Performing Initial Setup for the Probe

This chapter contains the following sections:

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There are a few configuration tasks that should be performed to ensure that the Probe meets your requirements.

Locating the IP Address of the Probe

To find the IP address being used by the probe, use one of the following methods:

1. The default IP address configuration for the Probe is performed using DHCP. Make sure your DHCP server is running and can be reached. If no DHCP server is available, the IP address will default to 192.168.1.10.

2. The Probe can be discovered and accessed using the **Cisco FindIT Network Discovery Utility** that enables you to automatically discover all supported Cisco devices in the same local network segment as your computer. You can get a snapshot view of each device or launch the product configuration utility to view and configure the settings. For more information, see http://www.cisco.com/go/findit.

3. The Probe is Bonjour-enabled and automatically advertises itself using the Bonjour protocol. If you have a Bonjour-enabled browser, you can find the Probe on your local network without knowing its IP address.

4. If you are using the virtual machine image, you can retrieve the IP address of the Probe from the virtual machine console. Use your Hypervisor's management tools to connect to the console of the virtual machine and log on with the default username: `cisco` and password: `cisco`. You will be required to change the password immediately after logging in. The new password should be a complex, non-dictionary word using a mixture of character types. A banner will then be displayed showing the current IP address.

   If you have installed the Probe on your own Ubuntu or Raspbian Linux installation, you can use the operating system tools to discover the IP address. For example, you can enter the command `ifconfig` at a shell prompt and see a list of interfaces and their addresses displayed.

Note The credentials set here are used to log on to the probe whenever it is not actively connected to a dashboard. When connected to a dashboard, the probe must be accessed using the same credentials used to log on to the dashboard.

5. Locate the IP address assigned by your DHCP server by accessing your router or DHCP server. See your DHCP server instructions for more information.

Setting Up a Software Probe

A software probe is a probe running in a virtual machine or on a Linux host when there is no Dashboard running on the same VM or host.

To set up a software probe, follow the steps below:

1. Launch a web browser, such as **Google Chrome** or **Microsoft Edge**.

2. In the **Address** field, enter the DHCP-assigned IP address and click **Enter**.

3. Enter the default user name: `cisco` and password: `cisco`. Click **Login**.

4. You will be prompted to change the username and password for the cisco account. Ensure that the new password is at least 8 characters in length using at least 3 different character classes. Click **Save**.

5. Specify the address or hostname of a Dashboard to connect to and click **Next**.

6. Your browser will be redirected to the Dashboard login screen. Login using administrator credentials for the Dashboard.

7. Choose to either create a new network or to select an existing network from the drop-down provided. If you choose to create a new network, then specify a name and location for the network in the boxes provided.

   You can enter the address of the network into the appropriate fields. If you enter a partial address, a list of potential matches will be displayed, and you can select the location from the list. Alternatively, you can click on the location in the map.

8. Click **Finish** to be redirected back to the probe GUI.

Setting up an Embedded Probe on a Cisco 100 to 500 Series Product

The process for associating an embedded probe with the dashboard requires explicit configuration on both the Dashboard and Probe prior to connecting. This process enables the device hosting the embedded probe to be pre-configured prior to installation, or to be automatically configured using a zero-touch deployment mechanism such as Network Plug and Play.

Devices running more recent firmware versions support the use of a connection wizard to associate the device to the dashboard using a similar method to that used with a software probe.

To set up an embedded probe using the connection wizard, do the following:

1. Install the device hosting the embedded probe into the network. Connect to the administration GUI of the device and navigate to the Cisco Business Dashboard page.

2. Specify the address or hostname of the Dashboard to connect to and click the Connect to Dashboard button.

3. Your browser will be redirected to the Dashboard login screen. Login using administrator credentials for the Dashboard.

4. Choose to either create a new network or to select an existing network from the drop-down provided. If you choose to create a new network, then specify a name and location for the network in the boxes provided. You can enter the address of the network into the appropriate fields. If you enter a partial address, a list

of potential matches will be displayed, and you can select the location from the list. Alternatively, you can click on the location in the map.

5. Click Finish to be redirected back to the device GUI.

See the device documentation for more details on the location and use of the CBD agent configuration page.

To manually set up an embedded probe, follow the steps below:

1. Create a new network record for the embedded probe using the steps described in Performing Initial Setup for the Dashboard.

