special access code can be used in the PBX to force calls to these types of trunks. The special outbound dial Prefix code can be specified on the PBX tab of the **OW5000 > Applications > MC550 Server** page. This setting is added to the outbound number after the OW5000 area code rules are applied.

Each remote contact dialed will use an outgoing trunk during the ringing phase of mobility. The SV8500/SV7000/IPX/8300 must provide enough trunks to accommodate these calls.

For the original Caller ID to be passed to the mobile contact, your trunking provider must not screen the number sent as the calling party number.

SV8300 does not support Caller ID pass through, or Caller ID flexibility. On SV8300 systems, the Caller ID sent will depend upon the system programming only.

PBX OAI System Requirements

The OAI facility Predictive Dial (SCF128) is used to ring the remote contacts. There are a maximum of 255 simultaneous active Predictive Dials per monitored number in the system.



Once the call is answered it does not count against this 255 total.

There is also a limit of 252 simultaneous Predictive Dials per Module Group according to the grading of the trunks in the system.

Predictive Dialing is only supported on ISDN (Nortel, NI2, QSIG, ATT) and MG-SIP type trunks in R26/S2 PBX versions or higher.

The MC550 Server uses 1 OAI association to the PBX for call control. The SV7000/IPX and SV8500 supports a maximum of 16 OAI associations. The SV8300 supports a maximum of 4 OAI associations. Please see the OAI System manual for more information on OAI associations.

LAN Requirements

In order to operate the MC550 Server application, the MC550 Server must be able to access the LAN where the PBX is located. The MC550 Server uses TCP Port 60030 to connect to the PBX.

In order for the MC550 Web Site to operate, the web site must be accessible from the mobile device. This normally requires that the MC550 Web Site be accessible on the Internet with a fully qualified domain name or IP address. This web site uses TCP Port 80 for HTTP or TCP Port 443 for HTTPS.

The MC550 Web Site application must also be able to access the host of the OW5000 Platform/MC550 Server. This connection uses TCP/IP ports 60052 and 60053. The MC550 Web Site must also have access to the SQL server where the OW5000 Database resides. The database connection requires the MC550 web site server to be able to reach the database server using UDP port 1434. This is the SQL browser port used to inform the MC550 web site SQL client which port is used for SQL connections. If the UDP port is unavailable, the default port of 1433 TCP port will be used. It is normally required that both UDP port 1434 and TCP port 1433 are open between the MC550 web site and the SQL server.

If the MC550 Server is installed on a separate server from the OW5000, it will need to access the OW5000 server platform. In this case, the MC550 Server uses TCP Port 1433 and UDP port 1434 for SQL browser support.

During the install and at application start up, TCP port 5690 must be open from the MC550 server to the OW5000 server.

3

Installing the MC550 System

This chapter describes the installation process of the MC550 System Software.

The following topics are included in this chapter:

Chapter Topics

- [Before Installing the MC550 Software](#)
- [PBX Configuration for MC550](#)
- [SV8500 System Programming](#)
- [SV8300 System Programming](#)
- [Installing the MC550 Server Software](#)
- [Installing the MC550 Web Site](#)

Before Installing the MC550 Software

Before installing the MC550 software, ensure the following procedures have been met.

- You are logged into an account that has administrator rights.
- The server software and hardware requirements are met, including the installation of .NET Framework 3.5. For more information, refer to ["Requirements" on page 2-1](#).

PBX Configuration for MC550

This guide assumes that all relevant PBX programming has been completed for normal OAI operations on the PBX with the OW5000 Platform.

For more information, refer to the following material:

- OAI System Manual
- Command Manual
- Job Specification
- Feature Programming Manual
- UNIVERGE OW5000 Getting Started Guide

SV8500 System Programming

The following items must be configured specifically for the MC550 Server operation using the SV8500 PCPro commands.

ASYDL SYS 1

Index 1188	Bit 1	
	0/1	Disable SCF128 for OAI/Enable SCF128 for OAI (Enable for MC550)
Index 1024	Bit 0	
	0/1	Do not send Caller ID on Tandem Calls/ Send original Caller ID on Tandem Calls. (Send Caller ID for MC550)
Index 869	bit 0	
	0/1	Name data in SMFN disabled/enabled (Enable for MC550)

AOKC Assign an OAI Key to use for the Move Call button.

AKYD Assign OAI key (Move Call button) to each MC550 user's desk phone.

AMNO/L/N Choose, Administration Station, TN=1
AMNO=XXXX NMI =YYYY MFC=0 and do not check the "Follow the UCD When Monitor Status is not Requested from AP" check box.

XXXX should be a valid station level number defined in ANPD/L/N and ASPA/L/N

YYYY should be a new unused NMI for this application. Use LMNO to verify that no duplications exist.



The MC550 must have at least one Monitored number for operation.

NOTE

AMNO/MLSO Used by MC550.



MLSO - Mobility Location Status Override needs as many Monitored numbers as override statuses.

NOTE

Use the following configurations in order to receive and send caller Name information on the ISDN/SIP trunk:

ARTD/N CDN 112 (IND) =1 (Allow incoming Name on NI-2 PRI)

ARTI/N CDN 80 (IONAME)=3 (Send outgoing Name on NI-2, AT&T, and Nortel PRIs; Allow incoming Name on AT&T and Nortel PRIs)

Often it can take a cell phone several seconds to start ringing. This is not due to the slowness of the MC550 Server placing a call to the mobile phone, but rather it is slowness on the part of cell phone provider services. In order to give the MC550 user time to answer their cell phone before their desk phone extension forwards the call to voice mail, one should make increases to a couple of CFNA timers. There are system wide CFNA timers configured by ASYD (SYS 1, INDEX 139 and 247), but to increase these timers per extension, use the ADAI command to increase user's CFNA timers for INDEX 139 and 247. It is suggested to start at 30 seconds and then decrease timers if possible based on log entries of maximum answer times. Refer to [MC550 Server PBX Settings Details on page A-1](#) for more information.

SV8300 System Programming

Table 3-1 Multiline Terminal

Start	Description	Data
CM05	Assign a Unit and Slot number to the DLC blade Blade Reset	<ul style="list-style-type: none"> • Y=0 (1) XXZZ <ul style="list-style-type: none"> XX:01-50: Unit No. ZZ: 01-18: Slot No. (2) 10: DLC blade
CM 10	Assign the Multiline Terminal station number to the associated Physical Port number. Blade Reset Note: 1 4 Multiline terminal station numbers are required for MC550 support. 1 OAI Pilot number 1 UCD Pilot number 1 UCD Member station 1 Phantom number Note: 2 When DLC blade is accommodated, the Multiline Terminal station number must be assigned for all the lines of the blade. Note: 3 For the following features, do not assign 5 or more digits station number. <ul style="list-style-type: none"> •SMDR/PMS •Front Desk Instrument (Multiline Terminal) 	<ul style="list-style-type: none"> • Y=00 (1) XXYYZZ: Physical Port No. <ul style="list-style-type: none"> XX: 01-50: Unit No. YY: 01-18: Slot No. ZZ: 01-32: Circuit No. (2) FX-FXXXXXXXXX <ul style="list-style-type: none"> Multiple Terminal Station No. X-XXXXXXXXX represents My Line No.

Table 3-2 Uniform Call Distribution (UCD)

Start	Description	Data
CM17	<p>For each UCD group, assign station numbers, one by one, in the order of hunting.</p> <p>Note: 1 Up to 60 stations can be assigned into a single UCD group.</p> <p>Example: For setting station numbers 200, 201, 202 into one UCD group.</p> <p>1st Operation (1) 200 (2) 201</p> <p>2nd Operation (1) 201 (2) 202</p> <p>3rd Operation (1) 202 (2) 200</p> <p>Note: Assign the Pilot station or Member station to the stations included in UCD group.</p> <p>Note: 2 Assign the OAI pilot number as a monitored number.</p> <p>Assign the UCD group number</p> <p>Note: 3 Assign the same UCD group number to the UCD pilot and UCD member. Assign a different UCD group number to the OAI monitor number.</p>	<p>• Y=0</p> <p>(1) X-XXXXXXX: Station No.</p> <p>(2) X-XXXXXXX: Another station No to be linked</p> <p>• Y=1</p> <p>(1) X-XXXXXXX: UCD Station No.</p> <p>(2) 0<:Member station 1: Pilot station 3: Monitor number</p> <p>• Y=2</p> <p>(1) X-XXXXXXX: Pilot Station No.</p> <p>(2) 00-15: UCD Group 00-15</p>

Table 3-3 Direct Inward Termination (DIT)

Start	Description	Data
CM30	<p>Assign the station number to be terminated by DIT in Day Mode/Night Mode/Mode A/Mode B respectively.</p> <p>Note: Assign the phantom number to all ISDN PRI B-channels.</p>	<p>• Y=04 Day Mode/05 Night Mode/ 42 Mode A43 Mode B</p> <p>(1) 000-511: Trunk No.</p> <p>(2)X-XXXXXXX: Station No.</p>

Table 3-4 SMF Data Assignment

Start	Description	Data
CM08	<p>Specify OAI SMFN (status) for Call Transfer from a station.</p> <p>Specify whether OAI SMFN is sent when answering a held call.</p> <p>Specify OAI SMFN STS (status) when a station answers the forwarded call with Call Forwarding-No Answer (SMFN FID=3/1).</p>	<p>(1) 460</p> <p>(2) 0 : SMFN STS=7</p> <p>(1) 461</p> <p>(2) 0 : To send</p> <p>(1) 805</p> <p>(2) 1 <: SMFN STS=1</p>

Table 3-5 SCF Data Assignment

Start	Description	Data
CM65	RR sending priority when receiving OAI SCF.	<ul style="list-style-type: none"> • Y=28 (1) 00-63: Tenant No. (2) 0 : Send RR signal after SMFN

Table 3-6 MSF Data Assignment

Start	Description	Data
CM90	Assign the OAI function key for starting up MSF to a multiline Terminal.	<ul style="list-style-type: none"> • Y=00 (1) My Line No. + , + Key No. (2) F1032-F1047: OAI Function Key No. 0-15
CMD7	When pressing the OAI function key to start up MSF, assign the operation code to the OAI function key assigned by CM90.	<ul style="list-style-type: none"> • Y=0 (1) F1032-F1047: OAI Function Key No. 0-15 (2) 128-191: Operation Code for MSF

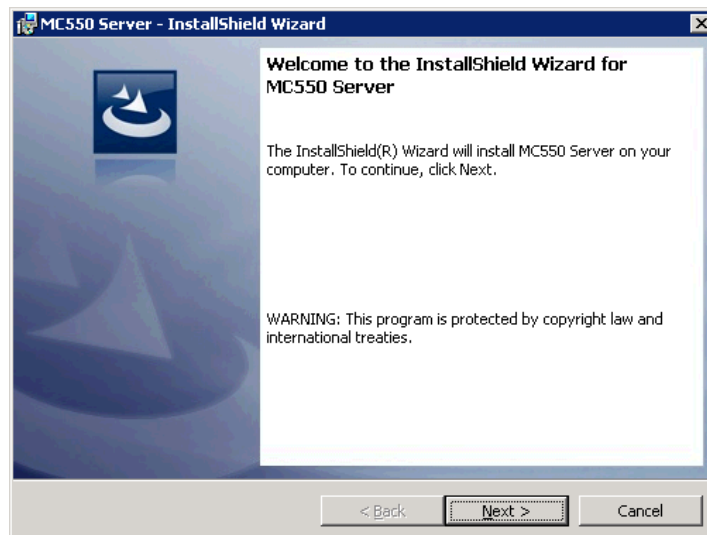
Table 3-7 Station Hunting Assignment

Start	Description	Data
CME5	Set or cancel make-busy to stations	<ul style="list-style-type: none"> • Y=0 (1) X-XXXXXXX: OAI Pilot/UCD Pilot/Phantom number (2) 0 : Make-busy set

