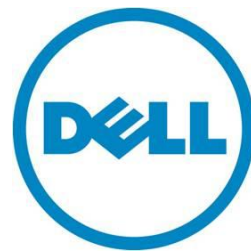

Dell Networking W-Series Instant Access Point Wireless LAN Deployment Guide for Dell PowerEdge VRTX

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Engineering



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Executive summary

Remote Office Branch Office can now take advantage of quickly enabling enterprise grade and simple to deploy Wi-Fi access. Dell Networking W-Series Instant Access Points enable a rich Mobility experience for users of notebooks, tablets, phones and other mobile devices.

Dell PowerEdge™ VRTX is a new shared infrastructure product, focused on remote, branch, and small office needs. It combines Dell PowerEdge M520 and M620 server blades, shared storage, and I/O in the form of PCIe and one dedicated I/O Module slot. These elements are combined into a 5U rackable tower, providing a simpler model for Remote Office Branch Office (ROBO) and Small Medium Businesses (SMB) customers to deploy and manage.

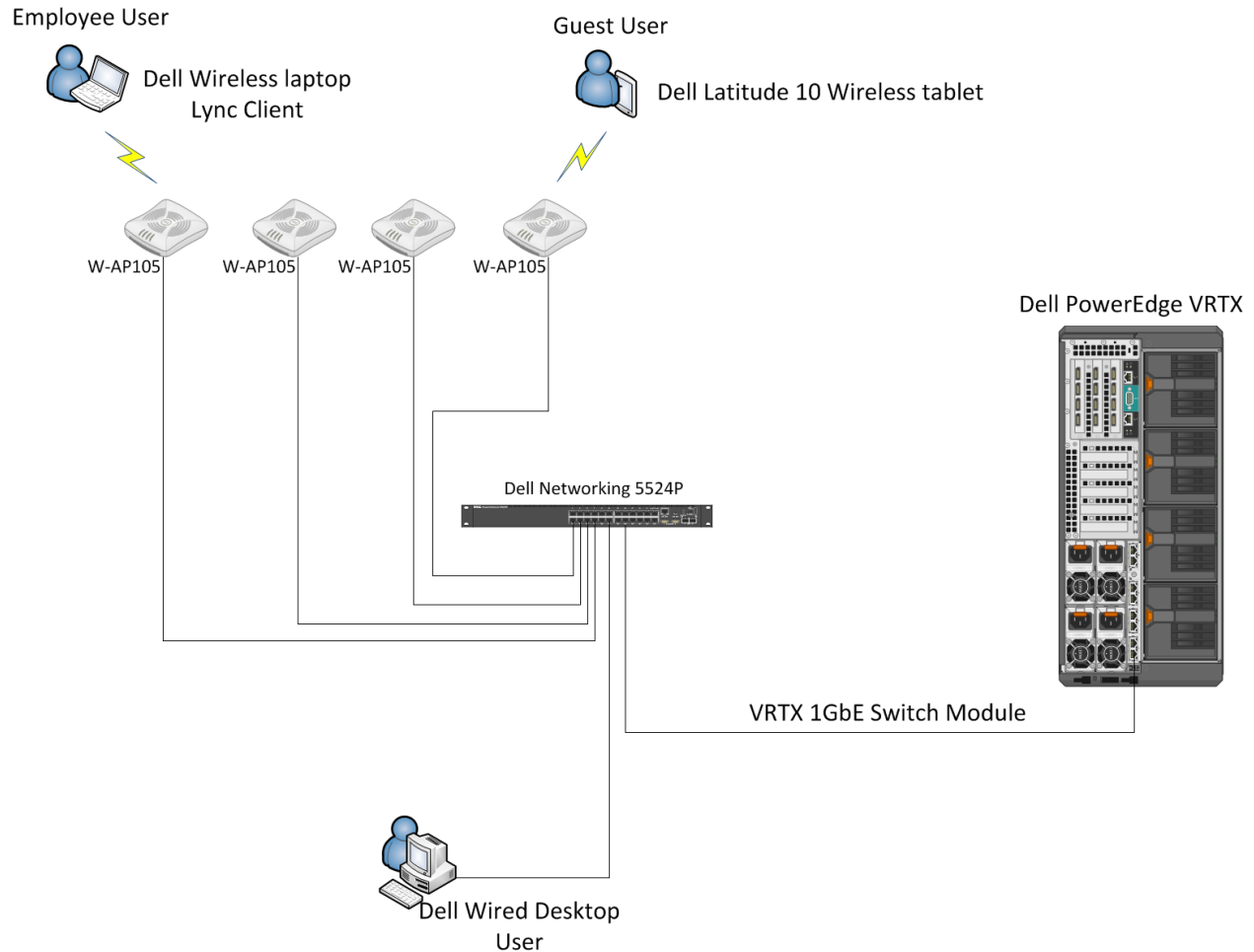
Introduction

This deployment guide outlines the ease of setting up the Dell networking W-Series Instant Access Points (IAP) with the Dell PowerEdge VRTX system platform designed for Remote Office Branch Office. The combination of Dell networking W-Series IAP with Dell PowerEdge VRTX highlights the ability to deliver “Better Together” end -to- end solutions to the Remote Office Branch Office.

