OneWireless Migration User's Guide

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1 About this guide

This guide assists you in understanding, planning, and performing the migration of standalone OneWireless Network.

Intended audience

This guide is intended for people who are responsible for planning and performing the migration of OneWireless Network.

How to use this guide

This guide provides guidance on:

- Supported migration paths
- · Planning considerations for performing a migration
- Performing the premigration tasks
- · Migrating to the latest OneWireless release
- Configuring the OneWireless components after migration

Required Honeywell documentation

The following documents and sources contain additional information required for migrating and deploying OneWireless Network. It is recommended to have these documents readily available for reference.

Document	Document ID	Description
OneWireless Release Notes	OWDOC-X252-en-220A	This document provides information about the new functions and features in OneWireless.
OneWireless Network Planning and Installation Guide	OWDOC-X253-en-220A	This document provides information about planning, designing, and setting up OneWireless Network using WDM, FDAPs, and field devices.
OneWireless Wireless LAN Controller Configuration Guide	OWDOC-X255-en-220A	This document provides information about planning, designing, setting up, and configuring a OneWireless Network using WDM, FDAPs, Cisco 1552S APs, and field devices.
OneWireless Wireless Device Manager (WDM) User's Guide	OWDOC-X254-en-220A	This document describes the procedures to provision, configure, operate, and monitor an ISA100 Wireless wireless field device network using Wireless Device Manager (WDM).

Document	Document ID	Description
OneWireless Field Device Access Point (FDAP) User's Guide	OWDOC-X256-en-220A	This document describes the procedures to install, configure, and operate Field Device Access Point (FDAP).
OneWireless Parameter Reference Dictionary	OWDOC-X260-en-220A	This document provides information about the parameters associated with the OneWireless devices.

You can download Honeywell documentation from http://www.honeywellprocess.com/ web site.

2 Before you begin

Related topics

"Supported migration paths" on page 8

"Understanding differences from prior releases" on page 10

2.1 Supported migration paths



The following figure illustrates the valid migration paths supported for OneWireless R220. It also identifies the base release (minimum software release level) at which a node must be, to start the migration.

The qualified migration paths which are supported for OneWireless R220 are as follows. Ensure that you perform the migration in the sequence specified in the table.

Table	1:	Qualified	migration	paths
-------	----	-----------	-----------	-------

Current Release	Migration path to be followed
OneWireless R100.1	OneWireless R100.1 > OneWireless R110.1 > OneWireless R120.1 Patch 7 > OneWireless R120.1 Patch 11 > OneWireless R220.1
OneWireless R110.1	OneWireless R110.1 > OneWireless R120.1 Patch 7 > OneWireless R120.1 Patch 11 > OneWireless R220.1
OneWireless R120.1 Patch 4/Patch 5/ Patch 6	OneWireless R120.1 Patch 4/Patch 5/Patch 6 > OneWireless R120.1 Patch 7 > OneWireless R120.1 Patch 11 > OneWireless R220.1
OneWireless R120.1 Patch 7/Patch 8/ Patch 9/Patch 10	OneWireless R120.1 Patch 7/Patch 8/Patch 9/Patch 10 > OneWireless R120.1 Patch 11 > OneWireless R220.1
OneWireless R200.1	OneWireless R200.1 > OneWireless R201.1 > OneWireless R202.1 > OneWireless R210.1 > OneWireless R220.1
OneWireless R201.1	OneWireless R201.1 > OneWireless R202.1 > OneWireless R210.1 > OneWireless R220.1

Current Release	Migration path to be followed	
OneWireless R202.1	OneWireless R202.1 > OneWireless R210.1 > OneWireless R220.1	
OneWireless R210	OneWireless R210.1 > OneWireless R220.1	

Qualified firmware upgrade paths

- **WDM**: The Wireless Device Manager can only be upgraded from OneWireless R210.1 to OneWireless R220.1. The upgrade from R200/R201/R202 to R220 is not supported.
- Access Points (FDAP, Cisco 1552S) and XYR6000 Field Devices: OneWireless R220.1 supports firmware upgrade from any previous release, including OneWireless R200.1, R201.1, R202.1, and R210.1. For example, you can directly upgrade an FDAP running R202.1 firmware to R220.1 firmware (without installing R210.1 intermediate firmware).

2.2 Understanding differences from prior releases

Migration from OneWireless R120 or releases earlier than R120 to the R220 release requires a hardware change as well as a software upgrade. The following table lists the major differences from OneWireless R120 or earlier releases and the tasks involved to complement these differences.

Differences from OneWireless R120 (or earlier) releases	Tasks to be performed
The current OneWireless Network is compliant with the ISA100 Wireless standard and offers interoperability with Honeywell XYR 6000, Honeywell Enraf SmartRadar FlexLine systems, and other third-party field devices. The proprietary wireless protocol used with has been removed from the system and is no longer supported.	Upgrade the firmware of the existing devices to the ISA100 Wireless compatible firmware.
In the current release of OneWireless Network, you can enable a Multinode to function as an Field Device Access Point (FDAP), which is an access point that communicates using ISA100 Wireless protocol. To achieve this functionality, the firmware image loaded to the Multinode must be of FDAP.	Upgrade the Multinode field device radio with the latest FDAP software image.
The current OneWireless Network infrastructure includes the Wireless Device Manager (WDM), the central management unit of the OneWireless Network. The WDM is responsible for network security, network resource allocation, data caching, and external interface functionality (including CDA protocol).	Install and configure a WDM.
The authentication device software that runs on the handheld Personal Digital Assistant (PDA) is replaced with the Provisioning Device Application.	Install the R220 Provisioning Device Application on the provisioning device handheld.
Ability to configure a Multinode as Wireless System Gateway (WSG) is no longer supported.	Repurpose Multinode that is used as WSG, to function as a regular Multinode.
New Multinode mesh software enables proper communication with FDAP.	Upgrade Multinode mesh software with the latest release version.
In the current release, Enraf SmartRadar FlexLine gauge provides support for only two transducer blocks (Product Level and Product Temperature blocks). In addition, protocol tunneling support is also not available with this release.	Upgrade the Enraf SmartRadar FlexLine gauge radio firmware and the CAN-1WL FlexConn board firmware.

3 R120 to R220 migration

Related topics

"Migrating from R120.1 to R220 checklist" on page 12

"Considerations for migration" on page 14

"Exporting security key database from R120 server" on page 15

"Installing and configuring the WDM" on page 16

"Configuring network properties on the computer" on page 17

"Logging on to OneWireless user interface" on page 19

"Performing migration using the First Time Configuration Wizard" on page 20

"Loading the Device Description file" on page 24

"Downloading the upgrade files from the WDM" on page 25

"Verifying the OneWireless patch version" on page 29

"Installing the OneWireless R120 patch" on page 30

"Upgrade firmware to R120 latest" on page 31

"Decommissioning R120 field devices" on page 33

"Upgrade the R120 sensor or radio firmware to R220" on page 34

"Replace wnsiadevfmw.exe file in OneWireless R120 system" on page 35

"Upgrading the SmartRadar FlexLine gauge radio firmware to R220 radio firmware" on page 36

"Upgrading CAN-1WL FlexConn board of SmartRadar FlexLine gauge" on page 37

"Upgrading Wireless System Gateway (WSG) and Multinode to the R220 firmware" on page 38

"Verifying if the migrated devices have joined the OneWireless R220 network" on page 42

"Downgrading Multinode mesh firmware" on page 43

"Upgrading the XYR 6000 field device to latest R220 sensor firmware" on page 45

"Configuring external interfaces" on page 46

"Re-configuring OPC/HART/MODBUS interfaces" on page 47

"Configuring redundant WDM" on page 48

3.1 Migrating from R120.1 to R220 checklist

This topic provides a checklist that describes the significant tasks to be performed for migrating from OneWireless R120 to the target release. The checklist also serves as a ready reference to review the progress of migration as you move from one phase of your migration to another. The sections following the checklist provide the details about each task in detail.

Ensure that the OneWireless Server is installed with OneWireless R120.1 (base release). This document describes only the tasks that you need to perform for migrating from OneWireless R120.1 to R220. If your system is installed with any of the releases prior to R120.1, you must migrate to R120.1 and then use this document to migrate to R220. To migrate from any releases earlier than R120.1, refer to the migration documentation specific to that release.

Attention

Ensure that you perform the migration tasks in the sequence in which the tasks are listed in the checklist. If you do not perform the tasks in the same sequence, then it may lead to undesired result or damage the device.



