

Web User Interface

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Introduction to the Web User Interface

The Web User Interface (WebUI) provides network administrators with a single solution for provisioning, monitoring, and optimizing devices. After you complete the hardware installation, you need to setup the device with a configuration required to enable traffic to pass through the network. On your first day with your new device, you can perform a number of tasks to ensure that your device is online, reachable and easily configured. This is referred to as the Day 0 interface.

Note A Day 0 configuration is defined as a device that is fresh out of the box with no startup-configuration.

After the initial Day 0 configuration, the WebUI can be used for day to day configuration.

Once the router boots up in Day 0, the PC can connect to the 192.168.1.x network and can access WebUI using the IP address of 192.168.1.1 with any browser. After the configuration is applied through the WebUI, the router will display the message "Day 0 config done. Stopping autoinstall".

Note PnP is supported on GigabitEthernet 0/0/0 - 0/0/1 ports and Cellular PIMs.

Day 0 Cellular Mode

The router can be configured on Day 0 through the cellular pluggable module. This assumes a cellular pluggable module is already installed.

This mode helps configuring the Cellular APN, assuming the customer gets a private APN (or private LTE/5G) as WAN backhaul. By doing so, the APN value is stored in the modem. Once the router reboots, it is reset to factory-default, enabling the router to perform PnP over Cellular when private APN is used.

Note Advanced Mode is needed in order to set up Cellular WAN, including public or private APN. This should be provided by your SIM's service provider.

Note The pluggable interface is not hot swappable. If you wish to change a SIM, power off the router.

The steps to configure through the cellular pluggable module follow:

1. Select the Cellular interface in the **`WAN type`**.
2. Enter the APN name.
3. There is no need to select a backup WAN.
4. Reboot the router.

PnP will now be able to run with private APN to connect to IOS OD, vManage, or DNA-C.

Day 0 Web User Interface

The Day 0 Web User Interface (WebUI) will be supported on the IR1001-G2. Day 0 WebUI is supported only on LAN ports. These are GigEthernet ports 0/0/0 and 0/0/1 on the IR1001-G2. Connect either a Windows, Linux or Mac PC/Laptop to one of the LAN ports of the IR1001-G2 and boot the router on Day 0. The PC/Laptop should be configured to obtain an IP address through DHCP.

Additional Modem Support for CAT 6 and CAT 7 Cellular Pluggable Modules

The LTE Cat6 Pluggable Interface Modules (PIMs) will be updated with Cat7 modems. The following table shows the product transition:

Table 1: Cat6 to Cat7 Transition

Cat6 (Current)	Cat7 (Refreshed)
Sierra Wireless EM7455/7430	Sierra Wireless EM7411/7421/7431
Cat6 LTE Advanced	Cat7 LTE Advanced

Support for additional modems on the IR1001-G2

The following are the new PIDs that will be available:

- P-5GS6-RC-GL
- P-LTEA7-NA
- P-LTEA7-EAL
- P-LTEA7-JP
- P-5GS6-R16SA-GL

GPS mode default enablement

GPS mode default enablement is a configuration enhancement that:

- automatically enables GPS mode by default
- sets GPS to standalone mode without requiring additional user configuration, and
- reduces cellular link up time by eliminating the need for manual modem power-cycling.

Guidelines and Limitations

The following are Guidelines and Limitations:

IR1001

Day 0 WebUI is supported only on LAN ports. These are GigEthernet ports 0/0/0 and 0/0/1. Connect a PC to one of the LAN ports of the router and boot the router on Day 0. The PC can be configured to use DHCP or with a static IP address of 192.168.1.2/255.255.255.0.

The following are limitations to the Day 0 feature:

-
- Plug and Play (PNP) cannot be used if router is being used to configure using Day 0 WebUI as PNP will be aborted once the configuration is applied through Day 0 WebUI.
- An explicit **write memory** is not needed once the configuration is applied through the WebUI.

Configuring Your Computer to Connect to the Router

The following section provides guidance for configuring your computer to properly interface with the router.

You can access the application from a client web browser. Ensure that the following web client requirements are met:

- Hardware—A Mac (OS version 10.9.5) or Windows (OS version 10) laptop or desktop compatible with one of the following tested and supported browsers:
  - Google Chrome 59 or later
  - Mozilla Firefox 54 or later
  - Apple Safari 10 or later
  - Microsoft Edge browser
- Display resolution—We recommend that you set the screen resolution to 1280 x 800 or higher.

Connecting to the Router Using DHCP

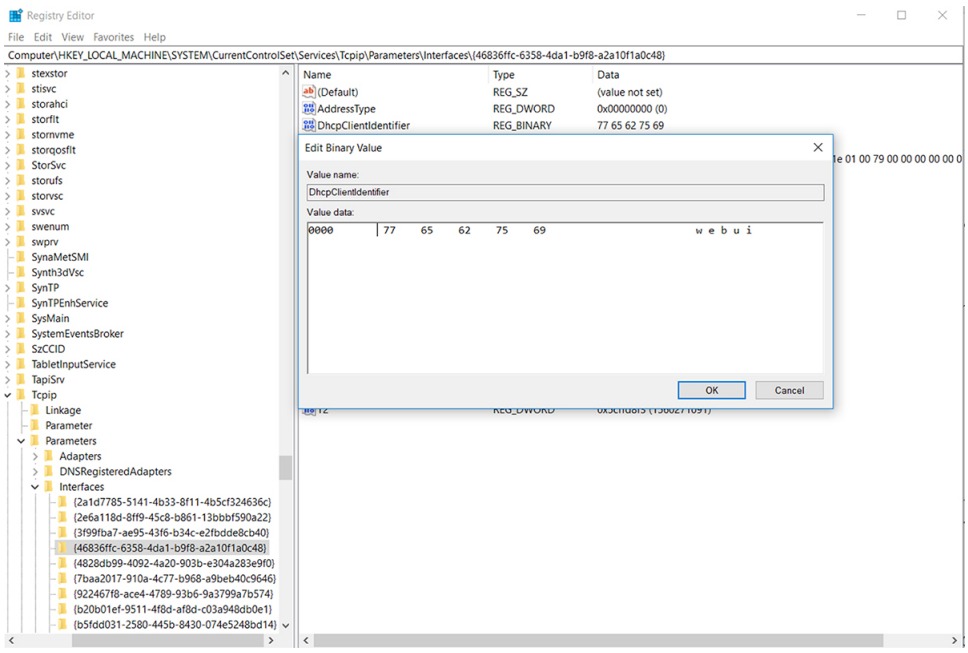
Set up the DHCP Client Identifier on the client to get the IP address from the router, and to be able to authenticate with Day 0 login credentials.

Setting up the DHCP Client Identifier on the client for Windows

1. Type **regedit** in the Windows search box on the taskbar and press **enter**.
2. If prompted by User Account Control, click **Yes** to open the Registry Editor.
3. Navigate to

   Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces and locate the **Ethernet Interface Global Unique Identifier (GUID)**.
4. Add a new REG_BINARY **DhcpClientIdentifier** with Data **77 65 62 75 69** for **`webui`**. You need to manually type in the value.

