

## How to Update Managed High Availability Clusters with Automatic Failover

<https://campus.barracuda.com/doc/79463168/>

To update the high availability cluster using automatic failover, both firewalls must be enabled. The passive firewall must be updated first while the active firewall keeps operating. After the passive firewall update is complete, the active firewall will automatically transfer control to the passive firewall and make it the active one. After the update of the primary firewall is complete, control will be transferred from the active secondary firewall back to the primary firewall. The secondary firewall will fall back to stay in passive mode.

If required, update your Control Center before updating your managed firewalls to a newer firmware version. After major version updates, the cluster version on the Control Center must be migrated to match the new firmware version.

The Control Center checks every hour for updates relevant to the configured cluster versions. It can take up to one hour for the updates, hotfixes, and patches to be displayed when a new cluster with a previously unused cluster version is created.

### Before You Begin

If you are using SSL Inspection on your border firewall, you must add **dlportal.barracudanetworks.com** and **d.barracudanetworks.com** to the SSL Inspection **Domain Exceptions** on the *your CloudGen Firewall* > **Virtual Servers** > **Assigned Services** > **Firewall** > **Security Policy** page. For more information, see [SSL Inspection in the Firewall](#).

#### Exception Handling

Domain Exceptions



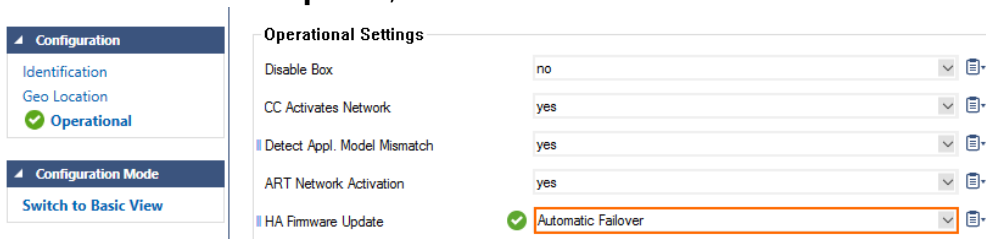
### Step 1: Verify the Compatibility of the Control Center Firmware with the Managed Firewalls

Before updating a managed firewall to a higher firmware version, verify that the Control Center is running a firmware version that is equal to or higher than the highest firmware version used by a managed firewall after the update.

For more information, see [Updating CloudGen Firewalls and Control Centers](#).

## Step 2. Enable Automatic Failover

1. Go to **CONFIGURATION > Configuration Tree > Box > Box Properties**.
2. In the left menu, click **Operational**.
3. Expand the **Configuration Mode** menu and select **Switch to Advanced View**.
4. Click **Lock**.
5. From **HA Firmware Update**, select **Automatic Failover**.



6. Click **Send Changes** and **Activate**.

## Step 3. Download the Update Package to the Control Center

Download the update package to the Control Center.

1. Log into the Control Center.
2. Go to **CONTROL > Firmware Update**.
3. In the lower half of the screen, click the **Download Portal** tab.
4. Hover the mouse over the desired update package to display the download icon.

| Download Portal |         |              |                    |   | Files on Control Center |
|-----------------|---------|--------------|--------------------|---|-------------------------|
| Filter          | Filter  | Filter       | Filter             | Filter  |                         |
| Scope           | Type    | Release Date | For Versions       | Name  |                         |
| Maintenance     | Package | 24.08.2016   | 7.0                | Hotfix 789 - Cumulative Hotfix  |                         |
| Maintenance     | Package | 03.08.2016   | 7.0                | Hotfix 793 - Virscan Service  |                         |
| Maintenance     | Package | 03.08.2016   | 6.1                | Hotfix 795 - Virscan Service  |                         |
| Maintenance     | Package | 11.07.2016   | 6.0, 6.1, 6.2      | Update package for NextGen F-Series from 6.X to 6.2.2   |                         |
| Maintenance     | Package | 03.06.2016   | 6.0, 6.1, 6.2, 7.0 | Update package for NextGen F-Series from 6.X to 7.0.0   |                         |
| Maintenance     | Package | 05.05.2016   | 6.1                | Hotfix 776 - SSLv2  |                         |
| Maintenance     | Package | 23.03.2016   | 6.1                | Hotfix 766 - DNS Server   |                         |
| Security        | Package | 23.02.2016   | 6.1                | Hotfix 749: glibc (CVE-2015-7547)   |                         |
| Maintenance     | Package | 15.02.2016   | 6.0, 6.1, 6.2      | Barracuda NG Firewall and NG Control Center 6.2.1 Update Package to update from 6.0.x and 6.1.x |                         |
|                 | App     |              |                    |   |                         |

