

Cisco IQ Link Getting Started Guide v1.1.0

Introduction

Cisco IQ™ provides customers with enhancements and features designed to improve asset visibility, deliver smarter insights across their environments, and streamline case management. In addition, AI features such as the Cisco IQ AI Assistant optimizes operational outcomes and the Cisco IQ user experience by providing contextual understanding that empowers users to make proactive, informed decisions and streamlines processes for customer engagement and success.

Cisco IQ Link securely collects and transmits asset telemetry from your on-premises network to Cisco IQ, enabling AI-powered predictive insights that help you improve network visibility, anticipate issues, and drive operational efficiency.

Prerequisites

Ensure the following prerequisites are met before configuring and installing Cisco IQ Link.

Hardware and VM Resource Requirements

Cisco IQ Link is tested for multiple scale capacity and offers multiple deployment sizes to support your environment's scaling needs. Refer to the table below to select the appropriate resource configuration based on your planned device discovery count.

Table 1: Hardware and VM Resource Requirements

Resource	10K Devices	20K Devices	50K Devices
vCPU	16	16	32
RAM	28GB	28GB	48GB
Storage (SSD) (Recommended for better performance)	600GB	600GB	600GB
Collection Schedule	24 hours or more	24 hours or more	7 days or more

Supported Hypervisors	<ul style="list-style-type: none"> • VMware ESXi v8.0 or later with VMware vSphere Web Client v8.0 or later • Hyper-V on Microsoft Server 2022 and 2025 • Kernel-based Virtual Machine (KVM) Hypervisor on RHEL v9.7
Server	<ul style="list-style-type: none"> • Unified Computing System M7 or newer models
Additional Recommendation	<ul style="list-style-type: none"> • Cisco recommends that you use thick provisioning. While it is possible to use thin provisioning, over-provisioning can lead to a lack of storage capacity which can then result in degradation and loss of service. • It is highly recommended to place appliance disks on a volume backed by SSDs. • Disk write speed must be greater than 70 megabytes per second.

Network Requirements

Cisco IQ Link supports single network interface. The associated Virtual Machine (VM) host network must have connectivity to iq.cisco.com, either directly or through a proxy. If your network environment requires a proxy for connectivity to Cisco IQ, you must configure these settings during Cisco IQ Link installation.

IP Address and Hostname Requirements

The following IP address and hostname requirements must be met:

- Available IPv4 address
- **Domain Name System (DNS):** DNS simplifies system management by replacing numeric IP addresses with consistent, human-readable hostnames. This approach facilitates easier maintenance, seamless service integration, and reliable certificate validation in secure environments. Ensure that the IPv4 address is configured in your DNS with the following:
 - **A Record:** Maps the hostname (such as myciscoiqlink.mydomain.com) to the IPv4 address
 - **Associated Pointer (PTR) record:** Required to support reverse DNS lookups; if an IP address resolves to multiple hostnames, the first resolved hostname is used to access the UI

 **Note:** DHCP is not supported.

Connectivity Requirements to Cisco IQ SaaS

For customers using designated US, EMEA, or APJC data centers, Cisco IQ Link must connect to the servers using one (1) of the associated Fully Qualified Domain Names (FQDN) listed below:

- **US:** us-west-2.iq.cisco.com
- **EMEA:** eu-central-1.iq.cisco.com
- **APJC:** ap-southeast-2.iq.cisco.com

Port Requirements

The following table outlines the network ports required for Cisco IQ Link communication.

Table 2: Port Requirements

Port(s)	Protocol	Description
22	TCP	Used for Administrator CLI and Cisco Support debugging sessions
443	TCP	Used for communication between Cisco IQ Link UI and API
53, 123, 161	UDP	Used to send and receive DNS, Network Time Protocol (NTP), and Simple Network Management Protocol traffic

Supported Browsers

You must use the latest stable release of the following browsers to install and launch Cisco IQ Link:

- Google Chrome
- Microsoft Edge
- Apple Safari
- Mozilla Firefox



Note: Support is limited to current browser versions and older versions may not provide full functionality or may be unsupported as new updates are released.


Installing Cisco IQ Link VM

This section outlines the installation procedures for Cisco IQ Link VM. The current scope includes instructions for the following hypervisors:


- VMware ESXi
- Microsoft Hyper-V Server
- Red Hat KVM

Installing Cisco IQ Link on VMware ESXi


Cisco IQ Link is distributed as a deployable VM contained in an Open Virtual Appliance (OVA) file format.

 **Note:** The OVA must be deployed using VMware vCenter and cannot be directly deployed on ESXi servers.

1. Log in to VMware vSphere Web Client with administrator credentials.
2. Right-click on the appropriate vCenter object (datacenter, cluster, or ESXi host) and choose **Deploy OVF Template**.
3. On the **Deploy OVF Template** wizard, choose the template page, specify the source location, and click **Next**. You can specify a URL or browse to any accessible location.
4. On the **OVF Template Details** page, verify the OVF template details and click **Next**. No input is necessary.
5. On the **Select a name and location** page, add or edit the **Name** and **Location** for the virtual appliance and click **Next**.
6. On the **Select a resource** page, select the specific **Host** (ESXi host), **Cluster**, or **Resource Pool** on which you want to deploy and click **Next**.

 **Note:** Each VM must be assigned to a specific host on clusters that are configured with vSphere HA or Manual mode vSphere DRS.

7. On the **Review details** page, verify the OVA template details and click **Next**.
8. On the **Configuration** page, choose a deployment configuration and click **Next**.
9. On the **Select storage** page, choose the destination storage location for the VM files in the selected ESXi host and click **Next**.
10. Choose the **Disk Format** for the VM virtual disks.

 **Note:** It is recommended to use thick provisioning. While it is possible to use thin provisioning, over-commitment of storage can lead to a lack of storage capacity resulting in degradation and loss of service.