CAUTION

If your OneWireless R120 network is deployed with both Honeywell XYR 6000 field devices and Honeywell Enraf SmartRadar FlexLine gauge, ensure that you upgrade the firmware of the XYR 6000 field devices first and then proceed with the upgrade of the SmartRadar FlexLine gauge.

	Task	Go to	Done?
Step 1	Review and address the migration considerations.	"Considerations for migration" on page 14	
Step 2	Export the security key database.	"Exporting security key database from R120 server" on page 15	
Step 3	Install and configure the WDM.	"Installing and configuring the WDM" on page 16	
Step 4	Configure network properties on the computer that will be used for accessing the OneWireless user interface.	"Configuring network properties on the computer" on page 17	
Step 5	Log on to the OneWireless user interface.	"Logging on to OneWireless user interface" on page 19	
Step 6	Perform migration using the First Time Configuration Wizard.	"Performing migration using the First Time Configuration Wizard" on page 20	
Step7	Reload the DD files for the field devices.	"Loading the Device Description file" on page 24	
Step 8	Download and save the upgrade files from the WDM.	"Downloading the upgrade files from the WDM" on page 25	
Step 9	Verify the patch version installed on the OneWireless server.	"Verifying the OneWireless patch version" on page 29	
Step 10	Install the latest available OneWireless R120 patch.	"Installing the OneWireless R120 patch" on page 30	
Step 11	 Upgrade the following firmware to R120 latest. Multinode firmware XYR 6000 field device sensor firmware and the radio firmware SmartRadar FlexLine gauge radio firmware and CAN-1WL FlexConn board firmware 	"Upgrade firmware to R120 latest" on page 31	
Step 12	Decommission the R120 field devices.	"Decommissioning R120 field devices" on page 33	

	Task	Go to	Done?
Step 13	Upgrade the following R120 sensor or radio firmware to R220 firmware.	"Upgrade the R120 sensor or radio firmware to R220" on page 34	
	• XYR 6000 field device sensor firmware to R220 transition firmware.		
	• XYR 6000 field device sensor firmware to R220 base firmware.		
	• XYR 6000 field device radio firmware to R220 radio firmware.		
Step 14	Replace wnsiadevfmw.exe file	"Replace wnsiadevfmw.exe file in OneWireless R120 system" on page 35	
Step 15	Upgrade the SmartRadar FlexLine gauge radio firmware to R220 radio firmware.	"Upgrading the SmartRadar FlexLine gauge radio firmware to R220 radio firmware" on page 36	
Step 16	Upgrade the CAN-1WL FlexConn board of SmartRadar FlexLine gauge.	"Upgrading CAN-1WL FlexConn board of SmartRadar FlexLine gauge" on page 37	
Step 17	Upgrade Wireless System Gateway (WSG) and Multinodes to the R220 firmware.	"Upgrading Wireless System Gateway (WSG) and Multinode to the R220 firmware" on page 38	
Step 18	Verify if the migrated devices have joined the R220 network.	"Verifying if the migrated devices have joined the OneWireless R220 network" on page 42	
Step 19	Upgrade field device sensor firmware to the latest R220 firmware.	"Upgrading the XYR 6000 field device to latest R220 sensor firmware" on page 45	
Step 20	Reconfigure the external interfaces.	"Configuring external interfaces" on page 46	
Step 21	Re-enable the OPC/HART interfaces.	"Re-configuring OPC/HART/MODBUS interfaces" on page 47	
Step 22	Upgrade the Provisioning Device Application on the Provisioning Device handheld.	See the "Configuring a Provisioning Device handheld" section in the <i>WDM</i> <i>User's Guide</i> .	

3.2 Considerations for migration

Review and address the following considerations before starting the migration.

OneWireless R120 network configured with Network ID 1

If your OneWireless R120 system is configured with Network ID 1, to migrate to R220 you must re-provision all the devices in the network. The valid Network ID range in the OneWireless R220 is between 2 and 65535.

When migrating from OneWireless R120 with a Network ID 1, all the devices must be re-provisioned before the migration. The following steps are optional and must be performed only when you face such scenario.

- If the device sensor firmware and the radio firmware are already migrated from R120 to R220, then perform the following:
 - 1. Configure the R220 system using the First time Configuration Wizard as a new system.
 - 2. Reset the system to defaults.
 - 3. Provision all the devices in the ISA100 Wireless network using over-the-air provisioning method. For further information about over-the-air provisioning method, refer to the latest *Wireless Device Manager User's Guide*.
- If the device sensor firmware and the radio firmware are still loaded with R120 versions, initialize the Key Server database using Database Manager (dbman), select a network ID between 2 and 65535, and then provision all the devices in the network before starting the migration. For more information refer to the R120 set of documents.

Publish period in OneWireless R120 devices

The configured publish period in R120 devices cannot be migrated to R220. In R220, the publish period is determined by the WDM. When the migrated devices first join the network, the WDM initializes the publish period as 30 seconds for XYR 6000 device and 10 seconds for SmartRadar FlexLine device. The publish period can then be configured as required.

Attention

For Honeywell Enraf R120 SmartRadar FlexLine gauge, it is recommended to configure the publish period only as one second.

Ensure that you have the wnsiadevfmw.exe file prior to starting the migration.

Replace batteries prior to upgrades

The batteries of the field devices should be replaced prior to any upgrades.

Cisco switch port configuration setting

In case you plan to set up a redundant WDM, ensure that switch port setting are configured for Cisco ports where FDN and PCN ports of WDM are connected. For more information, refer to "Configuring Cisco switch port setting" on page 17.

Attention

Ensure to disable Gateway redundancy. In addition, you must also disable Sync if Gateway redundancy is configured.

3.3 Exporting security key database from R120 server

You must export the wireless security key database from the R120 Key Server Manager on the OneWireless server. The WDM imports the file from any location on the server during WDM migration.

To export the security key database

- 1 Click Start > Run.
- 2 Type KeyServerExportTool.exe, and then press Enter. The Export R120 Data dialog box is displayed.
- 3 Connect the USB drive to the computer.
- 4 On the Export R120 Data dialog box, click Browse, and then select a location on the USB drive.
- 5 Click Export.

A message appears indicating that the data is exported to the USB drive.

6 Click **OK** to acknowledge the message and close the dialog box.

3.4 Installing and configuring the WDM

This section describes the high level tasks you must perform to install and configure the WDM.

• Mount the WDM on to a desired location.

For more information about mounting a WDM, refer to the section "Installing the WDM" in the *WDM User's Guide*.

• Connect an Ethernet cable from the FDN port of the WDM to the OneWireless switch where the OneWireless R120 server is connected.

The following figures illustrate the typical OneWireless network before and after migration.



Figure 2: OneWireless topology after migration

3.5 Configuring network properties on the computer

Before migrating, you must configure the network properties on your computer to use a different IP subnet. This is because you cannot use the default FDN ip address of WDM (192.168.0.1) for migration.

Prerequisites

• A desktop or a laptop computer for accessing the OneWireless user interface.

Attention

The steps in the following procedure are specific to Microsoft Windows XP operating system.

To configure network properties on the computer

- 1 Perform one of the following steps to open the Network Connections dialog box.
 - Choose Start > Settings > Network Connections.

Or

- Choose Start > Control Panel > Network Connections.
- 2 Right-click the network port connected to the WDM and click Properties.
- 3 On the General tab, select Internet Protocol (TCP/IP) check box, and then click Properties.

Attention

Note down the current settings in Internet Protocol (TCP/IP) Properties so that, if necessary, you can return to their original values.

4 Configure the **IP address** and the **Subnet Mask** as 192.168.0.x and 255.255.255.0 respectively.

Attention

Do not configure the computer with the default IP address of the WDM, 192.168.0.1.

- 5 Click OK to close the Internet Protocol (TCP/IP) Properties dialog box.
- 6 On the General tab, click Configure.
- 7 Click the Advanced tab and then in the Property list, click Link Speed & Duplex.
- 8 In the Value list, click Auto Detect and then click OK.
- 9 Click OK and close all the open dialog boxes.



CAUTION

You must turn on a single WDM at a time, at the default address because the second WDM removes itself from the network if its duplicate address is detected. The removed WDM does not recover unless power-cycled.

3.5.1 Configuring Cisco switch port setting

In case you plan to set up a redundant WDM, ensure the following:

- 1. CISCO switch port, where the WDM is connected, is configured to operate in access mode.
- 2. Spanning-tree portfast feature is enabled.
- 3. Speed is set to auto.
- 4. Port is in full duplex mode.