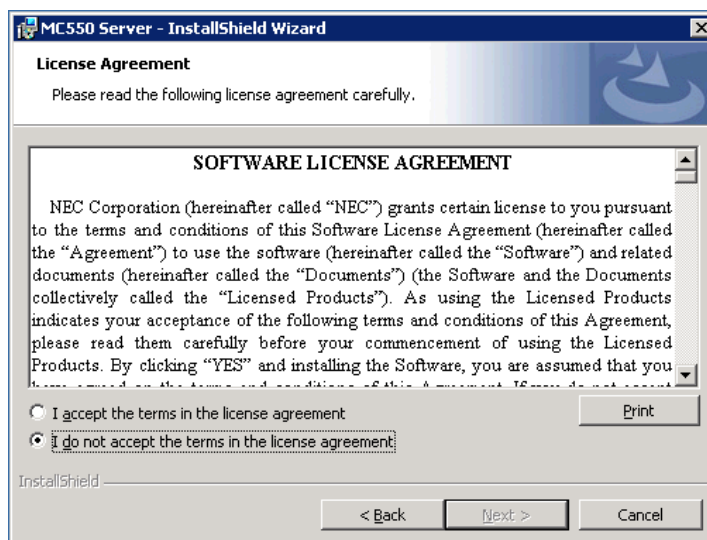
Installing the MC550 Server Software

Use the following steps to install the MC550 Server software.

- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive of the server. On most computers Autorun automatically starts the installation when you load the **DVD**. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the UCE MC550 menu, select a link to launch the installer for **UCE Mobility** server. [Figure 3-1](#) displays.

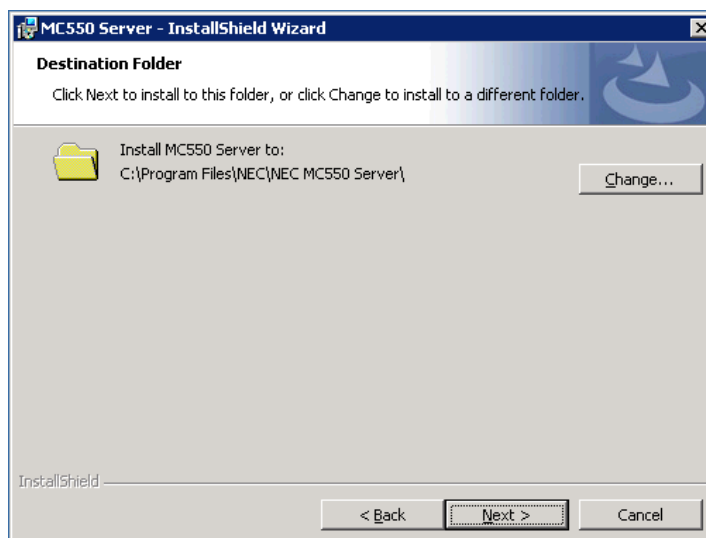
Figure 3-1 Welcome dialog box

Step 3 Click **Next**. [Figure 3-2](#) displays.

Figure 3-2 Software License Agreement

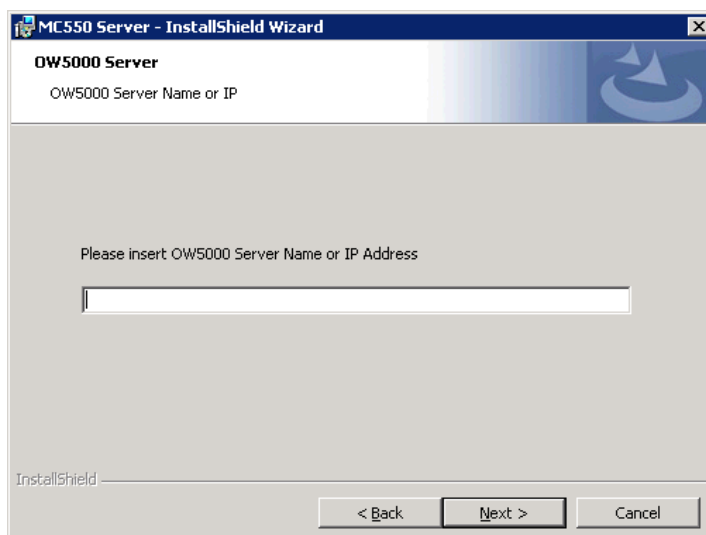
Step 4 Accept the terms of the License Agreement and click **Next**. [Figure 3-3](#) displays.

Figure 3-3 Destination Folder dialog

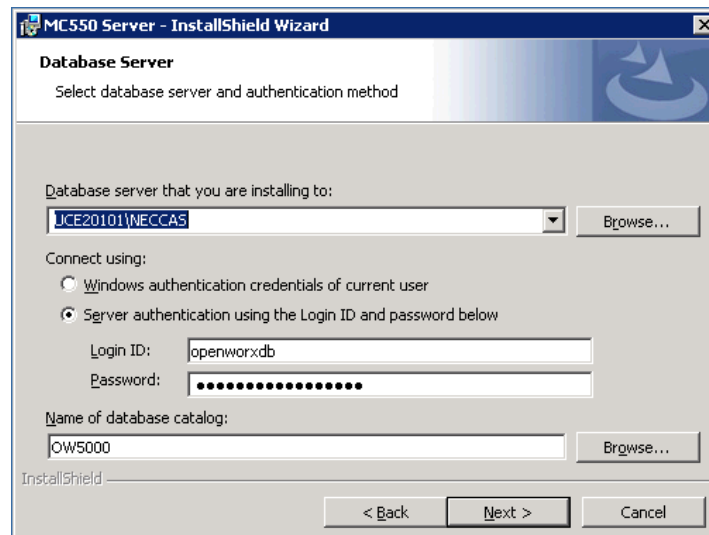


- Step 5** Click **Next** to install to the default folder or click **Change** to select a different location. [Figure 3-4](#) displays.

Figure 3-4 Server Name or IP Address dialog



- Step 6** Enter the OW5000 Server Name or the IP Address. If you are installing on the OW5000 platform server, you can enter **localhost**.
- Step 7** Click **Next**. [Figure 3-5](#) displays.

Figure 3-5 Server Install dialog box

If **localhost** or the server name was specified in the previous step, the database information and credentials will be filled in automatically, as shown in this example. Normally, no changes will need to be made.

Step 8 Click **Next** and then follow the prompts to install the MC550 Server.

Activating the MC550 Server Software

The MC550 Server software is normally activated with the platform. If it does not activate, use the steps below.

Confirming License Activation

Follow the steps below to confirm that the licenses are activated.

Step 1 In OW5000 Administrator, go to **OW5000 > Platform > Licenses** page and select the **Licensed Information** tab. A screen displays the total licenses available and all Used Licenses.

If you are using a Trial License, the expiration date is indicated under **Term of Validity**.

Upgrading the MC550 Server

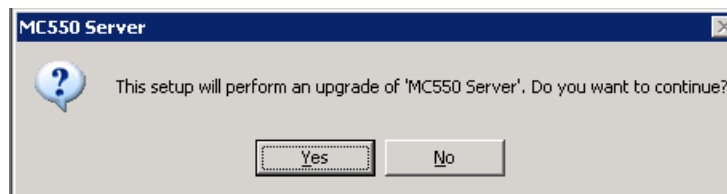


NOTE

When upgrading from R1 or R2 to R3, select **Control Panel > Add Remove Programs** and remove the MC550 Server before installing the new server.

- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive of the server. On most computers Autorun automatically starts the installation when you load the **DVD**. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the **UCE Mobility** menu, select a link to launch the installer for **MC550 Mobility Server**. [Figure 3-6](#) displays.

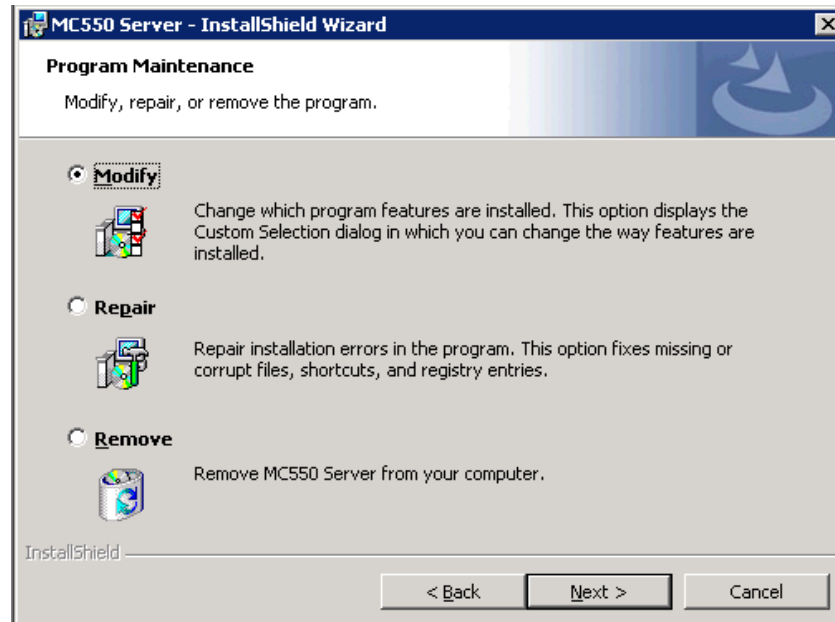
Figure 3-6 Upgrading the MC550 Server



- Step 3** Click **Yes** to upgrade or **No** to cancel the process.

Uninstalling the MC550 Server

- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive of the server. On most computers Autorun automatically starts the installation when you load the **DVD**. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the UCE MC550 menu, select a link to launch the installer for **UCE Mobility** server to display [Figure 3-7](#).

