OnCell Central Manager User's Manual

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www.moxa.com/product



OnCell Central Manager User's Manual

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Introduction

OnCell Central Manager v2.0 is a powerful tool that makes it possible for two sites configured with **Private IP** addresses to access each other over a public network. More specifically, Ethernet hosts with access to the Internet can be configured to communicate with devices connected to an OnCell unit by connecting to OnCell Central Manager.

The following topics are covered in this chapter:

- ☐ Key Features
- □ Overview
- ☐ OnCell Central Manager Hardware Topology
- ☐ Moxa Device Compatibilities
- ☐ System Requirements
 - > Minimum Hardware Requirements
 - > Software Requirements

Key Features

- The Administrator can manage up to 2000 OnCell devices with OnCell Central Manager, and allow up to 200 simultaneous data connections between hosts and serial/Ethernet device.
- Full support for Windows X64 platforms
- · Auto detects occupied ports to prevent function failures
- · Pie charts present device status and information in a clear and readable format
- Categorized system log with substantial diagnostics information
- Manage, group, monitor, configure, and upgrade the firmware of all your devices from OnCell Central Manager

Overview

OnCell Central Manager makes it possible for multiple sites configured with private IP addresses to access each other over a public network. The sites connect to OnCell Central Manager, which assigns port numbers to each site, thereby allowing hosts to connect to serial and/or Ethernet devices connected to an OnCell device. Furthermore, OnCell Central Manager allows a host to monitor the connection status of an OnCell and the devices connected to it.

OnCell Central Manager supports the following types of accessibility:

- 1. Private IPs hidden from the public domain can communicate directly
- 2. Connect over the Internet to OnCell devices with private IP SIM cards



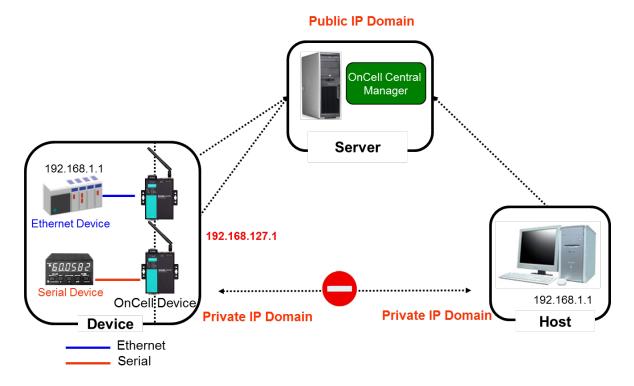
ATTENTION

Throughout this manual:

- OnCell or OnCell device refers to an actual OnCell hardware product (OnCell 5004, for example).
- Connected device refers to an Ethernet device connected directly to an OnCell.
- OnCell Central Manager or OCM refers to software utility which is the topic of this manual.

OnCell Central Manager Hardware Topology

Oncell Central Manager allows private IP hosts and OnCells to communicate with each other over a public network.



Moxa Device Compatibilities

OnCell Central Manager v2.0 is compatible with the following OnCell and WDR models:

- OnCell G3100 series
- OnCell G3100-HSPA series
- OnCell G3111 series
- OnCell G3111-HSPA series
- OnCell 5000 series
- OnCell 5000-HSPA series
- OnCell G3470A-LTE
- WDR-3124A

System Requirements

Minimum Hardware Requirements

- Windows 7 (32-bit or 64-bit)
- 4 GB of RAM
- 300 MB hard drive

Software Requirements

OnCell Central Manager v2.0 has been fully tested, and has been shown to be compatible with the latest Windows operating systems, including Windows 64-bit operating systems.

Compatible operating systems

- X86 OS: Windows 2000 Server, Windows Servers 2003, Windows Server 2008, Windows 7, Windows 8, Windows 2012
- **X64 OS:** Windows 2000 Server, Windows Server 2003, Windows Server 2008, Windows 7, Windows 8, Windows 2012

Browsers:

- Internet Explorer 6.0 or above
- Firefox 37.02
- Chrome

NOTE Windows XP is no longer supported by Microsoft. Moxa recommends using the Windows 7 OS instead.

NOTE Adobe Flash is required to install OnCell Central Manager.

Configuring Your OnCell and Connected Devices

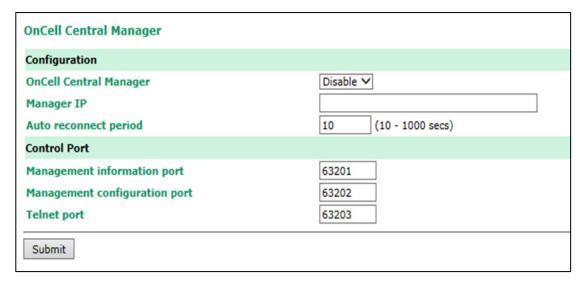
In this chapter, we describe how to use your OnCell's web console utility to configure the OnCell to connect to OnCell Central Manager, and configure the connected devices to connect to the OnCell.