Replace the sample CISCO switch configuration for WDM port with the following sample port configuration.

• interface FastEthernet 0/1

- description WDM port
- switchport access vlan 2
- switchport mode access
- spanning-tree portfast
- speed auto
- duplex full

3.6 Logging on to OneWireless user interface

Prerequisites

- One of the following recommended Web browsers must be installed on the computer.
 - Microsoft Internet Explorer 7.0 or higher
 - Firefox 3.6 or higher
 - Google Chrome 12.0 or higher
- Honeywell recommends a browser resolution of 1280 X 1024. Any resolution is supported but it may be
 necessary to navigate scrollbars or adjust zoom levels to view the entire interface.
- Microsoft Silverlight 5 plug-in is required on the computer used for accessing the user interface. If the computer has a prior version or it is not installed, then you are prompted to install or update the software when you attempt to connect to the WDM. Honeywell is an authorized distributor of the Silverlight software and a copy is maintained on the WDM for installs and upgrades; no internet or external connection is required.

Attention

Silverlight is backwards compatible. You can still run prior applications based on earlier versions of Silverlight. To save some initialization time during the first use on a new computer and if the computer has internet access, you can pre-install the Silverlight 5 runtime environment at any time using the following link: http://www.microsoft.com/getsilverlight/Get-Started/Install/Default.aspx.

Perform the following steps to log on to the OneWireless user interface.

To log on to OneWireless user interface

- 1 Open the Web browser and type the URL for the WDM in the address bar.
 - If you are logging on to the user interface for the first time from the PCN side of the network, use the default address, https://192.168.1.1 for logging on to the user interface. If you have connected to FDN side of the network, you must use the ip address 192.168.0.1.
- 2 If a security warning appears, confirm or allow the security exception.
- 3 In the User ID and Password fields, type the user name and password, and then click Login.

Attention

The default User ID and Password configured for the WDM are as follows:

User ID: administrator

Password: password

Note that the **Password** is case-sensitive.

3.7 Performing migration using the First Time Configuration Wizard

Prerequisites

• Ensure that you have the required security key information that you have exported from the R120 Key Server. For exporting the R120 Key Server, refer to the section "Exporting security key database from R120 server" on page 15.

To migrate from OneWireless R120

- Log on to the OneWireless user interface using the default user name and password. The First Time Configuration Wizard appears.
- 2 On the Welcome page of the First Time Configuration Wizard, click Next. The Wireless Device Manager Configuration page appears.
- 3 Click Migrate From OneWireless R120 and click Next.



The Migrate from OneWireless R120 page appears.

4 Under Select File From Location, click Browse and navigate to the location where the XML file containing the security key is saved as documented in the section "Exporting security key database from R120 server" on page 15.

Nalcoma	Migrate from One Wireless R120	
recome	Select File From Location	
WDM Configuration	To migrate from a One Wireless R120 to a One Wireless R200 system import th Manager.	e R120 security configuration into the Wireless Device
Wireless Device Manager Settings	Select file to be imported.	
Location Settings	File Name: < No file selected >	Browse
Network Settings		
Time Settings		
Administrator Account		
		Migrate

5 Select the XML file and click Open, and then click Migrate. The security keys are imported into the WDM's Security Manager and a security configuration migrated message appears.

Valcomo	Migrate from One Wireless R120	
Welcome	Select File From Location	
WDM Configuration	To migrate from a One Wireless R120 to a One Wireless R200 system import the R120 securi Manager.	ity configuration into the Wireless Device
Wireless Device Manager Settings	Select file to be imported.	
Location Settings	File Name: R120DataExport.xml	Browse
Network Settings		
Time Settings		
Administrator Account	Successfully migrated R120 security configuration.	
Configuration Summary		
		Migrate

6 Click Next.

The Wireless Device Manager Settings page appears.

7 Under Wireless Device Manager Identification, type the Tag Name and Description. The Tag Name is the unique name that is used to identify the WDM. It can be up to 16 characters long and must start with an alphabetic character. Do not use special characters in the Tag Name; underscore is the only acceptable character. After completing the initial configuration, you cannot change the WDM name.

The **Description** can be up to 255 characters long.

- 8 If you are configuring redundancy, under **Redundancy Configuration**, configure the following:
 - a Select Enable redundancy for this Wireless Device Manager check box.
 - **b** Click the **Redundancy Role**, as required.
 - c In the Partner IP Address box, type the PCN IP address of the partner WDM.
- 9 Click Next.

The Location Settings page appears.

10 Under Location, set the Country Code to United States (840).

The Country code is used to present any location-specific settings within the OneWireless Network. This feature will be available in the future releases. For example, radio frequency options are location dependent and vary depending on the country code setting. After completing the first time configuration, you cannot modify the **Country Code**.

- 11 Under **ISA100 Network ID**, the Network ID appears by default. This information is imported from the security file that you have exported from the R120 Key Server.
- 12 Click Next.

The Network Settings page appears.

13 Under Field Device Network (FDN), enter the following information to configure the network settings for wireless field device network. The FDN connects the WDM with one or more FDAPs.

Attention

It is recommended not to change the default **Field Device Network IP Address** during migration. The migrated access points requires the default IP address (192.168.0.1) to automatically join the network after migration. However, if you are changing the default **Field Device Network IP Address**, you must manually reprovision all the devices using the provisioning keys from the WDM. This enables all the migrated devices to join the network.

• Field Device Network IP Address: These settings are used to configure the wireless field device network Ethernet connection for the WDM. This is used for communication with FDAP.

Attention

- The IP address must be unique on the network, even if a redundant WDM pair is being configured.
- After completing the initial configuration, you cannot change the **Field Device Network IP Address** specified in the **First Time Configuration Wizard**.
- Subnet Mask
- Assign Addresses to Field Device Access Points (Enable DHCP Server): Select this check box to enable the WDM to act as the DHCP Server. Ensure you do not select the check box if the network has another DHCP Server. It is recommended to enable the WDM to act as the DHCP Server.
- Field Device Access Point IP Address: This option is enabled only if you have selected the Enable DHCP Server check box. Accept the default range or enter the IP address range according to the network settings in the plant network. The WDM that acts as the DHCP Server assigns IP addresses based on the range specified.

If you do not enable DHCP Server during the first time configuration, it is possible to enable this at a later stage using the Property Panel.

- 14 Under Process Control Network (PCN), configure the process control network settings as follows.
 - **Process Control Network IP Address**: The process control network settings are used to configure the process control network Ethernet connections for the WDM. This is used for communication with monitoring applications and external controllers.
 - Attention
 - The IP address must be unique on the network, even if redundant WDM pair is being configured.
 - Subnet Mask
 - **Default gateway**: Used to access the subnets outside the PCN subnet. This is an optional configuration option.
- 15 Click Next.

The Network Time page appears.

16 Click Use NTPServer or Use System Time, as required.

You can use either the NTP server or system time to configure the network time of the OneWireless Network.

Attention

- By default, the network time is configured as the system time.
- Consider the following while configuring an external NTP server.
 - NTP server should be on the PCN or FDN.
 - NTP server IP address must be within FDN or PCN subnet unless a default gateway has been configured on the PCN subnet and the NTP server is accessible through the default gateway.
 - NTP server IP address should not overlap with the FDN and PCN IP addresses.
 - NTP server IP address should not overlap with FDAP IP address range, if DHCP Server is enabled.
- 17 If you are selecting NTPServer, enter the NTP Server IP Address and click Next.
 - The Administrator Information page appears.
- 18 Type the new Administrator password in the New Password and Confirm Password fields, and then click Next.

The password must contain at least one character and can contain up to 32 characters. It should not start or end with a space and must not contain single quote (').

The Administrator Information page provides an option to modify the username of the default account (administrator). It can only be modified from the FTCW (like country code and subnet id).

The **Configuration Summary** page appears which contains the summary of all the configuration information specified in the **First Time Configuration Wizard**. An incorrect entry is indicated by a warning icon. Hovering the mouse over the icon displays a tooltip with the information about the incorrect entry.

19 Verify the WDM settings, correct errors if any, and then click Finish.

If there are any errors in the configuration information that you have provided, then the system does not allow you to click **Finish**.

20 On the Browser Redirect dialog box, click OK.

The wizard redirects the Web browser to the revised process control network IP address.

Attention

- If you are configuring the WDM to use the same process control network IP address, then the wizard redirects the Web browser.
 - If you have configured the WDM using a different PCN IP subnet than the computer, then you need to reconfigure the network settings of the computer to access the user interface using the IP address on the new subnet.