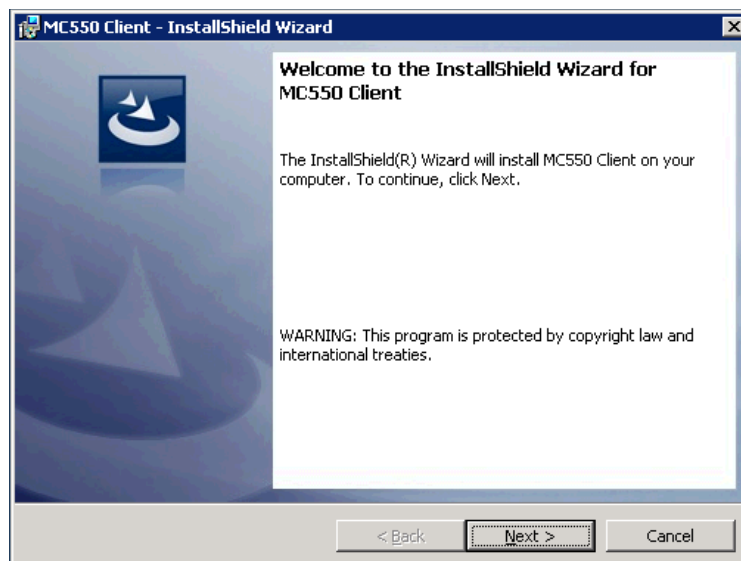
Figure 3-7 Program Maintenance

Step 3 Select the **Remove** radio button and then click **Next**. The MC550 Server is removed from your computer.

Installing the MC550 Web Site

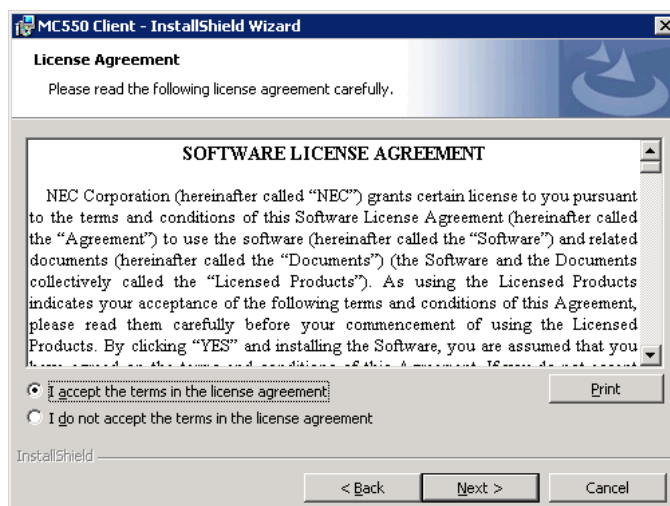
- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive. On most computers Autorun automatically starts the installation when you load the DVD. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the **UCE Mobility** menu, select a link to launch the installer for **MC550 Mobility Client Website**. [Figure 3-8](#) displays.

Figure 3-8 MC550 Client—Destination Folder dialog box



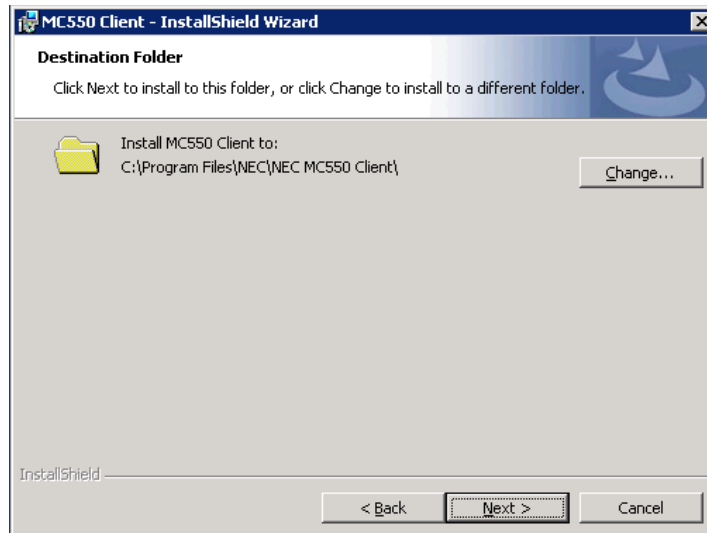
- Step 3** Click **Next**. [Figure 3-9](#) displays.

Figure 3-9 License Agreement dialog box



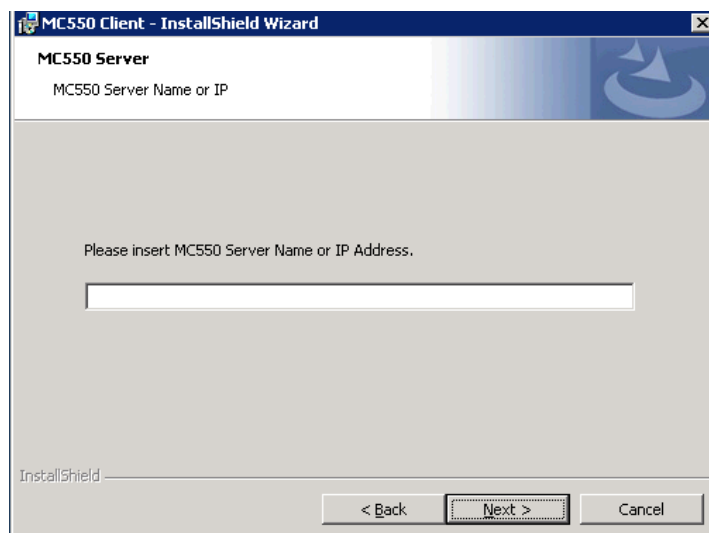
- Step 4** Accept the terms of the License Agreement and click **Next**. [Figure 3-10](#) displays.

Figure 3-10 *Destination Folder dialog box*



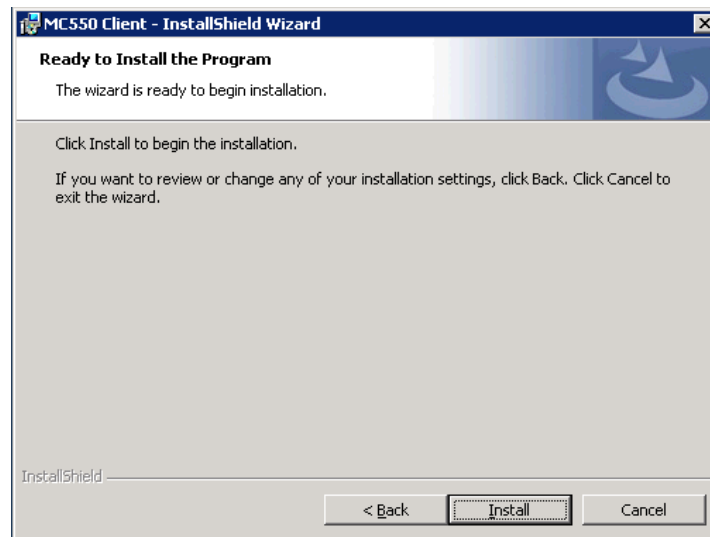
- Step 5** Click **Next** to install to the default folder or click **Change** to select a different location. [Figure 3-11](#) displays.

Figure 3-11 *MC550 Server dialog box*



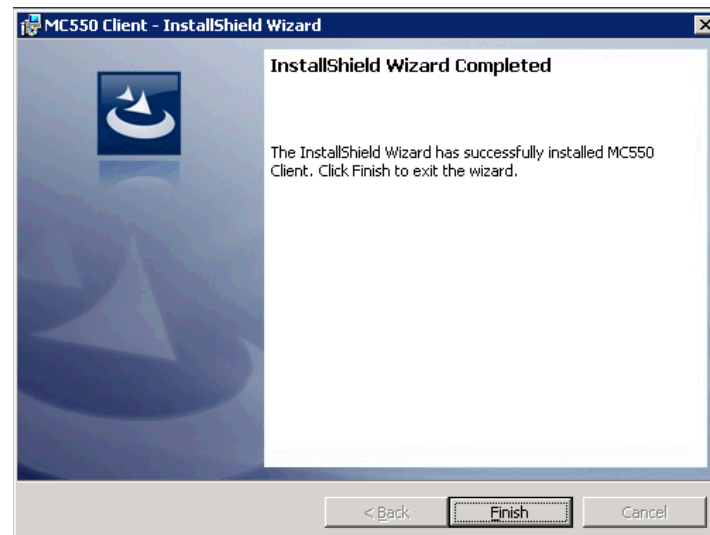
- Step 6** Enter the MC550 Server Name or the IP address. If installing on the MC550 server, you can enter **localhost**.
- Step 7** Click **Next**. [Figure 3-12](#) displays.

Figure 3-12 Ready to Install dialog box



Step 8 Click **Install**. An Installing dialog box displays briefly and then [Figure 3-13](#) displays.

Figure 3-13 Installation Complete dialog box



Step 9 Click **Finish** to complete the Client installation process.

Securing the MC550 Web Site

Users will log on to the MC550 Website by submitting their UC700 logon credentials. It is strongly recommended to configure IIS for this MC550 web site application to only support SSL connections.

Instructions on how to configure SSL and only allow SSL on a web application can be found on Microsoft's web site. The MC550 training material will provide the user the steps needed to accomplish this task.

Upgrading the MC550 Client

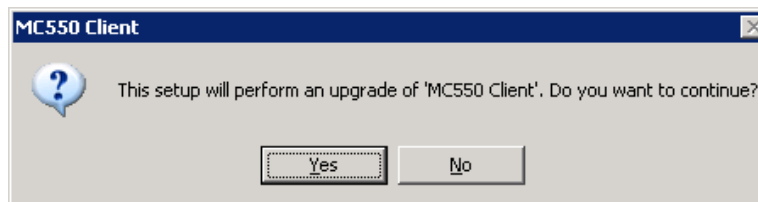


NOTE

When upgrading from MC550 R1 to MC550 R2, select **Control Panel > Add Remove Programs** to remove the MC550 Client Website and then install MC550 R2 Client Website.

- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive of the server. On most computers Autorun automatically starts the installation when you load the **DVD**. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the UCE MC550 menu, select a link to launch the installer for **MC550 Mobility Client Website Install** to begin the upgrade process. [Figure 3-14](#) displays.

Figure 3-14 Upgrading the MC550 Client



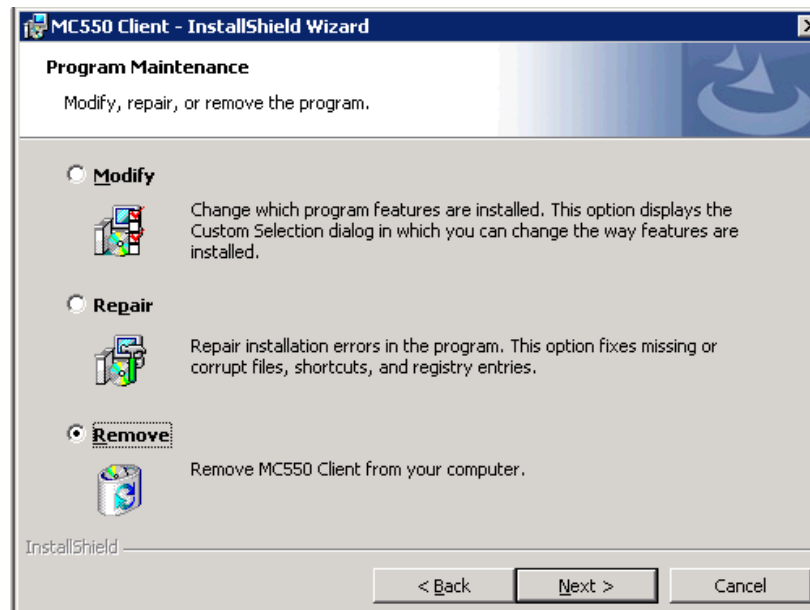
- Step 3** Click **Yes** to upgrade the MC550 client or **No** to cancel the process.