11. On the **Select networks** page, choose a source network and map it to a destination network, then click **Next**.

12. On the **Ready to Complete** page, select **Power On After Deployment** and click **Finish**.
13. Ensure that VMs are configured with the following additional settings by right-clicking the desired VM in VMware ESXi and clicking **Edit Settings**.
 - **CPU**: Select **Low** from the first **Shares** drop-down list
 - **Memory**: Check the **Reserve all guest memory (All locked)** check box
 - Set CPU and RAM based on your scale size. See [Hardware and VM Resource Requirements](#).
14. In **VMware ESXi**, select the desired VM.
15. Click the **Summary** tab.
16. Click the displayed image or the **Launch Console** icon to launch the console.
17. See [Network Configuration](#) for next steps.

Installing Cisco IQ Link on Microsoft Hyper-V Server

The Cisco IQ Link Hyper-V bundle from Cisco is delivered as a .tar.gz file. To install Cisco IQ Link on Hyper-V:

1. Log in to Hyper-V Server Manager with administrator credentials.
2. Extract the Cisco IQ Link package to the location defined by the Hyper-V Administrator to store all the virtual hard disks.
3. Verify that all the disks from the original Cisco IQ .tar.gz are in the Virtual Hard Disks folder.
4. From the **Actions** pane of Hyper-V Manager, choose **New > Virtual Machine** and click **Next**.
5. Enter the **Name** you want to assign to the Cisco IQ Link VM and click **Next**.
6. Choose **Generation 2** and click **Next**.
7. Enter the memory value based on the recommended memory size in [Hardware and VM Resource Requirements](#) for more details and click **Next**.
8. Verify **Use Dynamic Memory** remains unchecked.
9. Choose the appropriate network adapter for your Cisco IQ Link VM and click **Next**
10. Add the provided Cisco IQ Link virtual hard disk, ensuring disk one (1) is the first disk and click **Next**.



Note: The other two (2) virtual hard disks are added at a later step.

11. Verify the selections in the **Summary** and click **Finish**. Hyper-V displays the newly created Cisco IQ Link VM.
12. Right click the VM and choose **Settings**.
13. Under **Security**, uncheck the **Enable Secure Boot** check box.
14. Add the other two (2) virtual hard disks to the VM by repeating the same steps used for adding the first hard disk.
15. In the **Advanced Features** under the Network Adapter, verify that the **Enable device naming** is

selected.

16. Set the number of processors to the recommended vCPUs as listed in [Hardware and VM Resource Requirements](#).
17. In the **Actions** pane, select **Start** to power on the VM.
18. In the **Actions** pane, select **Connect** to connect to the VM. The **VM Connection** console is displayed.
19. See [Network Configuration](#) for more details.

Installing Cisco IQ Link on KVM Hypervisor

Ensure that the following supported requirements are met before installing Cisco IQ Link on KVM.

- RHEL host OS
- Administrative access on the Red Hat server

To install Cisco IQ Link on a KVM Hypervisor, VM Manager is required.

1. Log in to Red Hat host OS server with administrator credentials.
2. Download and extract the Cisco IQ Link package on the host.
3. Launch the Virtual Machine Manager (VMM) client.
4. Choose **File > New Virtual Machine** on the menu to install a new Cisco IQ Link VM.
5. Choose **Import existing disk image** and click **Forward**.
6. Under **Provide the existing storage path**, click **Browse**.
7. Create a new storage pool using the path where you extracted the Cisco IQ Link package.
8. Choose the first disk of the Cisco IQ Link from the storage pool created on the previous step and click **Choose Volume**.
9. Under **Choose an operating system type and version**, choose **AlmaLinux 9** and click **Forward**.
10. Under **Choose Memory and CPU settings**, enter details based on your scale size and click **Forward**. See [Hardware and VM Resource Requirements](#) for more details.
11. In the dialog box, complete the following configuration:
 1. Under **Ready to begin the installation**, enter a **Name** for the Cisco IQ Link instance.
 2. Click the **Customize configuration before install** option.
 3. Under **Network selection**, ensure that you select the appropriate virtual network.
12. Click **Finish** to complete the addition of the first disk.
13. Add the remaining two (2) disks by following the steps below:
 1. On the VMM console, click **Add Hardware**.
 2. Under **Storage**, ensure that the **Select or create custom storage** check box is checked and click **Manage**.
 3. Browse to select the second disk of the Cisco IQ Link file that you have extracted on your

system.

4. Click **Choose volume**.

14. Repeat the same (Add Hardware) steps to add the third Cisco IQ Link disk.

15. Ensure all disk Bus Types are **SCSI**.

16. Click **Finish**.

17. Under the **Overview** section, choose **UEFI** for Firmware.

18. Click **Begin installation**.

19. See [Network Configuration](#) for next steps.


Network Configuration

1. Launch Cisco IQ Link from VM console.

```
##### WARNING!!! #####
##### READ THIS BEFORE ATTEMPTING TO LOGON #####
#
#   This System is for the use of authorized users only. Individuals
#   using this computer without authority, or in excess of their
#   authority, are subject to having all of their activities on this
#   system monitored and recorded by system personnel. In the course
#   of monitoring individuals improperly using this system, or in the
#   course of system maintenance, the activities of authorized users
#   may also be monitored. Anyone using this system expressly
#   consents to such monitoring and is advised that if such
#   monitoring reveals possible criminal activity, system personnel
#   may provide the evidence of such monitoring to law enforcement
#   officials. You cannot copy, disclose, display or otherwise
#   communicate the contents of this server except to other Cisco
#   employees who have been authorized to access this server.
#
##### Confidential Information #####
login:
```

Log In

2. Log in to the console using the default network credentials by entering “admin” for both the login name and password. The main menu displays.