The Dell Networking W-Series portfolio is highly scalable and secure, and offers centralized WLAN or Distributed WLAN architectures. You can provide easily managed WLAN, BYOD and Application delivery optimized for your wireless users.

Network Topology

Figure 1. Wireless LAN Mobility for small office/branch office with PowerEdge VRTX



Networking W-Series Instant Access Point (IAP) Configuration

Power up and obtain IP address from DHCP server

Connect the Dell W-Series Instant Access Points (IAP) to the Dell Power-over Ethernet (POE) network switch and verify the unit powers up as shown in Figure 2, indicating the IAP is ready to be configured.

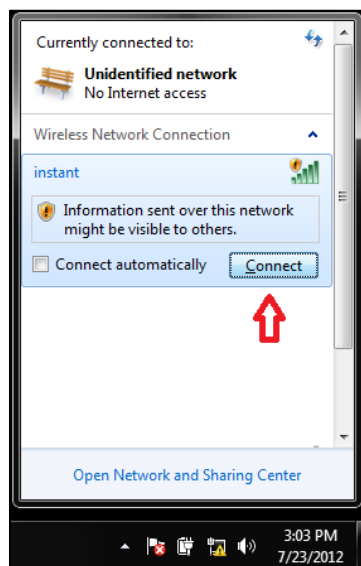
Figure 2. IAP Ready



Connect to the instant SSID

The Dell W-Series Mobility Instant Access Point (IAP) advertises the default Service Set Identifier (SSID). From a mobile laptop or tablet network connect to the *instant* SSID as shown in Figure 3.

Figure 3. Connecting to Instant SSID



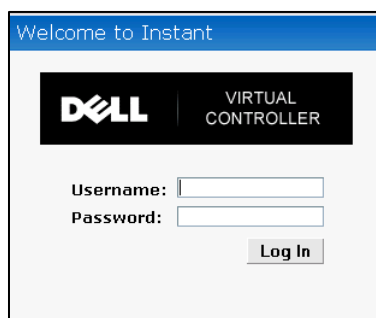
Logging into Dell Networking W-Series IAP

Open a web browser and navigate to **instant.dell-pcw.com** to access the Dell Virtual Controller login screen. If you enter any other URL, you are redirected to the same Dell Virtual Controller login screen.

 **NOTE:** Connection to the Internet is required.

Figure 4 shows the Dell Virtual Controller's login screen. Enter Username **admin** and Password **admin**, and then click **Log In**.