3.8 Loading the Device Description file

A Device Description (DD) file is usually a zip file that can be downloaded from the http:// www.honeywellprocess.com/ website. It contains information about the device type, commands that are supported by the device, and other device-specific data. A DD file for a particular field device is used to describe the device and to interpret messages and the device status.

Attention

- DD files loaded prior to migrating the WDM to R220 are discarded to resolve the R2xx to R220 migration anomaly. Note that this is a one time behavior that is not repeated after migration to future releases.
- To ensure consistency in the channel names, load the DD files before the device joins the network.

To load the Device Description file

- 1 On the ribbon bar, in the **Maintenance** group, click **Templates**. The **Load DD File** dialog box appears.
- 2 Click Load DD File.
- 3 Browse to the directory location of the DD file.
- 4 Select the DD file and click Open. The DD file is uploaded to the WDM and an upload success message appears.
- 5 Click Close to close the Load DD File dialog box.
- 6 Repeat steps to load the DD files for all the device types.

3.9 Downloading the upgrade files from the WDM

To download and save the upgrade files from the WDM

 On the ribbon bar, in the System group, click Software. The Support Software dialog box appears.



- 2 From the Select Software list, select Onewireless R120 Migration Firmware.
- 3 Click **Save To** to save the files to the computer. A confirmation message appears.
- 4 Click OK.

The Save As dialog box appears.

- 5 Browse to a location on the hard drive to save the files.
- 6 If required, type the File name, and then click Save.
- 7 Extract the zip file to the local computer, using the directory structure specified in the zip file. The following are the different folders that are available after extracting the *mn_120_200.zip*.
 - Multinode-Mesh: Contains multinode mesh upgrade and downgrade files.
 - Multinode-Sensor-Radio: Contains R120 to R220 multinode sensor radio firmware file.
 - Sensor: Contains R120 latest sensor and radio files. In addition, it also contains R120 to R220 sensor and radio firmware files.

Attention

You can avoid referring to the XYR 6000 DSSS folder as the firmware file in the XYR 6000 DSSS folder is already available in the Sensor folder.

For more information about the files available in the *mn_120_200.zip*, refer to the section "Contents of mn_120_200.zip file" on page 26.

3.9.1 Contents of mn_120_200.zip file

The mn_120_200.zip file contains the following high level folders based on the firmware type.

- Multinode-Mesh
- Multinode-Sensor-Radio
- Sensor

These high level folders are sorted into sub-folders. The sub folders provide all the firmware upgrade files you require for migrating all devices. The following table displays the files available in each sub-folder.

Firmware file		Files in Folder levels	
	Level 1	Level 2	Level 3
Multinode-Mesh	WNMS Model	Downgrade	01_rescue-image-4.2.0HWL.bin
			2_redboot-3.28.no-reboot.bin
			3_525I_4.3.1.00.33- downgrade.bin
			4_525I_4.3.1.00.48.bin
		Upgrade	1_525I_4.3.1.interim-01.33.bin
			2_rescueImage1.0.7.no- reboot.bin
			3_525A-3_4.4.0.00.76.bin
			4_525A-3_4.4.0.00.102.bin
			525I_4.3.1.00.33.bin
	WNMS Model	Downgrade	1_525I_4.3.1.00.34.bin
			2_525I_4.3.1.00.48.bin
		Upgrade	525I_4.3.1.8M-00.48.bin
Multinode-Sensor-Radio	FDAP_multinode_sensor_ radio.bin	-	-
Sensor	Corrosion	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
		02_Honeywell_XYR6000_R ADIO_3_329.wdf	
		03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
		04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
		05_Honeywell_XYR6000_R ADIO_3_200.wdf	
	Enraf SmartRadar FlexLine	02_Honeywell_XYR6000_R ADIO_3_329.wdf	-
		05_Honeywell_XYR6000_R ADIO_3_200.wdf	

HLAI	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	
Multi AI DI	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	
Multi AI DI DO	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	
Multi DI	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	

Pressure	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	
Temperature	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	
Temperature DI	01_Honeywell_XYR 6000 Corrosion_SENSOR_06_42. wdf	-
	02_Honeywell_XYR6000_R ADIO_3_329.wdf	
	03_Honeywell_XYR 6000 Corrosion_SENSOR_06_150 .wdf	
	04_Honeywell_XYR 6000 Corrosion_SENSOR_51_200 .wdf	
	05_Honeywell_XYR6000_R ADIO_3_200.wdf	

The firmware upgrade file "05_Honeywell_XYR6000_RADIO_3_200.wdf" in XYR 6000 DSSS folder is also available in the Sensor folder.

The firmware files available in the Sensor folder are prefixed with numbers. These numbers indicate the type of firmware files. These files are arranged in the order you need to perform firmware upgrades. Following table defines the type of firmware files for the prefixes.

Prefix number	Type of firmware file
01	Latest R120 Sensor firmware file
02	Latest R120 Radio firmware file
03	R150 Sensor Transitional firmware file
04	R200 Sensor Base firmware file
05	R200 Radio firmware file

3.10 Verifying the OneWireless patch version

Verify the version of the patch installed on your OneWireless server as follows:

• Open Control Panel > Add or Remove Programs.

The Add or Remove Programs window lists all the OneWireless R120 patches installed on the system.

🐔 Add or Ren	nove Programs			
-	Currently installed programs:	Show updates	Sort by: Name	
C <u>h</u> ange or Remove	🔗 One Wireless R120 Patch 07 Cumulative			-
Programs	🔗 One Wireless R120 Patch 08			- 0
50	🔗 One Wireless R120 Patch 09			
Add Now	🔗 One Wireless R120 Patch 11C			
Programs	🛱 OneWireless Contiguration Tools			
Add/Remove Windows Components	් OneWireless Software			
				•

3.11 Installing the OneWireless R120 patch

OneWireless R120 patch 11 is a mandatory patch that must be installed on the OneWireless R120 server for migrating to OneWireless R220. It is mandatory to update the server components and the firmware components to the latest patch revision.

You can download the latest OneWireless patch from the Honeywell Process Solutions website (http://www.honeywellprocess.com). For information about installing the patch, refer to the *Software Change Notice* available with the patch.

3.12 Upgrade firmware to R120 latest

Upgrade the following firmware to R120 latest.

- Multinode firmware
- XYR 6000 field device sensor firmware and the radio firmware
- SmartRadar FlexLine gauge radio firmware and CAN-1WL FlexConn board firmware

3.12.1 Upgrading Multinode firmware to the latest R120 firmware

Multinode sensor radio firmware and mesh firmware must be upgraded to the latest R120 firmware revision before migration. Download the latest R120 Multinode firmware files from the WDM. Refer to the section "Downloading the upgrade files from the WDM" on page 25.

The following are the **minimum** sensor radio firmware and mesh firmware revisions of the Multinode required for migrating to the latest OneWireless release.

Sensor radio firmware	Mesh firmware
RAP120.1–33.11 for Patch 11	4.3.1.00.48 (included with OneWireless R120 Patch 11)



It is mandatory that you first upgrade the multinode sensor radio firmware.

For more information about upgrading the Multinode firmware, refer to the section "Upgrading Multinode firmware" in the OneWireless R120 *Getting Started with Honeywell OneWireless* guide.

3.12.2 Upgrading XYR 6000 and SmartRadar FlexLine gauge firmware to the latest R120 firmware

Upgrade the following firmware to the latest OneWireless R120 firmware revisions.

- XYR 6000 field device sensor firmware and the radio firmware
- SmartRadar FlexLine gauge radio firmware and CAN-1WL FlexConn board firmware

Download the latest firmware files from the WDM. Refer to the section "Downloading the upgrade files from the WDM" on page 25.

Experion PKS R311.3 TP5, and Experion PKS R400.4 include all necessary files required to migrate an XYR6000 or Enraf FlexLine field device to OneWireless R220.1. Firmware files are located under the . *\Firmware\OneWireless_Migration* directory and are listed in migration order.

After you download and save the upgrade files from the WDM, browse to the Sensor folder. The latest OneWireless R120 sensor firmware and radio firmware are available in all the sub-folders under the Sensor folder. The file with the prefix **01** is the latest **R120 Sensor firmware file**. The file with the prefix **02** is the latest **R120 Radio firmware file**.