Figure 1: Setting up DHCP Client Identifier on Windows

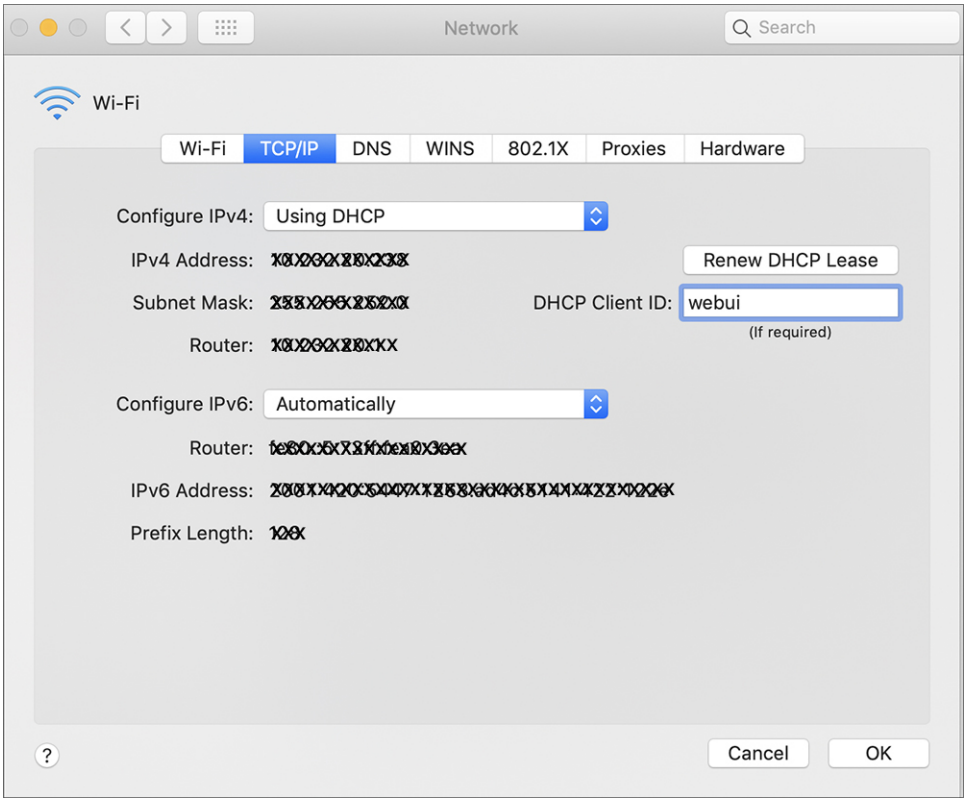


5. Restart the PC for the configuration to take effect.

Setting up the DHCP Client Identifier on the client for MAC

1. Go to **System Preferences >Network >Advanced >TCP >DHCP Client ID:** and enter **webui**.

Figure 2: Setting up DHCP Client Identifier on MAC



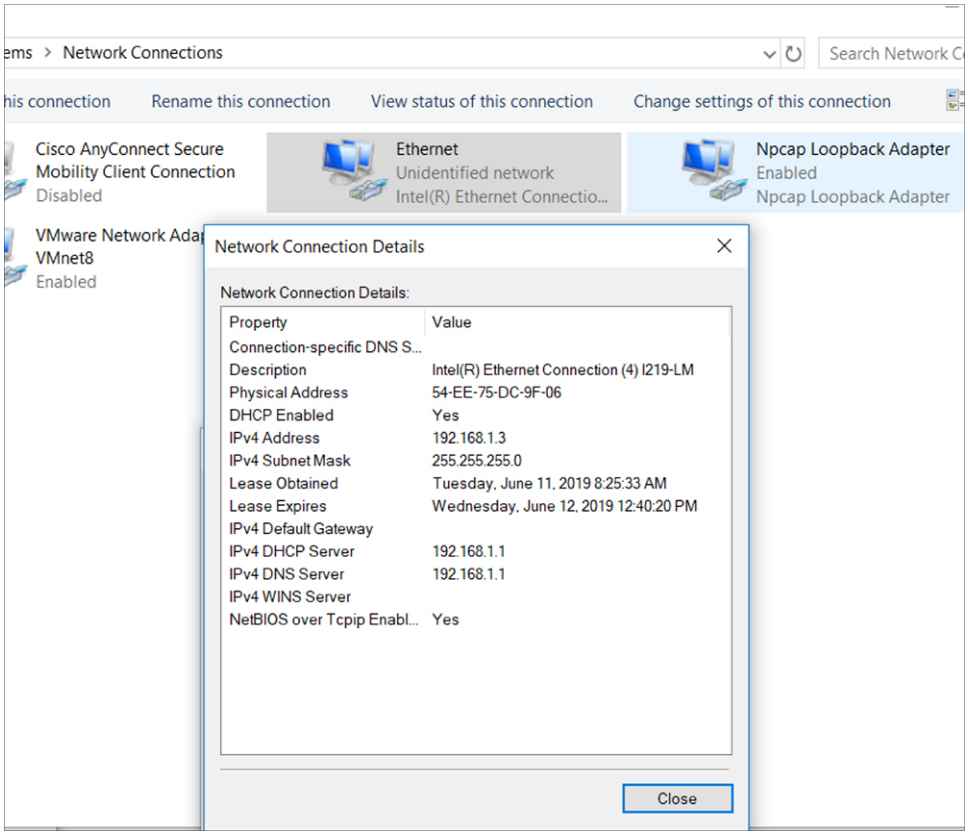
2. Click **OK** to save the changes.

Continuing with the Configuration Wizard

The bootup script runs the configuration wizard, which prompts you for basic configuration input: (**Would you like to enter the initial configuration dialog? [yes/no]:**). To configure Day 0 settings using the web UI, do not enter a response. Perform the following tasks instead:

1. Make sure that no devices are connected to the router.
2. Connect one end of an ethernet cable to one of the downlink (non-management) ports on the active supervisor and the other end of the ethernet cable to the host (PC/MAC).
3. Set up your PC/MAC as a DHCP client, to obtain the IP address of the router automatically. You should get an IP address within the 192.168.1.x/24 range.

Figure 3: Obtaining the IP Address



It may take up to three mins. You must complete the Day 0 setup through the web UI before using the router terminal.

4. Launch a web browser on the PC and enter the router IP address (`https://192.168.1.1`) in the address bar.
5. Enter the Day 0 username **webui** and password **cisco**.

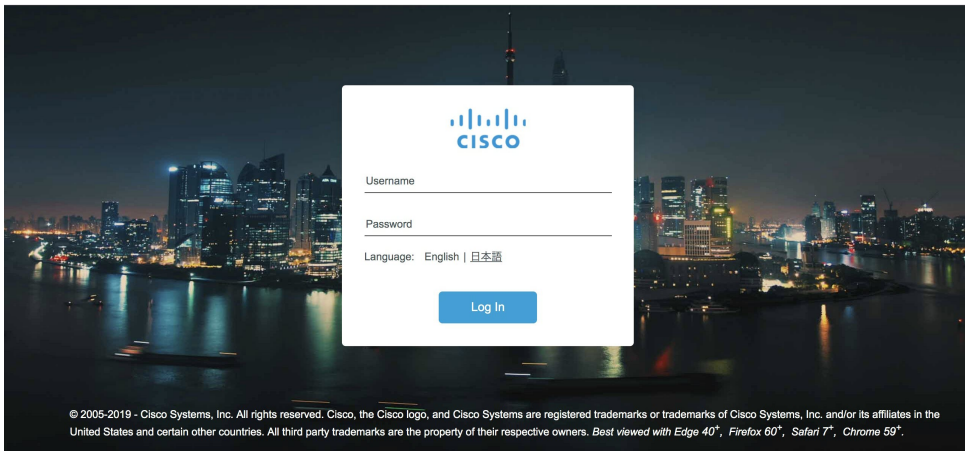
Configuring Basic Mode WebUI through the Browser

The following steps guide you through the process of using the browser on your PC/laptop to configure the WebUI.