Uninstalling the MC550 Client

Follow the steps below to remove the MC550 Client from you computer.

- Step 1** Place the UCE 2010 DVD into the **DVD-ROM** drive of the server. On most computers Autorun automatically starts the installation when you load the **DVD**. If Autorun is not enabled on the computer, you must do the following:
- After placing the UCE DVD into the computer's **DVD-ROM** drive, open Windows Explorer and double-click the **DVD-ROM drive icon**.
 - In the **DVD-ROM** file list, double-click the **Setup.exe** file.
- Step 2** From the UCE MC550 menu, select a link to launch the installer for **MC550 Mobility Client Website Install** to begin the uninstall process. [Figure 3-15](#) displays.

Figure 3-15 Uninstalling the MC550 Server



- Step 3** Select the **Remove** radio button and then click **Next**. The MC550 Server is removed from your computer.

4

Configuring the MC550 System

This chapter describes the configuration process for the MC550 System Software.

OW5000 Administrator is used to configure many of the MC550 System items. It is a robust OW5000 tool used to configure 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.

Refer to the OW5000 Configuration Guide for detailed instructions on how to add or modify users, people, extensions, applications, or for more details on configuring PBXs.

The functions and associated screen displays for configuring the MC550 System in OW5000 Administrator are described in this chapter.

The following topics are included in this chapter:

Chapter Topics

- [*Configuring the MC550 Server in OW5000 Administrator*](#)
- [*Configuring MC550 Users*](#)
- [*Configuring Extensions*](#)

Configuring the MC550 Server in OW5000 Administrator

Before starting the MC550 Server process for the first time, ensure the following four items are completed.

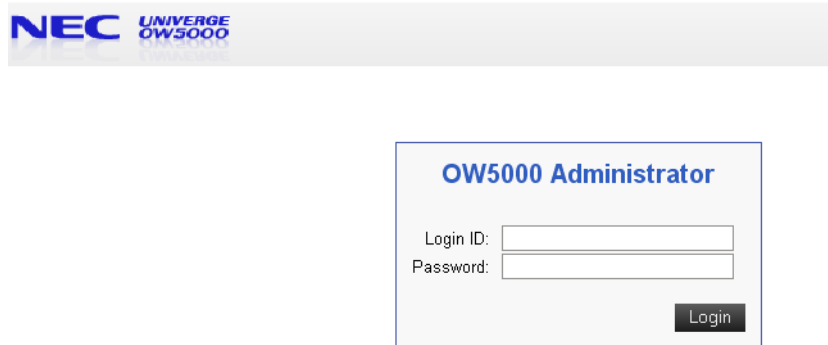
- [*Assigning a PBX / Monitored Numbers*](#)
- [*MC550 Server Settings*](#)
- [*Location Status Information/Message Settings*](#)
- [*Starting the Services*](#)

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**.

Step 1 From the desktop, click the **Start** button and then select **All Programs > NEC OW5000 > OW5000 Platform > OW5000 Admin**. [Figure 4-1](#) displays.

Figure 4-1 OW5000 Admin Login screen



Copyright 2006,2007 NEC Infrontia Corporation, all rights reserved

Step 2 Enter your login ID in the **Login ID** field.



The default login ID is **admin**.

Step 3 Enter your password in the **Password** field.



The default password for admin is **admin**.

After the initial login, you are required to change your password.

Step 4 Enter your Login ID.

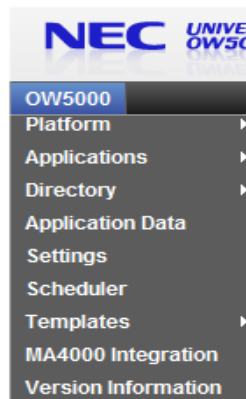
Step 5 Enter a new password in the New Password field. The length of the password must be at least eight characters long and include the following rules:

- 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 6 Enter the new password again in the **Confirm New Password** field.

Step 7 Click **Login**. [Figure 4-2](#) displays.

Figure 4-2 OW5000 Platform Main Menu



Assigning a PBX / Monitored Numbers

Step 1 From the OW5000 Platform Main Menu (Figure 4-2), select **Platform > PBXs** to display Figure 4-3.

If PBXs have previously been added, a list of all configured PBXs displays.

Figure 4-3 Selecting or Adding a PBX

PBX Name	IP Address	Office Code	PBX Type	Split Call Forward	RM Bind Name
FPC1	172.24.132.48	555	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC1
FPC3	172.24.132.47	888	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC3
FPC7	172.24.132.20	777	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC7


Step 2 Select the desired PBX to use for mobility users and then click the **Pencil**  **Icon** or click **Add New PBX** and follow the steps below. Figure 4-4 displays.

Figure 4-4 PBX Management—Reserved Number dialog box

Quick Links

[Extension Management](#)

(Warning: Please save any changes made to the page before navigating using any of the above links.)

Monitor Number	Reserved Type	Tenant	Owner
4800	Monitored Number	1	Incoming Call Assistant
4801	Monitored Number	1	Location Status
4802	Monitored Number	1	Mobile Client

Step 3 Select the **Reserved Numbers** tab and click **Add New Monitored Number**. Figure 4-5 displays.

A monitored number must be assigned. This number corresponds to the SV8500/SV7000/IPX command AMNO and SV8300 CM 172 set to 3.

Figure 4-5 Reserved Number dialog box

PBX: SV7000-LAB44

* Number:

* Tenant:

* Reserved Type:

Application:

Apply & Add New Apply Done Cancel

The PBX name is displayed for informational purposes only and cannot be changed.

Step 4 Enter the number to reserve in the **Number** field.

Step 5 Enter the **Tenant** for this reserved number.

Step 6 Select **Monitored Number** for the Reserved Type from the drop-down list.

Step 7 In the Application field, select **Mobility Client**.

Step 8 Click **Apply**.

Assigning a PBX / Mobility UCD Member



NOTE

A Mobility UCD Member is only needed on the SV8300.

- Step 1** From the OW5000 Platform Main Menu (Figure 4-2), select **Platform > PBXs** to display Figure 4-6.

If PBXs have previously been added, a list of all configured PBXs displays.

Figure 4-6 Selecting or Adding a PBX

PBX Name	IP Address	Office Code	PBX Type	Split Call Forward	RM Blind Name
FPC1	172.24.132.48	555	UNIVERGE NEAX2400 IPX		OAServer FPC1
FPC3	172.24.132.47	888	UNIVERGE NEAX2400 IPX		OAServer FPC3
FPC7	172.24.132.20	777	UNIVERGE NEAX2400 IPX		OAServer FPC7

- Step 2** Select the desired PBX to use for a Mobility UCD Member and then click the **Pencil** icon or click **Add New PBX** and follow the steps below. Figure 4-7 displays.

Figure 4-7 PBX Management—Reserved Number dialog box

Monitor Number	Reserved Type	Tenant	Owner
4800	Monitored Number	1	Incoming Call Assistant
4801	Monitored Number	1	Location Status
4802	Monitored Number	1	Mobile Client

- Step 3** Select the **Reserved Numbers** tab and click **Add New Monitored Number**.

A monitored number must be assigned. This number corresponds to the SV8300 CM 172 set to 3. Figure 4-8 displays.

Figure 4-8 Reserved Number—Mobility UCD Member dialog box

The PBX name is displayed for informational purposes only and cannot be changed.

- Step 4** Enter the number to reserve in the **Number** field.
- Step 5** Enter the **Tenant** for this reserved number.
- Step 6** Select **Mobility UCD Member** for the Reserved Type from the drop-down list.
- Step 7** In the Application field, select **Mobile Client**.
- Step 8** Click **Apply**.

Assigning a PBX / Mobility UCD Pilot



NOTE

A Mobility UCD Pilot is only needed on the SV8300.

- Step 1** From the OW5000 Platform Main Menu (Figure 4-2), select **Platform > PBXs** to display Figure 4-9.

If PBXs have previously been added, a list of all configured PBXs displays.

Figure 4-9 Selecting or Adding a PBX

PBX Name	IP Address	Office Code	PBX Type	Split Call Forward	RMI Bind Name
FPC1	172.24.132.48	555	UNIVERGE NEAX2400 IPX		OAServer FPC1
FPC3	172.24.132.47	888	UNIVERGE NEAX2400 IPX		OAServer FPC3
FPC7	172.24.132.20	777	UNIVERGE NEAX2400 IPX		OAServer FPC7


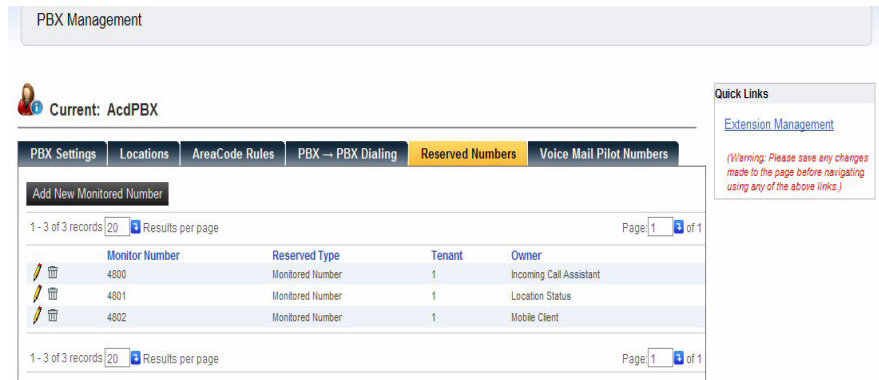
- Step 2** Select the desired PBX to use for Mobility UCD Pilot Members and then click the **Pencil**  **Icon** or click **Add New PBX** and follow the steps below. [Figure 4-10](#) displays.

Figure 4-10 PBX Management—Reserved Number dialog box

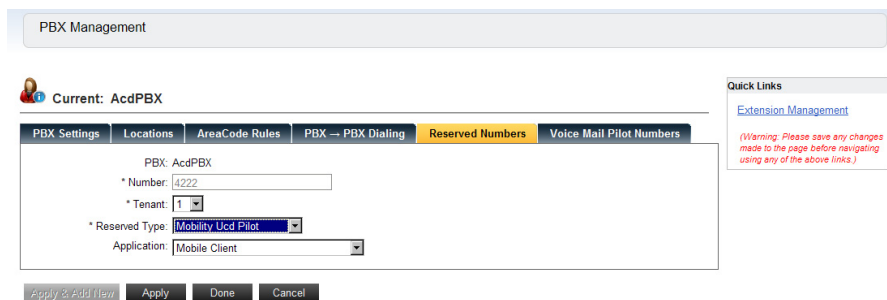


Monitor Number	Reserved Type	Tenant	Owner
4800	Monitored Number	1	Incoming Call Assistant
4801	Monitored Number	1	Location Status
4802	Monitored Number	1	Mobile Client

- Step 3** Select the **Reserved Numbers** tab and click **Add New Monitored Number**.