Figure 4. IAP Virtual Controller Login Screen

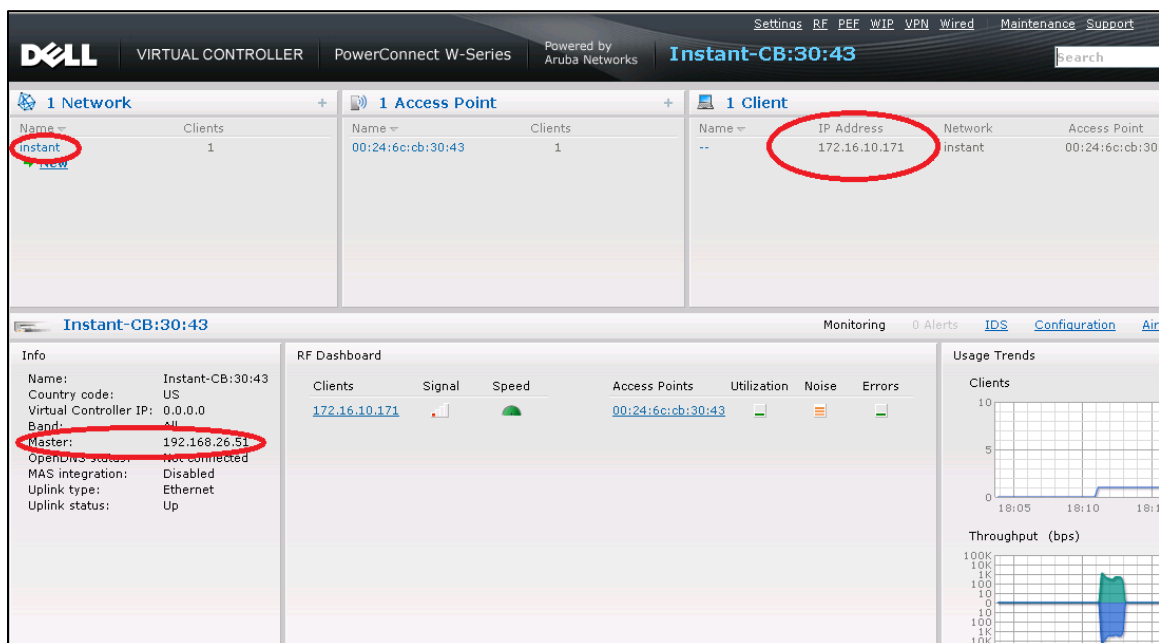


After logging in, the Virtual Controller main dashboard appears as shown in Figure 5.

 **NOTE:** This IAP is the only IAP in the network, and is the Master Virtual Controller.

Figure 5 shows the wireless client receiving an IP address from the IAP Virtual Controller. The IAP receives an IP address from the network DHCP in the subnet.

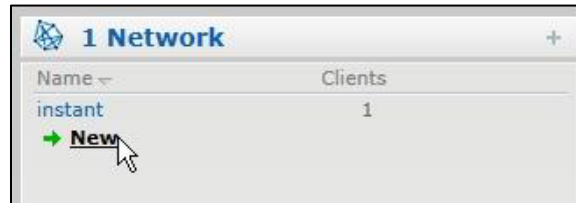
Figure 5. Virtual Controller Main Dashboard



Create New Employee SSID

From the Virtual Controller main dashboard in Figure 5, under **Network**, click **New** as shown in Figure 6.

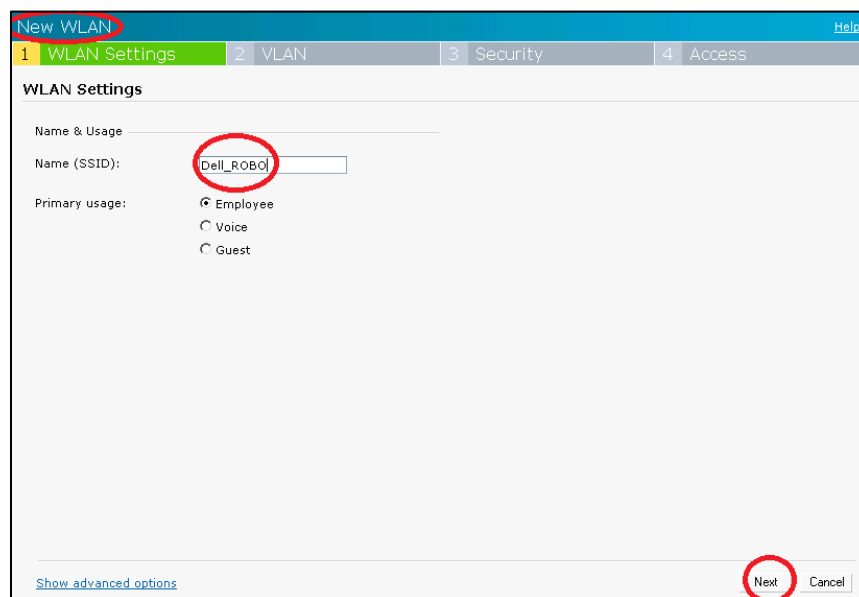
Figure 6. New Employee SSID



New WLAN Settings

In the **New WLAN** screen, enter a name (SSID). In the example below, the SSID is DellROBO. Next to **Primary usage**, select **Employee**, and click **Next** as shown in Figure 7.