5. Click the download icon, and select **Download**.

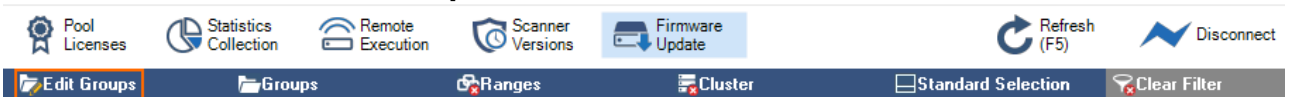
| Download Portal |         |              |                    |   | Files on Control Center                       |
|-----------------|---------|--------------|--------------------|---|---|
| Filter          | Filter  | Filter       | Filter             | Filter  |   |
| Scope           | Type    | Release Date | For Versions       | Name  |   |
| Maintenance     | Package | 24.08.2016   | 7.0                | Hotfix 789 - Cumulative Hotfix                        |   |
| Maintenance     | Package | 03.08.2016   | 7.0                | Hotfix 793 - Virscan Service                          |   |
| Maintenance     | Package | 03.08.2016   | 6.1                | Hotfix 795 - Virscan Service                          |   |
| Maintenance     | Package | 11.07.2016   | 6.0, 6.1, 6.2      | Update package for NextGen F-Series from 6.X to 6.2.2 |   |
| Maintenance     | Package | 03.06.2016   | 6.0, 6.1, 6.2, 7.0 | Update package for NextGen F-Series from 6.X to 7.0.0 |   |
| Maintenance     | Package | 05.05.2016   | 6.1                |   | Download                                      |
| Maintenance     | Package | 23.03.2016   | 6.1                |   | Download with your default Browser            |
| Security        | Package | 23.02.2016   | 6.1                |   | Copy Download Link to Clipboard               |
| Maintenance     | Package | 15.02.2016   | 6.0, 6.1, 6.2      |   | Update Package to update from 6.0.x and 6.1.x |
|                 | App     |              |                    |   |   |

After the download finishes, the update package is available in the **Files on Control Center** tab.

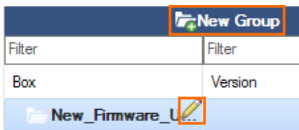
| Download Portal |         |              |                    |   | Files on Control Center |
|-----------------|---------|--------------|--------------------|---|-------------------------|
| Scope           | Type    | Release Date | For Versions       | Name  |                         |
| Maintenance     | Package | 16.03.2017   | 6.0, 6.1, 6.2, 7.0 | Update package for NextGen F-Series from 6.X and 7.0.X to 7.0.2 |                         |

### Step 4. (optional) Create Update Groups

1. Go to **CONTROL > Firmware Update**.
2. In the ribbon bar, click **Edit Groups**.



3. Click **New Group**. A new update group is created in the list.
4. Hover the mouse over the new group and click the edit icon.



5. Enter a name for the update group.
6. (optional) Use the Filter options to display the firewalls you want to add to this group.

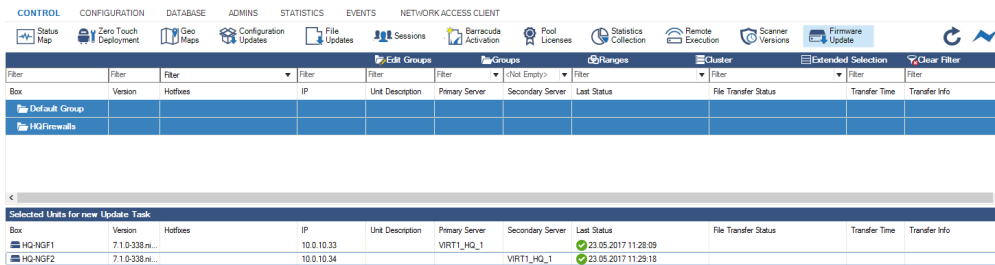
| New Group     |                 | Remove Group | Save Changes | Discard Changes  | Edit Groups    | Groups           |                     |
|---------------|-----------------|--------------|--------------|------------------|----------------|------------------|---------------------|
| Box           | Version         | Hotfixes     | IP           | Unit Description | Primary Server | Secondary Server | Last Status         |
| Default Group |                 |              |              |                  |                |                  |                     |
| HQ-NG1        | 7.1.0-290.ni... |              | 10.0.10.33   | Headquarters     | VIRT1_HQ_1     |                  | 05.04.2017 08:50:56 |
| HQ-NG2        | 7.1.0-290.ni... |              | 10.0.10.34   | Headquarters HA  | VIRT1_HQ_1     |                  | 05.04.2017 08:50:04 |
| HQFirewalls   |                 |              |              |                  |                |                  |                     |