 **Note:** The default credentials are provided for initial setup only as there is no data to protect at this stage of installation.

```
CISCO IQ

Navigation Main Menu

SYSTEM STATUS
Cisco IQ On-Prem   Not configured

CONFIGURATION SETTINGS
IP Address/Mask   Not Configured
Gateway IP       Not Configured
DNS List         Not Configured
Search Domain    Not Configured
NTP List         Not Configured
Hostname         CIQ-INFRA-HOST


MAIN MENU
 [1] Configure Network Settings
 [2] Configure System Orchestrator
 [3] System Diagnostics
 [4] Help
 [5] About
 [q] Quit

Select a menu option: _
```


Main Menu

3. Enter “1” and press **Enter** to configure network settings.

4. Provide the following network settings:

 **Note:** Users can press **Enter** to use detected values where available.

- IP address
- Gateway IP
- DNS IP list
- Search domain
- NTP server list


 **Note:** Inputting multiple NTP servers using a comma-separated format is supported.

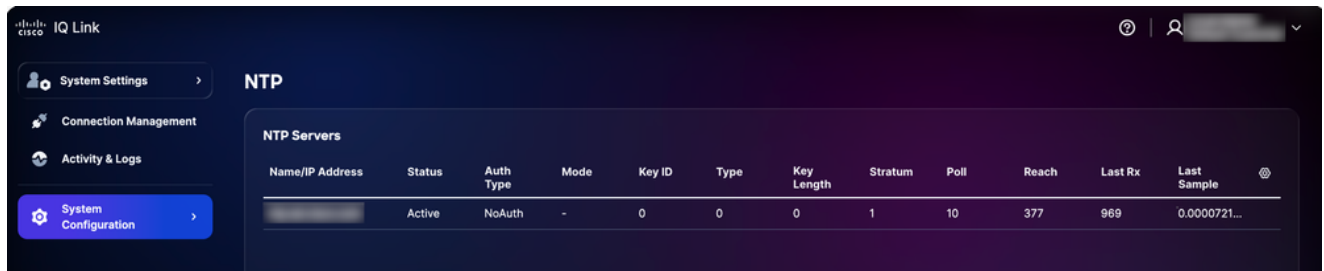
5. Configure the NTP authentication by pressing **N** to proceed without an authentication method

OR

Press **Y** and enter the corresponding number of an option listed below:

- **Traditional key-based authentication:** Uses provided credentials for secure time synchronization; after selecting this option, enter a valid algorithm and a hex key
- **Network Time Security (NTS):** Uses the NTS protocol to provide secure NTP communication

 **Note:** NTP information can be validated in the UI after installation by navigating to **System Settings**.



NTP Validation in UI

6. Enter and confirm a password after reviewing the on-screen password requirements.
7. Review the summary and press **Y** to continue. Setup can take a few minutes.
8. Once a success message is received, press **Enter** to return to the main menu.

Network settings are now configured, but Cisco IQ Link has not yet been installed. It is recommended to return to vCenter and take a Snapshot of the new VM for future reference. At this point, you can also initiate a Secure Shell connection using the newly configured IP address and credentials.

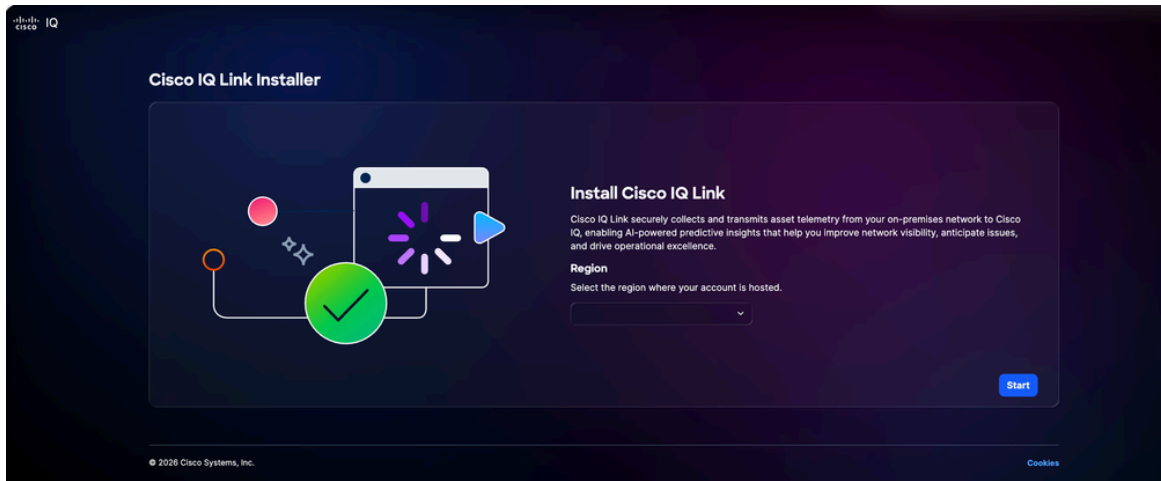
This completes manual configuration of Cisco IQ Link.

Installing Cisco IQ Link

Before you begin: The Cisco IQ Link installation process begins within Cisco IQ. Ensure you have already initiated the Cisco IQ Link instance addition in Cisco IQ (by navigating to **Home > System Settings > Data Connectors > Add Cisco IQ Link**). For more context, see Adding Cisco IQ Link Instances in the [Cisco IQ Getting Started Guide](#). This guide is your primary resource for the complete end-to-end deployment workflow.

To install Cisco IQ Link:

1. Navigate to the Cisco IQ Link installer web interface (received after configuring Cisco IQ Link in VMs). The **Cisco IQ Link Installer** page displays.