A monitored number must be assigned. This number corresponds to the SV8300 CM 172 set to 3. [Figure 4-5](#) displays.

Figure 4-11 Reserved Number—Mobility UCD Pilot dialog box



The PBX name is displayed for informational purposes only and cannot be changed.

- Step 4** Enter the number to reserve in the **Number** field.
- Step 5** Enter the **Tenant** for this reserved number.
- Step 6** Select **Mobility UCD Pilot** for the Reserved Type from the drop-down list.
- Step 7** In the Application field, select **Mobile Client**.
- Step 8** Click **Apply**.

MLSO Reserved Numbers

Telephony Base Remote Status Change

Follow the steps below to assign reserve numbers for use by MC550 to allow users to change their location status by dialing specific numbers.



NOTE

Repeat the steps for each status made available for the users.

These numbers will then be mapped on the MC550 allowing the Mobility user to call a predefined number to change their status.

Step 1 From the OW5000 Platform Main Menu (Figure 4-2), select **Platform > PBXs** to display Figure 4-12.

If PBXs have previously been added, a list of all configured PBXs displays.

Figure 4-12 Selecting or Adding a PBX

PBX Name	IP Address	Office Code	PBX Type	Split Call Forward	RMI Bind Name
FPC1	172.24.132.48	555	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC1
FPC3	172.24.132.47	888	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC3
FPC7	172.24.132.20	777	UNIVERGE NEAX2400 IPX	<input type="checkbox"/>	OAServer FPC7

Step 2 Select the desired PBX to use for Mobility L.S. Override and then click the **Pencil** **Icon** or click **Add New PBX** and follow the steps below. Figure 4-13 displays.

Figure 4-13 PBX Management—Reserved Number dialog box

Monitor Number	Reserved Type	Tenant	Owner
4800	Monitored Number	1	Incoming Call Assistant
4801	Monitored Number	1	Location Status
4802	Monitored Number	1	Mobile Client

Step 3 Select the **Reserved Numbers** tab and click **Add New Monitored Number**.

A monitored number must be assigned. This number corresponds to the SV8500/SV7000/IPX command AMNO and SV8300 CM 172 set to 3. Figure 4-14 displays.

Figure 4-14 Reserved Number—Mobility L.S. Override dialog box

PBX Management

Current: AcdPBX

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

PBX: AcdPBX

* Number: 4222

* Tenant: 1

* Reserved Type: Mobility L.S. Override

Application: Mobile Client

Apply & Add New | Apply | Done | Cancel

Quick Links

[Extension Management](#)

(Warning: Please save any changes made to the page before navigating using any of the above links.)

The PBX name is displayed for informational purposes only and cannot be changed.

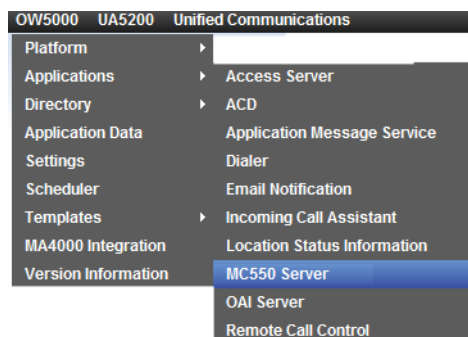
- Step 4** Enter the number to reserve in the **Number** field.
- Step 5** Enter the **Tenant** for this reserved number.
- Step 6** Select **Mobility L.S. Override** for the Reserved Type from the drop-down list.
- Step 7** In the Application field, select **Mobile Client**.
- Step 8** Click **Apply**.

MC550 Server Settings

Follow the steps below to configure the MC550 Server setting.

- Step 1** From the OW5000 Platform Main Menu (Figure 4-2), select **Applications > MC550 Server** (Figure 4-15). A PBX Settings dialog box displays (Figure 4-16).

Figure 4-15 MC550 Server dialog box



Use the steps below to configure PBX Settings and User Settings.

PBX Settings

Figure 4-16 PBX Settings dialog box

MC550 Server

PBX Settings User Settings

PBX: Dana-Pbx

IP Address: 172.24.132.36

PBX ID: 222

RMI Bind Name: OAIserver.Dana-Pbx

Client Server Port: 44012

PBX Type: UNIVERGE SV8500

Split Call Forward: No

Port: 60030

Force Port: Yes

Heartbeat: Yes

Selected: ☒

Use OAI Server: No

Data Mode: 132 | Mobility

LED Number: 13 | Mobility

Database Refresh Timer (min): 1 (Default value 5 min)

VMMA Short Timer (sec): 3 (Suggested value 2-6 sec)

VMMA Long Timer (sec): 36 (Suggested value 15-40 sec)

SMFN Version: 5 (Default value 2)

Special Outbound Dial Prefix:

Default Outbound Caller ID:

Send Caller ID for Outbound Dial: ☒

Calling Name Override from Database: ☒

Telephony Status Change Success Announcement: 1

Telephony Status Change Failure Announcement: 2

RESERVED LINE SETTINGS

Dial 2500: 2142620150 At Lunch

Dial 2501: 2142620151 Away from Desk

Dial 2502: 2142620152 Busy

Dial 2503: 2142620153 Gone Home

Dial 2504: 214262015412345* On Business Trip

Apply Cancel



Please refer to [A](#) for detailed descriptions of each setting.

- Step 1** Select the desired **PBX** from drop-down menu, then set the **Selected** check box.
- Step 2** Select the Mode number to use for this PBX's Move Call key (same as AOKC OP-CODE).
- Step 3** Select the LED number used for this PBX's Move Call Key (same as AOKC Key Number).
- Step 4** Enter **3** as the **VMMA Short Timer (Sec)** value.
- Step 5** Enter **32** as the **VMMA Long Timer (Sec)** value.
- Step 6** The **SMFN Version** should be **2**.

- The VMMA timers and SMFN Version are initial values and should be adjusted depending on the user network settings. This must be tested at the time of the installation. The **Selected** box should also be checked so the system knows this PBX is active in the MC550 system.

User Settings

Select the **User Settings** tab from the PBX Settings dialog box (Figure 4-16) to display Figure 4-17.

Figure 4-17 User Settings dialog box

MC550 Server

PBX Settings User Settings

Filter : Authorization: All Search By : First Name Starts With Search

1 - 10 of 13 records 10 Results per page Page 1 of 2 > >>

First Name	Last Name	Login	AuthorizationName
Administrator	Administrator	admin	MC550 User
Brian	Griffin	bgriffin	MC550 User
Cleveland	Brown	cbrown	MC550 User
Dana	Pope	dpope	MC550 User
Jeff	Agnew	jagnew	MC550 User
Joe	Smith	joe	MC550 User
Jon	Lacy	jlacy	MC550 User
Kenneth	Coombes	kcoombes	MC550 User
Larry	Barnett	lbarnett	MC550 User
Presence	10000	1000	MC550 User

1 - 10 of 13 records 10 Results per page Page 1 of 2 > >>

Apply Cancel

Quick Links

[Person Management](#)

(Warning: Please save any changes made to the page before navigating using any of the above links.)

- Step 1** Select the desired user from the User Settings dialog box or use the **Search** function to search for the user.
- Step 2** Click the **Pencil** icon next to the desired user to edit their settings. Figure 4-17 displays.

Figure 4-18 User Settings—Edit dialog box

MC550 Server

PBX Settings User Settings

User: Griffin, Brian

Connect to Call if answered after: 6 Seconds

Connect to Call if answered before: 0 Seconds

Caller id to be Displayed for Click to Call:

SMS Voice Mail Notification: ☐

MC550 Contact End Point: Mobile Phone

RESERVED LINE LOCATION STATUS OVERRIDES

Dial 2142620150 / 2500: At Lunch

Dial 2142620151 / 2501: Away from Desk

Dial 2142620152 / 2502: Busy

Dial 2142620153 / 2503: Gone Home

Dial 214262015412345* / 2504: On Business Trip

Apply Cancel

Quick Links

[Person Management](#)

(Warning: Please save any changes made to the page before navigating using any of the above links.)

- Step 3** In the **Connect to Call if answered after** text field, select the desired amount of time from the drop-down list.
- Step 4** In the **Connect to Call if answered before** text field, select the desired amount of time from the drop-down list.
- Step 5** Click to select the **SMS Voice Mail Notification** option. This option will send a SMS message to the mobile user when the message waiting light of their primary extension is on.
- Step 6** The **Reserved Line Location Status Overrides** can be changed by selecting the desired status from the drop-down list for each number listed.
- Step 7** Click **Apply** to save the changes or **Cancel** to exit the dialog box without saving the changes.



NOTE

To change the message under the **Quick Links**, select **Application Data** from the OW5000 menu. Refer to the OW5000 Configuration Guide for more information.

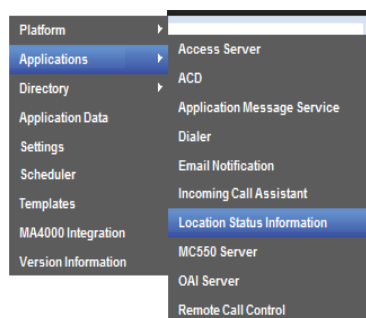
Location Status Information/Message Settings

UC700 users are able to multi-ring their mobile phone by creating contact rules using UC700. However, for non-UC700 users, you will have to define a default Presence Status that will enable multi-ringing of their mobile phone.

Follow the steps below to configure the Location Status Information (LSI) settings and the Message Settings.

- Step 1** From the OW5000 Platform Main Menu (Figure 4-2), select **Applications > Location Status Information** (Figure 4-19). **Step 2** displays.

Figure 4-19 Location Status Information



- Step 2** Select **Message Settings**. Figure 4-20 displays.

Figure 4-20 LSI—Message Settings dialog box

Location Status Information

Server Settings | **Message Settings** | PBX Settings

Add New Message

1 - 10 of 13 records | 10 Results per page | Page: 1 | > >>

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	
Mobility		
Offline		
On Break	break	
On Business Trip	biz_trip	

1 - 10 of 13 records | 10 Results per page | Page: 1 | > >>

Apply Cancel

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: -Not Set-

Dropdown menu for Default Mobility:
 -Not Set-
 At Lunch
 Available
 Away from Desk
 Busy
 Gone Home
 In a Meeting
 Mobility
 Offline
 On Break
 On Business Trip
 On Vacation
 Out Of Office
 Undisclosed

- Step 3** Select the desired status to be set for **Default Mobility**, or add a new status for the default mobility. When deciding whether to add a new status or not, consider the following:

All the system-wide presence settings on the left are available to be assigned to Default Mobility in the drop-down box. Once assigned, if a non-UC700 MC550 user has a matching presence status, and someone calls their primary desk extension, then their Mobile Phone will ring also. This assumes that the MC550 user has been assigned a Mobile Phone number by the OW5000 Administrator.

Note that this Default Mobility setting is global for all non-UC700 MC550 users. Thus, multi-ringing will only work for these users if they have a presence status that matches what is assigned on this page. Also note that multi-ringing will only ring the Mobile Phone number for non-UC700 MC550 users. No other defined external numbers will be rung.