Procedure

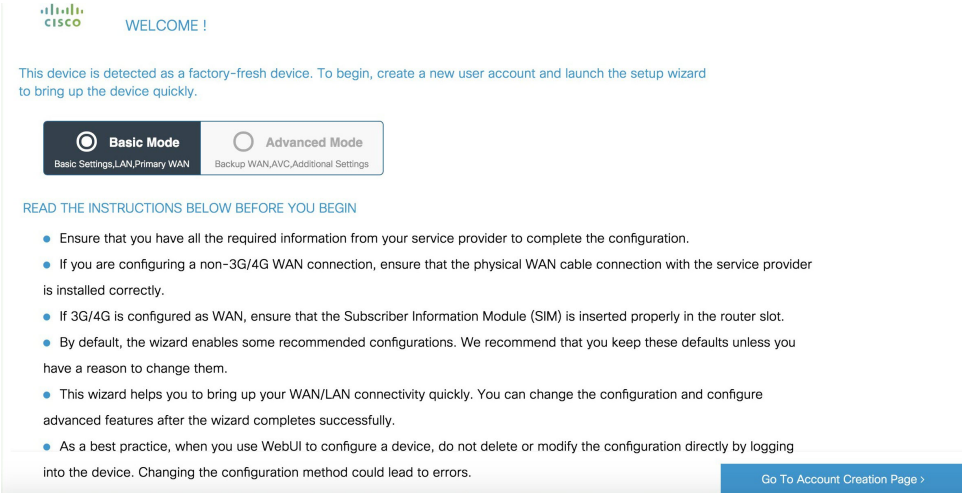
Step 1 Open your browser and enter 192.168.1.1in the address bar. The Login Screen appears. Enter the Username **webui** and the Password **cisco**. Then click **Log In**.

Figure 4: Login Screen



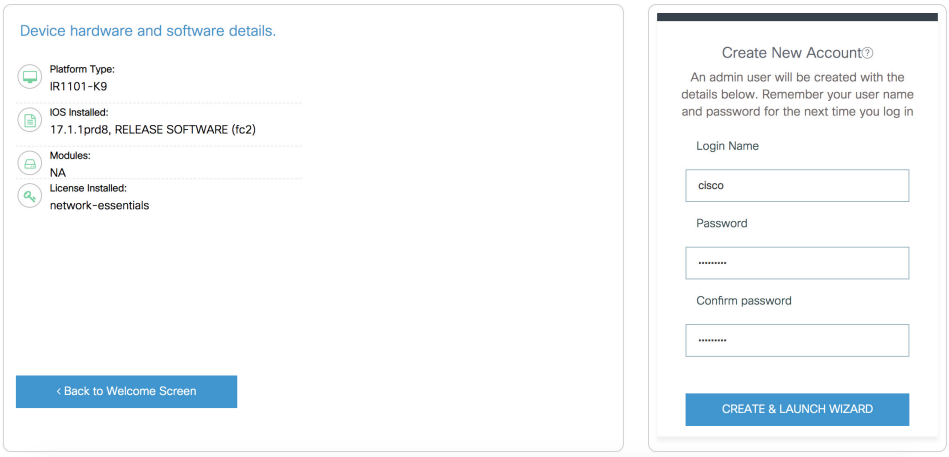
Step 2 The Welcome Screen appears. Select Advanced Mode or Basic Mode. Basic Mode allows for configuring Basic settings, LAN, and a Primary WAN. Advanced Mode allows you to configure an additional Backup WAN, AVC, as well as additional settings. For the purposes of this section, Basic Mode is used. Select **Basic Mode**.

Figure 5: Welcome Screen



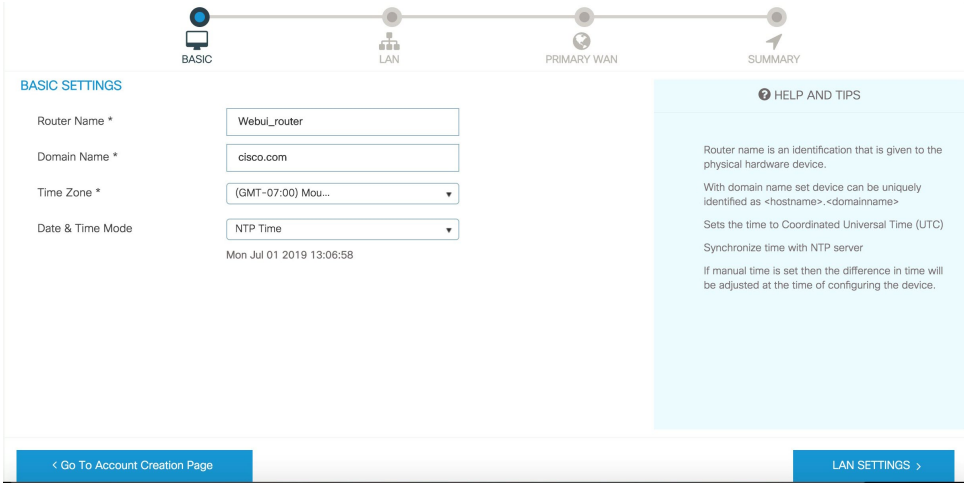
Step 3 Click **Go To Account Creation Page**. The Create New Account Screen appears. Create a new Login Name and Password to access the WebUI.

Figure 6: Create New Account Screen



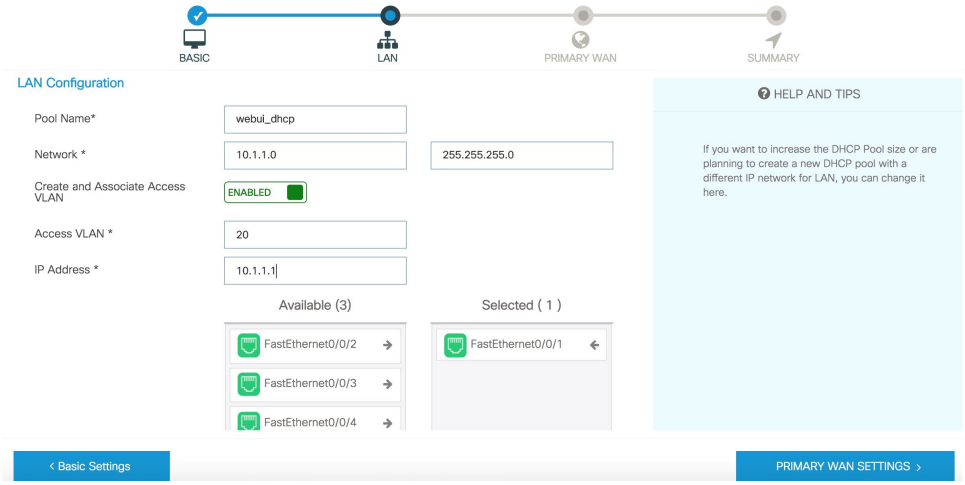
Step 4 Click **CREATE & LAUNCH WIZARD**. The Basic Settings Screen appears. Provide a Router Name (hostname), Domain Name, Time Zone and Date & Time Mode.