The following topics are covered in this chapter:

- □ OnCell Central Manager Settings
 - > Configuration
 - Control Port
- ☐ Service Forwarding

OnCell Central Manager Settings

After starting your OnCell's web console configuration utility, click **OnCell Central Manager Settings** in the navigation panel (not shown below) and then click **OnCell Central Manager** to open the settings page.



The **OnCell Central Manager** page includes two sections, **Configuration** and **Control Port**, described separately below.

Configuration

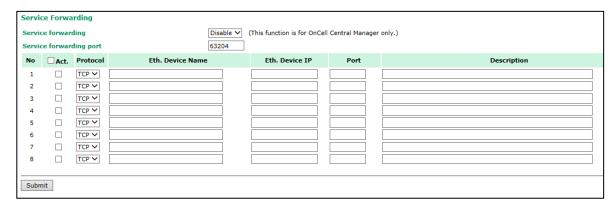
Setting	Description	Factory Default
OnCell Central	Select Enable to allow your OnCell to connect to OnCell	Disable
Manager	Central Manager.	
Manager IP	Enter the public IP address that assigned to Oncell Central	None
	Manager.	
Auto reconnect period	The number of seconds the OnCell will wait before attempting	10
	to automatically reconnect to Oncell Central Manager (input	
	any integer between 10 and 1000).	

Control Port

Setting	Description	Factory Default
Management	This port is used to transfer status information of the OnCell	63201
information port	to OnCell Central Manager. The port number must match the	
	Information port configured in OnCell Central Manager. To	
	prevent port conflicts with other applications, you can set the	
	management information port to a different port number.	
Management	This port is used to transfer configurations from the OnCell to	63202
configuration port	OnCell Central Manager. The port number must match the	
	Configuration port configured in OnCell Central Manager. To	
	prevent port conflicts with other applications, you can set the	
	management information port to a different port number.	
Telnet port	The Telnet port is the TCP port in OnCell Central Manager	63203
	(the server) that is listening for a Telnet connection from	
	OnCells (the hosts). To prevent a TCP port conflict with other	
	applications, you can set the Telnet port to a different port	
	number.	

Service Forwarding

To access the **Service Forwarding** configuration page, expand the **OnCell Central Manager Settings** item in the navigation panel (not shown below) and click **Service Forwarding**.



Settings specific to the OnCell

These settings govern the connection between the OnCell and OnCell Central Manager.

Setting	Description	Factory Default
Service forwarding	Select Enable to allow this OnCell to forward data from	Disable
	devices connected to the OnCell to OnCell Central Manager.	
Service forwarding	The Ethernet port number used to establish an Ethernet	63204
port	connection between this OnCell and OnCell Central Manager.	

Settings Specific to Connected Devices

These settings govern the connection between the OnCell and Ethernet devices connected directly to the OnCell.

Setting	Description	Factory Default
Act.	Select this checkbox to activate the connection between the	unchecked
	Ethernet device associated with this row and the OnCell.	
	Note: If Service Forwarding is set to Enable, the connected	
	device will be able to communicate with OnCell Central	
	Manager.	
Protocol	Select which protocol will be used to establish a connection	TCP
	between the connected device and the OnCell (options	
	include TCP and UDP).	
Ethernet Device Name	A name for the connected device.	N/A
Ethernet Device IP	The private IP address (192.168.xxx.xxx) assigned to the	N/A
	connected Ethernet device.	
Port	The Ethernet port number assigned to the connected Ethernet	N/A
	device.	
Description	A description of the connected Ethernet device.	N/A

Installing OnCell Central Manager

In this chapter, we explain how to install Moxa's OnCell Central Manager and quickly set up and test your network to make sure the connection is running smoothly.

The following topics are covered in this chapter.

- ☐ Installing OnCell Central Manager
- ☐ Using the OCM Server Tool
 - > OCM Server tool Tool Menu

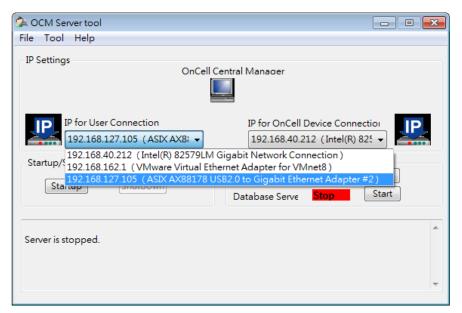
Installing OnCell Central Manager

Access http://www.moxa.com/product/OnCell Central Manager.htm to download OnCell Central Manager v2.0. Be sure to select the download option for the type of OS (32-bit or 64-bit) your system is running.

