Release Information for ExtremeCloud IQ Virtual Appliance

In this topic, you can find information about IQ Virtual Appliance releases, upgrade process, hardware, supported software, devices, and browsers, and CLI reference and other guides.

To find New Features for previously released version of IQ Virtual Appliance, along with the tables of Known and Addressed Issues for each version, see "Release Information for Previous IQ Virtual Appliance Versions".

Minimum Hardware Requirements

Low-Capacity Virtual Machine Recommendations

Recommended minimum hardware requirements for deploying a total of 500 APs or switches:

Low-capacity Virtual Machine Recommendations (up to 500 devices)
Xeon E3-1220 v5, 3.0GHz, 8MB cache or better CPU
4 CPU Cores, and 4 Threads
24 GB RAM
SSD (solid state drive)
300 GB of Storage Capacity

High-Capacity Virtual Machine Recommendations

The IQ Virtual Appliance OVA defaults to the high-capacity version.

Recommended minimum hardware requirements for deploying a total of 5000 APs or switches:

High-capacity Virtual Machine Recommendations (up to 5000 devices)
Xeon E5-2620 v4, 2.1GHz, 20MB cache or better CPU
8 CPU Cores, and 16 Threads
32 GB RAM
SSD (solid state drive)
300 GB of Storage Capacity

IQ Virtual Appliance does not support storage area networks (SAN).

Upgrading ExtremeCloud IQ Virtual Appliance

Use the Virtual Appliance Management System to upgrade to the current version of IQ Virtual Appliance.

Version 12 of IQ Virtual Appliance introduced an improved architecture that expands and optimizes back-end functionality, while reducing the footprint. As a result of the change in architecture, special considerations are required during the upgrade process from version 11.26.3.5 to any version using the new architecture.

Upgrading to IQ Virtual Appliance 21.1.23.4

You can learn more about the Virtual Appliance Management System by visiting "ExtremeCloud IQ Virtual Appliance Management Console".

The following upgrade path is supported when upgrading IQ Virtual Appliance using the Virtual Appliance Management System:

- **IQ Virtual Appliance 21.1.22.1 to IQ Virtual Appliance 21.1.23.4**

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

1. Download the upgrade package:

   The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Products > ExtremeCloud IQ > ExtremeCloud IQ On Premises >** *version_number* to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

   hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

   Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the desktop.

2. Back up your virtual machine using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

3. When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

   `http://<IQ Virtual Appliance_ip_address>:3000`

   or

   `https://<IQ Virtual Appliance_host_name>.<your_domain>.com:3000`

4. Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from other ExtremeCloud IQ Virtual Appliance versions

Upgrading to IQ Virtual Appliance 21.1.22.1

Upgrade IQ Virtual Appliance 21.1.21.11 to IQ Appliance 21.1.22.1

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

1. Download the upgrade package:

   The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

   hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

   Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the desktop.

2. Back up your virtual machine using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

   When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

   `http://<IQ Virtual Appliance_ip_address>:3000`

   or

   `https://<IQ Virtual Appliance_host_name>.<your_domain>.com:3000`

3. Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading to IQ Virtual Appliance 21.1.21.11

The following paths are supported when upgrading IQ Virtual Appliance using the Virtual Appliance Management System: Upgrade IQ Virtual Appliance 21.1.20.27 to IQ Appliance 21.1.21.11

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

1. Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the desktop.

2. Back up your virtual machine using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

   When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

   ```
   http://<IQ Virtual Appliance_ip_address>:3000
   ```

   or

   ```
   https://<IQ Virtual Appliance_host_name>.<your_domain>.com:3000
   ```

3. Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading to IQ Virtual Appliance 21.1.20.27

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 21.1 using the Virtual Appliance Management System:

- IQ Virtual Appliance 20.1.20.24 to IQ Virtual Appliance 21.1.20.27
- IQ Virtual Appliance 20.1.6.4 to IQ Virtual Appliance 21.1.20.27
- IQ Virtual Appliance 20.1.5.2 to IQ Virtual Applianc 21.1.20.27

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

1. Download the upgrade package:

   The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

   hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

   Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the desktop.