Figure 7: BASIC SETTINGS Screen



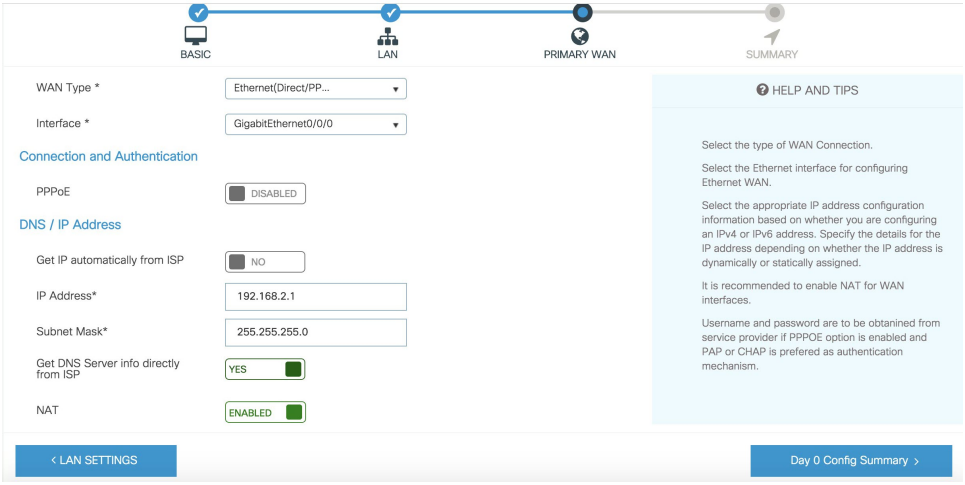
Step 5 Click **LAN SETTINGS**. The LAN Configuration Screen appears. Enter the webui_dhcp Pool Name, VLAN interface IP address, and select the interface that is connected to your laptop from the list of available interfaces.

Figure 8: LAN Configuration Screen



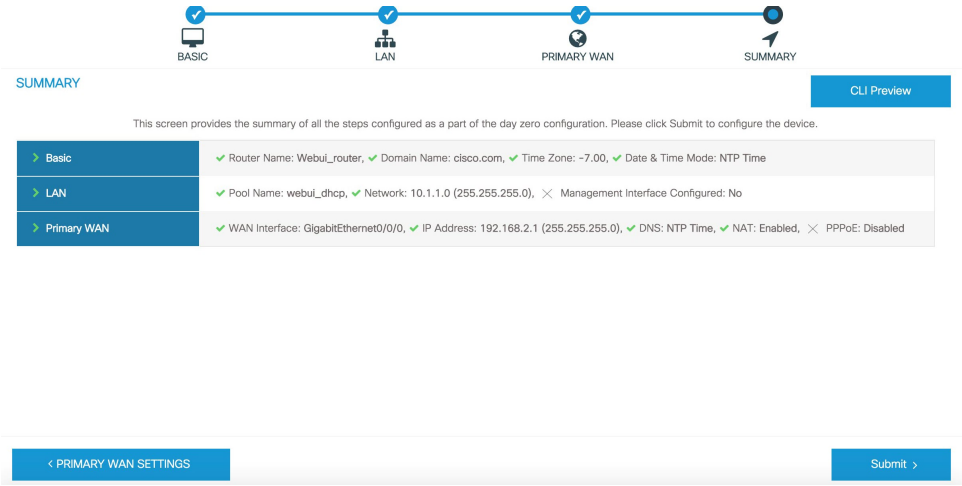
Step 6 Click **PRIMARY WAN SETTINGS**. The PRIMARY WAN SETTINGS Screen appears. Configure the WAN interface by selecting the WAN Type and Interface from the available options. Next enter your DNS IP address information and select Enable/Disable NAT.

Figure 9: Primary WAN Interface Screen



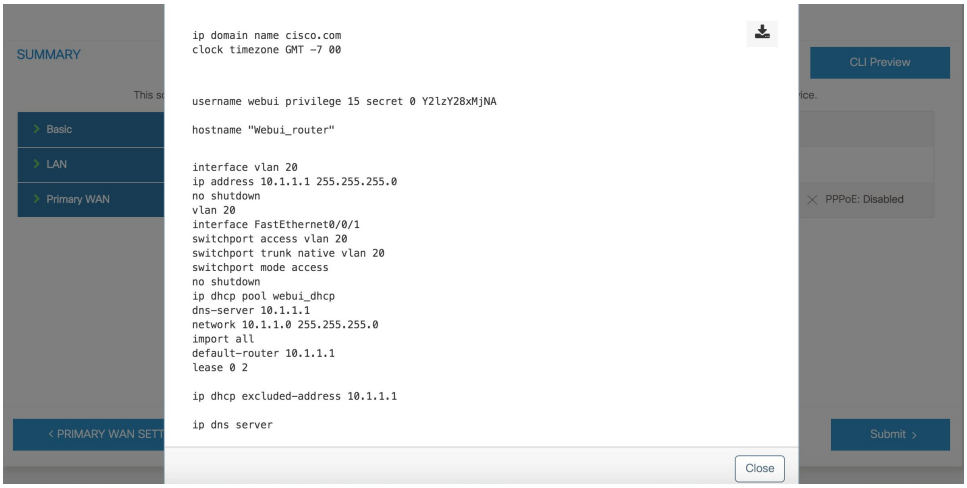
Step 7 Click **Day 0 Config Summary**. The Review Summary Screen appears. Verify your entries before applying the configuration.

Figure 10: Summary Screen



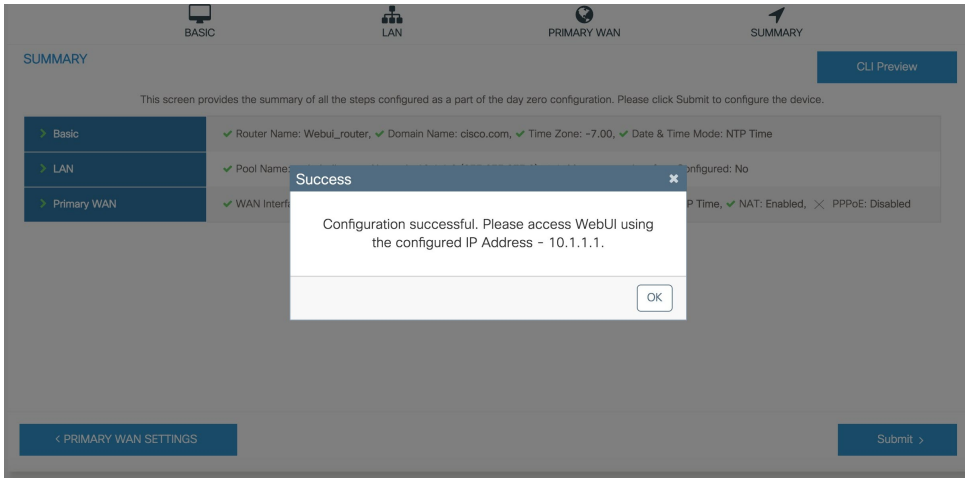
Step 8 (Optional) You can click on **CLI Preview** to see the Configuration that is being applied to the router. Close the CLI Preview and if you are ready, Click **Submit**.