The default status for non-UC700 users is "Offline". A non-UC700 user can change their status a couple of ways. One is by assigning the user an LSI button on their phone to allow them to change their status. The other way is for the user to login to the MC550 web page and change their status on the web site.

If non-UC700 MC550 users will not be granted access to change their status, then one should assign the status "Offline" to the Default Mobility field. With this setting, if non-UC700 MC550 users are unable to change their status, then their mobile phone will ALWAYS ring when their desk phone is rung.

Users may want more control over when multi-ringing is enabled. To accomplish this one would create a new system presence status. One needs to do this because this Default Mobility setting is global, and one user may feel that a presence status of Available should enable multi-ringing of their cell phone, while another user does not. So to avoid confusion one should create a new presence status that clearly means that MC550 functionality is enabled. Then one would give users the

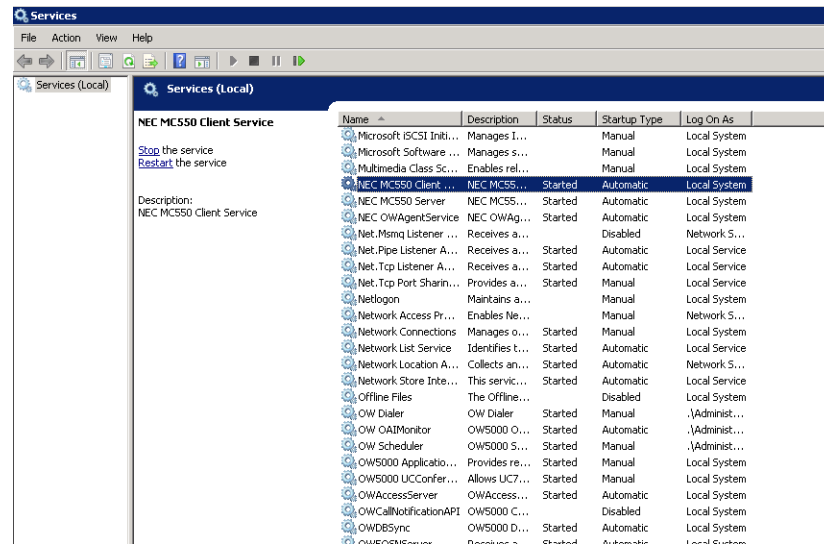
ability to change their status with either an LSI key on their desk phone, or by logging into the MC550 Website.

Step 4 Click **Apply**.

Starting the Services

Step 1 To start the server from your desktop, select **Start > Programs > Administrative Tools > Services**. Figure 4-21 displays.

Figure 4-21 Services dialog box



Step 2 Right-click on the MC550 Server and select **Start**.



The service will start automatically after the initial installation.

Step 3 Right click on the MC550 Client service and select **Start**.

Configuring MC550 Users

MC550 users can use contact rules to determine when calls should Multi-ring to their contact methods.

If a MC550 user is also a UC700 user, they will always use contact rules. If a MC550 user is not a UC700 user, they can select whether or not to use rules on their MC550 Call settings page. Once the system is running, it may take several minutes for new users to become operational.

Each user must be allowed access to the application. The following topics are included in this section.

User Configuration

- Step 1** Login to the OW5000 Administrator by following the steps in “[Logging into OW5000 Administrator](#)” on page 4-2.
- Step 2** From the OW5000 Platform Main Menu ([Figure 4-2](#)), select **Directory > Users** to display [Figure 4-22](#). This option allows you to manage user information, and to add or change application and role privileges.

Figure 4-22 Directory—User Management dialog box

User Management

SEARCH USERS

Filter By: Last Name Starts With Search

1 - 10 of 1193 records 10 Results per page Page: 1 of 120 > >>

Last Name	First Name	Full Name	Login ID
"Last abodefghijklmnopqr	"First abodefghijklmnopqr	"Last abodefghijklmnopqr, "First abodefghijklmnopqr"	unknown
"Last abodefghijklmnopqr	"First abodefghijklmnopqr	"Last abodefghijklmnopqr, "First abodefghijklmnopqr"	unknown
10000	Presence	10000, Presence	10000, Presence
10000	Presence	10000, Presence	10000, Presence
10001	Presence	10001, Presence	10001, Presence
10001	Presence	10001, Presence	10001, Presence
10002	Presence	10002, Presence	10002, Presence
10002	Presence	10002, Presence	10002, Presence

1 - 10 of 1193 records 10 Results per page Page: 1 of 120 > >>

USER INFORMATION

* Login ID: 1000

* New Password: *****

* Confirm New Password: *****

NTLM Login ID:

☐ Login is disabled

☐ Password never expires

Employee Name: 10000, Presence

APPLICATIONS AND ROLES

☐ DBTool - Import/Export OW5000 Data DbTool User

☐ Message Center MC Admin Recipient

☒ Mobile Client MC550 User

☒ OW5000 Administrator OW5000 Administrator

☐ OW5000 Platform Web Directory Web Directory User

☐ Procedure Manager Administrator Procedure Manager Admin

☐ UA5200 On-Call On-Call Admin User

☐ UA5200 Room Direct Room Direct Administrator

☒ UA5200 Server UA5200 Administrator

☒ UC700 UC700 ACD User

☐ UCE Emergency On-Site Notification E-OSN Administrator

☐ Wake-Up Wake Up Operator

Apply

Quick Links

[Person Management](#)

(Warning: Please save any changes made to the page before navigating using any of the above links.)

- Step 3** Select the desired user or use the **Search Users** option. In the **APPLICATIONS AND ROLES** section, check **Mobile Client** and then select MC550 User from the drop-down list.
- Step 4** If this user is also to use UC700, verify that **UC700** is also selected in the **APPLICATIONS AND ROLES** section.

Contact Methods

If a user is not using rules, they have a Mobile Phone Contact when in Default Mobility Status. Follow the steps below to add a Mobile Phone contact method and a Dual Mode Number.

Mobile Phone Contact Number


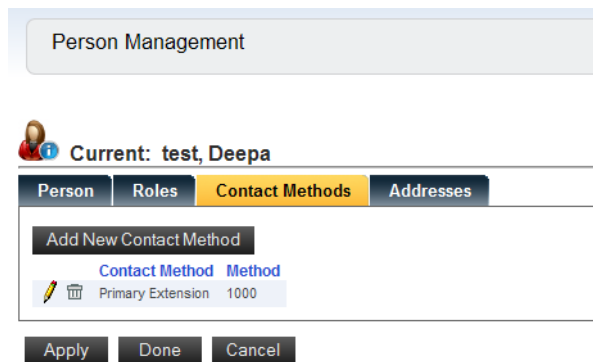
- Step 1** From the OW5000 Platform Main Menu (Figure 4-2), select **Directory > People** to display a list of persons. Find the correct person and click the **Pencil**  icon next to the desired user to edit.
- Step 2** Select the **Contact Methods** tab. Figure 4-23 displays.

Figure 4-23 Contact Method—Mobile Phone dialog box





Person Management

Current: test, Deepa

Person Roles **Contact Methods** Addresses

Add New Contact Method

Contact Method	Method
  Primary Extension	1000

Apply Done Cancel

- Step 3** If a Mobile Phone does not appear as a contact method, click the **Add New Contact Method** button.
- Step 4** Select **Mobile Phone** as the contact method and enter the desired Number of the Mobile Phone.
- Step 5** Click **Apply**.

Dual Mode Contact Number



This is only needed for uMobility users.

Figure 4-24 Contact Method—Dual Mode Number dialog box

Step 1 Select the **Priority** number and the PBX from the drop-down list.

Step 2 Enter the **Extension** number for the Dual Mode number and the desired **Confidentiality Status**.

Step 3 Click **Apply**

Configuring Extensions



Extensions must be configured for all users.

When a user receives a call on their external number, the MC550 Server will attempt to send the calling number. This means that for calls from internal extensions, the MC550 will attempt to send a full call back number, not merely the extension. In order for the MC550 Server to do this, the OW5000 database should be populated such that every extension reachable from outside be associated with a call back number.

The following steps must be completed to assign a DID number to an extension. Do this for each extension in the database.

Step 1 From the OW5000 Platform Main Menu (Figure 4-2), select **Platform > Extensions**. Figure 4-25 displays.

Figure 4-25 Extension Management dialog box

Extension Management

Add New Extension

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

1 - 10 of 10 records 20 Results per page Page 1 of 1

	PBX	Extension	Tenant	SIP URI	E164 Number
	FPC7	1000	1		2142621000
	FPC7	1002	1		2142621002
	FPC7	1003	1		2142621003
	FPC7	1004	1		2142621004
	FPC1	2000	1		
	FPC1	2002	1		
	FPC1	2900	1		
	FPC1	2902	1		
	FPC3	4210	1		
	FPC3	4211	1		

1 - 10 of 10 records 20 Results per page Page 1 of 1

Range Delete

Step 2 Click the **Pencil** icon on the desired extension to display [Figure 4-26](#).

Figure 4-26 Extension Number dialog box

Extension Management

*Extension: #

* PBX: AddPBX

* PhoneType: Analog

* Tenant: 1

Country: United States of America (1)

DID Number: []

telURI: [] Auto Input

SIPURI: [] Auto Input

SIP Access Server: Not Assigned

Collaboration: ☐ 1

Is Monitored: ☐

Sublines: Add Subline []

There are no sublines defined.

Apply & Add New Apply Done Cancel

Step 3 Enter the number in the DID Number field. Continue until all extensions are configured.

5

Advanced OW5000 Configuration

This chapter describes the advanced configuration for the MC550 Web Site.

Securing a Connection

By default, the MC550 Web Site connection to the OW5000 is not secured. In other words, the data that flows between them is not encrypted.

If one were able to capture data packets in this flow (a difficult proposition in an Ethernet switched environment, but not impossible), then one would be able to discover an MC550 user's login and password as well as view other data such as Current Status. This may or may not be an issue in your private LAN; it depends on the security policy in your organization and other safeguards put into place.

If your organization requires that the MC550 to OW5000 connection be secure, OW5000 has the capability to use the security protocol TLS (also known as SSL) to secure the connection. SSL provides confidentiality for your MC550 data, including the login and password, by encrypting the connection. In addition, SSL uses certificates so that the MC550 Web Status Page will connect only to the correct OW5000 server and not to a bogus server.

The following topics are included in this chapter:

Chapter Topics

- [*Securing a Connection*](#)
- [*Server Certificate*](#)
- [*Configurations to Use a Secure Connection*](#)

Server Certificate

Use the information below to obtain and install a service certificate.

