

# Application Note



## Updating the BIOS on a blade

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## 1 Overview

This application note describes how to install updated Amulet Hotkey BIOS on a Dell M-Series blade server or an Amulet Hotkey DXM blade workstation. Specifically, this application note describes the following BIOS update paths:

- **Dell-to-Amulet Hotkey:** This update replaces the Dell BIOS with a new Amulet Hotkey BIOS, thereby converting the Dell blade server to an Amulet Hotkey DXM blade workstation.
- **Amulet Hotkey-to-Amulet Hotkey:** This update replaces the old Amulet Hotkey BIOS on a DXM blade with a new Amulet Hotkey BIOS
- **Amulet Hotkey-to-Dell:** This update reverts the BIOS on an Amulet Hotkey DXM blade to a Dell BIOS, effectively reverting the blade to a Dell blade server.

## 2 Update methods

Two update methods are supported:

- **‘Windows method’ - DUP updates on Windows systems**

Amulet Hotkey BIOS updates are available as Dell Update Packages (DUPs). A DUP is a self-contained executable in a standard package format that updates a single software element on the system. To update the BIOS from a DUP, you simply copy the DUP to a folder on the blade or to a suitable network location. You then run the DUP installation.

The DUP method is suitable for the following BIOS update paths:

Update path	Suitable?
Dell BIOS-to-Amulet Hotkey BIOS	✓
Amulet Hotkey BIOS-to-Amulet Hotkey BIOS	✓
Amulet Hotkey BIOS-to-Dell BIOS	✗

- **‘DOS method’ – DOS updates from a bootable USB drive**

This method is suitable for blades running any operating system. First, you copy the new BIOS to a bootable USB flash drive containing the new BIOS. Then you reboot the blade from the USB flash drive and manually install the new BIOS.

The DOS method is suitable for all BIOS update paths:

Update path	Suitable?
Dell BIOS-to-Amulet Hotkey BIOS	✓
Amulet Hotkey BIOS-to-Amulet Hotkey BIOS	✓
Amulet Hotkey BIOS-to-Dell BIOS*	✓

\* This is an indirect update path via an Amulet Hotkey ‘SP’ BIOS; see [section 5.4](#).

For both methods, you must first obtain the new BIOS update package; see [section 3](#).

### 3 Obtain the new BIOS update package

Follow these steps:

1. Obtain the BIOS update package from Amulet Hotkey. Note the filename format:  
Filename format: Amulet-< blade>-<Dell BIOS>-<AHK BIOS>.zip  
For example: [Amulet-M620-020106-010003.zip](#)
2. Unzip the package contents to a local folder on a convenient PC. The PC that you choose is your *build computer*.  
**Note:** Do *not* choose the blade workstation as your build computer.
3. Verify the contents of the local folder. An unzipped BIOS update package typically contains the following executables:
  - **32-bit and 64-bit DUP executables:** Required for BIOS updates using the Windows method.  
For example:  
[Amulet\\_M620\\_BIOS\\_WN64\\_2.1.6\\_1.0.3.exe](#)
  - **DOS executable:** Required for BIOS updates from a bootable USB drive using the DOS method.  
For example:  
[Amulet-M620-020106-010003.exe](#)
  - **DOS executable, SP version:** Required when reverting an Amulet Hotkey BIOS to a Dell BIOS using the DOS method. For example:  
[Amulet-M620-020019-010003-SP.exe](#)

The next step depends on your chosen BIOS update method:

- If using the Windows method, go to [section 4](#).
- If using the DOS method, go to [section 5](#).