Figure 11: CLI Preview Screen



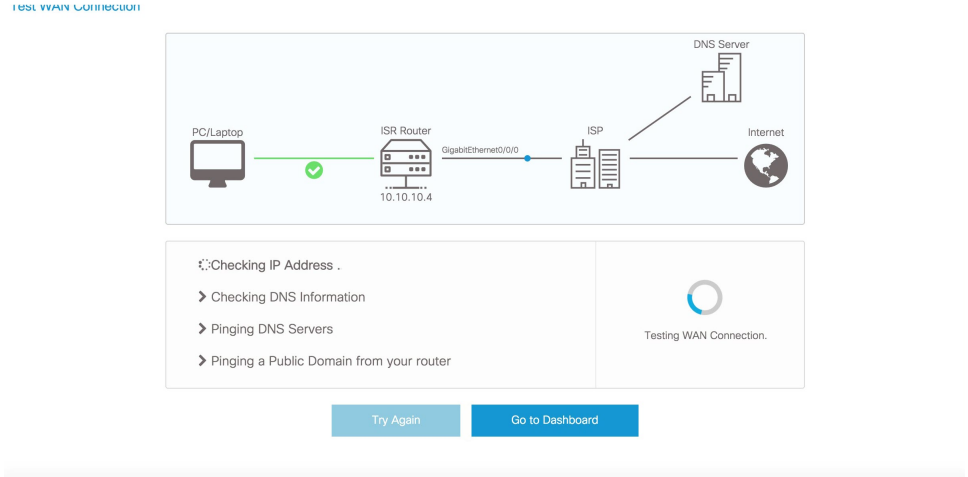
Step 9 After clicking on **Submit**, a dialog box will appear which informs you that the configuration has been applied successfully. The new WebUI ip address is also presented.

Figure 12: Submit Dialog Box



Step 10 If you have web connectivity, the device will try to connect. It is recommended that you close the browser session and move to the newly configured WebUI ip address.

Figure 13: Test VLAN Connection Screen



Configuring Advanced Mode WebUI through the Browser

The following steps guide you through the process of using the browser on your PC to configure the WebUI.

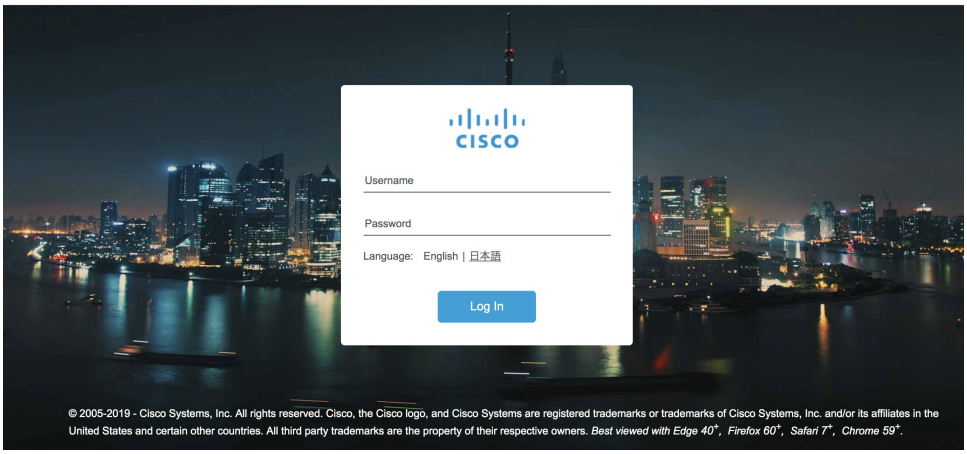
Make sure your laptop is configured to obtain an IP address through DHCP, or assign an IP address *n.n.n.n* matching the default subnet.

Note Advanced Mode is needed in order to set up Cellular WAN, including public or private APN.

Procedure

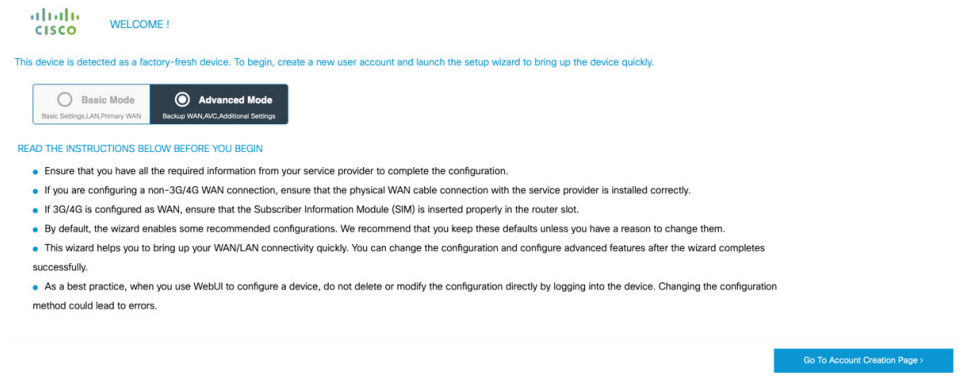
Step 1 Open your browser and enter 192.168.1.1 in the address bar. The Login Screen appears. Enter the Username **webui** and the Password **cisco**. Then click **Log In**.

Figure 14: Login Screen



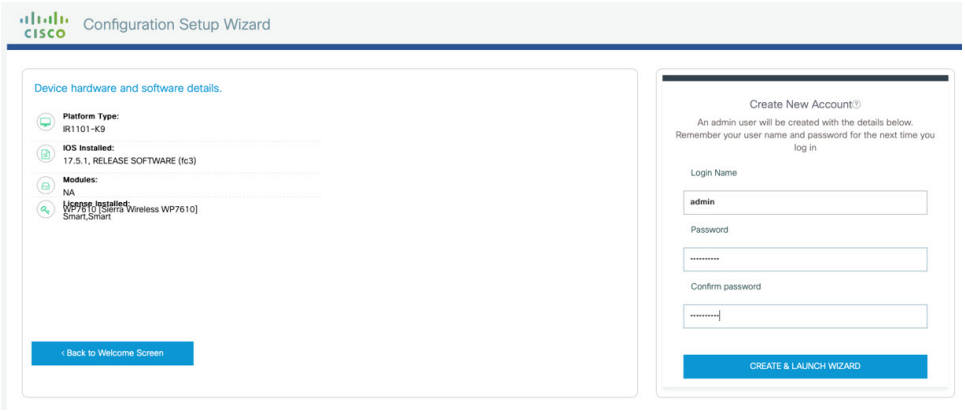
Step 2 The WELCOME screen appears. Select Advanced Mode or Basic Mode. Basic Mode allows for configuring Basic settings, LAN, and a Primary WAN. Advanced Mode allows you to configure an additional Backup WAN, AVC, as well as additional settings. For the purposes of this section, Advanced Mode is used.

Figure 15: WELCOME Screen



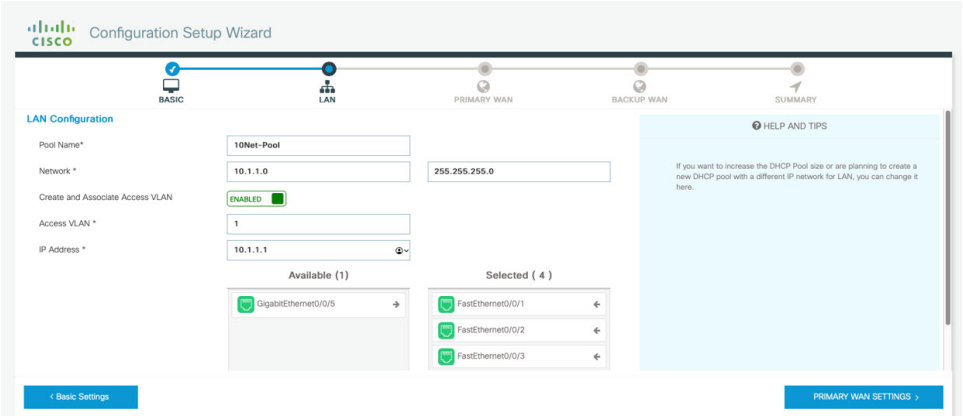
Step 3 Select **Advanced Mode**, then click **Go To Account Creation Page**. The Create New Account screen appears. Create a new Login Name and Password to access the WebUI.