XYR 6000 field device radio firmware revisions

The **minimum** radio firmware revision of the field device required for migrating to OneWireless R220 is **Revision 3, build 329 (RAP120.1-33.11)**. The latest R220 radio firmware is available in all the sub-folders of the Sensor folder and can be identified with the prefix **05**.

For more information about upgrading the field device firmware, refer to the section "Upgrading wireless transmitter sensor and radio firmware" in the OneWireless R120 *Getting Started with Honeywell OneWireless* guide.

Honeywell SmartRadar FlexLine gauge - CAN-1WL FlexConn board firmware revision

The **minimum** firmware revision of the Honeywell Enraf CAN-1WL FlexConn board required for migrating to OneWireless R220 is **Revision 10, build 163**. For more information about upgrading the FlexConn boards of a SmartRadar FlexLine gauge, refer to the Enraf *CAN-Upgrade Manual SmartRadar FlexLine*.

The **minimum** radio firmware revision of the SmartRadar FlexLine field device required for migrating to OneWireless R220 is **Revision 3, build 329 (RAP120.1-33.11)**.

The latest R120 radio firmware is available in all the sub-folders of the Sensor folder and can be identified with the prefix **02**.

3.13 Decommissioning R120 field devices

To decommission the field devices

- 1 Inactivate the field device channels as follows.
 - a In the Monitoring view of Wireless Builder, right-click the field device and choose Inactivate > Select Item(s) Content(s).

A confirmation dialog box appears.

- b Click Yes. The field device channels appear as inactive (blue icon).
- 2 In the **Monitoring** view, select all the devices and click the Delete icon on the toolbar. A confirmation dialog box appears.
- 3 Click Continue.

The Delete Selected object(s) dialog box appears.

4 Click Delete Selected object(s).

The selected wireless device blocks and their associated templates are deleted. The deleted devices now appear as uncommissioned devices under the WSG.

3.14 Upgrade the R120 sensor or radio firmware to R220

Upgrade the following R120 sensor or radio firmware to R220 firmware.

- XYR 6000 field device sensor firmware to R220 transition firmware.
- XYR 6000 field device sensor firmware to R220 base firmware.
- XYR 6000 field device radio firmware to R220 radio firmware.

3.14.1 Upgrading XYR 6000 field device sensor firmware to R220 firmware

Using the OneWireless server, upgrade the R120 field device sensor firmware to the R150 transition firmware and then to the R220 base firmware. The transition firmware and base firmware files are special revisions of the sensor firmware files used to migrate the devices to ISA100 Wireless compatible firmware. The latest firmware files can be downloaded from the WDM. Refer to the section "Downloading the upgrade files from the WDM" on page 25 for further information.

The R150 sensor transition firmware and the R220 base firmware files are available in all the sub-folders of the *Sensor* folder from the extracted mn_120_200.zip file. The file with the prefix **03** is the **R150 Sensor Transition** firmware, while the prefix **04** is the R220 **Sensor base firmware** file.

For more information about upgrading the field device sensor firmware, refer to the section "Upgrading wireless transmitter sensor and radio firmware" in the OneWireless R120 *Getting Started with Honeywell OneWireless* guide.



CAUTION

It is mandatory to upgrade the field device firmware in the following sequence.

- Upgrade the sensor firmware
- Upgrade the radio firmware

If you are not upgrading according to the above mentioned sequence, the field device stops communicating with the OneWireless R120 system and does not establish communication with the OneWireless R220 network.

Attention

Note that while upgrading the field device sensor firmware, it is mandatory to upgrade the transition firmware first, and then the base firmware.

3.14.2 Upgrading the XYR 6000 field device radio firmware to R220 radio firmware

Using the OneWireless Server, upgrade the XYR 6000 field device radio firmware to the R220 radio firmware. The R220 radio firmware is the ISA100 Wireless compatible firmware.

The field device radio firmware files are available in all the sub-folders of the *sensor* folder from the extracted **mn 120 200.zip** file. The file with the prefix **05** is the latest R220 Radio firmware file.

For more information about upgrading the field device radio firmware, refer to the section "Upgrading wireless transmitter sensor and radio firmware" in the OneWireless R120 *Getting Started with Honeywell OneWireless* guide.

Base radio firmware revision

Radio type	Radio firmware file name
XYR 6000	Honeywell_XYR6000_RADIO_3_200.wdf

All XYR 6000 devices use the same R220 base radio firmware. After completing this step, the field devices migrate to the latest OneWireless release and are no longer accessible from the R120 OneWireless server.

3.15 Replace wnsiadevfmw.exe file in OneWireless R120 system

In the OneWireless R120 system, you must replace the *wnsiadevfmw.exe* file located at *c:\Program Files* *Honeywe11\OneWireless\System\Bin*, with version 120.1.33.4. You can down load the *wnsiadevfmw.zip* file from the Honeywell Process Solutions website.

Attention

Replace the *wnsiadevfmw.exe* file only after upgrading all the XYR 6000 devices in the network. In case, you have replaced the *wnsiadevfmw.exe* file before completing the firmware upgrade of XYR 6000 devices, you must replace the 120.1.33.4 version of *wnsiadevfmw.exe* file with version 120.1.33.7.

Do not replace wnsiadevfmw.exe for Experion R311.3 TP5, or Experion R400.4.

3.16 Upgrading the SmartRadar FlexLine gauge radio firmware to R220 radio firmware

Using the OneWireless server, upgrade the SmartRadar FlexLine gauge radio firmware to the R220 radio firmware. The R220 radio firmware is the ISA100 Wireless compatible firmware.

The field device radio firmware files are available in all the sub-folders of the *sensor* folder from the extracted **mn_120_200.zip** file. The file with the prefix **05** is the latest R220 Radio firmware file.

For more information about upgrading the SmartRadar FlexLine gauge radio firmware, refer to the section "Upgrading wireless transmitter sensor and radio firmware" in the OneWireless R120 *Getting Started with Honeywell OneWireless* guide.



CAUTION

Before starting the firmware upgrade process, ensure that you have replaced *wnsiadevfmw.exe* file as specified in the section "Considerations for migration" on page 14.

Base radio firmware revision

Radio type	Radio firmware file name
SmartRadar FlexLine gauge	Honeywell_XYR6000_RADIO_3_200.wdf

All the SmartRadar FlexLine gauge devices use the same R220 base radio firmware. After completing this step, the devices migrate to the latest OneWireless release and are no longer accessible from the R120 OneWireless server.

3.17 Upgrading CAN-1WL FlexConn board of SmartRadar FlexLine gauge

You must upgrade the firmware on the CAN-1WL FlexConn board of a SmartRadar FlexLine gauge using the CAN SD card. For more information about upgrading the FlexConn boards of a SmartRadar FlexLine gauge, refer to the Enraf *CAN-Upgrade Manual SmartRadar FlexLine*.

After completing the firmware upgrade, you must switch off the SmartRadar FlexLine gauge, remove the CAN SD card, and then restart the SmartRadar FlexLine gauge. Only after restarting, the device becomes part of the OneWireless R220 Network.

3.18 Upgrading Wireless System Gateway (WSG) and Multinode to the R220 firmware

Upgrading Wireless System Gateway (WSG) and Multinode to the OneWireless R220 firmware involves the following tasks.

- Upgrading WSG and Multinodes to the OneWireless R220 base Multinode sensor radio firmware.
- Upgrading WSG and Multinodes to the OneWireless R220 base Multinode mesh firmware.



CAUTION

It is mandatory to upgrade the Multinode firmware in the following sequence.

- 1. Upgrade the multinode sensor radio firmware
- 2. Upgrade the multinode mesh firmware

Mistakenly if you upgrade the mesh firmware before upgrading the sensor radio firmware, you must downgrade the mesh firmware and then start upgrading the Multinode firmware in the sequence mentioned in this document. For more information about downgrading the Multinode mesh firmware, refer to the section "Downgrading Multinode mesh firmware" on page 43.

3.18.1 Upgrading the Multinode sensor radio firmware

To upgrade the Multinode sensor radio firmware

- 1 Log on to the **Multinode Configuration Tool** as follows.
 - **a** Open Internet Explorer and type the WAN IP address in the address bar.
 - **b** In the Username and Password fields, type the user name and password.
 - c Select the I agree to the terms and conditions below check box, and then click Sign In. The System Configuration - General page appears.
- In the left pane, under System Administration, click System Upgrade.
 The System Administration System Upgrade page appears. The Firmware Upgrade tab is selected by default.
- 3 Under Select sensor radio software here, click Browse.
- 4 Browse to the directory where the firmware file is saved and open the firmware file.
- 5 Click Upload Firmware to begin the firmware upgrade operation. After completing the firmware upgrade operation, the message System has been upgraded successfully appears.
- 6 Click Back to return to the Multinode Configuration Tool.