2. Back up your virtual machine using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

   When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

   ```
   http://<IQ Virtual Appliance_ip_address>:3000
   ```

   or

```
https://<IQ Virtual Appliance_host_name>.<your_domain>.com:3000
```

3. Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading to IQ Virtual Appliance 21.1.20.24

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 21.1 using the Virtual Appliance Management System:

- IQ Virtual Appliance 20.1.5.2 to IQ Virtual Appliance 21.1.20.24
- IQ Virtual Appliance 20.1.6.4 to IQ Virtual Appliance 21.1.20.24

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

1. Download the upgrade package:

   The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

   hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

   Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

2. Backup your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.
3. When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

   ```
   http://<IQ Virtual Appliance_ip_address>:3000
   ```

   or

   ```
   https://<IQ Virtual Appliance_host_name>.<your_domain>.com:3000
   ```

4. Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading to ExtremeCloud IQ Virtual Appliance 20.1.5.2

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 20.1.5.2 using the Virtual Appliance Management System:

- IQ Virtual Appliance 20.1.4.3 to IQ Virtual Appliance 20.1.5.2 only

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the

current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<iqva_ip_address>:3000
```

or

```
https://<iqva_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading to ExtremeCloud IQ Virtual Appliance 20.1.4.3

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 20.1.4.3 using the Virtual Appliance Management System:

- IQ Virtual Appliance 20.1.3.2 to IQ Virtual Appliance 20.1.4.3
- IQ Virtual Appliance 19.5.1.7 to IQ Virtual Appliance 20.1.4.3

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<iqva_ip_address>:3000
```

or

```
https://<iqva_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 19.5.1.7 to 20.1.3.2

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 20.1.3.2 using the Virtual Appliance Management System:

- IQ Virtual Appliance 19.5.1.7 to IQ Virtual Appliance 20.1.3.2

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<iqva_ip_address>:3000
```

or

```
https://<iqva_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 12.8.3.2 to 19.5.1.7

The following upgrade paths are supported when upgrading to IQ Virtual Appliance 19.5.1.6 using the Virtual Appliance Management System:

- IQ Virtual Appliance 12.8.2.2 to IQ Virtual Appliance 19.5.1.7
- IQ Virtual Appliance 12.8.3.1 to IQ Virtual Appliance 19.5.1.7
- IQ Virtual Appliance 12.8.3.2 to IQ Virtual Appliance 19.5.1.7
- IQ Virtual Appliance 12.8.3.3 to IQ Virtual Appliance 19.5.1.7

Only upgrade from and to the versions specified. Attempting to upgrade across unsupported upgrade paths can result in unpredictable behavior.

To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software**

Releases > ExtremeCloud IQ Releases > *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<hivemanager_ip_address>:3000
```

or

```
https://<hivemanager_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 12.8.2.2 to 12.8.3.2

You can upgrade from IQ Virtual Appliance version 12.8.2.2 to 12.8.3.2 directly from the Virtual Appliance Management System. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<hivemanager_ip_address>:3000
```

or

```
https://<hivemanager_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 12.8.1.2 to 12.8.2.2

You can upgrade from IQ Virtual Appliance version 12.8.1.2 to 12.8.2.2 directly from the Virtual Appliance Management System. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<hivemanager_ip_address>:3000
```

or

```
https://<hivemanager_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 12.8 to 12.8.1.2

You can upgrade from IQ Virtual Appliance version 12.8 to 12.8.1.2 directly from the Virtual Appliance Management System. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal.. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, log in to your Virtual Appliance Management System by directing your browser to one of the following URLs, and then entering your credentials:

```
http://<hivemanager_ip_address>:3000
```

or

```
https://<hivemanager_host_name>.<your_domain>.com:3000
```

Begin the upgrade by navigating to **HM Upgrade**, clicking **Upload**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.26.3.5 to 12.8

You can upgrade from IQ Virtual Appliance version 11.26.3.5 to version 12.8, but you cannot upgrade directly on the same VM through the GUI. Instead, the process requires a fresh installation of the version 12.8 to a new VM.