Figure 16: Create New Account Screen



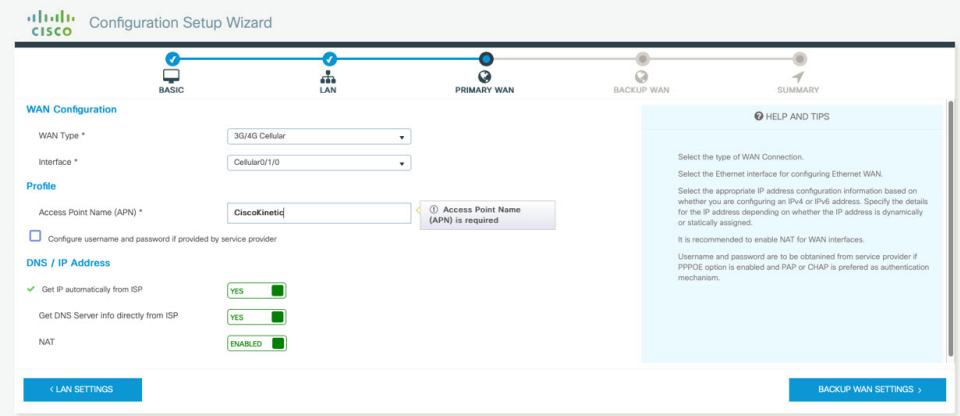
Step 4 Click **CREATE & LAUNCH WIZARD** The LAN Configuration screen appears. Provide a Pool Name, Network IP Address, Subnet, Access VLAN, and Device IP Address. A list of available interfaces is shown to select from.

Figure 17: LAN Configuration Screen



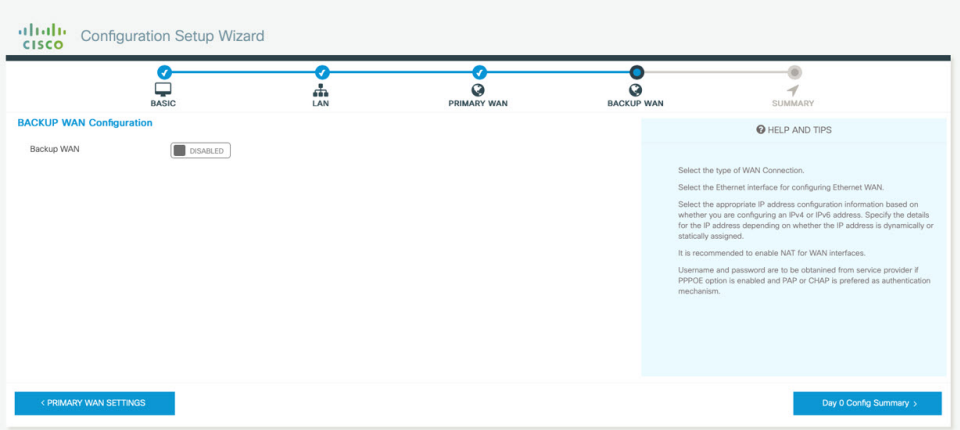
Step 5 Click **PRIMARY WAN SETTINGS**. The WAN Configuration screen appears. Select the WAN Type and Interface from the pull-downs. Provide an APN (Access Point Name) from your LTE Service Provider, and then select the DNS and IP Address settings for your network.

Figure 18: WAN Configuration Screen



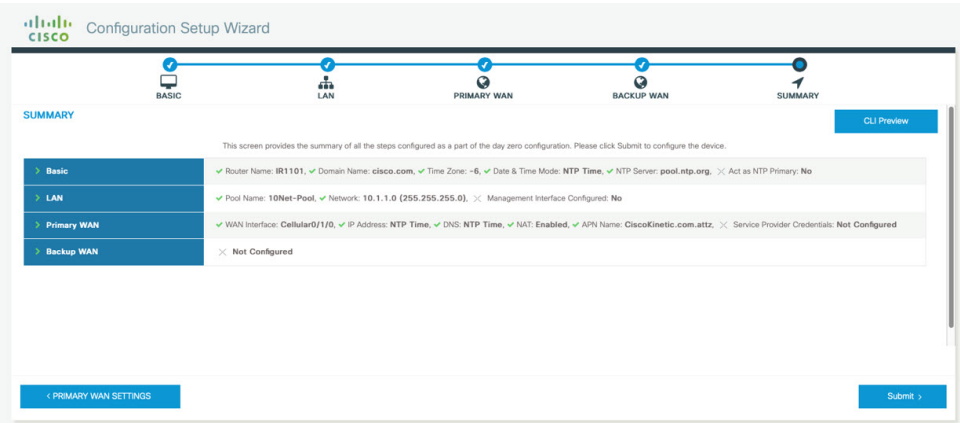
Step 6 Click **BACKUP WAN SETTINGS**. The BACKUP WAN Configuration screen appears. Select the button to Enable or Disable a backup WAN.

Figure 19: BACKUP WAN Configuration



Step 7 Click **Day 0 Config Summary**. The SUMMARY screen appears. Verify your entries before applying the configuration.

Figure 20: Summary Screen

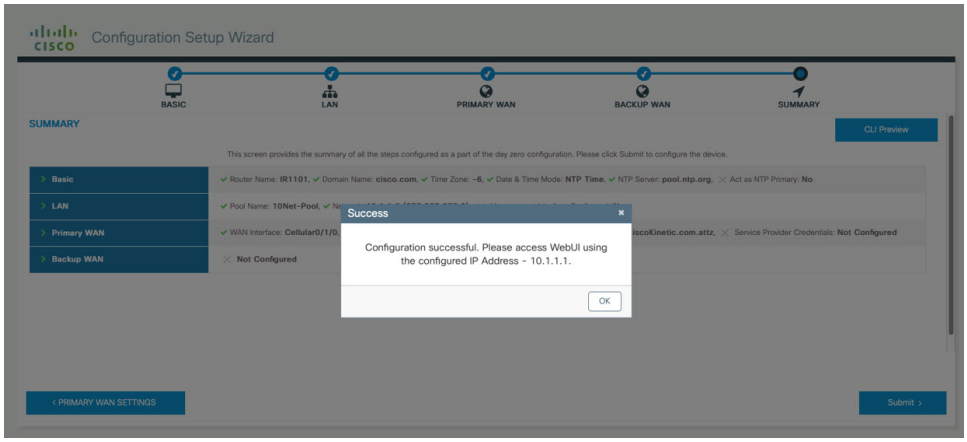


Step 8 (Optional) You can click on **CLI Preview** to see the Configuration that is being applied to the router. Close the CLI Preview, and if you are ready, click **Submit**.

Note A CLI Preview example is found at the end of this section.

Step 9 After clicking on **Submit**, a dialog box will appear which informs you that the configuration has been applied successfully. The new WebUI ip address is also presented.