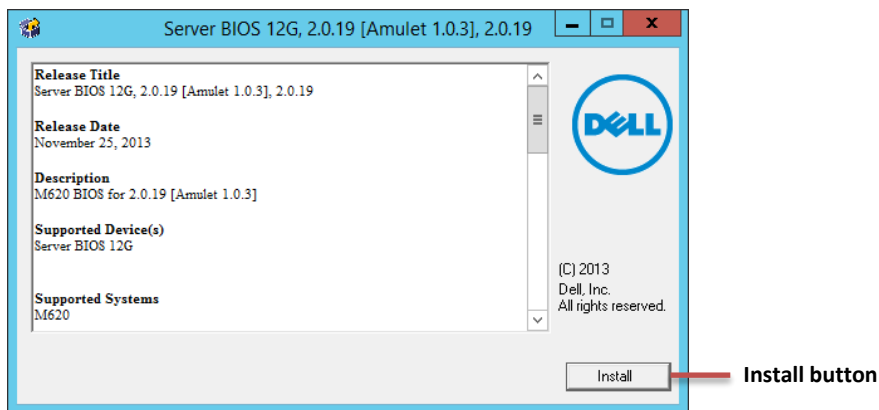
## 4 BIOS updates from DUP executable ('Windows method')

This method is suitable for *Dell-to-Amulet Hotkey* and *Amulet Hotkey-to-Amulet Hotkey* BIOS updates.

Do **not** use this method for *Amulet Hotkey-to-Dell* BIOS updates.

1. Browse to the folder on your build computer that contains the unzipped BIOS package.
2. Identify the DUP executable (see step 3 in [section 3](#)). For example:  
[Amulet\\_M620\\_BIOS\\_WN64\\_2.1.6\\_1.0.3.exe](#)
3. Copy the DUP executable to a folder on the target blade or to a suitable network location.
4. Run the DUP executable.

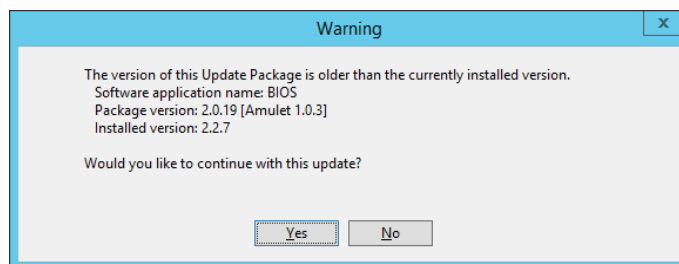
The DUP window launches and displays details about the BIOS included in the DUP.



*DUP window*

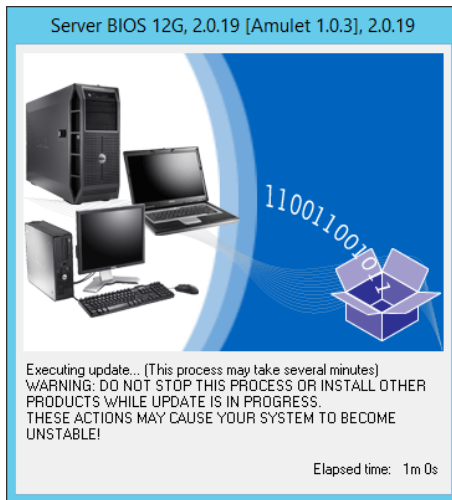
5. Click the Install button to install the new BIOS.

**Note:** For Dell-to-Amulet Hotkey BIOS updates, you may see a warning that the Amulet Hotkey BIOS in the DUP is older than the Dell BIOS currently installed on the blade. Click Yes to continue the update.