Figure 7. New WLAN

A screenshot of the 'New WLAN' configuration screen. The screen has a blue header with the title 'New WLAN' and a 'Help' link. Below the header is a tabbed interface with four tabs: '1 WLAN Settings' (selected), '2 VLAN', '3 Security', and '4 Access'. The 'WLAN Settings' tab is active, showing a 'Name & Usage' section. This section contains a 'Name (SSID):' field with the text 'Dell_ROBO' entered, and a 'Primary usage:' section with three radio button options: 'Employee' (selected), 'Voice', and 'Guest'. At the bottom of the screen, there is a 'Show advanced options' link and two buttons: 'Next' and 'Cancel'. The 'Next' button is circled in red.

Client IP and VLAN Assignment

See Figure 8. For client IP assignment, **Network assigned** is the default setting. This allows wireless clients connecting to the Employee network to be assigned an IP address from the network.

The client VLAN assignment default setting uses VLAN1 for the wireless client.

Figure 8. Client IP and VLAN Assignment

The screenshot shows the 'New WLAN' configuration window with the 'VLAN' tab selected. The 'Client IP & VLAN Assignment' section contains two radio button options. The first option, 'Network assigned', is selected and circled in red. The second option, 'Default', is also selected and circled in red. Below these options are 'Static' and 'Dynamic' radio buttons, which are not selected. At the bottom right of the window, the 'Next' button is circled in red, while 'Back' and 'Cancel' buttons are visible.

New WLAN [Help](#)