7. Select, then drag and drop firewalls to the new user group.
8. Click **Save Changes**.

| New Group     |                 | Remove Group |            | Save Changes     |                | Discard Changes  |                     | Edit Groups |        | Groups |        |
|---------------|-----------------|--------------|------------|------------------|----------------|------------------|---------------------|-------------|--------|--------|--------|
| HQ-NG         | Filter          | Filter       | Filter     | Filter           | Filter         | Filter           | Filter              | Filter      | Filter | Filter | Filter |
| Box           | Version         | Hotfixes     | IP         | Unit Description | Primary Server | Secondary Server | Last Status         |             |        |        |        |
| Default Group |                 |              |            |                  |                |                  |                     |             |        |        |        |
| HQFirewalls   |                 |              |            |                  |                |                  |                     |             |        |        |        |
| HQ-NG1        | 7.1.0-290.ni... |              | 10.0.10.33 | Headquarters     | VIRT1_HQ_1     |                  | 05.04.2017 08:50:56 |             |        |        |        |
| HQ-NG2        | 7.1.0-290.ni... |              | 10.0.10.34 | Headquarters HA  |                | VIRT1_HQ_1       | 05.04.2017 08:50:04 |             |        |        |        |

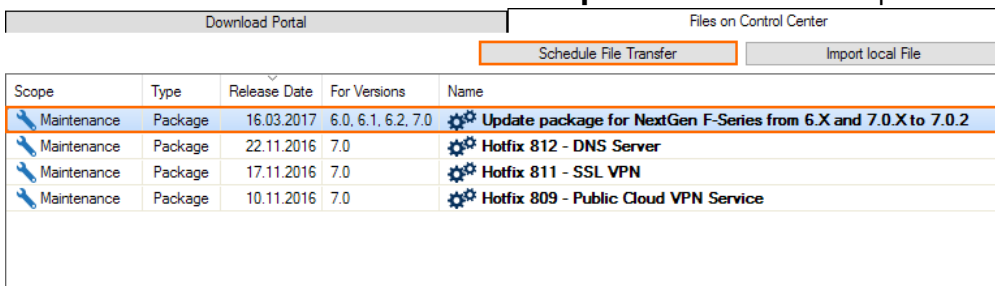
## Step 5. Select Firewalls and Schedule File Transfer

1. Go to **CONTROL > Firmware Update**.
2. Double-click on both firewalls on the HA cluster to add them to the **Selected Firewall Update List**.



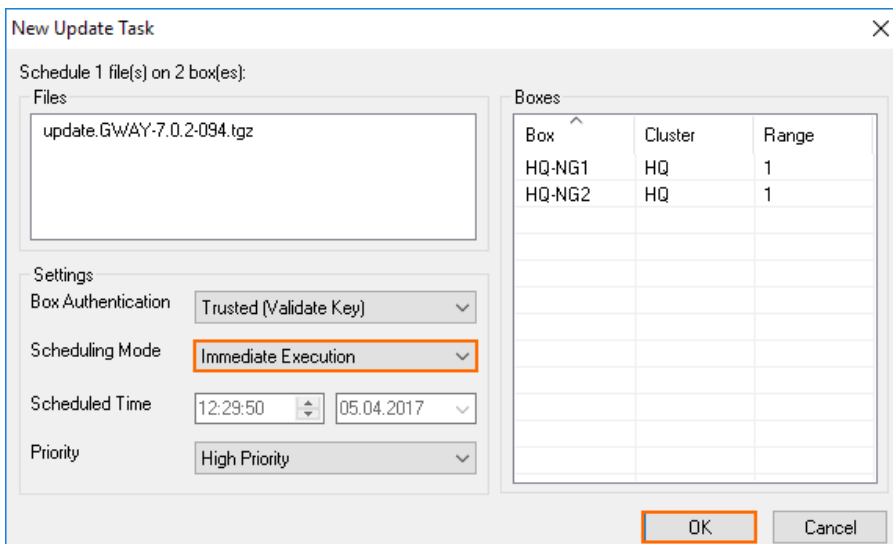
| Box    | Version         | Hotfixes | IP         | Unit Description | Primary Server | Secondary Server | Last Status         | File Transfer Status | Transfer Time | Transfer Info |
|--------|-----------------|----------|------------|------------------|----------------|------------------|---------------------|----------------------|---------------|---------------|
| HQ-NG1 | 7.1.0.338.ni... |          | 10.0.10.33 |                  | VIRT1_HQ_1     |                  | 23.05.2017 11:28:09 |                      |               |               |
| HQ-NG2 | 7.1.0.338.ni... |          | 10.0.10.34 |                  |                | VIRT1_HQ_1       | 23.05.2017 11:28:19 |                      |               |               |