During this process, you must download image files or export VHM files that are very large. To ensure that your upgrade goes smoothly, delete or archive unneeded images or files that might take up disk space and affect performance. The complete upgrade path from 11.26.3.5 to 12.8 is as follows:

[11.26.3.5] >> [Patch 11.26.3.6] >> [12.8]

To upgrade, perform the following steps:

1. Download Upgrade-related Images

Download the upgrade package (11.26.3.6) and the new IQ Virtual Appliance 12.8 image

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

The IQ Virtual Appliance installation image has the following format and is also accompanied by a description and the MD5 checksum value:

hmva-signed-12.8.0.1-NGVA-2018-04-07-aerohive.ova

Be sure to note the save location of the files, or choose a download location that is easy to find, such as on the Desktop.

2. Install The IQ Virtual Appliance 11.26.3.6 Upgrade Package

The 11.26 upgrade package introduces Virtual IQ export capabilities that facilitate the transfer of Virtual IQ information from the source Virtual IQ to the new Virtual IQ.

To install the upgrade package, do the following:

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking **Upload Patch and Upgrade**, choosing the file (hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed)you saved previously, and then clicking **Open** in the dialog.

3. Export Your ExtremeCloud IQ Virtual Machine:

In ExtremeCloud IQ, click **Admin > Global Settings > VHM Management > Export VHM**, click **Export Now**, and then confirm by clicking **Yes**.

Depending on the extent of your current network configuration, the export process can take several minutes. For very small configurations with few rules, few objects and profiles, and few devices, exporting the VHM can take as little as one minute.

The following table lists the information that is included or not included when you export the ExtremeCloud IQVirtual IQ:

Information Exported	Information Not Exported
Private Device Firmware Email Notification Settings Default Device Admin Password Device Inventory Maps System Settings Device and Network Configurations Certificates Captive Web Portal Files	Monitoring Data Alarm Data Event Data Audit Log Information

Because client data (monitoring, alarm, and event data) is not exported, you can only retain client data in the form of reports. When you upgrade to IQ Virtual Appliance 12.8, client data in the database is lost.

4. Download The Exported Virtual Machine File:

When ExtremeCloud IQ exports your Virtual IQ file, it makes it available for download within ExtremeCloud IQ itself and prompts you to log in to ExtremeCloud IQ to access it. You might need to log out, log back in, and then click **Admin > Global Settings >** Virtual IQ **Management** to download the file.

5. Install IQ Virtual Appliance 12.8:

Upgrading from IQ Virtual Appliance 11.26 to IQ Virtual Appliance 12.8 requires a new installation because of the enhancements in the back-end architecture; there is no direct update path from v11.26.3.5 to v12.8.

To view the steps needed to install IQ Virtual Appliance 12.8, see "ExtremeCloud IQ Virtual Appliance".

6. Import Your Virtual IQ File Into IQ Virtual Appliance 12.8:

To import your Virtual IQ file into IQ Virtual Appliance, click **Admin > Global Settings > VHM Management > Import VHM**, choose the file you exported in step 3, and then click **Import Now**.

*You can also choose how ExtremeCloud IQ responds to error conditions during the importation process. If you want the import process to halt when an error is encountered, select **Abort** (default). If you want IQ Virtual Appliance to continue importing the file until completion without halting, select **Continue**.*

7. Manually Change Device Statuses And Upload Configurations To Devices

When you import your Virtual IQ into IQ Virtual Appliance 12.8, the devices are imported in an unmanaged state. Because of this, IQ Virtual Appliance ignores device connection attempts. To allow your devices to connect to ExtremeCloud IQ, manually change the status of your devices to *Managed*.