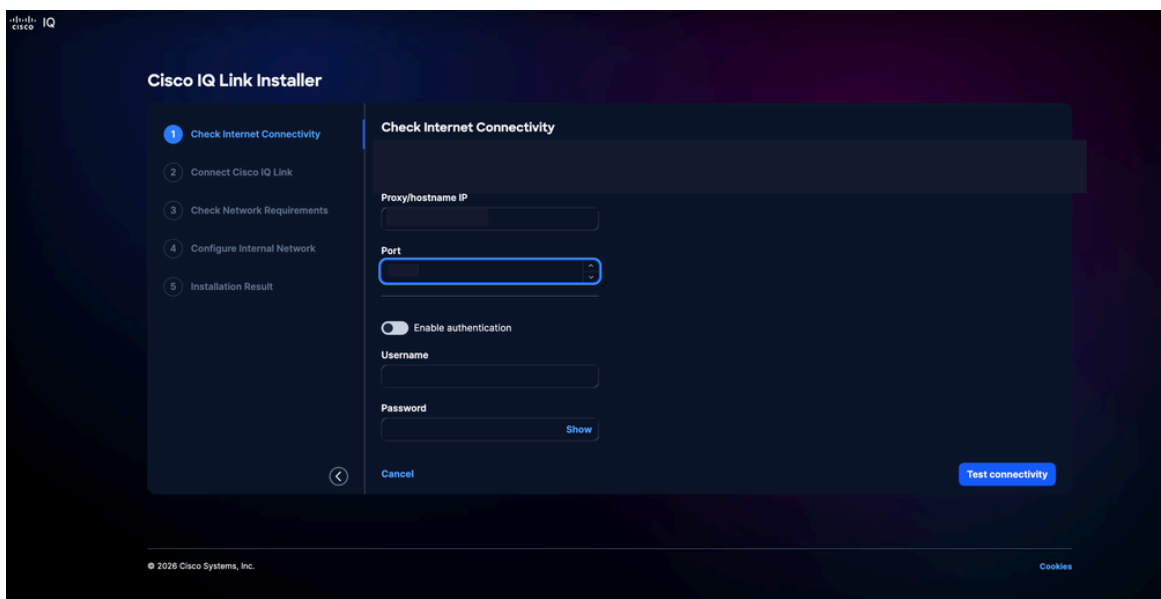


Cisco IQ Link Installer

2. Select an applicable region from the **Region** drop-down list. The following options are available:

- AMER
- APJC
- EMEA

3. Click **Start**. The **Check Internet Connectivity** tab displays.



Check Internet Connectivity

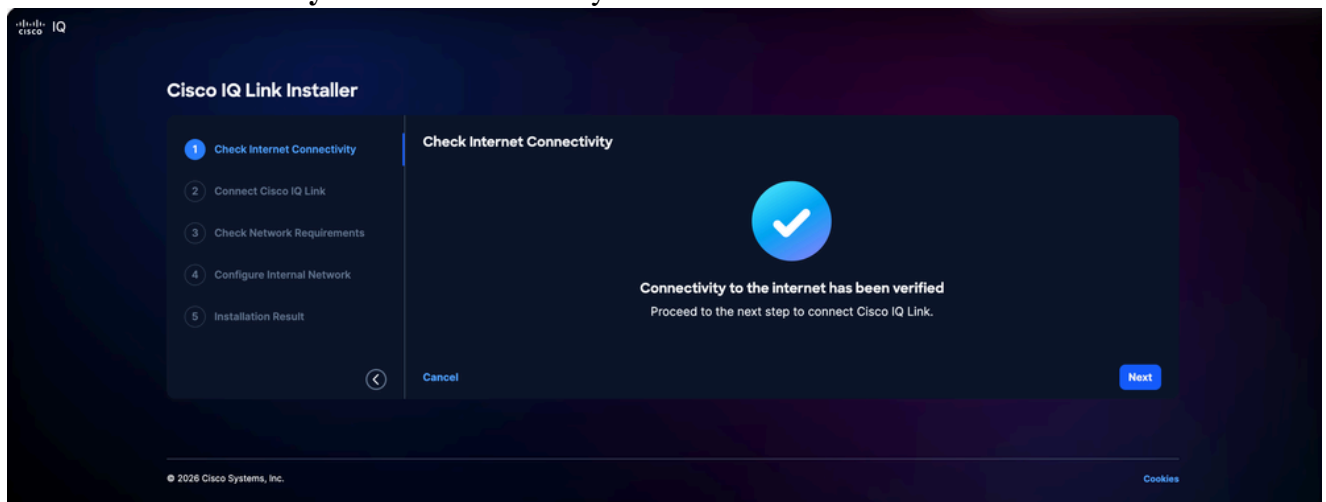
4. If proxy configuration is required, enter the **Proxy/hostname IP**.