3. In the **Files on Control Center** tab, select the update package.
4. Click **Schedule File Transfer**. The **New Update Task** window opens.



| Scope       | Type    | Release Date | For Versions       | Name  |
|-------------|---------|--------------|--------------------|---|
| Maintenance | Package | 16.03.2017   | 6.0, 6.1, 6.2, 7.0 | Update package for NextGen F-Series from 6.X and 7.0.X to 7.0.2 |
| Maintenance | Package | 22.11.2016   | 7.0                | Hotfix 812 - DNS Server   |
| Maintenance | Package | 17.11.2016   | 7.0                | Hotfix 811 - SSL VPN  |
| Maintenance | Package | 10.11.2016   | 7.0                | Hotfix 809 - Public Cloud VPN Service                           |

5. (optional) Select the **Scheduling Mode** and **Schedule Time** to schedule a time for the file transfer.



Schedule 1 file(s) on 2 box(es):

Files: update.GWAY-7.0.2-094.tgz

Boxes:

| Box    | Cluster | Range |
|--------|---------|-------|
| HQ-NG1 | HQ      | 1     |
| HQ-NG2 | HQ      | 1     |

Settings:

Box Authentication: Trusted (Validate Key)

Scheduling Mode: Immediate Execution

Scheduled Time: 12:29:50 | 05.04.2017

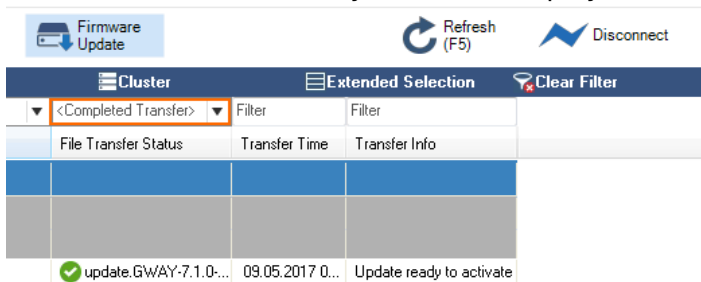
Priority: High Priority

OK | Cancel

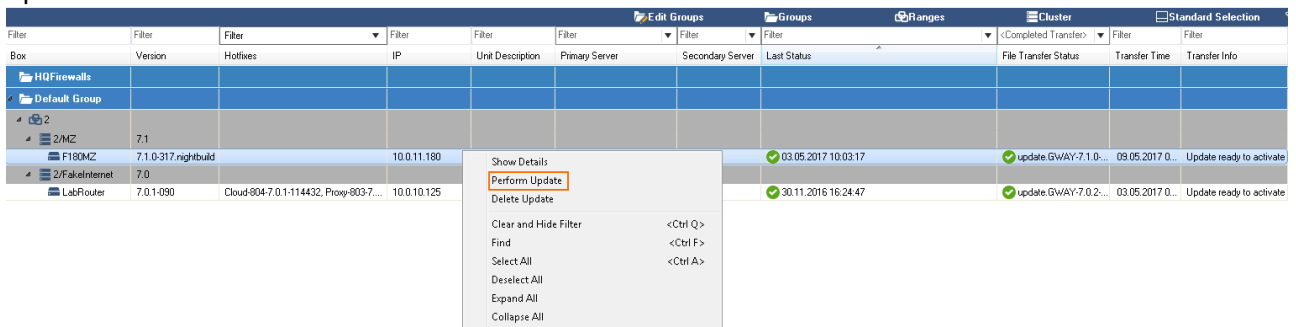
6. Click **OK**.