To ensure that your devices are running the latest configuration updates in the context of the new architecture, be sure to upload full configurations to all your devices.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.26.0.29 to 11.26.3.5

You can upgrade from IQ Virtual Appliance version 11.26.0.29 to version 11.26.3.5 directly from the user interface. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Backup your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking **Upload Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.26.x to 11.26.3.5

You can upgrade from IQ Virtual Appliance version 11.26.x to version 11.26.3.5 directly from the user interface. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Dell EMC customers on the Secure FTP (SFTP) server: sftp://dellsupport.aerohive.com. Connect to the server using any standard SFTP client with the credentials provided in the email that also contains the entitlement key. Navigate to **Software Downloads > Current Software Releases** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking Upload **Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.21 to 11.26

You can upgrade from IQ Virtual Appliance version 11.21 to version 11.26 directly from the user interface. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Backup your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking **Upload Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.21.2.2 to 11.26

You can upgrade from IQ Virtual Appliance version 11.21.2.2 to version 11.26 directly from the user interface. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Dell EMC customers on the Secure FTP (SFTP) server: sftp://dellsupport.aerohive.com. Connect to the server using any standard SFTP client with the credentials provided in the email that also contains the entitlement key. Navigate to **Software Downloads > Current Software Releases** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Backup your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking Upload **Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.21.0.1 to 11.21.2.2

You can upgrade from IQ Virtual Appliance version 11.21.0.1 to version 11.21.2.2 directly from the user interface. To upgrade, perform the following steps:

If upgrading from 11.17.x.x, you must first upgrade to version 11.21.0.1 before upgrading to version 11.21.2.2.

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Dell EMC customers on the Secure FTP (SFTP) server: sftp://dellsupport.aerohive.com. Connect to the server using any standard SFTP client with the credentials provided in the email that also contains the entitlement key. Navigate to **Software Downloads > Current Software Releases** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking Upload **Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.17 to 11.21

You can upgrade from IQ Virtual Appliance version 11.17 to version 11.21.1.1 directly from the user interface. To upgrade, perform the following steps:

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Extreme Networks customers on the Extreme Networks Support Portal. After you log in, navigate to **Software Downloads > Current Software Releases > ExtremeCloud IQ Releases >** *version_number* **> ExtremeCloud IQ Software** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signed

Be sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking **Upload Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

Upgrading from ExtremeCloud IQ Virtual Appliance 11.17 to 11.21

You can upgrade from IQ Virtual Appliance version 11.17 to the current version directly from the user interface. To upgrade, perform the following steps:

You must perform this upgrade before upgrading to 11.21.2.2.

Download the upgrade package:

The 64-bit IQ Virtual Appliance software is available for Dell EMC customers on the Secure FTP (SFTP) server: sftp://dellsupport.aerohive.com. Connect to the server using any standard SFTP client with the credentials provided in the email that also contains the entitlement key. Navigate to **Software Downloads > Current Software Releases** to find the current version of IQ Virtual Appliance. The upgrade pack file name has the following format and is accompanied by a brief description of the file and the MD5 checksum value:

hivemanager-ng-upgrade-pack-<version>-<date>.tar.signedBe sure to note the save location of the file, or choose a download location that is easy to find, such as on the Desktop.

Back up your virtual machine by using the Snapshot feature of Vmware vCenter. The snapshot feature makes a complete backup of the virtual machine, including both the data and the software.

When your backup is complete, begin the upgrade by navigating to **Account Details > Upgrade HiveManager**, clicking Upload **Patch and Upgrade**, choosing the file you saved in Step 1, and then clicking **Open** in the dialog.

New Features and Enhancements

New Hardware Support

With this release, the AP305C-1 and AP410C-1 are now manageable by the ExtremeCloud IQ Virtual Appliance. These lower cost units will be configured and managed as AP305C and AP410C devices in the UI, respectively.