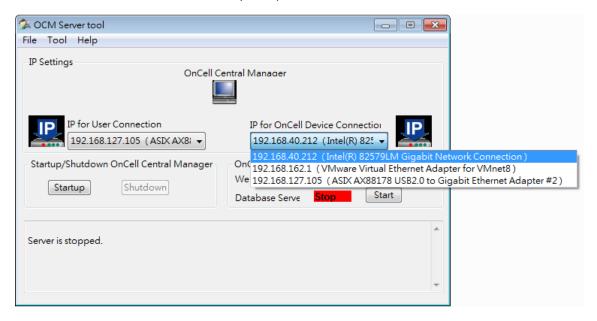


Using the OCM Server Tool

Use the **IP for User Connection** drop-down box to select which IP address OCM users should use to connect to OnCell Central Manager. This will usually be a private IP address.



Use the **IP for OnCell Device Connection** to select which IP address OnCell Central Manager will use to connect to OnCell devices. This will usually be a public IP address.

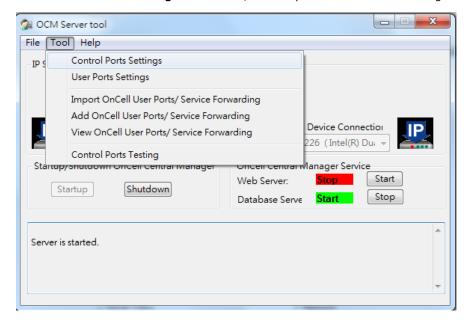


OCM Server tool Tool Menu

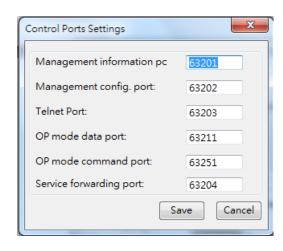
Click the OCM Server tool **Tool** menu to access **Control Port Settings**, **User Port Settings**, and to make use of other functions.

Control Port Settings

Select **Control Port Settings** to view and/or modify the OnCell Central Manager's control ports.

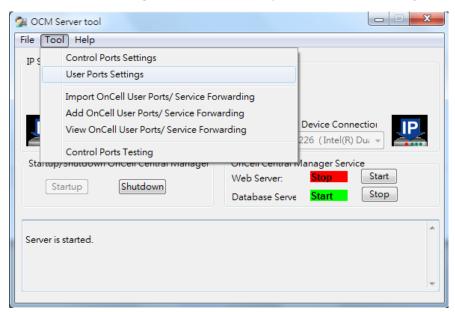


These ports are the communication ports between OnCell Central Manager and OnCell devices. The aim is to allow OnCell Central Manager to access and manage OnCell devices. Make sure the port numbers shown here match the control port numbers in your OnCell devices.

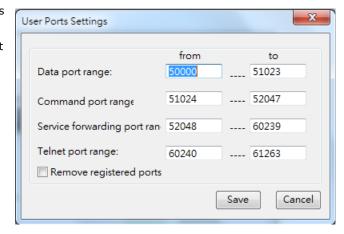


User Port Settings

Select **User Port Settings** to view and/or modify the OnCell Central Manager's user ports.



These ports will generate specific port numbers from the configured ranges. The port numbers will map to the TCP server ports of an Ethernet device connected to an OnCell, or directly connect to a serial device.



OnCell Central Manager Web Server Ports

The following table shows the ports used by OnCell Central Manager. Make sure the port numbers are not already occupied.

OnCell Central Manager Web Server ports:		
Web Server Ports	8005, 8080, 8443	
OCM Service Ports	63201, 63202, 63203, 63204, 63211, 63251	
OCM Monitoring Ports	63206, 63207, 63210	
OnCell Central Manager Database Server ports		
Database Server	1527	

NOTE	The above figures are for illustration purposes only. The actual numbers depend on the connection status
	and network environment.

OnCell Central Manager Web Console Configuration

In this chapter, we describe the web console that you can use to configure OnCell Central Manager, and several advanced functions that are available to manage, monitor, and upgrade the firmware to connected OnCell devices.