3.18.2 Upgrade Multinode mesh firmware

OneWireless Network supports the following two types of Multinode models. This section describes the tasks that you need to perform to upgrade the Multinode mesh firmware of both these models. The Multinode model is printed on the label on the back of the unit.

- WNMS Extended Temperature Multinode with ISA100 (DSSS) sensor radio.
- WNMX Standard Temperature Multinode with ISA100 (DSSS) sensor radio.

Attention

In the Multinode Configuration window, select Logs > System Logs. In the System Logs page, blocks = 127 is for WNMS – Extended Temperature Multinode and blocks = 64 is for WNMX – Standard Temperature Multinode.

The upgrade procedure involves loading a series of files to the Multinode. Note that the firmware files must be loaded in the order given, or else unexpected behavior could result, including the malfunctioning of the unit.

Mesh firmware revisions

WNMS - 4.3.1.00.102

WNMX - 4.3.1.8M.00.48

To upgrade the Multinode mesh firmware for WNMS models

- 1 Log on to the Multinode Configuration Tool as follows.
 - 1. Open Internet Explorer and type the WAN IP address in the address bar.
 - 2. In the Username and Password fields, type the user name and password.
 - 3. Select the I agree to the terms and conditions below check box, and then click Sign In.

The System Configuration - General page appears.

- In the left pane, under System Administration, click System Upgrade.
 The System Administration System Upgrade page appears. The Firmware Upgrade tab is selected by default.
- 3 Under Select mesh software here, click Browse.
- 4 Browse to the directory where the mn_120_200.zip file is extracted.
- 5 In the **mn_120_200** folder, navigate to the sub-folder *Mu1tinode-Mesh\WMMS Mode1\Upgrade* that contains a list of the following Multinode mesh firmware files.
 - 1_525I_4.3.1.interim-01.33.bin
 - 2_rescueImage1.0.7.no-reboot.bin
 - 3_525A-3_4.4.0.00.76.bin
 - 4 525A-3 4.4.0.00.102.bin
 - 525I_4.3.1.00.33.bin
- 6 If the Multinode is at build 4.3.1.00.30 or earlier, select **525I_4.3.1.00.33.bin** and click **Upload Firmware**. The Multinode reboots after the firmware upgrade operation is complete.
- 7 Select **1_525I_4.3.1.interim-01.33.bin** and click **Upload Firmware** to begin firmware upgrade. The Multinode reboots after the firmware upgrade operation is complete.
- 8 Select 2_rescueImage1.0.7.no-reboot.bin and click Upload Firmware to begin the firmware upgrade. The message, System Upgrade Failed: Did not find transmit log appears. Ignore the message and proceed with the firmware upgrade operation.
- 9 Select 3_525A-3_4.4.0.00.76.bin and click Upload Firmware to begin firmware upgrade. The message, System has been upgraded successfully appears.

10 Click System Administration > Reboot.

The Multinode reboots and upgrades to 525A-3 build 4.4.0.00.76. The WAN IP address is preserved after the upgrade and is accessible from the WAN 1 port. After the Multinode starts up, use the default user account to access the Multinode Configuration Tool.



CAUTION

Ensure that you restart the Multinode before performing the next step. Failing to reboot causes the Multinode to restore to default settings.

11 Repeat steps 2 through 4 and select 4_525A- 3_4.4.0.00.102.bin and click Upload Firmware to start the firmware upgrade operation.

The message, **System has been upgraded successfully** appears. The Multinode reboots after the firmware upgrade operation is complete.

- 12 After upgrading the firmware to 4_525A- 3_4.4.0.00.102.bin, the operating mode of the migrated Multinode changes to FIPS mode. Honeywell recommends using only Non-FIPS mode. Configure the operating mode of the Multinode to Non-FIPS as follows:
 - a On the Multinode Configuration Tool, under System Configuration, click Operating Mode.

С

- b Under Submode, clear the FIPS 140-2 mode check box.
 - Click **Apply**. A message appears indicating that the changes are applied and then the Multinode reboots.

Attention
 Changing the operating mode from FIPS to Non-FIPS restores all the configuration settings to default settings.

- 13 Configure the TCP/IP properties as follows:
 - IP Address: 192.168.254.1
 - Network Mask: 255.255.255.0
 - Attention
 - The computer IP address should not conflict with any other IP address in the network if a switch is connected.
- 14 To view or change your TCP/IP settings, perform the following steps:
 - a If the operating system on your computer is Windows 2000 or XP, choose Start > Settings > Network and Dialup Connections > Local Area Connection.
 - b Click **Properties**.

The Local Area Connection Properties dialog box appears.

- c Select TCP/IP protocol, and then click Properties.
 The Internet Protocol (TCP/IP) Properties dialog box appears.
- d Click Use the following IP address and then in the IP Address and Subnet mask boxes, type 192.168.254.1 and 255.255.0, respectively.
- e Click OK.

The Local Area Connection Properties dialog box closes.

f Click OK.

The Internet Protocol (TCP/IP) Properties dialog box closes.

15 Open a browser window and type the following default IP address for the unit's Local LAN in the address bar: https://192.168.254.254.

Attention

For some versions of the Multinode, the WAN2 cable is accessible through the following IP address — **192.168.15.1**.

16 On the Multinode Configuration Tool page, type the default user name **CryptoOfficer** and the password **CryptoFIPS**.

If the system prompts you to change the default password, change the password to proceed.

17 Configure the Web browser settings as follows.

The web browser version should be either of the following – Internet Explorer (IE) version 6 or later or Firefox version 3.6.3 or later.

- In the IE web browser:
 - Click Tools > Internet Options > Advanced, and then select the Transport Layer Security (TLS), TLS 1.0 check box.
 - Click Tools > Internet Options > Advanced, and then clear the Secure Sockets Layer (SSL), SSL
 2.0 check box. By default, Use SSL 3.0 check box is selected.
- In the Firefox browser:
 - Click Tools > Options > Advanced, and then select TLS 1.0 check box. By default, Use SSL 3.0 check box is selected.

To upgrade the Multinode mesh firmware for WNMX models

1 Log on to the Multinode Configuration Tool as follows.

- 1. Open Internet Explorer and type the WAN IP address in the address bar.
- 2. In the Username and Password fields, type the user name and password.
- 3. Select the I agree to the terms and conditions below check box, and then click Sign In.

The System Configuration - General page appears.

2 In the left pane, under System Administration, click System Upgrade.

The **System Administration - System Upgrade** page appears. The **Firmware Upgrade** tab is selected by default.

- 3 Under Select mesh software here, click Browse.
- 4 Browse to the directory where the mn_120_200.zip file is extracted. and navigate to the subdirectory www. mode1\upgrade.
- 5 In the mn_120_200 folder, navigate to the sub-folder *Multinode-Mesh\WMMX Mode1\Upgrade* that contains a single 525I_4.3.1.8M-00.48.bin file.
- 6 Select 525I_4.3.1.8M-00.48.bin and then click Upload Firmware.

The message, **System has been upgraded successfully** appears. The Multinode automatically reboots. After the Multinode starts up, use the default user account to access the Multinode Configuration Tool.

After completing this step, all the field devices and the Multinodes join the ISA100 Wireless field device network and start appearing in the Selection Panel/Map view of the OneWireless user interface. To understand more about the current state of the device icons appearing on the user interface, refer to the *WDM User's Guide*.

Attention

Note that the devices may take up to one hour to join the network.

3.19 Verifying if the migrated devices have joined the OneWireless R220 network

After upgrading the firmware of all the devices in the OneWireless R120 system, the devices start joining the network. All the migrated devices that have joined the network appear in the Selection Panel of the OneWireless R220 user interface. Verify if all the migrated devices are appearing in the Selection Panel.



3.20 Downgrading Multinode mesh firmware

This section describes the procedures to downgrade the Multinode mesh firmware for both the Multinode types, if required. The downgrade procedures are applicable only in a situation in which you have upgraded the mesh firmware before upgrading the sensor firmware. This is because it is mandatory to upgrade the sensor firmware before upgrading the mesh firmware.

Attention

Honeywell does not support downgrade of Multinode firmware from R2xx to R1xx.

Note that after downgrading the mesh firmware, all the configuration information restores to default values.