5. Enter the **Port** number.

6. Turn on the **Enable Authentication** toggle button if required.


1. Enter **Username**.
2. Enter **Password**.

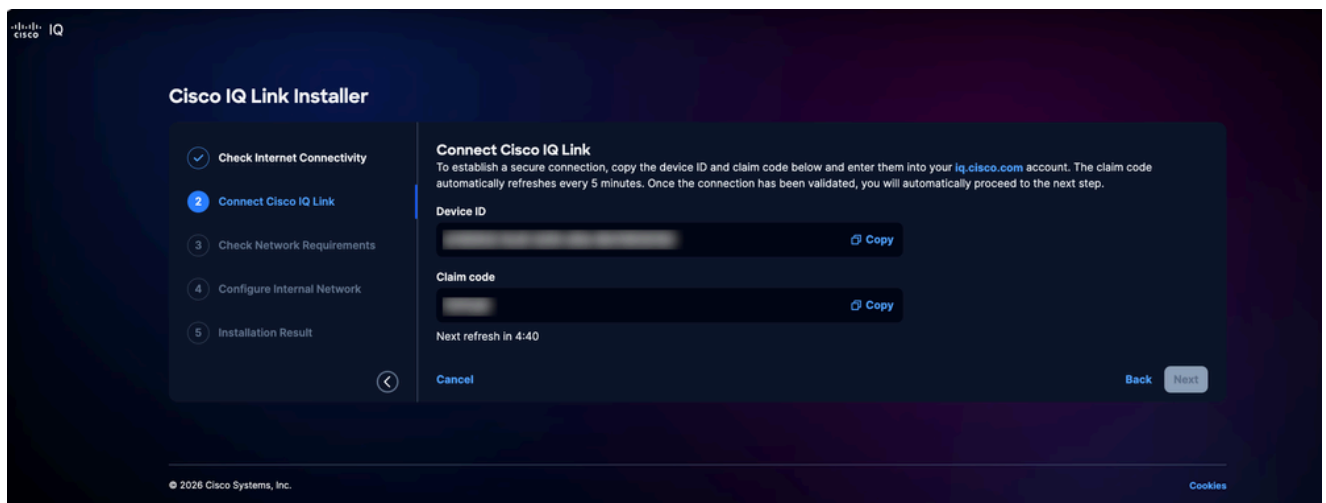
7. Click **Test Connectivity**. Internet connectivity is verified.



Verify Internet Connectivity

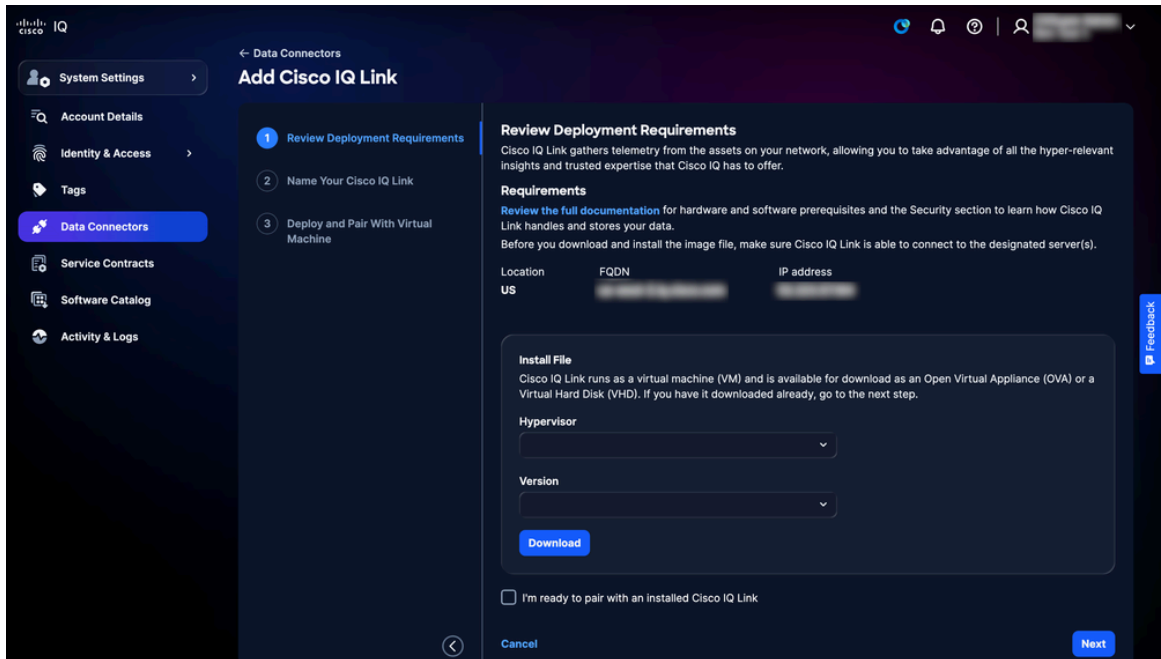
8. Click **Next**. The **Connect Cisco IQ Link** tab displays with the **Device ID** and **Claim code**.

 **Note:** Device ID and Claim code are required to connect to Cisco IQ in a later step. They remain valid for five (5) minutes, after which they automatically refresh.



Connect Cisco IQ Link

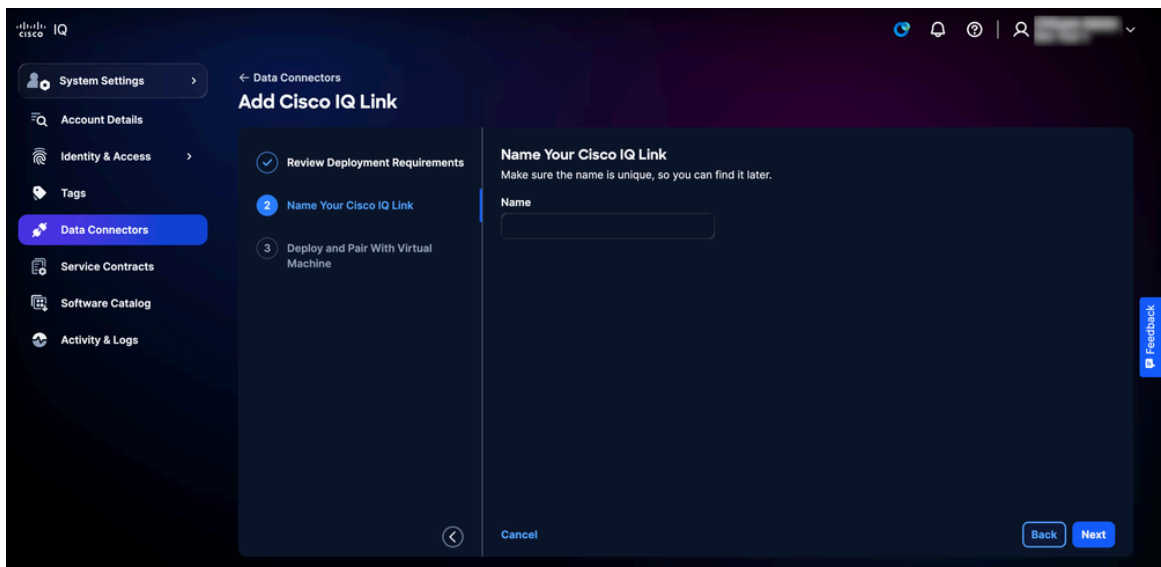
9. Navigate back to Cisco IQ and ensure you are still on the **Add Cisco IQ Link** page.