The following topics are covered in this chapter:

□ Launching OnCell Central Manager

☐ Server

- Overview
- Control Ports / User Ports Info.
- Change Password
- > Device Group Management
- > Account Management

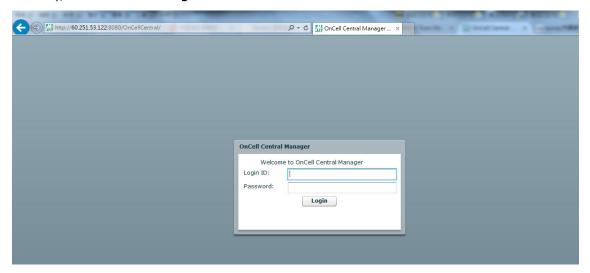
□ Device

- > All Devices
- ➤ Groups
- All User Ports
- Service Forwarding
- > Firmware Upgrade
- > Managing a Single Device
- Device Logout

Launching OnCell Central Manager

To access OnCell Central Manager:

- 1. Open a web browser.
- 2. Enter the OnCell Central Manager's IP address (e.g., http://localhost:8080).
- 3. When the login screen appears, enter the user name (default is "admin") and password (default is "admin"), and then click the **Login** button.



NOTE Default user name and password:

Username: **admin**Password **admin**

For security reasons, we strongly recommend changing the default password. To do so, select **Server** \rightarrow **Change Password**, and then follow the on-screen instructions to change the password.

Server

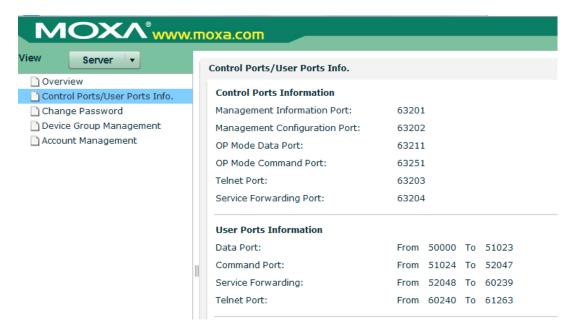
Overview

The Overview screen shows which version of OnCell Central Manager is installed.



Control Ports / User Ports Info.

Click the **Control Ports / User Ports Info.** menu item to display the current port numbers for OnCell Central Manager. For detailed port information, see Chapter 2: Device Web Console Configuration. Port numbers can be modified manually using the device web console.



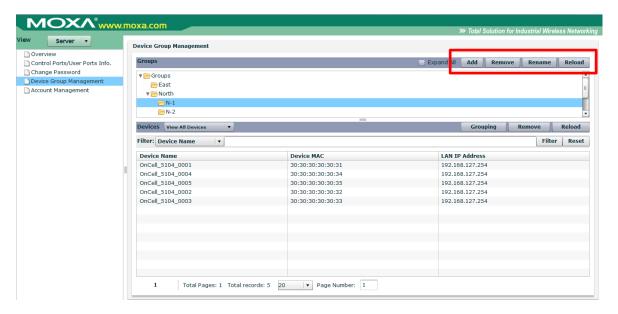
Change Password

Use the **Change Password** function to change your login password. Before you set up a new password, you must input the current password and reenter the new password for confirmation.



Device Group Management

Administrators can use the **Device Group Management** page to manage Groups and allocate devices to specific groups. Use the **Add**, **Remove**, **Rename**, and **Reload** functions to create, delete, or rename groups and sub groups.



Basic Group Management

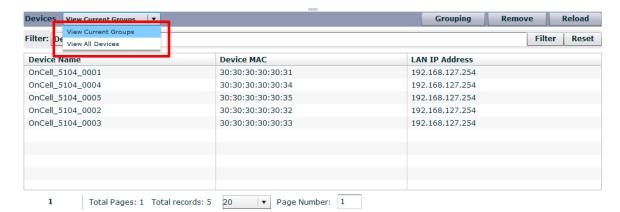
The four basic group management functions, Add, Remove, Rename, and Reload, are described below.



Function Name	Description
Add	Add a new group or sub group to the currently selected item.
Remove	Remove the currently selected group or sub group.
Rename	Rename the current group or sub group.
Reload	Refresh the group listing.

Devices

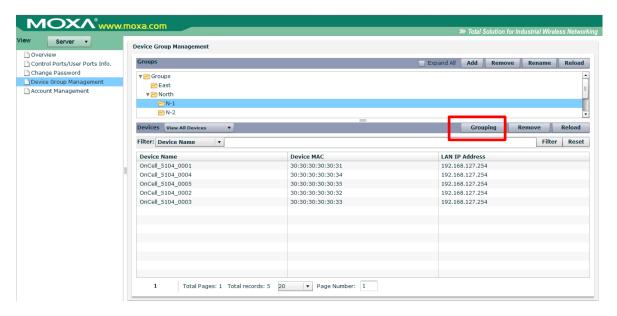
In the **Devices** section of the **Device Group Management** page, you may **View Current Groups** or **View All Devices**.



Viewing Option	Description
View Current Groups	View all of the devices in the currently selected group.
View All Devices	View all of the devices currently registered with OnCell Central Manager.