### Step 6. Schedule Update for the Secondary Firewall

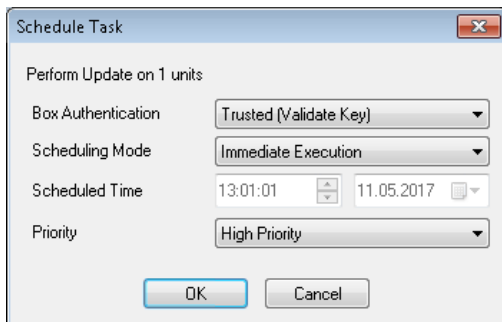
1. Go to **CONTROL > Firmware Update**.
2. In the **File Transfer Status** column, filter for **Completed Transfer**. The list of completed transfers for the secondary firewall is displayed.



3. Select the secondary firewall to perform the update.
4. Right-click the secondary firewall and click **Perform Update**. The **Schedule Task** window opens.



5. (optional) Configure the time and authentication settings for the update:
  - o **Box Authentication** – Select **Trusted (Validate Key)**.
  - o **Scheduling Mode** – Select **Immediate Execution** to update immediately, or **Delayed Execution** to set the time the update is triggered.
  - o **Priority** – When multiple tasks are configured for execution, the priority setting determines the execution order.



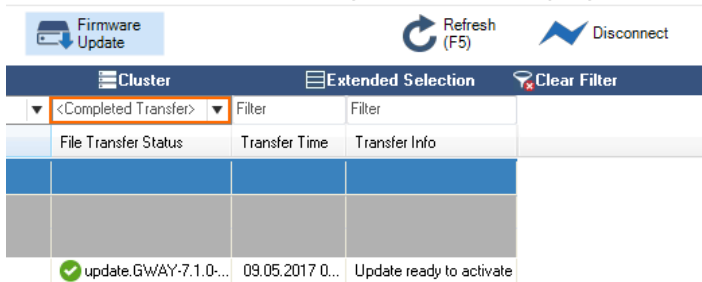
6. Click **OK**.

Wait for the update to finish. Depending on the system hardware, the process can last anywhere from 15 minutes (for a fast system) to 60 minutes (for flash appliances).

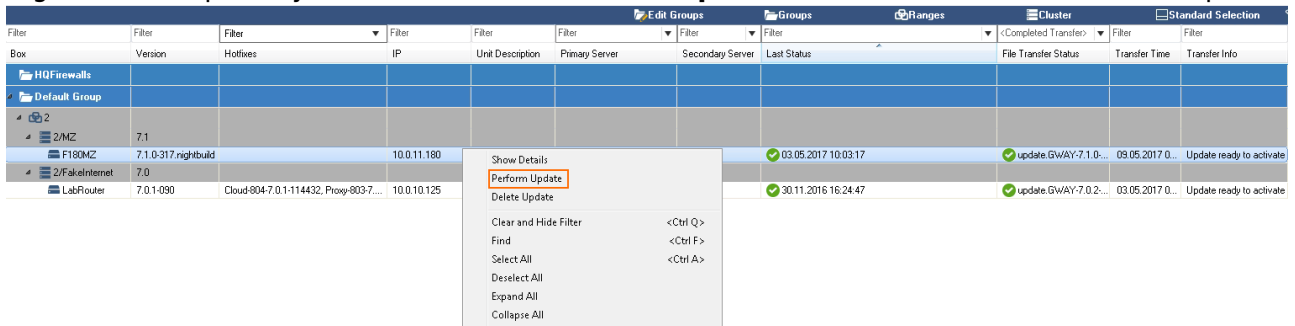
Unless otherwise noted, the firewall will reboot after the update.

## Step 7. Schedule Update for the Primary Firewall

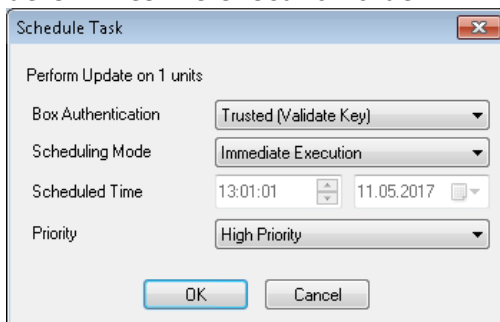
1. Go to **CONTROL > Firmware Update**.
2. In the **File Transfer Status** column, filter for **Completed Transfer**. The list of completed transfers for the secondary firewall is displayed.