Figure 21: Submit Dialog Box



Example

The following is an example of a CLI Preview:

```
ip domain name cisco.com
clock timezone GMT -6 00
ntp server pool.ntp.org

username admin privilege 15 secret 0 Mjc1N0dsb2NrIQ==

hostname "IR1001"
interface vlan 1
ip address 10.1.1.1 255.255.255.0
no shutdown
vlan 1
interface GigabitEthernet0/0/0
switchport access vlan 1
switchport trunk native vlan 1
switchport mode access
no shutdown
interface GigabitEthernet0/1/0
switchport access vlan 1
switchport trunk native vlan 1
switchport mode access
no shutdown
ip dhcp pool 10Net-Pool
dns-server 10.1.1.1
network 10.1.1.0 255.255.255.0
```

```
import all
default-router 10.1.1.1
lease 0 2

ip dhcp excluded-address 10.1.1.1

ip dns server
ip dns view default
default dns forwarder
default dns forwarding
default domain lookup
default domain name-server
interface Cellular0/1/0
description primary_wan
ip address negotiated
dialer in-band
dialer-group 1
pulse-time 1
shutdown
no shutdown
ip nat outside
exit
dialer-list 1 protocol ip permit

controller Cellular 0/1/0
lte sim data-profile 2 attach-profile 2 slot 0

ip route 0.0.0.0 0.0.0.0 Cellular0/1/0

ip nat inside source list 197 interface Cellular0/1/0 overload
access-list 197 permit ip any any
```

WebUI Dashboard

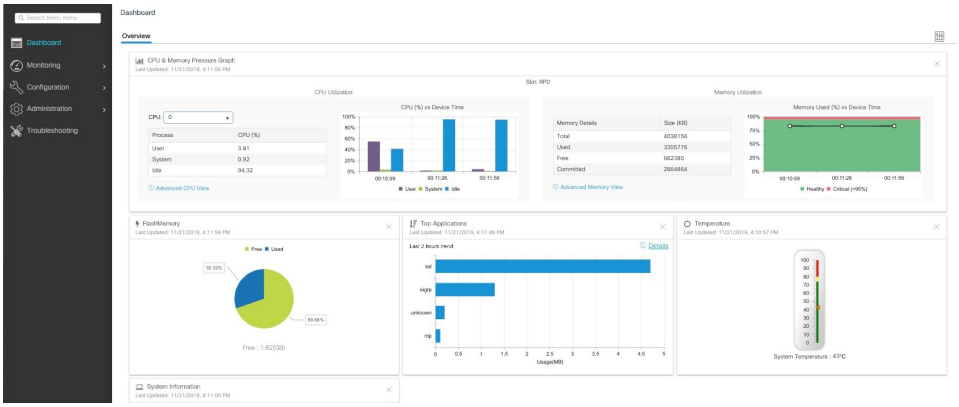
After completing the Day 0 setup, the WebUI can now be used for day to day administration. The WebUI opens up to an easy to use dashboard.



Note WebUI feature support may vary based on the license and platform type of your device.

The following figure shows the dashboard:

Figure 22: Dashboard



The following table provides an overview of the dashboard.

Dashboard	View dashlets that give you a snapshot of CPU and memory utilization and system information.
Monitoring	Monitor your network on a daily basis and perform other ad hoc operations related to network device inventory and configuration management.
Configuration	Configure your device.
Administration	Specify system configuration settings and user administration settings.
Troubleshooting	Troubleshoot connectivity problems and packet loss using Ping and Traceroute, and monitor device health and performance using web server logs and syslogs.

Configure access point name using Cisco WebUI

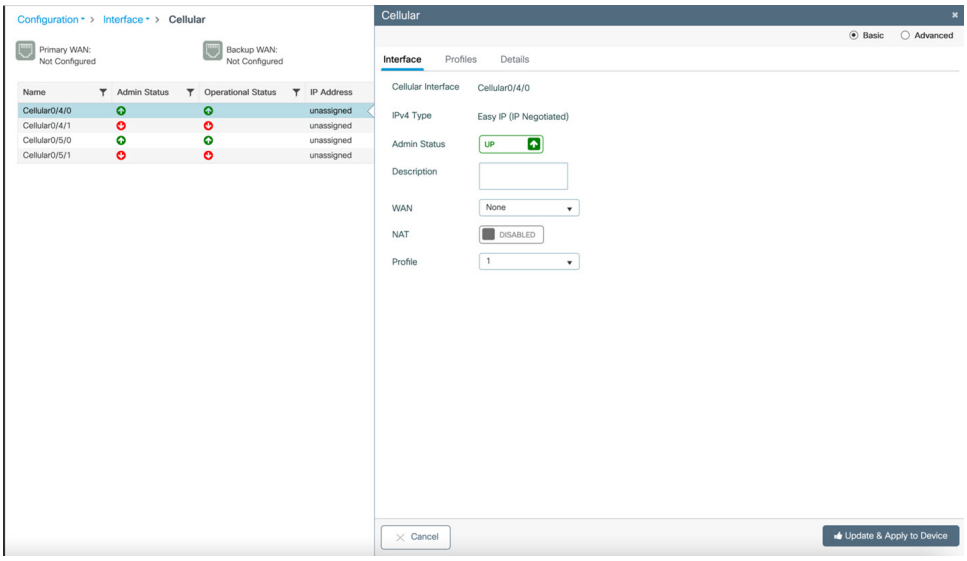
These steps provide an overview of how to perform add, edit, or delete the APN from the Cisco WebUI interface.

Note This section describes only the new functionality and is not a complete overview of the WebUI.

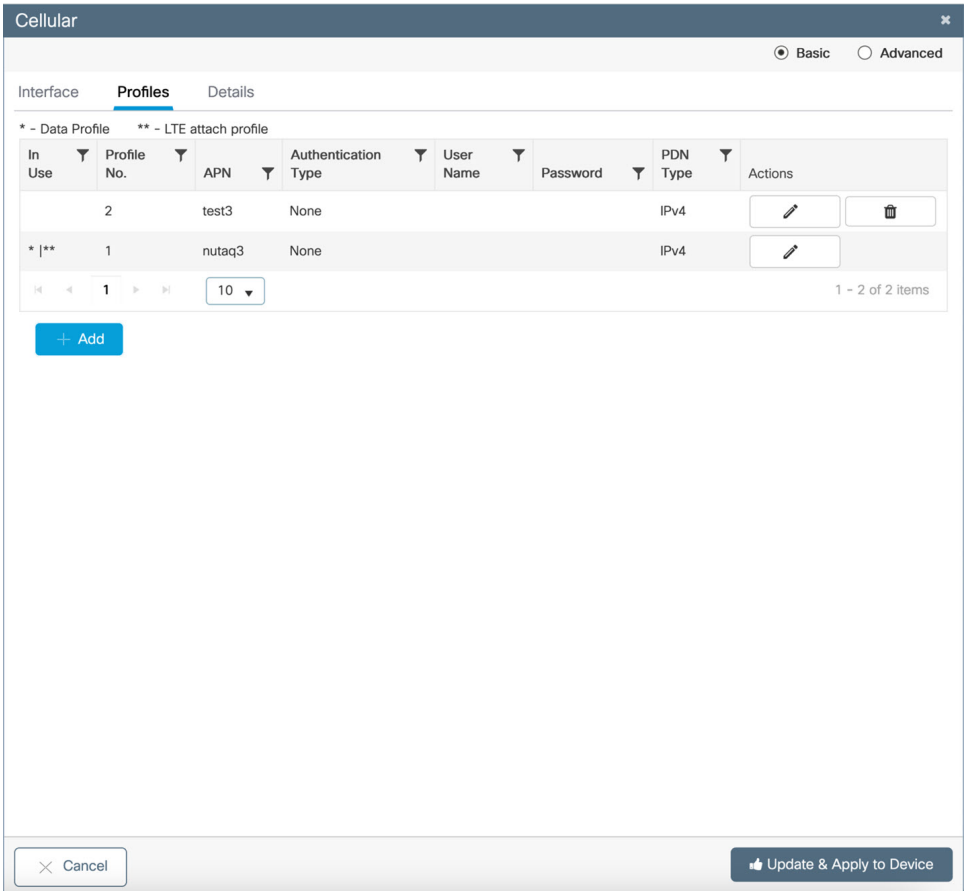
Procedure

Step 1 Navigate to **Configuration > Interface > Cellular**.