1 WLAN Settings 2 **VLAN** 3 Security 4 Access

Client IP & VLAN Assignment

Client IP assignment: ☐ Virtual Controller assigned
☒ **Network assigned**

Client VLAN assignment: ☒ **Default**
☐ Static
☐ Dynamic

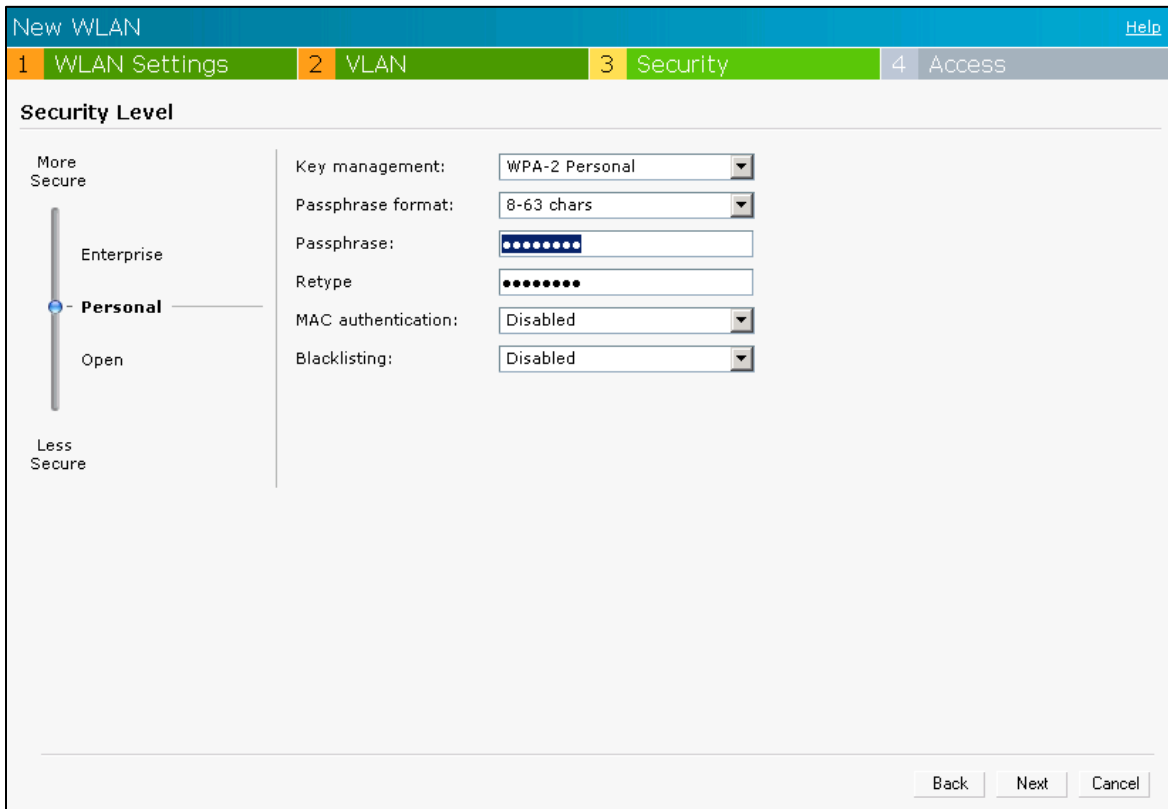
Back **Next** Cancel

Security

See Figure 9. Set the **Security Level** slide bar to **Personal**. From the **Key management** field drop down menu, select **WPA-2 Personal**. Enter the passphrase then click **Next**.

 **NOTE:** The IAP Enterprise security setting allows IEEE 802.1x authentication using WPA-2 with AES encryption. Please reference the [Instant Access Point Users Guide](#)

Figure 9. Security Settings



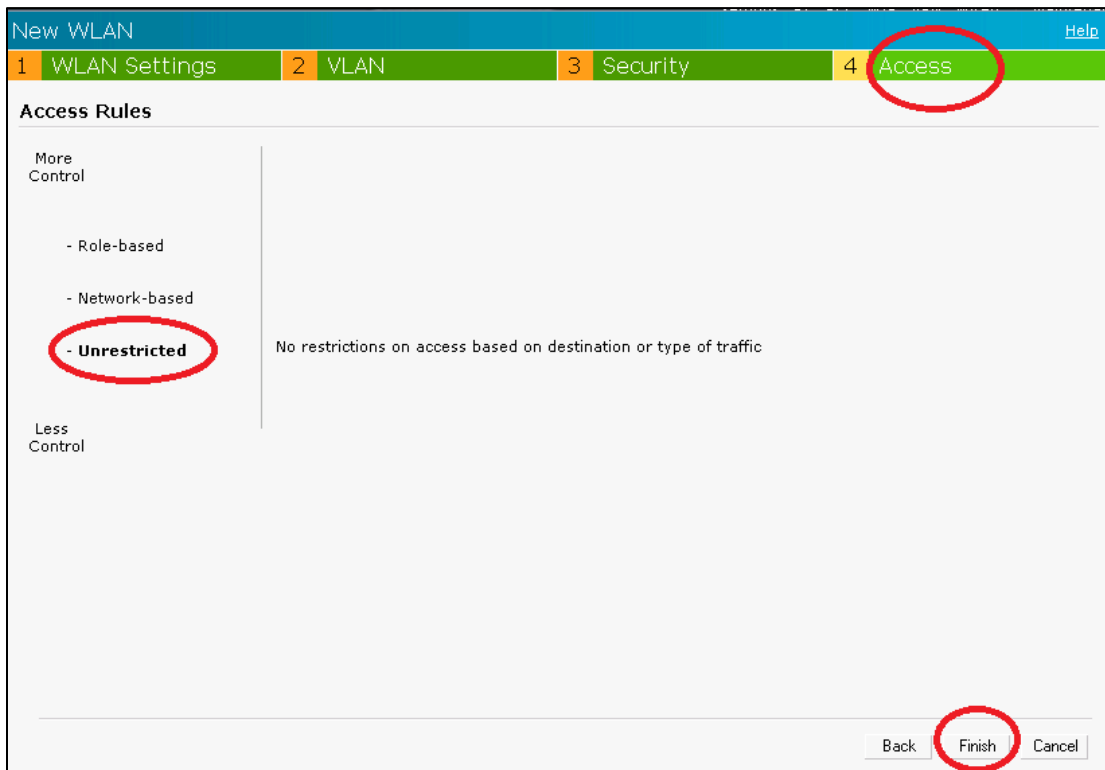
The screenshot shows the 'New WLAN' configuration window with the 'Security' tab selected. The window has a blue header bar with the title 'New WLAN' and a 'Help' link. Below the header is a progress bar with four steps: 1 WLAN Settings, 2 VLAN, 3 Security (highlighted), and 4 Access. The main content area is titled 'Security Level'. On the left, there is a vertical slider bar with 'More Secure' at the top and 'Less Secure' at the bottom. The slider is positioned between 'Enterprise' and 'Personal', with 'Personal' being the selected option. To the right of the slider, there are several configuration fields: 'Key management:' with a dropdown menu set to 'WPA-2 Personal'; 'Passphrase format:' with a dropdown menu set to '8-63 chars'; 'Passphrase:' with a text input field containing 10 dots; 'Retype' with a text input field containing 10 dots; 'MAC authentication:' with a dropdown menu set to 'Disabled'; and 'Blacklisting:' with a dropdown menu set to 'Disabled'. At the bottom right of the window are three buttons: 'Back', 'Next', and 'Cancel'.