New Features and Enhancements

IQ Engine 10.5r2 is now the supported firmware revision for most Broadcom-based access points managed by ExtremeCloud IQ Virtual Appliance. You may now also upgrade and manage certain Broadcom access points devices to subsequent versions of IQ Engine 10.5 and 10.6, if available for the platform in question. This best effort support for future versions extends to the AP30, AP122, AP122X, AP130, AP305C, AP245X, AP250, AP305C, AP305C-1, AP305CX, AP410C, AP410C-1, AP460C family, AP510C, AP510CX, AP550, AP650, AP650X, and AP1130. AP230 may be upgraded to 10.5r3.

Known and Addressed Issues

ExtremeCloud IQ Virtual Appliance 21.1.23.4

Addressed Issues in IQ Virtual Appliance 21.1.23.4

ID	Description
CFD-7627	Fixed SSID sorting across pages in Common Objects.
CFD-6661	Fixed display of Manage > Devices page when French language is selected.

Known Issues in IQ Virtual Appliance 21.1.23.4

ID	Description
XIQ-16182	When upgrading firmware on XR600p, the latest version of IQ Engine offered, 10.0.r11a, does not exist. Choose "Upgrade to specific version" and select 10.0r11 instead.
CFD-7376	Devices are sometimes not listed correctly in the Get Tech Data utility.
CFD-7034	The Tomcat rotation log does not clear some component logs.
CFD-6995	IQVA may continue to query default NTP servers even after configuring the use of different NTP servers.
CFD-6875	Applied filters in reports may not work correctly.
CFD-6796	Elastic search service may not restart automatically if service terminates abnormally.
CFD-6662	Extremely large log files may cause IQVA to go down.
CFD-6584	Supplemental CLI may not apply correctly when HIQ is enabled.
CFD-6570	NTP setting in Global Settings may not accept IP addresses when the fourth octet is a single character.
CFD-5344	When the switch location is in a different region from the ExtremeCloud IQ RDC, updating the switch software from ExtremeCloud IQ is sometimes unsuccessful.
CFD-2493	The account of an ExtremeCloud IQ administrator sometimes becomes suspended, despite being an otherwise valid account.
CGUEST-440	When a user selects a social login without a walled garden configured, ExtremeCloud IQ sometimes displays an authentication error page instead of the correct message page.
XLOC-411	When all sites are selected, the Category Path Analytics widget does not display data correctly.
APC-42709	Throughput and application metrics for wired clients of AP150W access points sometimes do not match.
APC-41956	Client Trail and the client tracking tool sometimes displayed duplicate client session entries.
APC-42931	In some older browsers, ExtremeCloud IQ pages do not display properly. **Workaround**: Upgrade browser to the latest version and refer to the list of supported browsers.
APC-41057	Legend labels on the switch stack graph sometimes disappear when attempting to download or print the graph.
APC-39971	Hierarchical ExtremeCloud IQ search function only displays five results for each search category.
APC-38369	When an admin updates EXOS switch firmware from 30.6 to 30.6.1.11-patch1-11, the switch loses connectivity to the cloud when IQAgent is configured using the CLI.
APC-38238	When an EXOS switch running 30.6.1.11-patch1-11 is downgraded to 30.6.1.11 by a firmware update in ExtremeCloud IQ, the switch cannot reconnect to ExtremeCloud IQ successfully.