Grouping

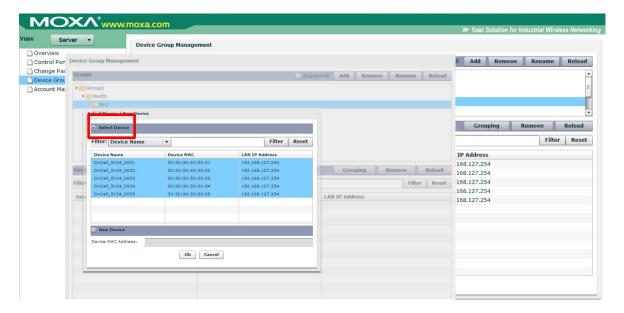
Administrators can add a device to a group, provided the device does not already belong to a group. Click on a specific group and then click **Grouping** to open the **Select Device / New Device** window.



NOTE The same device cannot be added to more than one group at the same time.

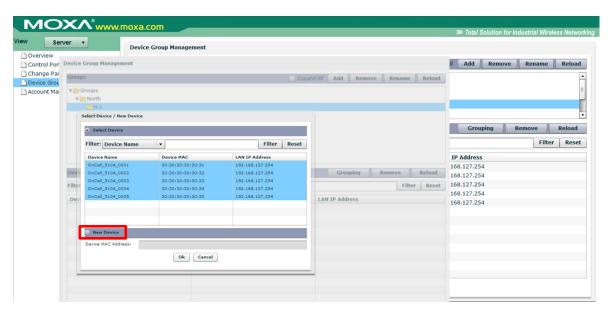
Select Device

The **Select Device** section of the pop-up window only displays devices that currently do not belong to a group. Select one or more devices and then click **OK** to add the devices to the group selected above.



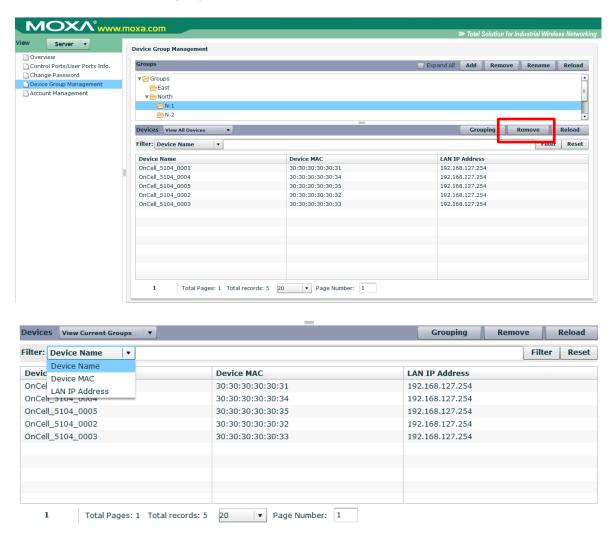
New Device

To add a device not shown in the pop-up window, enter the device's MAC Address in the input box near the bottom of the window, and then click **OK** to add the device to the group.



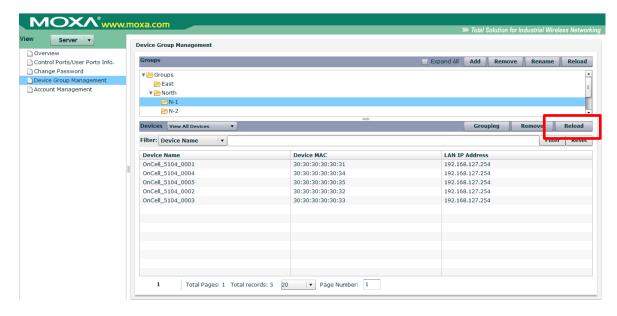
Remove

To remove a device from the group, select the device and then click **Remove**.



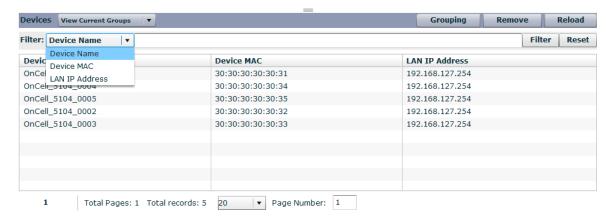
Reload

Click Reload to refresh the device list.



Filter

The **Filter** function allows you to search via Device Name, Device MAC, or LAN IP Address. Enter partial names, MACs, or IPs to display all devices relevant to that search.



Device Name

Choose Device Name, and then input a keyword to filter by.

Device MAC

Choose Device MAC and input all or part of a MAC address to filter by.

Device LAN IP Address

Choose Device LAN IP address and input all or part of a LAN IP address to filter by.