Obtaining a Service Certificate for the OW5000

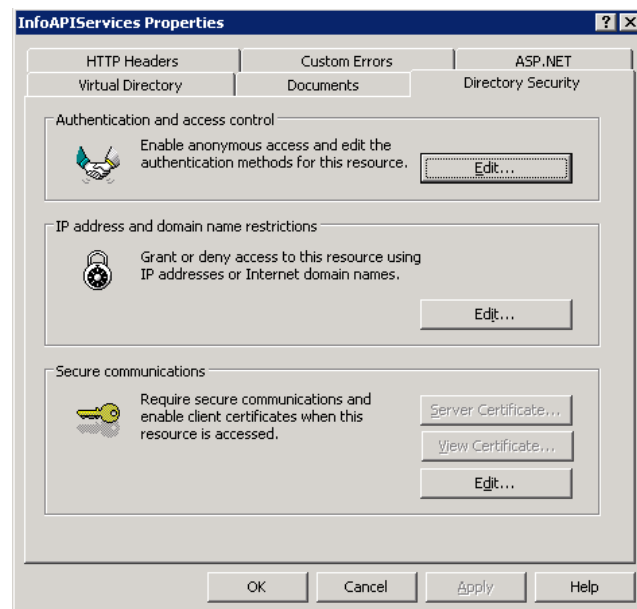
There are several ways to obtain a server certificate for the OW5000. One method is described below and is based on instructions by Microsoft. The instructions can be found at <http://msdn.microsoft.com/en-us/library/aa302411.aspx>.

Follow the steps below to create a new certificate request, which can be sent to a Certificate Authority (CA) for processing. If successful, the CA will send back a file containing a validated certificate.

Step 1 To generate a certificate request, start **Internet Information Services (IIS) Manager**, expand the server, and then select **Default Web Site**.

Step 2 Right-click **InfoAPIServices** and click **Properties**. [Figure 5-1](#) displays.

Figure 5-1 InfoAPI Services Properties



Step 3 Click the **Directory Security** tab.

- Step 4** Click the Server Certificate button within Secure communications to launch the Web Server Certificate Wizard and follow the instructions in the Wizard.



The common name is one of the most significant pieces of information in the certificate. It is the name of the OW5000. If the certificate name doesn't match the OW5000 name, the MC550 Web Site will not be able to connect to OW5000. If your OW5000 has a DNS name of "ow5000.abc-corp.com" and the MC550 web server can resolve the DNS name to an IP address, then this name is what you should specify for the common name. You may need to ensure that the internal DNS servers have an entry for the OW5000 server.

Alternately, if your OW5000 has a NetBIOS name of "ABC-OW5000" and the MC550 web server can resolve the NetBIOS name to an IP address, then this name is what you could specify for the common name.

- Step 5** When the Web Server Certificate Wizard is complete, save the certificate file when prompted.

This file should be sent to the Certificate Authority (CA). The CA then uses your public key information from the certificate request to verify information signed with your private key. The CA also verifies the information supplied in the request.

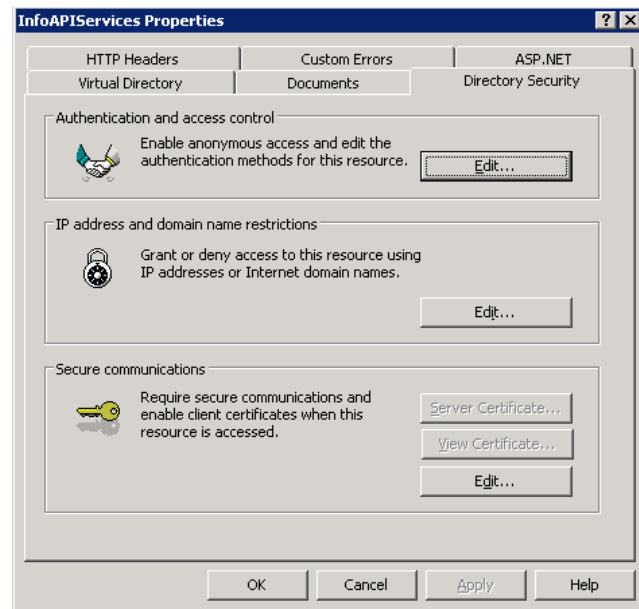
The CA varies from organization to organization. It may be your corporate IT group, or you may need to submit to a root CA company.

Installing a Server Certificate on the OW5000 Server

After submitting the OW5000 certificate request to a CA, the CA returns a server certificate for the OW5000. Use the following steps to install the server certificate on the OW5000 server.

- Step 1** Start **IIS Manager**, expand your server name, and select **InfoAPIServices**.
- Step 2** Right-click on **InfoAPIServices** and select **Properties**. [Figure 5-2](#) displays.

Figure 5-2 InfoAPI Services Properties



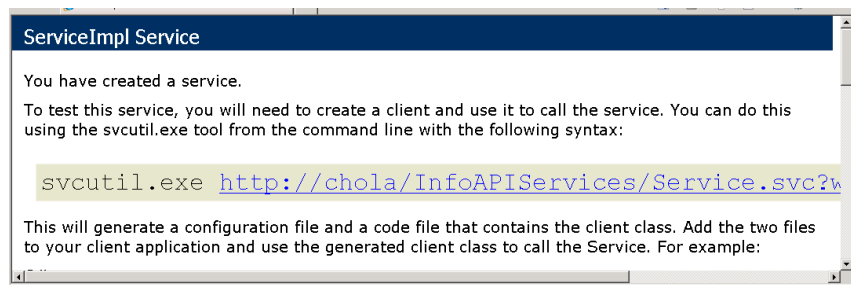
- Step 3** Select the **Directory Security** tab.
- Step 4** Click **Server Certificate** to start the IIS Certification Wizard.
- Step 5** Select **Process the pending request and install the certificate**.
- Step 6** Enter the Path to the certificate received from the CA and click **Next**.
- Step 7** Leave the SSL port to the default of 443 and click **Next**. A Certificate Summary displays.
- Step 8** Click **Next** if it is correct.
- Step 9** Select **Finished**.

Testing a Certificate

If desired, test the certificate to be sure it is working. To test the certificate, open a web browser on the MC550 Web Site server and browse to the OW5000 INFOAPI URL; such as <https://ow5000.abc-corp.com/InfoAPIServices/Service.svc>. If the page displays, the certificate has been installed successfully.

If the installed server certificate was not signed by a well-known CA, a warning displays that there is a problem with the OW5000 certificate. Do not be concerned because this warning will not display after the CA certificate is installed on the MC550 Web Site. The MC550 Web Site will then be able to connect to the OW5000.

Figure 5-3 Certification Testing



Configurations to Use a Secure Connection

Configuring the OW5000 INFOAPI Web Site

Use the steps below to configure the OW5000 InFOAPI Web Site to use a secure connection.

- Step 1** Open **Windows Explorer** on the OW5000 server and browse to the **Program Files\NEC\OW5000\INFOAPIS** directory.
- Step 2** Right-click on the existing file **web.config** and rename it **web.nonssl.config**.
- Step 3** Right-click on the existing file **web.ssl.config** and rename it to **web.config**.
- Step 4** Save the changes and then close the file.
- Step 5** Restart the web site using IIS Manager.
(re-start the default web site and default application pool; or if a separate INFOAPI application pool is used, restart that pool).

InfoAPI should now be accessible using
<https://localhost/InfoAPIServices/Service.svc>.

6

Maintaining the MC550 System

This chapter provides details on maintaining the MC550 system.

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](#)

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	-	-	-
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.

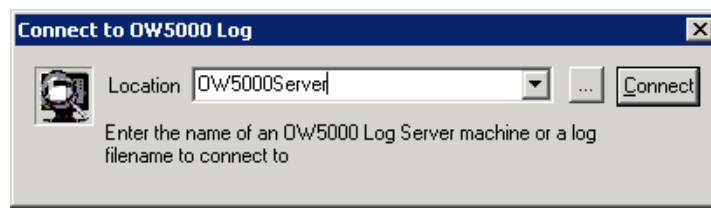
Starting Log Viewer

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 6-1).

Figure 6-1 Connect to OW5000 Log dialog box



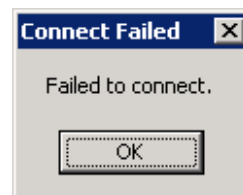
- Step 2** In the **Location** field, type the name where the Log Server is to connect.

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. A Connect Failed dialog box displays if it failed (Figure 6-2).

- Step 3** Click **OK** and try again beginning with [Step 2](#).

Figure 6-2 Connection Failed dialog box



- Step 4** Click the **Connect** button, a Log Viewer Main Window displays if it is connected successfully.

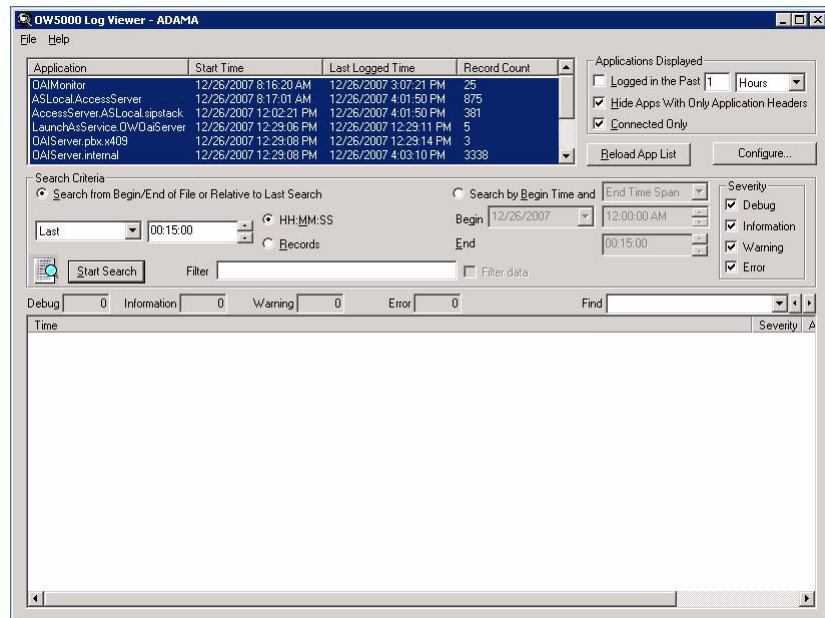
Log Viewer Main Window

Starting the Log Viewer program displays the Log Viewer Main Window, shown in [Figure 6-3](#). 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.
- View log file information.
- Print log file information.
- Save query results and bookmark them for easy access.
- In Real-time Query mode, Real-time event information displays.
- Change the application log level. Maintenance of log files.
- Change query mode between Standard Query mode and Real-time Query mode.

Figure 6-3 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 6-4 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 6-5).

Figure 6-5 Log Viewer Menu Bar

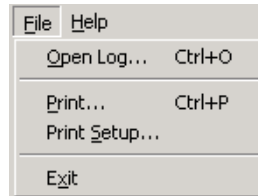


Each menu item contains various menu options. Each menu item and its corresponding menu options are described below:

File Menu

The **File** menu options are Open Log, Print, Print Setup, and Exit. A brief description of each option is listed below.

Figure 6-6 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.

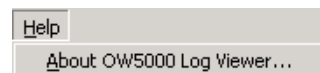
Exit

Closes Log Viewer.

Help Menu

The **Help** menu option is About OW5000 Log Viewer. A description of this option is listed below ([Figure 6-7](#)).

Figure 6-7 Help Menu



Appendix A

MC550 Server PBX Settings Details

As referenced in [Chapter 4](#), detailed descriptions of each field in the PBX Settings dialog box is explained below.