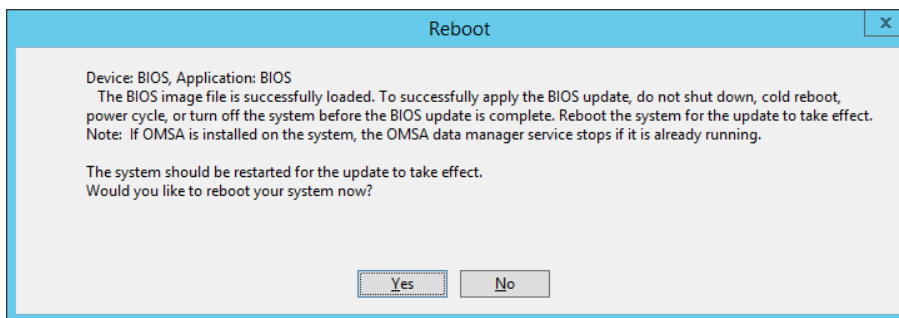
*DUP version warning*

6. Wait while the update executes. This may take several minutes.



*DUP progress window*

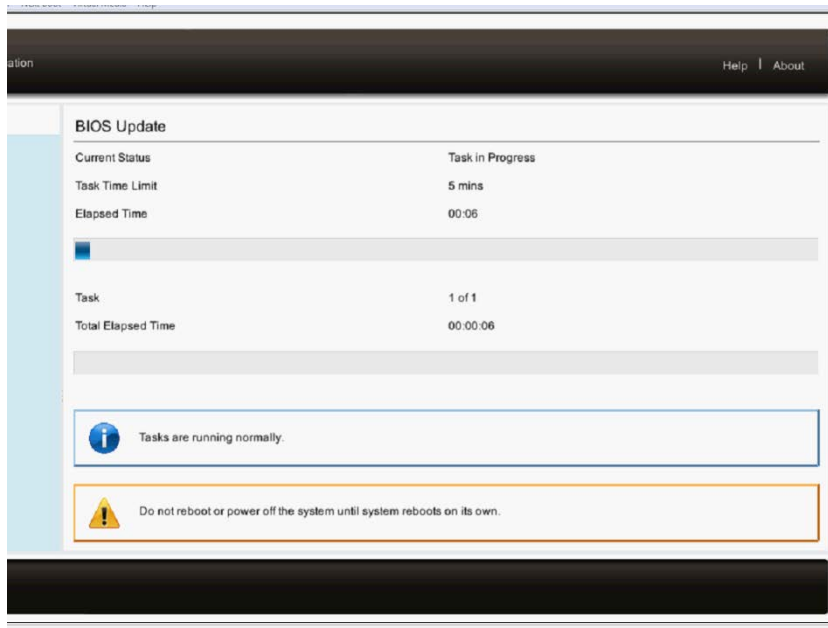
7. When the BIOS image has been successfully loaded onto the blade from the DUP, the DUP installer prompts you to reboot the blade to apply the BIOS update. Click Yes to reboot the system.



*DUP reboot notification*

- When the blade restarts, the Dell Lifecycle Controller starts up and displays the BIOS Update screen. Wait while the BIOS update is in progress.

(The Dell Lifecycle Controller provides embedded systems management on the blade.)



*Lifecycle Controller: BIOS Update screen*

- When the BIOS update is complete, the blade restarts automatically and the Amulet Hotkey Boot Options screen shows the new BIOS version. Confirm that the new BIOS version is correct:



*Amulet Hotkey Boot Options screen*

## 5 Command line BIOS updates ('DOS method')

### 5.1 Rename and copy the BIOS file to the USB flash drive

If you intend to use the DOS method to update the BIOS, you must now rename the BIOS executable to 8.3 format and copy it to the USB flash drive.

Follow these steps:

1. Browse to the folder on your build computer that contains the unzipped BIOS package.
2. Locate the *DOS executable* (see step 3 in [section 3](#)).
3. Rename the DOS executable. Use 8.3 format for the new filename. For example:  
[Amulet-M620-020106-010003.exe](#) → [M620103.exe](#)  
[Amulet-M620-020019-010003-SP.exe](#) → [M620103S.exe](#)
4. Copy the renamed BIOS executable to the root folder of the USB flash drive.

You can now reboot the blade from this USB flash drive to install the new BIOS. For:

- *Dell-to-Amulet Hotkey* BIOS updates, see [section 5.2](#).
- *Amulet Hotkey-to-Amulet Hotkey* BIOS updates, see [section 5.3](#).
- *Amulet Hotkey-to-Dell* BIOS updates, see [section 5.4](#).