ID	Description
APC-38236 APC-38372	When updating an EXOS switch to a patch of the current version, the admin must select **Upgrade even if the versions are the same**.
APC-38210	When an admin assigns a branch ID to an XR-series router, the branch ID is not updated on the Devices table. **Workaround**: Refresh the page if the new branch ID is not visible.
APC-37835	When an admin deletes a RADIUS proxy profile, the deleted profile still appears in the Use Existing list.
APC-27965	ExtremeCloud IQ does not generate the correct CLI command set when an admin changes a device radio profile directly on the device using the Interface Settings.
APC-22297	ExtremeCloud IQ displays PoE configuration controls for all ports on the Dell EMC N1108P switch, even though the N1100P only supports PoE on ports 1 - 4.
APC-22222	If a member of the stack is disconnected, then you cannot upload a configuration to the stack while the stack is missing the member switch. **Workaround**: If you want to push configuration with a member disconnected you will need to create a stack template that corresponds to the stack without the member that is disconnected and push that.
APC-21979	ExtremeCloud IQ does not allow an admin to add more than two AP150W device templates. When a third AP150W device template is added, ExtremeCloud IQ displays an error message and does not add the device to the template.
APC-21676	Hierarchical ExtremeCloud IQ improperly allows an admin to select locations in the Assign Location section of Account Management when the Organization is set to *All Organizations*.
APC-21667	ExtremeCloud IQ sometimes paginates the user list incorrectly, displaying the incorrect number of users per page.
APC-21634	If an admin enables HHM (Hierarchical ExtremeCloud IQ), and then attempts to restore ExtremeCloud IQ from a previous, non-HHM image, the restore is unsuccessful, and the admin can no longer log in to ExtremeCloud IQ.
APC-21456	In rare cases, HiveManager NG does not upload some IGMP sub-commands successfully. **Workaround**: Use the Supplemental CLI feature to upload problematic commands.
APC-21409	After modifying a custom network service value (such as *Service Idle Timeout* or *ALG Type*), attempts to upload the change to devices are unsuccessful.
APC-21298	ExtremeCloud IQ returns an error message when an admin attempts to disable SDR (Software Defined Radio) on multiple APs simultaneously.
APC-21294	When an admin attempts to change a radio channel on multiple APs simultaneously to a channel that at least one of the radios does not support, ExtremeCloud IQ returns the error message "The channel [...] is not valid for country code [...].", which is unrelated to the actual issue that the channel is not supported by at least one of the selected radios.
APC-21215	ExtremeCloud IQ sometimes displays inaccurate *Issue* and *Diagnosis* count information within *Client Monitor*.

ID	Description
APC-21194	When an admin clicks Dashboard > Diagnostics, and then promptly clicks Monitor, ExtremeCloud IQ sometimes reports that the API calls were unsuccessful.
APC-21178	When an admin uses some diagnostic tools, the tools do not execute properly and ExtremeCloud IQ returns a message that the device on which the tool is run is unsupported.
APC-21053	When the admin disables LLDP, and then uploads the new configuration, ExtremeCloud IQ continues to display LLDP information.
APC-21015	When devices are removed from, and then re-added to ExtremeCloud IQ, ExtremeCloud IQ does not retain the LLDP information for display in the Monitoring tab.
APC-20760	ExtremeCloud IQ reports as unidentified any wired devices that are connected to an SR2208P switch.
APC-20735	Device-level storm control settings cannot be configured on a switch unless a template for the switch is part of the network policy.
APC-20734	When a configuration upload is unsuccessful because of improper Supplemental CLI commands, hovering the mouse over the upload message does not result in a tool tip containing the problematic CLI command.
APC-20707	When an admin selects multiple switches in ExtremeCloud IQ, the Get Tech Data utility becomes unavailable.
APC-20647	ExtremeCloud IQ does not successfully upload configurations that contain an external RADIUS server.
APC-20600	Some filter settings are not persistent after the admin navigates to different tabs.
APC-20371	After an admin adds a user profile to an existing list of user profiles in order to apply the new profile to the traffic, ExtremeCloud IQ does not successfully upload the new configuration.
APC-20172	The option to configure SSH appears when the admin is attempting bulk edits of multiple switches or of switches and APs together. When the admin is performing bulk edits of multiple APs only, ExtremeCloud IQ correctly hides the SSH configuration options.
APC-20132	Extreme Networks Connect administrators are unable to edit RBAC role details.
APC-20099	ExtremeCloud IQ does not display any CPU or memory usage information when the Switch Diagnostics graph is set to display a week of data.
APC-20092	In some cases, ExtremeCloud IQ does not allow an administrator configuring a switch template to configure a switch port as a Phone port.
APC-20063	ExtremeCloud IQ sometimes prompts the admin to add a license, even when the current license is sufficient.
APC-20018	When the admin is configuring device wireless settings, ExtremeCloud IQ sometimes returns a general error.
APC-19743	When the admin attempts to view a filtered list of several thousand devices, ExtremeCloud IQ sometimes cannot properly display the list of devices.
APC-19616	The status cards of the *Monitor* page in a managed service provider context do not update after the admin changes what organizations are displayed.