- **Data Mode:**
Set the Data Mode key that MC550 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 (AKYD) on each user's Dterm in order for the MC550 Move function to be available to the user.

The value ranges from 128 to 191 and should match the OPCODE in the AOKC command on the UNIVERGE SV8500, and command D7 on the UNIVERGE SV8300.

- **LED Number:**
Set the LED Number that the MC550 Move function lights when active on the Dterm. This data directly relates to the KEY-CODE assigned in the AOKC command on the UNIVERGE SV8500, and command D7 on the UNIVERGE SV8300.

- VMMA Short Timer (sec) and VMMA Long Timer (sec):
See ["Setting the MC550 VMMA Timers" on page A-2](#) of this Appendix. These can also be adjusted, on a per user basis, from the MC550 Application page by selecting the **User Settings** tab. For more information, refer to ["User Settings" on page 4-11](#).
- Special Outbound Dial Prefix:
This field can be used to force the MC550 to dial out to the mobile contacts using a special dial code so as to force it to pick an ISDN or SIP route in a mixed trunking environment. This would be a code that was programmed in the voice server as an LCR code to a specific route.
- Default Outbound Caller ID:
This is the caller ID sent to Mobile Contacts if no valid caller ID for the calling part can be found.
- Send Caller ID for Outbound Dial:
Selecting this box tells the MC550 Server to pass the incoming or database referenced caller ID out to the mobile contacts.
- Calling Name Override from Database:
This check box tells the MC550 to override the incoming name provided by ISDN or voice system programming with the name assigned in the OW5000 database, if found. This is used on outgoing calls to mobile contacts for multi-ring cases.

Setting the MC550 VMMA Timers

The MC550 uses a combination of 3 timers for voice mail message avoidance (VMMA).

- MC550 VMMA Short Timer
- MC550 VMMA Long Timer
- PBX Predictive Dial Timer



NOTE

The VMMA timers are per user in MC550 R3.0.

The MC550 VMMA Short Timer is used to avoid cellular voice mail when the hand set is powered off or out of service. If the MC550 application receives an answer signal from the outgoing trunk before the VMMA Short timer expires, it assumes this was the cellular network voice mail answering and releases the trunk, leaving the original call ringing on the desk station.

The MC550 VMMA Long Timer is used to avoid the Cellular network voice mail answering after the handset has been rung and does not answer. If the MC550 Application receives an answer signal from the trunk after this timer has expired, it assumes this is the cellular network voice mail answering and releases the trunk, leaving the original call ringing on the desk station.

The PBX Predictive Dial timer is used to make sure that an unanswered call to a mobile contact always gets released after a set amount of time.

This will avoid accidental trunk lockups if the application is shutdown or if some failure is encountered. This timer is cleared as soon as the PBX receives an answer signal from the trunk. This timer is automatically set larger than the VMMA Long timer. It is a normal TC * MTC PBX timer and has a fixed TC value of 8 seconds. MTC is the $((\text{VMMA Long Timer} / 8) + 1)$. As with all PBX timers, this timer will vary within 1 TC value. For example, if the MTC is set to 3. $\text{TC} * \text{MTC} = 24$ so the timer would be a range from 24 to 32 seconds.

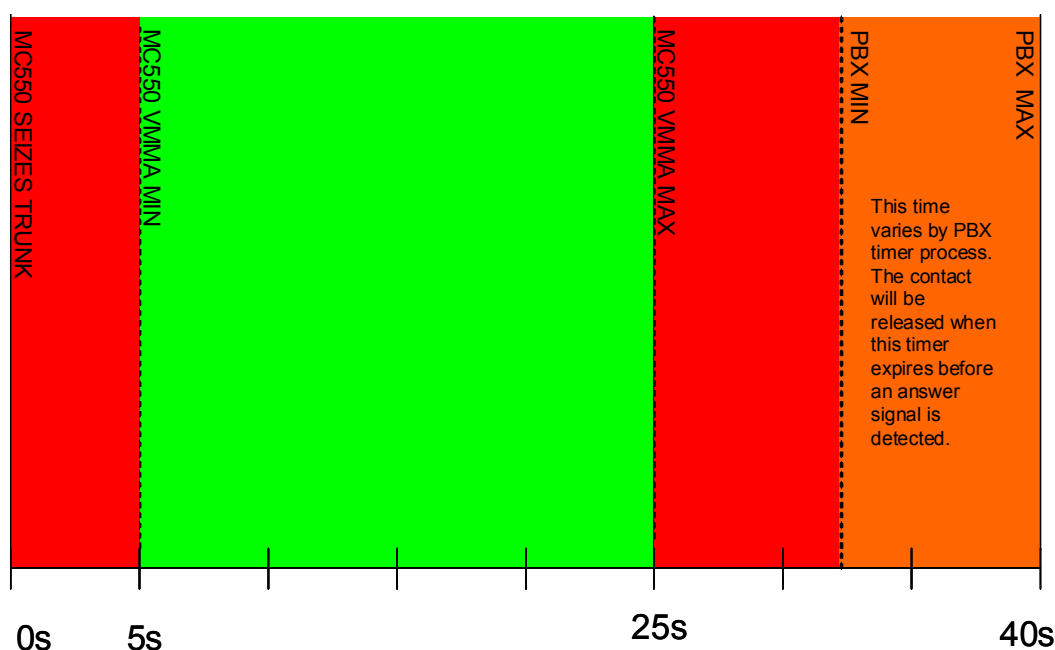


NOTE

These timers only affect calls that are answered by external contacts, not the primary extension.

In the following example, the MC550 VMMA Short timer is set to 5 seconds and the VMMA Long timer is set to 25 seconds. The PBX Predictive Dial timer will be 32-40 seconds.

- Only calls answered in the Green area will result in a completed mobile call.
- Calls answered in the Red or Orange area will be released by the MC550 application because of VMMA detection.
- Calls that are not answered will be released by the PBX in the orange area.



Appendix B

MC550 Caller ID

How MC550 Caller ID Works

Listed below are important notes about trunk providers and cell networks.

Trunk Provider

MC550 uses a variety of methods to find a number and a name to send as the Caller ID when MC550 server calls an external number. However, the trunk (ISDN or SIP) provider must not filter Caller ID to fully realize Caller ID for MC550. Listed below are some typical issues that you may need to resolve with your provider:

- The trunk is setup to send only the billing number for the trunk. In this case the provider will send only this number as the caller ID, regardless of what MC550 sends.
- The trunk is setup to send only numbers that belong to your business. In this case, caller ID will work for calls from internal callers. But, for calls from external numbers, the provider will send the billing number for the trunk as the caller ID, regardless of what MC550 sends.
- The provider may be willing to provide exceptions to most businesses to allow any number to be sent (by a signed agreement), but they are unable to make an exception for you because the ISDN switch you are connected to is unable to support this exception.
- The trunk may be setup to only send a predefined name as the Caller ID name. The provider will send only this name, regardless of what MC550 sends.

Cell Networks

Most North American cell networks are not passing Caller ID names to cell phones.

Important OW5000 Settings

The MC550 Server application settings include the following Caller ID related fields.

Default Outbound Caller ID:

Send Caller ID for Outbound Dial: ☒

Calling Name Override from Database: ☒

Send Caller ID for Outbound Dial

Enable **Send Caller ID for Outbound Dial** for MC550 to provide a calling name and number to the PBX for calls to MC550 external numbers, such as an MC550 user's cell phone.

If **Send Caller ID for Outbound Dial** is not enabled, a number will not be provided and either your trunk gateway or your provider will be relied upon to send the Caller ID they have configured to send.

Default Outbound Caller ID

MC550 will make an attempt to find a DID to send as the calling number, when **Send Caller ID for Outbound Dial** is enabled.

- If the caller is external, and Caller ID is received, the received calling number will be sent as Caller ID.
- If the caller is internal, and there is a DID associated with the caller, the DID will be sent as Caller ID.

If a number is not found to be sent, the **Default Outbound Caller ID** will be sent as the Caller ID.

Calling Name Override from Database

The Calling Name can come from an external callers' received Caller ID, or it can come from an internal caller's PBX assigned name. However, when **Calling Name Override from Database** is enabled, the name in the OW5000 database that is associated with the calling number will be sent instead as the Caller ID.

Associating a DID with an Internal Caller

To associate a DID with an internal caller in OW5000, configure **DID Number** for the calling number in Extension Management. Generally this would be done for every employee extension in the OW5000 database.

DID Number:

Call Scenarios and Caller ID

Red calls Black (MC550 user) which multi-rings Black's cell number:



Red Phone	Display on Red	Caller ID sent to Black's cell
Internal Dterm	Ringing: Black's extension Answered: Black's cell number (Note)	Red's DID
External phone	Black's extension's DID	Red's number

Note: PBX-Dterm limitation

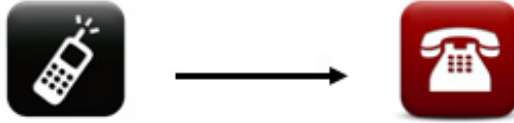
Red calls Black (MC550 user) which multi-rings another Station:



Red Phone	Display on Red	Display on the multi-rung Station
Internal Dterm	Ringing: Black's extension Answered: Black's cell number (Note)	If Dterm: MC550 Monitor number (Note) If SIP Station: Red's DID
External phone	Black's extension's DID	Red's number

Note: PBX-Dterm limitation

Black (MC550 user) uses MC550 Website to call Red from Black's cell phone:



Red Phone	Display on Red	Caller ID sent to Red	Caller ID sent to Black's cell
Internal Dterm	Ringing: Black's extension Answered: Black's cell number (Note 1)	-	Black's extension's DID (Note 2)
External phone	-	Black's extension's DID (Note 3)	Black's extension's DID (Note 2)

Note 1: PBX-Dterm limitation.

Note 2: This is design intent. That way you know that the inbound call was initiated by you and not Red.

Note 3: The MC550 user can override this by configuring a custom Caller ID number, as show in [Figure B-1](#). Sending a custom Caller ID can be useful for scenarios such as when helpdesk employees call external customers with **Click-to-Call** and want to send the main helpdesk number as the Caller ID.

Figure B-1 MC550 Website Call Settings

Call Settings

SMS Voice Mail Notification	Enable <input checked="" type="checkbox"/> (2147327039@bdt.att.net))
Connect The Call if Answered After:	4 (Default) seconds
Connect The Call if Answered Before:	22 (Default) seconds
Caller ID To Be Displayed for Click-to-Call:	2142626000

Proving what Caller ID is Sent

Inspect the MC550 Server debug log. When MC550 server multi-rings an external number, you will see an SCF128_REQ command in the log similar to the following:

```
{INFO } ... SCF128_REQ : 14600 -> 9815558221509 , "" , 5555774200 , 5
```

This is a command from the MC550 telling the PBX to:

- dial from the monitor number 14600
- dial the number 555-822-1509
- send nothing as the calling name ("" means no name was found to send)
- send 555-577-4200 as the calling number.

With such troubleshooting you should be able to prove whether the provider is filtering Caller ID.

*For additional information or support on this NEC Corporation of America product,
contact your NEC Corporation of America representative.*



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Installation Guide**

NDA-31000, Revision 4