WLAN Access Settings

Figure 10 illustrates the Access link. The default is **Unrestricted**, allowing wireless clients access to any and all protocols and destinations. Click **Finish**.

 **NOTE:** Dell recommends network access rules and policies be set according to the customer's unique security policy requirements.

Figure 10. Access Setting



New WLAN [Help](#)

1 WLAN Settings 2 VLAN 3 Security 4 **Access**

Access Rules

More Control

- Role-based
- Network-based
- Unrestricted**

Less Control

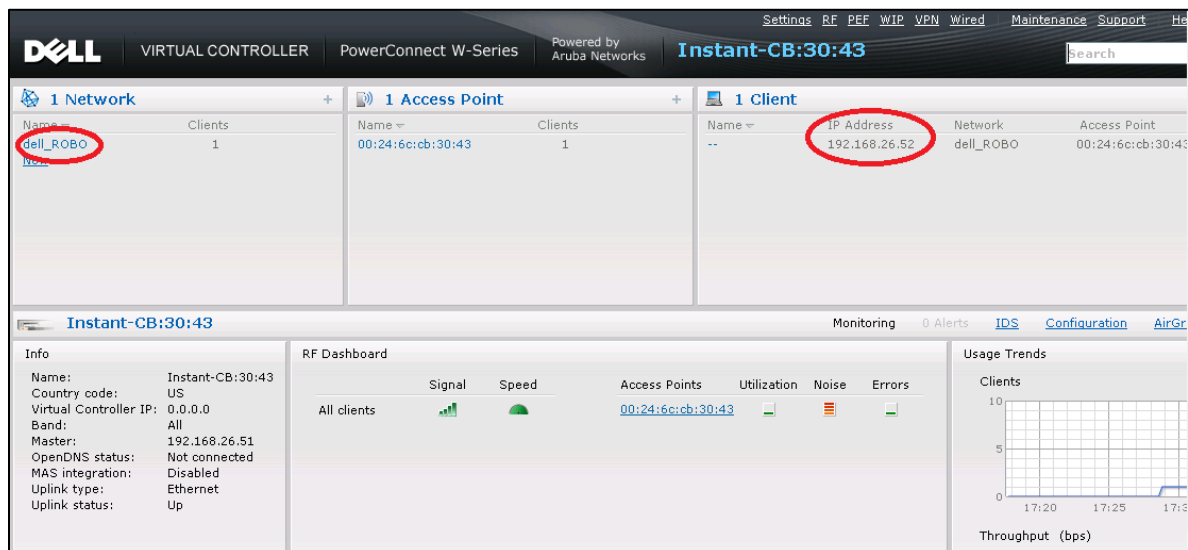
No restrictions on access based on destination or type of traffic

Back **Finish** Cancel

Employee WLAN

See Figure 11. Disconnect the wireless client from Instant SSID. Connect the wireless client to the new wireless network SSID. Notice a wireless client is now associated with the new WLAN and the IP address for the wireless client is now assigned by the network DHCP. Once the new WLAN is created and connected to a wireless client, the default Instant SSID is removed.