Step 2 Double-click the cellular interface based on your platform.



Step 3 On the Cellular window, click the **Profiles** tab.

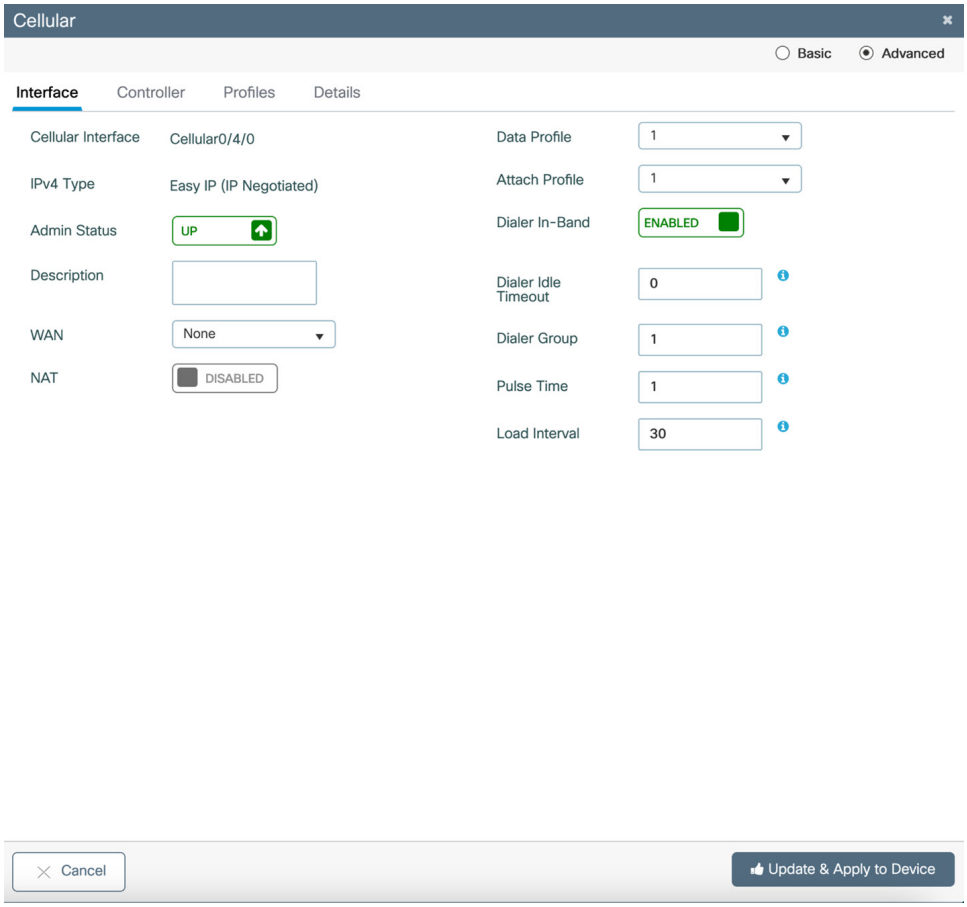


Step 4 From the **Profiles** tab, add, delete, or edit the APN as needed.

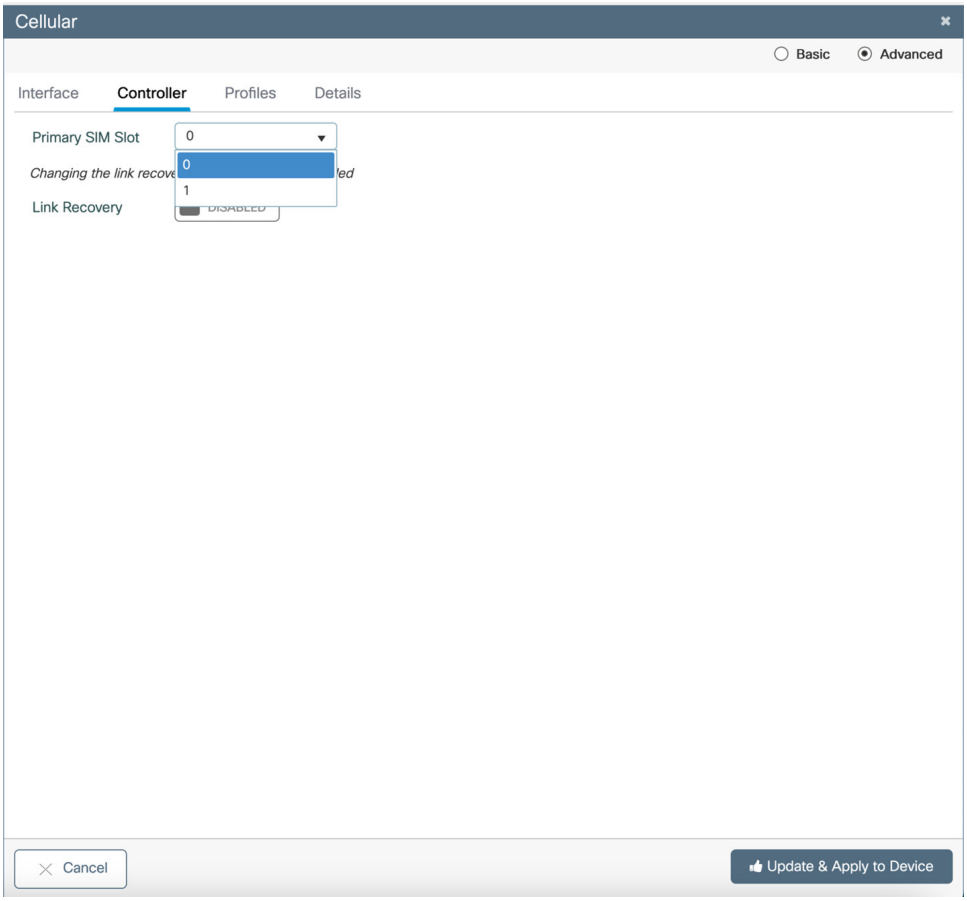
Step 5 Click **Update & Apply to Device** at the bottom of the window.

Step 6 To change the SIM slot, click the **Advanced** radio button at the top of the window.

By default, the APN is attached to SIM slot 0. You can change the APN to SIM slot 1 by using the WebUI.



Step 7 Click the **Controller** tab at the top of the window.



Step 8 From the **Primary SIM Slot** drop-down list, select slot 1.

Step 9 Click **Update & Apply to Device** at the bottom of the window.