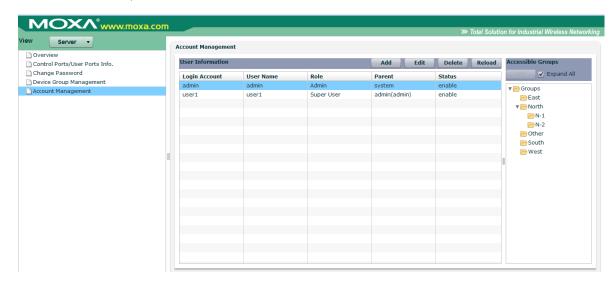
Reset

Clear filter criteria.

NOTE The above figures are for illustration purposes only. The actual numbers depend on the connection status and network environment.

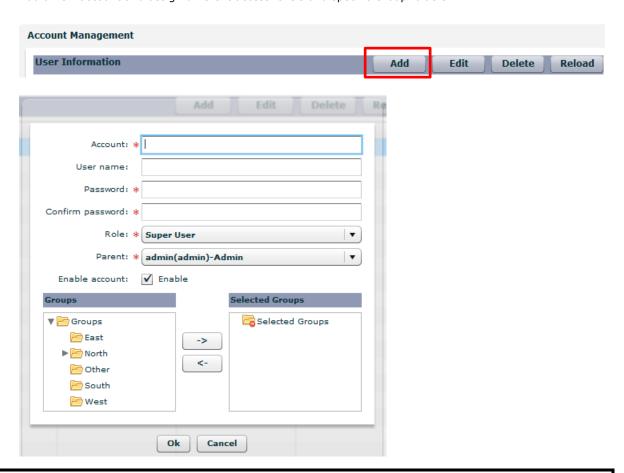
Account Management

The **Account Management** page allows the administrator to assign different roles, give each account various access levels, and monitor the current status.



Add

Add a new account and assign different access levels and specific Group folders.



NOTE Information for items marked with a red asterisk must be provided.

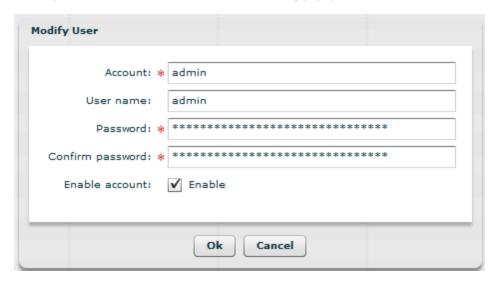
Item	Description
Account	Account name used to log in to OnCell Central Manager.
User name	Enter a nickname or description for the user name.
Password	Password used to log in to OnCell Central Manager.
Confirm Password	Retype the password to confirm.
Role	Admin: Can access all groups, devices and user information.
	Super User: Can access subgroups, devices in the subgroup, and user information
	for users created by the Super User.
	User: Can only view device information.
Parent	
Enable account	

Edit

Click **Edit** to modify user information.

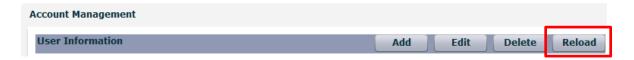


Enter updated information as needed in the following popup window.



Reload

 $\label{linear_continuous_continuous_cont} \textbf{Click } \textbf{Reload} \ \ \text{to refresh the account information appearing onscreen}.$



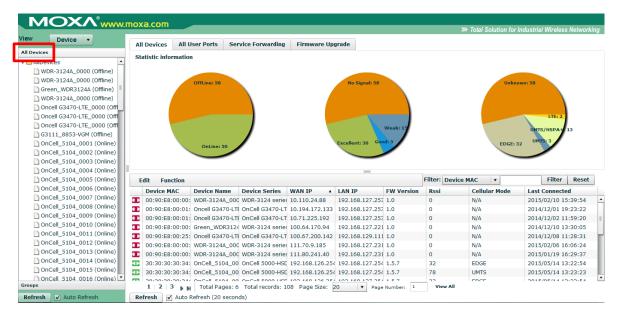
Device

OnCell Central Manager provides infographic demonstration that displays devices' connection status, signal RSSI, and device cellular mode. You may view using the **All Devices** view or **Groups** view. Click on the various headings (Device MAC, Device Name, etc.) to change the way the information is sorted.

Pass your cursor over a pie chart to see more information.

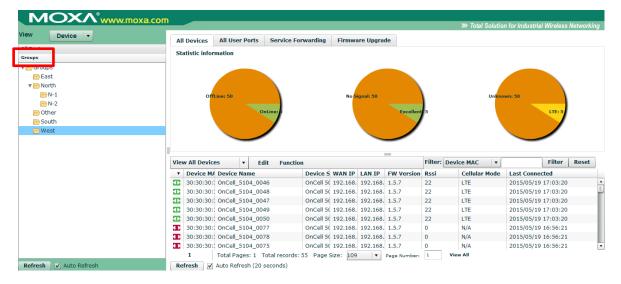
All Devices

The All Devices view option is selected by default.