Add Cisco IQ Link

10. Check the **I am ready to pair with an installed Cisco IQ Link** check box.

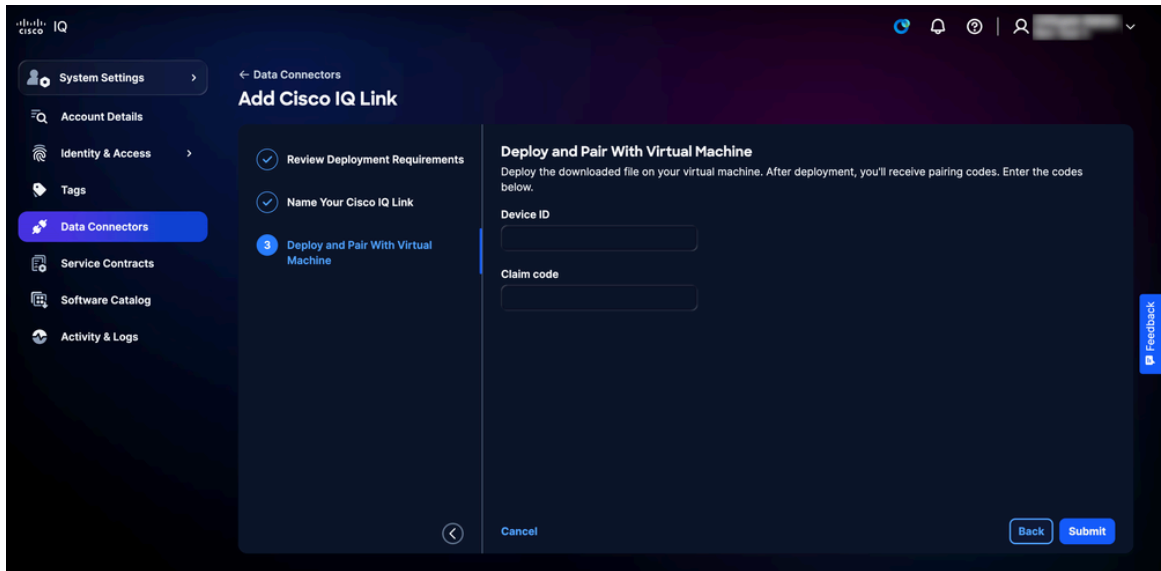
11. Click **Next**.



Name Your Cisco IQ Link

12. Enter a unique name for the Cisco IQ Link instance in the **Name** field.

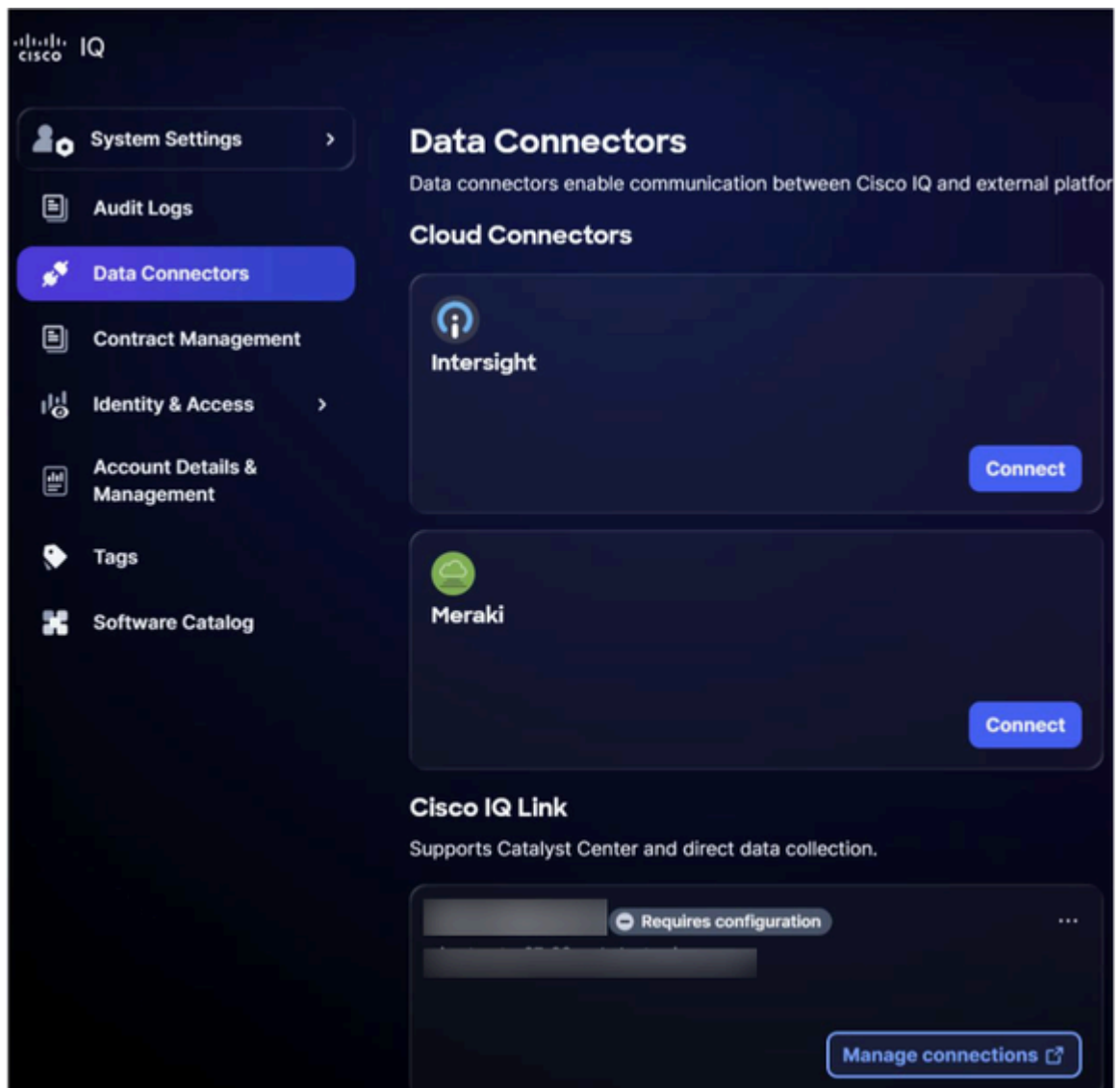
13. Click **Next**.