3. Select the primary firewall to perform the update.
4. Right-click the primary firewall and click **Perform Update**. The **Schedule Task** window opens.



5. (optional) Configure the time and authentication settings for the update:
  - o **Box Authentication** – Select **Trusted (Validate Key)**.
  - o **Scheduling Mode** – Select **Immediate Execution** to update immediately, or **Delayed Execution** to set the time the update is triggered
  - o **Priority** – When multiple tasks are configured for execution, the priority setting determines the execution order.



6. Click **OK**.

When the firmware update starts at the scheduled time, the primary firewall will automatically transfer control over to the secondary firewall. The update packages will be copied to the primary

firewall. After the update, server control will be completely transferred back from the secondary firewall to the primary firewall.

Wait for the update to finish. Depending on the system hardware, the process can last anywhere from 15 minutes (for a fast system) to 60 minutes (for flash appliances).

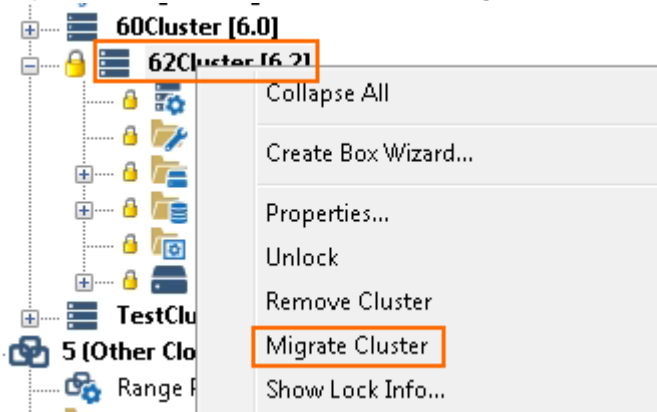
Unless otherwise noted, the firewall will reboot after the update.

## Step 8. Migrate the Configuration Version of the Cluster

If you are updating to a new major version (e.g., 6.0 to 6.2, or 6.2 to 7.1), migrate the cluster version to the new major version after the update has completed. Multiple migrations may be required to reach the cluster version matching the firmware version.

### Update the Clusters Individually

1. Go to **CONFIGURATION > Configuration Tree > Multi-Range > your range > your cluster**.
2. Right-click the cluster and select **Lock**.
3. Right-click the cluster and select **Migrate Cluster**.



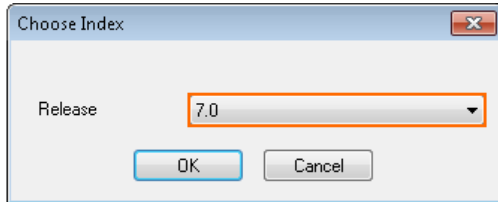
4. Select the new **Release** version.
5. Click **OK**.
6. Click **Activate**.

### Update All Clusters in a Range

If all clusters in the range are on the same firmware version, you can migrate all clusters simultaneously.

1. Go to **CONFIGURATION > Configuration Tree > Multi-Range > your range**.
2. Right-click the range and select **Lock**.
3. Right-click the range and select **Migrate Range**.

4. Select the new **Release** version.
5. Click **OK**.



6. Click **Activate**.

Migrating the cluster version may have to be done multiple times if the firmware update skipped major firmware versions. E.g., when updating from 6.0 to 7.0.

## Troubleshooting / Logs

After the update process, review the **Box\Release\update** or **Box\Release\update\_hotfix** log for each system to verify that it was successfully updated. To view a system log, you must connect directly to the firewall and go to the **Logs** tab.



## Figures

1. fw\_update00.png
2. activate\_ha\_automatic\_failover\_00.png
3. cc\_update\_element\_01.png
4. cc\_update\_element\_02.png
5. cc\_update\_element\_03.png
6. fwupdate\_groups\_01.png
7. fwupdate\_groups\_02.png
8. fwupdate\_groups\_03.png
9. fwupdate\_groups\_04.png
10. HA\_firewalls\_selected\_for\_update.png
11. managed\_updates\_02.png
12. managed\_updates\_03.png
13. managed\_updates\_04.png
14. managed\_updates\_05.png
15. managed\_updates\_06.png
16. managed\_updates\_04.png
17. managed\_updates\_05.png
18. managed\_updates\_06.png
19. managed\_updates\_07.png
20. managed\_updates\_08.png

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