To downgrade the Multinode mesh firmware for WNMS models

- 1 Log on to the Multinode Configuration Tool as follows.
 - **a** Open Internet Explorer and type the WAN IP address in the address bar.
 - **b** In the Username and Password fields, type the user name and password.
 - c Select the I agree to the terms and conditions below check box, and then click Sign In. The System Configuration - General page appears.
- In the left pane, under System Administration, click System Upgrade.
 The System Administration System Upgrade page appears. The Firmware Upgrade tab is selected by default.
- 3 Under Select mesh software here, click Browse.
- 4 Browse to the directory where the mn_120_200.zip file is extracted.
- 5 In the **mn_120_200** folder, navigate to the sub-folder *multinode-Mesh\wwws_Mode1\Downgrade* that contains the following downgrade files.
 - 1_rescue-image-4.2.0HWL.bin
 - 2_redboot-3.28.no-reboot.bin
 - 3_525I_4.3.1.00.33-downgrade.bin
 - 4_525I_4.3.1.00.48.bin
- 6 Select 1_rescue-image-4.2.0HWL.bin and click Upload Firmware to begin firmware downgrade. The Multinode reboots after the firmware downgrade operation is complete.
- 7 Select 2_redboot-3.28.no-reboot.bin and click Upload Firmware to begin the firmware downgrade. The message, System Upgrade Failed: Did not find transmit log appears. Ignore the message and proceed with the firmware downgrade operation.
- 8 Select 3_525I_4.3.1.00.33-downgrade.bin and click Upload Firmware to begin firmware downgrade. Wait until system reboots and starts running with the firmware, 525I build 4.3.1.00.33. You can then use the default WAN IP address 192.168.254.254 and the default user account to access the Multinode.
- 9 Repeat steps 2 through 4, select 3_525I_4.3.1.00.48-downgrade.bin and then click Upload Firmware to begin firmware downgrade.

Wait until system reboots and starts running with the firmware, 525I build 4.3.1.00.48.

To downgrade the Multinode mesh firmware for WNMX models

- 1 Log on to the **Multinode Configuration Tool** as follows.
 - a Open Internet Explorer and type the WAN IP address in the address bar.
 - **b** In the **Username** and **Password** fields, type the user name and password.
 - c Select the I agree to the terms and conditions below check box, and then click Sign In. The System Configuration - General page appears.
- 2 In the left pane, under System Administration, click System Upgrade.

The System Administration - System Upgrade page appears. The Firmware Upgrade tab is selected by default.

- 3 Under Select mesh software here, click Browse.
- 4 Browse to the directory where the mn_120_200.zip file is extracted.
- 5 In the **mn_120_200** folder, navigate to the sub-folder *Mu1tinode-Mesh\WNMS Mode1\Downgrade* that contains the following two downgrade files.
 - 1 525I 4.3.1.00.34.bin
 - 2_525I_4.3.1.00.48.bin
- 6 Select 5251_4.3.1.00.34.bin and click Upload Firmware to begin firmware downgrade. The message System has been upgraded successfully appears. The Multinode automatically reboots. After the Multinode starts up, use the default user account to access the Multinode Configuration Tool.
- 7 Select 3_5251_4.3.1.00.48-downgrade.bin and click Upload Firmware to begin firmware downgrade. The message System has been upgraded successfully appears. The Multinode automatically reboots.

3.21 Upgrading the XYR 6000 field device to latest R220 sensor firmware

The R220 base firmware installed during migration may not be the released firmware and must be updated. The field device radio firmware is preloaded on the WDM. The latest field device sensor firmware files can be downloaded from Honeywell Process Solutions website.

To upgrade the field device sensor firmware

1 On the Selection Panel of the OneWireless user interface, select the field device.

You can select multiple devices using the Selection Panel or the map view. Use SHIFT+click to select multiple items in a successive list. Use CTRL+click to select multiple items not in succession.

2 To upgrade the application firmware of the selected field device, on the ribbon bar, in the Upgrade group, click Application.

The Application Firmware Upgrade dialog box appears.

3 Depending on the firmware type, the available upgrade files appear by default. Select the required file from the list of upgrade files.

If the file is not available in the list, perform the following steps.

- a Click Add to browse to the directory location of the firmware upgrade file.
- b Click Open.
- 4 Click Upgrade.

The Application Firmware Upgrade dialog box appears.

The **Firmware Upgrade Status** dialog box displaying the status of the upgrade appears. Closing the dialog box allows the upgrade operation to run in the background. The upgrade status is displayed in the status bar. Click the firmware upgrade status box to open the dialog box again. If multiple users are simultaneously upgrading different device firmware, all the users can view the progress of all the device upgrades.

While upgrading the application firmware of a field device, the LCD display of the field device displays the firmware upgrade status. The status is displayed until the upgrade operation completes or aborts.

Once the upgrade is complete, the status column displays the status as complete. If firmware upgrade fails for a device, you can abort the upgrade and start again. To abort firmware upgrade for individual devices, click the abort button next to the status indicator.

5 Close the Firmware Upgrade Status dialog box.

3.22 Configuring external interfaces

Using the OneWireless user interface, reconfigure the external interfaces. Ensure that you perform the following while reconfiguring the external interfaces.

- Manually configure the Modbus Registers.
- Reconfigure the device/parameter tag names, since the naming convention is different from R120.

For more information about configuring external interfaces, refer to the section "Activate process control interfaces" in the *WDM User's Guide*.

3.23 Re-configuring OPC/HART/MODBUS interfaces

After migration, the OPC, HART, or MODBUS interfaces are disabled in the OneWireless user interface. Perform the following steps to enable the disabled interfaces.

To re-configure OPC/HART/MODBUS interfaces

- 1 On the Selection Panel, expand the WDM icon and select HART/OPC/MODBUS.
- 2 On the Property Panel, expand Configuration.
- 3 In the **Interface** list, click **Enabled**.
- 4 Click Apply.

3.24 Configuring redundant WDM

For configuring redundant WDM, refer to the latest OneWireless Wireless Device Manager User's Guide.

4 R202 to R220 migration

OneWireless R220 provides a new feature where you can download all the firmware files directly from the WDM. In addition, FDAP and other devices can be directly upgraded from R202 to R220. Only WDM must be upgraded to R210 and from R210 to R220. For releases earlier to 202, first migrate all devices to R202 and from R202 to R220.

4 R202 TO R220 MIGRATION

5 R210 to R220 migration

Related topics

"Migrating from R210 to R220 checklist" on page 52

"Verifying the WDM firmware revision" on page 53

"Configuring Cisco switch port setting" on page 17

"Upgrading the WDM firmware" on page 55

"Upgrading the field device firmware" on page 57

"Upgrading the FDAP/access point firmware" on page 58

5.1 Migrating from R210 to R220 checklist

This topic provides a checklist that describes the significant tasks to be performed for migrating from OneWireless R210 to the target release. The checklist also serves as a ready reference to review the progress of migration as you move from one phase of your migration to another. The sections following the checklist provide the details about each task in detail.

This section describes only the tasks that you need to perform for migrating from OneWireless R210 to R220. If you are migrating from releases prior to R202, you must refer to the migration documentation specific to that release.

	Task	Go to	Done?
Step 1	Log on to the OneWireless user interface.	"Logging on to OneWireless user interface" on page 19	
Step 2	Verify the WDM firmware revision.	"Verifying the WDM firmware revision" on page 53	
Step 3	Upgrade the WDM firmware.	"Upgrading the WDM firmware" on page 55	
Step 4	Load the DD files for the field devices.	"Loading the Device Description file" on page 24	
Step 5	Upgrade the sensor firmware of all the field devices.	"Upgrading the field device firmware" on page 57	
Step 6	Upgrade the radio firmware of all the field devices.	"Upgrading the field device firmware" on page 57	
Step 7	Upgrade all the FDAP routers.	"Upgrading the FDAP/access point firmware" on page 58	
Step 8	Upgrade all the FDAP access points.	"Upgrading the FDAP/access point firmware" on page 58	
Step 9	Upgrade the sensor radio firmware of all the Multinodes.	"Upgrading the FDAP/access point firmware" on page 58	
Step 10	Upgrade the Provisioning Device Application on the Provisioning Device handheld.	See the "Configuring a Provisioning Device handheld" section in the <i>WDM</i> <i>User's Guide</i> .	

5.2 Verifying the WDM firmware revision

To verify the WDM firmware revision

- 1 On the Selection Panel of the OneWireless user interface, select the WDM.
- 2 On the Property Panel, expand Device Manager Summary.
- 3 Under Identification group, review the firmware version displayed in the Revision field.