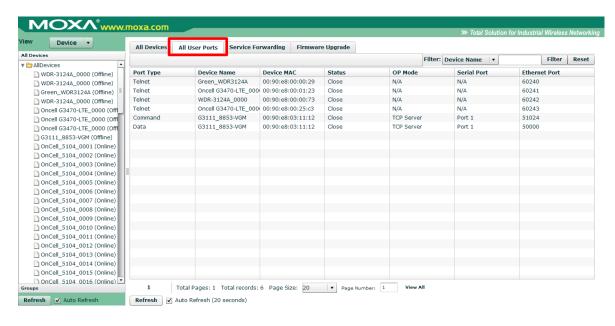
Groups

Click the **Groups** option to view groups. This viewing option can be used for batch configurations of all devices in certain groups or subgroups.



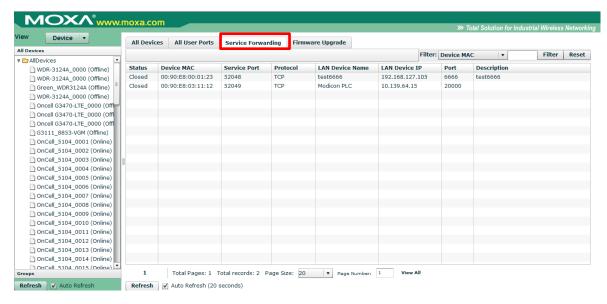
All User Ports

Click **All User Ports** to display all ports mapped to OnCell Central Manager in OP mode with Telnet status on.



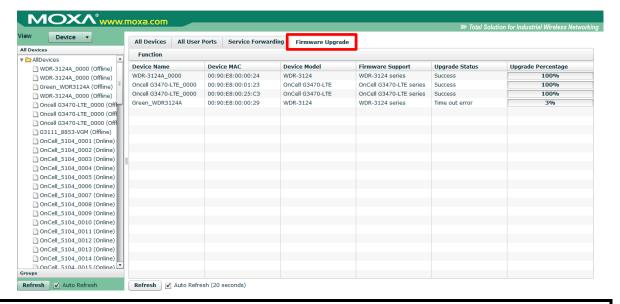
Service Forwarding

Click **Service Forwarding** to display all ports mapped to OnCell Central Manager with TCP port status set to service forwarding.



Firmware Upgrade

Click Firmware Upgrade to display the devices' upgrade status and upgrade histories.



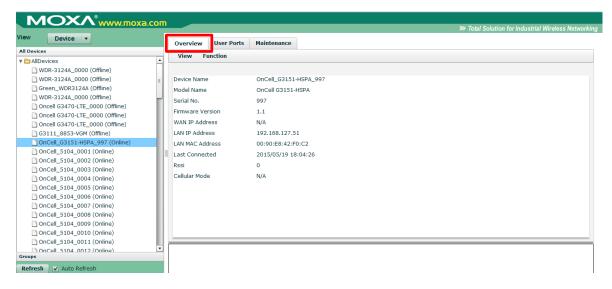
NOTE The information shown in the figure is for demonstration purposes only. The actual information depends on the connection status and configuration.

Managing a Single Device

Click on a single device in the All Devices list to view and/or manage the information for that device.

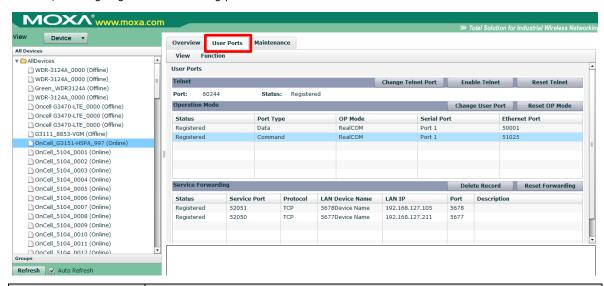
Overview

The Overview tab, which displays information for the device, is selected by default.



User Ports

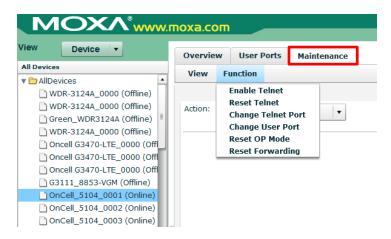
The **User Ports** tab allows administrators to manage and monitor specific device ports, including the Telnet, OP mode, and Service Forwarding configurations. The **Service Forwarding** section only allows deleting records, or assigning a new forwarding port.



Item	Description
Change Telnet Port	Modify the device's Telnet port number.
Enable Telnet	Activate Telnet.
Reset Telnet	Deactivate Telnet.
Change User Port	Modify the device's user port number.
Reset OP mode	Restart the device's OP mode.
Delete Record	Delete specific device Service Forwarding port mapping; system will reassign a
	new service port.
Reset Forwarding	Restart the device's Service Forwarding connection.