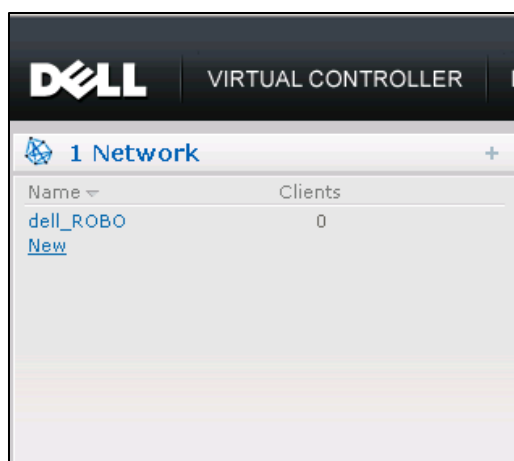
Figure 11. Employee WLAN



Create New Guest SSID

From the Virtual Controller main dashboard in Figure 11, under **Network**, click **New**, as shown in Figure 12.

Figure 12. New Guest SSID



Guest WLAN Setting

See Figure 13. In the **New WLAN** screen, enter a name in the **Name (SSID)** field. Next to **Primary usage**, select **Guest** and then click **Next**.

Figure 13. Guest WLAN

The screenshot displays the 'New WLAN' configuration interface. At the top, a blue header bar contains the title 'New WLAN' and a 'Help' link. Below the header, a tabbed navigation bar shows four tabs: '1 WLAN Settings' (active), '2 VLAN', '3 Security', and '4 Access'. The main content area is titled 'WLAN Settings' and includes a 'Name & Usage' section. In this section, the 'Name (SSID):' field contains the text 'guest_ROBO'. Below this, the 'Primary usage:' section has three radio button options: 'Employee', 'Voice', and 'Guest'. The 'Guest' option is selected. At the bottom right of the form, there are two buttons: 'Next' and 'Cancel'. A 'Show advanced options' link is located at the bottom left of the form area.

Guest Client IP and VLAN Assignment

See Figure 14. **Virtual Controller assigned** is the default setting. This allows the wireless clients connecting to the Guest network to have the IP address assigned by the Virtual Controller. Click **Next**.

Figure 14. Guest IP Assignment

The screenshot shows the 'New WLAN' configuration interface. At the top, there's a blue header bar with 'New WLAN' and a 'Help' link. Below it is a tabbed interface with four tabs: '1 WLAN Settings' (orange), '2 VLAN' (green), '3 Security' (grey), and '4 Access' (grey). The 'VLAN' tab is active. The main content area is titled 'Client IP & VLAN Assignment'. It contains a label 'Client IP assignment:' followed by two radio button options. The first option, 'Virtual Controller assigned', is selected and circled in red. The second option is 'Network assigned'. At the bottom right of the window, there are three buttons: 'Back', 'Next' (circled in red), and 'Cancel'.

Guest Security

Figure 15 illustrates the security-level splash page default requiring username and password entries into the internal database. Click the **Users** link.

Figure 15. Guest Security Level

1 WLAN Settings 2 VLAN 3 Security 4 Access

Security Level

Splash page type: Internal - Authenticated

WISPr: Disabled

MAC authentication: Disabled

Auth server 1: InternalServer

Reauth interval: 0 min.

Internal server: No users [Users](#)

Blacklisting: Disabled

Encryption: Disabled

Splash Page Visuals

Welcome to Guest Network

Click thumbnail above to edit [Preview](#)

Redirect URL: (Optional)

Back Next Cancel

See Figure 16. In the **Users** screen, add a new user. Enter the username and password, and then click **OK**.