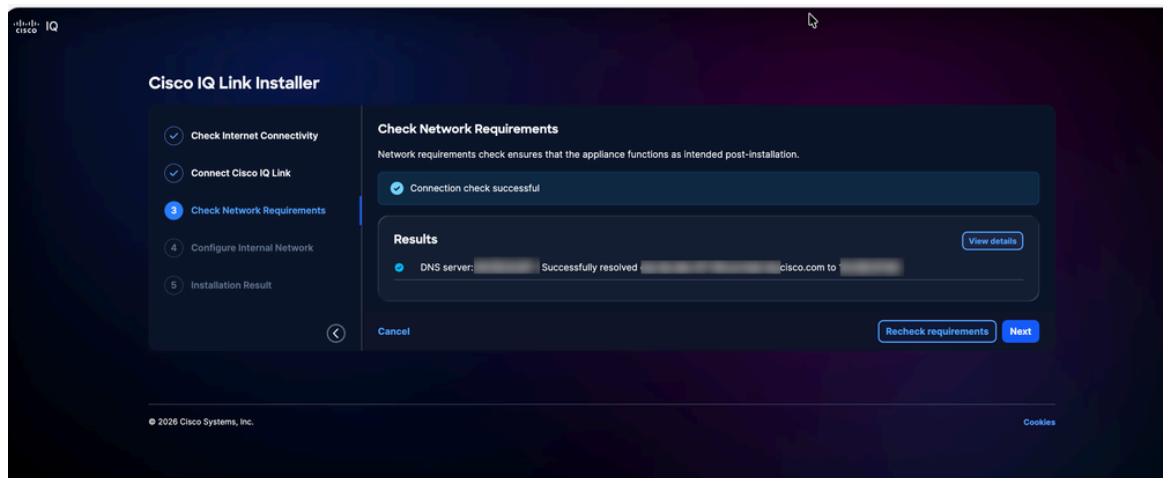
Deploy and Pair

14. Enter the **Device ID** and **Claim code** (provided in the Cisco IQ Link installer).

15. Click **Submit**. You are redirected to the **Data Connectors** page.

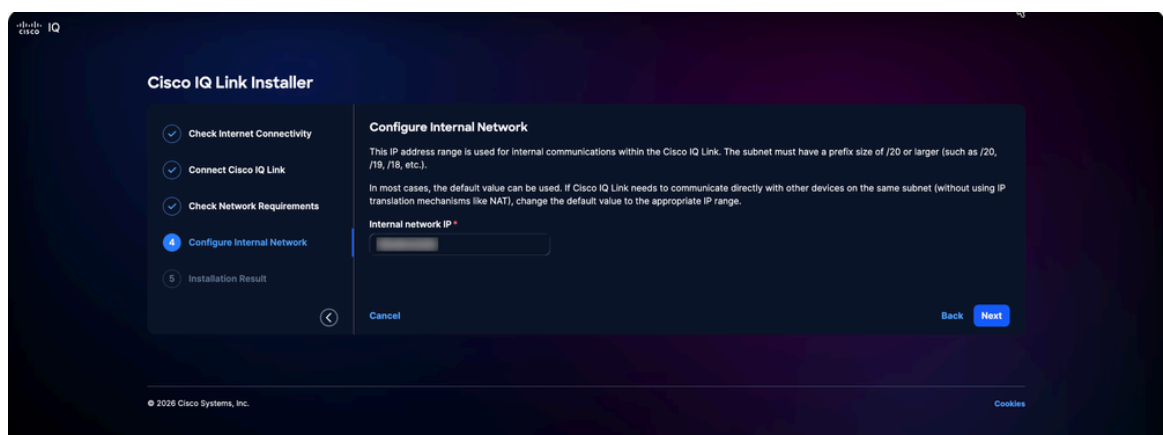


16. Navigate back to the Cisco IQ Link Installer web page. The **Check network requirements** page displays.




Check Network Requirements

17. Click **Next**. The **Configure Internal Network** tab displays.

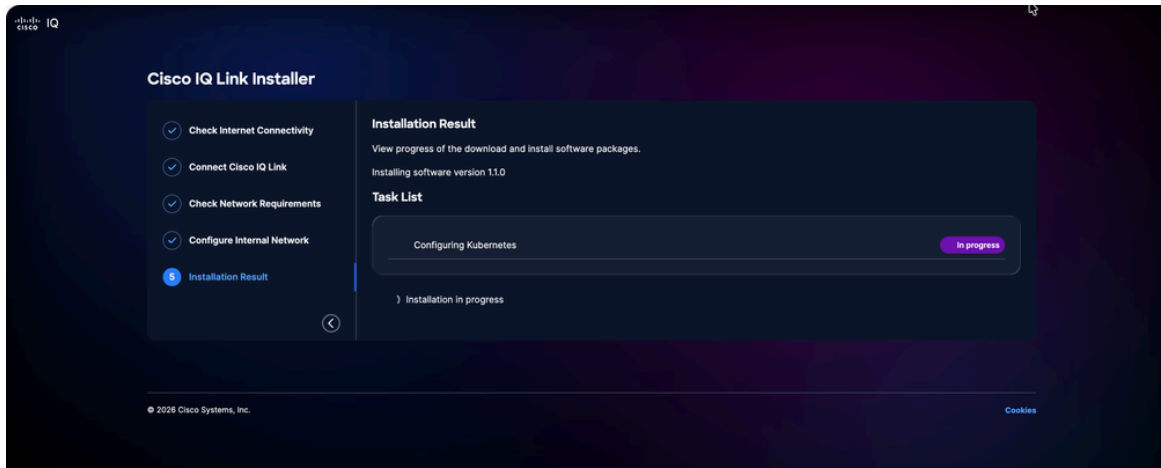


Configure Internal Network

18. Enter the **Internal network IP**.

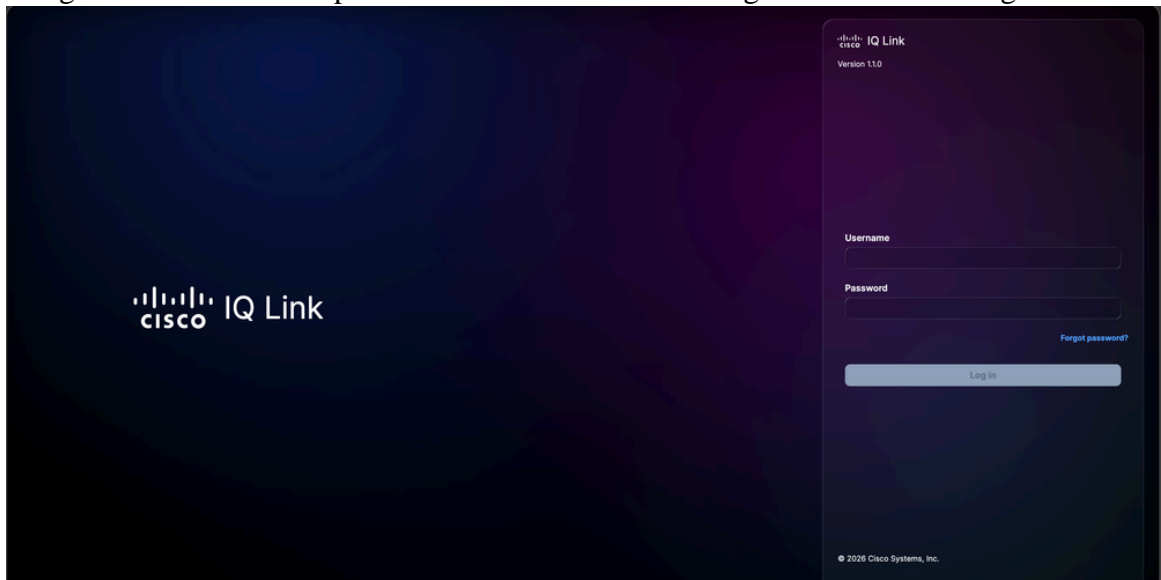
 **Note:** The specified IP range is reserved for internal Cisco IQ Link communication. To prevent connectivity issues, ensure this range does not overlap with external devices (for example, DNS, NTP, or data sources). Any external device assigned an IP within this range is unreachable by Cisco IQ Link.

19. Click **Next**. The **Installation result** page displays.



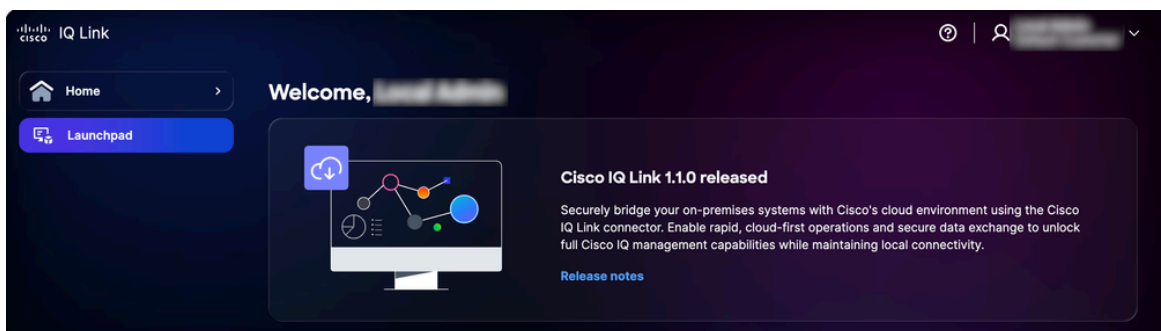
Installation Result

Once the installation is complete, the Cisco IQ login opens in the browser. You can log in using the admin user and password credentials used during the Network configuration.




Cisco IQ Link Login

20. Log into Cisco IQ Link. The **Home** page displays.



Cisco IQ Link Successful Installation

 **Note:** From here onwards, you can add Connections from Cisco IQ Link by navigating to **System Settings > Connection Management**. See the Cisco IQ Link Operations Guide by navigating to the

 **Help** menu to learn more about Cisco IQ Link features.