ID	Description
APC-19591	When there are more than 500 APs in ExtremeCloud IQ, it sometimes becomes unresponsive when reloading the *Monitor* page after the admin deletes a device.
APC-19515	When the number of digits in the alarm notification counters exceeds three, the notification counter background elements can no longer contain the value.
APC-19474	The type-ahead (live search) functionality sometimes displays incorrect or no information.
DAPC-394	Administrators sometimes cannot onboard N3024F, N2024P, N1108P, or N1524P switches after resetting the Virtual IQ.
DAPC-385	ExtremeCloud IQ sometimes displays the incorrect port number in the tool tip when the admin mouses over a stack port on the Port Status page.
DAPC-382	When an administrator attaches a switch stack to HiveManager Virtual Appliance, only the master switch is auto-detected. The administrator must subsequently onboard the remaining stack members manually.
DAPC-259	When stacks are merged, ExtremeCloud IQ sometimes reports the existence of a zero-member stack along with the merged stack. The existence of the zero-member stack can result in inconsistent data and unsuccessful configuration uploads. **Workaround**: Delete any zero-member stack immediately after merging stacks.
DAPC-240 DAPC-234	When the master is removed from a stack, the stack retains the old MAC address. As a result, the master (now a standalone switch), and the original stack both have the same MAC address, which ExtremeCloud IQ cannot resolve. **Workaround**: Before removing the master from a stack with the intention of continuing to use the master as a standalone switch, perform the following steps: 1. Remove the stack from ExtremeCloud IQ. 2. Perform the related command line operations on the stack to remove the master switch. 3. Re-add the stack and the standalone switch to ExtremeCloud IQ.
DAPC-222	After an admin uploads stack template to a switch stack, ExtremeCloud IQ displays *[-No Change-]* in the Stack Template drop-down list, rather than the new template name.
DAPC-186	ExtremeCloud IQ does not display the management VLAN information in the *Devices* table.
DAPC-73	When resetting multiple switches simultaneously to factory default settings, ExtremeCloud IQ erroneously reports that the reset was unsuccessful.
DAPC-38	When an admin updates Dell EMC switch configurations in ExtremeCloud IQ with the Update Network Policy and Configuration option cleared, ExtremeCloud IQ displays an updated timestamp, despite no configuration update occurring. **Workaround**: Be sure to select either **Update Network Policy and Configuration** or **Upgrade Dell Switch Images** before clicking **Perform Update**.

Device Support Information

This section lists the devices that ExtremeCloud IQ supports and includes the latest version of the software that each device supports. Expand the sections below to view the list of supported devices.