Figure 16. Guest User Database

Users Help

Users(1)	Type
ROBO	Guest

Edit Delete Delete All

Add new user:

Username: Password: Retype: Type: Guest Add

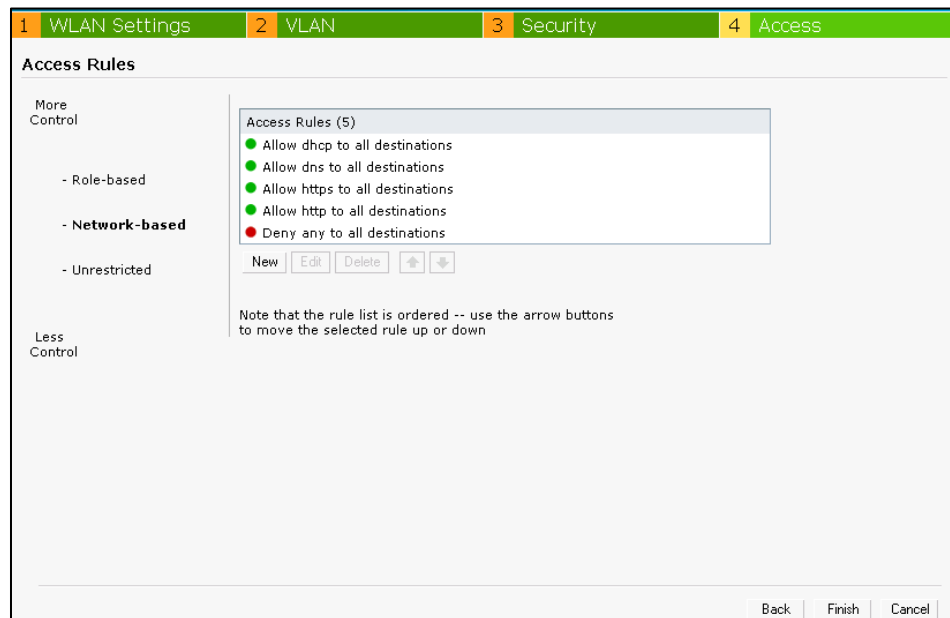
OK Cancel

Guest Access

Figure 17 shows the network-based access rules to add. Click **New**, and then click **Finish**. The rules will be executed in the order shown.

 **NOTE:** Dell recommends setting network access rules and policies according to the customer's unique security policy requirements.

Figure 17. Guess Access Rules



Connect to the Guest SSID

From a mobile device, connect to the Guest SSID. Open a web browser and connect to any internet website. Figure 18 shows the Guest Welcome page that appears. Agree to the terms, and then enter the user name and password for the guest user.

At this point, users now have an Employee and Guest WLAN to which they can connect.

Figure 18. Guest Welcome Page

Appendix A

Components for this Deployment: (for deployment outside US, equivalent SKU's are available)

Table 1. Dell Networking 5524P

Description	QTY	SKU
5524P, 24 GbE Ports, Managed Switch, 10GbE and Stacking built-in, PoE	1	225-0848
Powercord, 125 Volt, 15Amp, 10 Foot	1	330-6870
Switch includes Lifetime Warranty repair. Choose Dell ProSupport™ for advanced technical support.	1	929-2707, 931-2041, 934-8788, 939-9130, 939-9360
ONSITE INSTALLATION: Hardware Install only	1	989-6188
Asset Recovery, Program Managed	1	960-1848

Table 2. Dell Networking W-IAP105

Description	QTY	SKU
W-IAP105, Instant Wireless Access Point, US	1	225-2051
W-WIAP105,Optional Mounting Kit, Recessed Ceiling, 9/16" or 15/16"	1	331-0211
W-WIAP105 Flat Surface, Wall Box Mount Kit (for PoE only)	1	331-0212
Basic Hardware Warranty Repair: 5x10 HW-Only, 5x10 NBD Parts	1	933-9147, 959-0600, 959-0610, 968-7546, 968-7547
No Installation	1	900-9997
W-IAP Documentation Kit	1	331-5447

Additional Resources

Recommended Dell publications:

[Dell Networking W-Series Mobility](#)

[Dell Networking W-Series Mobility Support](#)

[Microsoft Lync Server 2010 on Dell Systems](#)

Recommended Microsoft publications:

[Microsoft® Lync® Qualified Infrastructure](#)