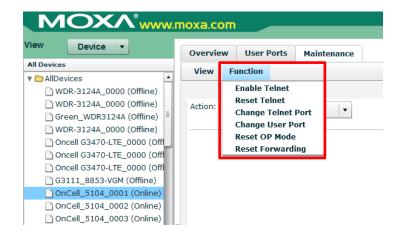
Maintenance

Maintenance functions provide the administrator with tools to manage the a device's port configuration, activation, restoration, and firmware upgrade.



Function

Click Function to view all functions.

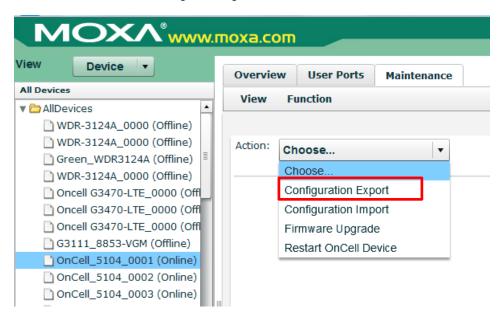


Action

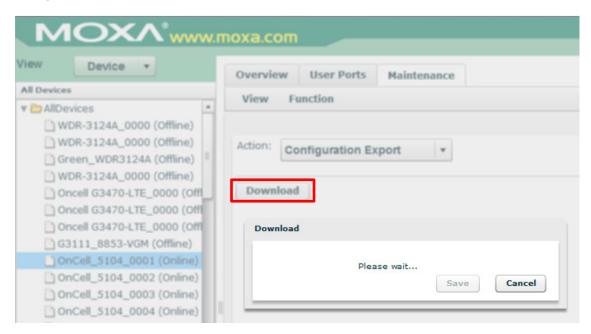
Select one of four actions from the **Action** drop-down list.

Configuration Export

Click **Configuration Export** to back up OnCell Central Manager settings, and click **Configuration Import** to restore OnCell Central Manager settings.

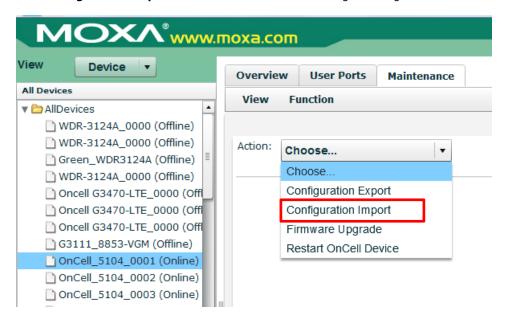


Next, click **Download** to save to a configuration text file, which can be viewed and edited with any text-editing tool.

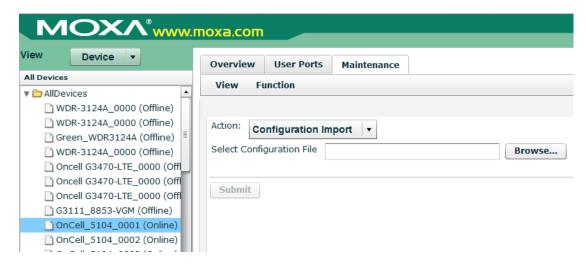


Configuration Import

Click Configuration Import to restore OnCell Central Manager settings.



Next, in the **Configuration Import** section, click **Browse** to select a configuration file and then click **Open files** button and **Submit** to begin importing the configuration.

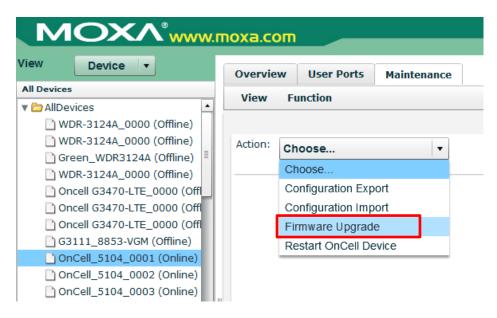


Firmware Upgrade

OnCell Central Manager allows administrators to complete a **Firmware Upgrade** from a remote site. The latest firmware is available from Moxa's download center.

Before running a firmware upgrade, make sure the OnCell device is **off**. Click the **Browse** button to specify the firmware image file and click **Firmware Upgrade and Restart** to start the firmware upgrade. After the progress bar reaches 100%, the device will reboot itself.

When upgrading your firmware, you may not use any of the OnCell device's other functions.



Restart OnCell Device

After changing the configuration and submitting the changes, click the **Restart** function to reboot the devices.



Device Logout

Logout allows users to disconnect OnCell Central Manager. For security reasons, we recommend that you logout before closing the console manager.