Access Points

Device Model	Latest Supported Release	Comments
AP650, AP650X	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.0r1.
AP630	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.0r1. End of Life Information
AP560i-FCC	WiNG 7.1.1	Monitor only
AP560h-FCC	WiNG 7.1.2	Monitor only
AP505i	WiNG 7.1.0	Monitor only
AP510i	WiNG 7.1.0	Monitor only
AP505e	WiNG 7.1.1	Monitor only
AP510C	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.0r1.
AP510CX	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.0r1.
AP460i	WiNG 7.3.0	Monitor only
AP460e	WiNG 7.3.0	Monitor only
AP460C	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.1r2
AP410C	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.1r2
AP305C	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.1r1.
AP305CX	IQ Engine 10.5r2	Platform support introduced with IQ Engine 10.1r1.
AP1130	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.2r1. End of Life Information
AP550	IQ Engine 10.5r2	Platform support introduced with IQ Engine 7.0r3. End of Life Information
AP390	IQ Engine 6.5r16	End of Life Information
AP370	IQ Engine 6.5r16	End of Life Information
AP350	IQ Engine 6.5r16	End of Life Information
AP340	IQ Engine 6.5r10	End of Life Information
AP330	IQ Engine 6.5r16	End of Life Information
AP320	IQ Engine 6.5r10	End of Life Information
AP250	IQ Engine 10.5r2	Platform support introduced with IQ Engine 7.0r2.
AP245X	IQ Engine 10.5r2	Platform support introduced with IQ Engine 7.0r2. End of Life Information
AP230	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.2r1. End of Life Information
AP170	IQ Engine 6.5r16	End of Life Information
AP150W	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.1r1.

Device Model	Latest Supported Release	Comments
AP141	IQ Engine 6.5r16	End of Life Information
AP130	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.2r1. End of Life Information
AP122	IQ Engine 10.5r2	Platform support introduced with IQ Engine 7.0r4.
AP122X	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.2r1. End of Life Information
AP121	IQ Engine 6.5r16	End of Life Information
AP120	IQ Engine 6.5r10	End of Life Information
Atom AP30	IQ Engine 10.5r2	Platform support introduced with IQ Engine 8.3r2.

Switches and Routers

Device Model	Latest Supported Release	Comments
SR2024	N/A	Not supported in ExtremeCloud IQ End of Life Information
SR2024P	IQ Engine 6.5r16	End of Life Information
SR2124P	IQ Engine 6.5r16	End of Life Information
SR2148P	IQ Engine 6.5r16	End of Life Information
SR2208P	IQAgent 1.1.31	
SR2224P	IQAgent 1.1.31	
SR2324P	IQAgent 1.1.31	
SR2348P	IQAgent 1.1.31	
BR100	N/A	Not supported in ExtremeCloud IQ End of Life Information
BR200	N/A	Not supported in ExtremeCloud IQ End of Life Information
BR200-LTE-VZ	N/A	Not supported in ExtremeCloud IQ End of Life Information
BR200WP	IQ Engine 6.9r7	End of Life Information
XR200P	IQ Engine 6.9r7	Platform support introduced with IQ Engine 6.9r2
XR600P	IQ Engine 10.0r11	Platform support introduced with IQ Engine 9.0r1
VGVA	IQ Engine 6.9r7	

Dell EMC Switches

ExtremeCloud IQ can manage the following Dell EMC N-Series switches running IQAgent versions up to 1.1.29:

Device Model	Latest Supported Release	Comments
N3132PX	IQAgent 1.1.29	
N3024EF	IQAgent 1.1.29	
N3024EP	IQAgent 1.1.29	
N3024ET	IQAgent 1.1.29	
N3048EP	IQAgent 1.1.29	
N3048ET	IQAgent 1.1.29	
N3024	IQAgent 1.1.29	
N3024F	IQAgent 1.1.29	
N3024P	IQAgent 1.1.29	
N3048	IQAgent 1.1.29	
N3048P	IQAgent 1.1.29	
N2128PX	IQAgent 1.1.29	
N2024	IQAgent 1.1.29	
N2024P	IQAgent 1.1.29	
N2048	IQAgent 1.1.29	
N2048P	IQAgent 1.1.29	
N1524	IQAgent 1.1.29	
N1524P	IQAgent 1.1.29	
N1548	IQAgent 1.1.29	
N1548P	IQAgent 1.1.29	
N1108T-ON	IQAgent 1.1.29	
N1108P-ON	IQAgent 1.1.29	
N1124T-ON	IQAgent 1.1.29	
N1124P-ON	IQAgent 1.1.29	
N1148T-ON	IQAgent 1.1.29	
N1148P-ON	IQAgent 1.1.29	