2. On the Dashboard UI, go to the Inventory and click the plus (+) icon to create a new device record. Fill in the form with appropriate details for the device that will host the probe, making certain to specify the correct product ID and serial number. This will allow the dashboard to associate the probe with the correct network.

3. On the Dashboard UI, go to the **My Profile** page by clicking on your username at the bottom of the navigation panel. Use this page to create a new **Access Key** using the **Generate Access Key** button. You can also use an existing access key if you prefer.

> **Note** The access key used for associating an embedded probe with the dashboard does not need to be a long lived key. This key only needs to be valid at the time the initial association takes place. Once the probe and dashboard are associated, the connection is authenticated using limited access, short-lived credentials that are unique to the network and regenerated periodically.

4. Using the device UI, navigate to the Probe configuration page and fill out the fields provided. At the minimum, you will need to supply configuration for the dashboard address and port, and access key ID and secret. If the device is running an older version of the CBD agent, you will also need to specify the organization and network names. It may also be necessary to configure the dashboard certificate. See below for more details.

5. Submit the changes. The probe will connect to the dashboard and be associated with the network created in step 1.

Verifying the Identity of the Dashboard

When establishing a connection to the dashboard, the probe checks to ensure the certificate presented by the dashboard is valid and can be trusted. For the certificate to be acceptable and the connection to proceed, the certificate must meet the following conditions:

- The certificate must be signed by a trusted Certificate Authority (CA), or the certificate itself must be added to the device configuration as a trusted certificate. Refer the device administration guide for details on adding a trusted certificate.

- If the dashboard is configured as an IP address, then either the Common Name field or the Subject-Alt-Name field of the certificate must contain that IP address

- If the dashboard is configured as a hostname, then either the Common Name field or the Subject-Alt-Name field of the certificate must contain that hostname

Configuring Basic System Settings on the VM image using Web User Interface (Optional)

To configure basic system settings such as IP addressing and time settings for the Probe using the web user interface, follow the steps below:

1. Navigate to **Administration** > **Platform Settings**.

2. Specify a hostname for the Probe. The hostname is used to identify the Probe on the network.

3. Optionally, specify static IP parameters in the fields provided. By default, the Probe will automatically determine the IP settings using DHCP.

4. Alternatively, you can set the Probe to use its internal clock for keeping time, or you can specify your preferred NTP servers. By default, the Probe will synchronize its clock with public NTP servers.

Note If the hypervisor in use is VirtualBox and the VirtualBox Guest Additions are installed in the VM, the NTP service - timesyncd - will not operate.

Configuring Basic System Settings on the VM Image through the Command Line (Optional)

As an alternative to configuring basic system settings through the web interface, you can set them using the command line as follows:

1. Connect to the virtual machine console.

2. Log on using the default username and password set to: `cisco`. You will be required to change the password immediately after logging in. The new password should be a complex, non-dictionary word using a mixture of character types.

3. Enter the command `sudo config_vm` to perform the initial configuration. The `config_vm` utility will prompt you with a series of steps to change the platform settings.

4. First you will be prompted to change the hostname for the Probe. The hostname is used to identify the Probe on the network. Choose a meaningful name here, or you can skip this step to keep the default hostname.

5. Next you will be prompted to change the web server ports. If these ports are changed from the default values, it may also be necessary to change firewall settings in your network.

6. Next you will be prompted to configure the network interface. The options here are static and dhcp (the default). If you select static, you will be prompted for IP address information, default gateway, and DNS server addresses. The network interface will be reset if you make changes here.

7. Next you will be prompted to configure the time settings for the Probe. You can opt to configure one or more NTP servers for time synchronization (recommended), and you will be asked to select the timezone.

Note If the hypervisor in use is VirtualBox and the VirtualBox Guest Additions are installed in the VM, the NTP service - timesyncd - will not operate.

8. Finally, you will be asked if you wish to change the bootloader password. The bootloader username and password can be used on the console at system startup to change the system boot process or recover lost operating system passwords. The default bootloader credentials are username: **root** and password: **cisco**.

Configuring Basic System Settings when the Probe is Embedded on a Cisco Business Product

If you are using a Probe embedded in a Cisco Business product, then the Probe user interface is accessed through the device administration interface. Consult the device administration guide for more information on associating the Probe with the Dashboard and making changes to system settings.

Configuring Basic System Settings when the Probe is Co-hosted with Cisco Business Dashboard

A Probe that is co-hosted with Cisco Business Dashboard does not have any user interface. The Probe is managed entirely through the Dashboard user interface.