5.3 Configuring Cisco switch port setting

In case you plan to set up a redundant WDM, ensure the following:

- 1. CISCO switch port, where the WDM is connected, is configured to operate in access mode.
- 2. Spanning-tree portfast feature is enabled.
- 3. Speed is set to auto.
- 4. Port is in full duplex mode.

Replace the sample CISCO switch configuration for WDM port with the following sample port configuration.

- interface FastEthernet 0/1
- description WDM port
- switchport access vlan 2
- switchport mode access
- spanning-tree portfast
- speed auto
- duplex full

5.4 Upgrading the WDM firmware

Download the latest WDM firmware file from the Honeywell Process Solutions website.

Attention

Sync must be disabled on a redundant WDM to allow WDM upgrade. If WDM upgrade is initiated on a WDM when sync is enabled an error is displayed. You must disabled the sync from WDM PP and again re-initiate the WDM upgrade.

CAUTION

- Upgrading the WDM firmware makes the WDM offline for some time. During this operation, all the devices drop and join the network again.
- Once initiated, you cannot abort the firmware upgrade operation.
- The WDM must not be turned on while the upgrade is in progress.

The steps for upgrading the WDM from R202 to R210 and then from R210 to R220 are common.

Prerequisites

Ensure that the speed/duplex setting for the network adapter of the computer is set to Auto.

To upgrade the WDM firmware

- 1 On the Selection Panel, select the WDM.
- 2 On the ribbon bar, in the Upgrade group, click Application. The WDM Update dialog box appears.

			WDM Update		
Tag Name	Location	Vendor	Model	Revision	
wdm1	Unplaced	Honeywell	WDM	OW220.1-60.0	-
Firmware OneWireles	Package: s-OW220.1-f	61.0-i686-s.pkg.tar.gz	Ĵ		
Browse					
	ions: Select (packag	an upgrade package and e, press the "Browse" but	press the "Update" button. To upload an upgrade tton.		
Wan	ning: The Wi upd <u>ate</u>	reless Device Manager wi . All services and in <u>terfac</u>	ill be shutdown while performing a firmware es will be unavailable.		
	Firmwa and/or duplex.	ire upload may be very sl duplex. For best perform	ow if your switch is configured with a forced spee ance, configure your switch for auto speed and		
				Update	Cancel

3 Click **Browse** to navigate to the directory location of the firmware file and click **Open**. The WDM firmware file has a *.tar.gz* extension.

The **WDM Update** dialog box displays the upload status. Once complete, the **Firmware File** box displays the uploaded firmware file.

4 Click Update.

The firmware upgrade starts and once complete, the user interface displays a message indicating the result of firmware upgrade operation.

- Attention
- At times, the update may take longer than expected and the result of the upgrade may not be displayed. Instead, a "Page not available" error may appear. In such cases, wait for a minute and then redirect the browser to "https:// <ipaddress>/restartzfs.html" for viewing the result. Do not remove or reboot the WDM during the upgrade process.

After the WDM upgrade from R210 to R220 is complete, the WDM reboots automatically.

- 5 Close and restart the web browser.
- 6 Log on to the user interface again.
- 7 Verify the upgraded version of the WDM firmware as follows:
 - 1. On the Selection Panel, select the WDM.
 - 2. On the Property Panel, expand Device Manager Summary.
 - 3. Under Identification, verify the Revision.

5.5 Upgrading the field device firmware

The devices at the farthest hop level must be upgraded first.

To upgrade the SmartRadar FlexLine field device firmware

1 On the Selection Panel of the OneWireless user interface, select the field device.

You can select multiple devices of the same type using the Selection Panel or the map view. Use SHIFT +click to select multiple items in a successive list. Use CTRL+click to select multiple items not in succession.

Attention

• It is recommended that you select and accept only three devices at a time.

- 2 On the ribbon bar, in the Upgrade group, click one of the following icons, as required.
 - Application: To upgrade the application firmware of the selected field device.

Attention

- To initiate the firmware upgrade of the HCI-1WL (CAN-1WL) board using the **Application** firmware, the SD card must be inserted in the HCI-1WL (CAN-1WL) board. Also, the SD card should not be write protected.
- Radio: To upgrade the radio firmware of the selected field device.

The Radio/Application Firmware Upgrade dialog box appears.

3 Depending on the firmware type, the available upgrade files appear by default. Select the required file from the list of upgrade files.

If the file is not available in the list, perform the following steps.

- a Click Add to browse to the directory location of the firmware upgrade file.
- b Click Open.
- 4 Click Upgrade.

The Radio/Application Firmware Upgrade dialog box appears.

The **Firmware Upgrade Status** dialog box displaying the status of the upgrade appears. Closing the dialog box allows the upgrade operation to run in the background. The upgrade status is displayed in the status bar. Click the firmware upgrade status box to open the dialog box again. If multiple users are simultaneously upgrading different device firmware, all the users can view the progress of all the device upgrades.

While upgrading the application firmware of a field device, the LCD display of the field device displays the firmware upgrade status. The status is displayed until the upgrade operation completes or aborts.

Once the upgrade is complete, the status column displays the status as complete. If firmware upgrade fails for a device, you can abort the upgrade and start again. To abort firmware upgrade for individual devices, click the abort button next to the status indicator.

5 Close the Firmware Upgrade Status dialog box.

5.6 Upgrading the FDAP/access point firmware

Download the latest FDAP/access point firmware files from the Honeywell Process Solutions website.

To upgrade the FDAP/access point firmware

- On the Selection Panel, select the FDAP/access point.
 You can select multiple devices using the Selection Panel or the map view. Use SHIFT+click to select multiple items in a successive list. Use CTRL+click to select multiple items not in succession.
- 2 On the ribbon bar, in the **Upgrade** group, click **Radio**.

The Radio Firmware Upgrade dialog box appears.

			Radio Firmware Upgrade		
Tag Name	Location	Vendor	Model	Revision	-
TD_1030	Default Map	Honeywell	2618_2420_01	OW220.1-50.0	Î
		-			
Available	Firmware File	es:			
Available HON_FR_R	Firmware File adio_Rev1_R22	es: 20.1.50.0.bin	Î		
Available HON_FR_R	Firmware File adio_Rev1_R22	es: 20.1.50.0.bin	Ĵ		
Available HON_FR_R	Firmware File adio_Rev1_R22 Delete	295: 20.1.50.0.bin	Ĵ		
Available HON_FR_R Add [Instruct War	Firmware File adio_Rev1_R22 Delete ions: Select a f press the ning: Firmware and/or du	as: 20.1.50.0.bin îrmware file and press th "Add" button. To remov upload may be very slo uplex. For best performs	he "Update" button. To upload a firmwa re a firmware file, press the "Delete" bu w if your switch is configured with a for noe, configure your switch for auto spec	rre file, tton. ced speed d and	
Available HON_FR_R Add (Instruct War	Firmware File adio_Rev1_R22 Delete ions: Select a f press the ning: Firmware and/or du duplex.	es: 20.1.50.0.bin Îrmware file and press th "Add" button. To remov upload may be very slo uploat may be very slo uploat may be very slo	he "Update" button. To upload a firmwa re a firmware file, press the "Delete" bu w if your switch is configured with a for nce, configure your switch for auto spea	are file, tton. cod. speed ed and	

3 In the Available Firmware Files list, select the required firmware upgrade file.

By default, the firmware upgrade file appears in the list. If the file is not available in the list, perform the following steps to open the firmware file.

- a Click Add to browse to the directory location of the firmware upgrade file.
- b Click Open.
- 4 Click Upgrade.

The **Firmware Upgrade Status** dialog box appears. The **Progress** column displays the progress of the upgrade.

- Attention
 - To abort any firmware upgrade operation, click the Abort Upgrade icon adjacent to the upgrade status.
 - To remove the devices for which the firmware upgrade has been completed, click the Clear Upgrade icon adjacent to the upgrade status.
- 5 Close the Firmware Upgrade Status dialog box.

6 Notices

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6.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions website at:

http://www.honeywellprocess.com/

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

hpsdocs@honeywell.com

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Technical Assistance Center (TAC) listed in the "Support and other contacts" section of this document.

6.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at: https://honeywell.com/pages/vulnerabilityreporting.aspx

Submit the requested information to Honeywell using one of the following methods:

• Send an email to security@honeywell.com.

or

• Contact your local Honeywell Technical Assistance Center (TAC) listed in the "Support and other contacts" section of this document.

6 NOTICES