### 5.2 Dell-to-Amulet Hotkey BIOS updates

**Important!** You must plug the USB flash drive into the *blade* when you reboot. Do not reboot the blade with USB flash drive plugged into a *zero client*.

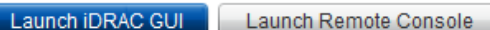
You must use the Dell iDRAC application to run these BIOS updates. First, you launch the iDRAC for your chosen blade. Then you use the BIOS Boot Manager to replace the BIOS.

#### 5.2.1 Launch the iDRAC

Follow these steps:

1. Go to the Dell M1000e chassis hosting the Dell blade server.
2. Using the chassis LCD control panel, check the IP address of the Chassis Management Console (CMC). For example, browse to:  
Enclosure > IP Summary > CMC IPv4 Address
3. Plug the bootable USB flash drive into the blade.
4. Restart the blade.
5. From a convenient computer, browse to the IP address of the CMC.
6. Log in to the CMC.
7. In the left-hand panel of the CMC, select the slot containing the blade that you want to update.  
For example, choose Chassis Overview > Server Overview > Slot <n>.

- In the CMC Server Status screen, click the Launch iDRAC GUI button:



This launches the Dell Integrated Dell Remote Access Controller (iDRAC).

- In the iDRAC main screen, go to the Virtual Console Preview pane and click Launch.

This launches a virtual console that shows the screen output for the Dell blade.

- When the virtual console starts, it displays the Dell Boot Options screen:

Immediately press F11 to launch the BIOS Boot Manager.



*Dell Boot Options screen*

### 5.2.2 Use the BIOS Boot Manager to replace the BIOS

Follow these steps:

- When the DELL Boot Manager screen appears, use the keyboard to select **BIOS Boot Menu**.

The blade now scans for attached devices.

- Now select the USB flash drive. From the listed menu options:

- Choose Hard drive C.
- Choose USB DISK.

**Note:** If you renamed your USB flash drive, this name is *not* included in the 'USB DISK' menu item.

- At the resulting DOS prompt, run the renamed BIOS executable (see [section 5.1](#) step 3).

For example:

```
C: \>M620103
```

- When the Flash BIOS Update Program launches:

- The program verifies the system configuration. It then prompts you to press any key to continue.
- The program prompts you to confirm that you want to replace the existing BIOS For example:  
About to replace Dell System PowerEdge M620 BIOS  
Press Y to replace "2.1.6" BIOS  
with "2.1.6 [Amulet 1.0.31]" BIOS
- Wait while the BIOS is updated. When the update is complete, the program prompts you:  
Done! – press any key to reboot



- d. Restart the blade.
- e. When the blade restarts, the Amulet Hotkey Boot Options screen shows the new BIOS version. Confirm that the new BIOS version is correct:



Amulet Hotkey Boot Options screen

### 5.3 Amulet Hotkey-to-Amulet Hotkey BIOS updates

**Important!** You must plug the USB flash drive into the *blade* when you reboot. Do not reboot the blade with USB flash drive plugged into a *zero client*.

Follow these steps:

1. Establish a PCoIP session between the DXM blade and a zero client.
  2. Plug the bootable USB flash drive into the *blade*.
- Note:** For faster update times, we recommend that you plug the USB flash drive directly into the blade, not into the zero client.
3. Restart the blade.
  4. When the blade restarts, the Amulet Hotkey Boot Options screen briefly displays.

Immediately press F11 to launch the BIOS Boot Manager.



Amulet Hotkey Boot Options screen

5. When the BIOS Boot Manager screen appears, use the keyboard to select **BIOS Boot Menu**.  
The blade now scans for attached devices.
6. Now select the USB flash drive. From the listed menu options:
  - a. Choose Hard drive C.
  - b. Choose USB DISK.

**Note:** If you renamed your USB flash drive, this name is *not* included in the 'USB DISK' menu item.
5. At the resulting DOS prompt, run the renamed BIOS executable (see step 3 in [section 5.1](#)).  
For example:  
C: \>M620103
7. When the Flash BIOS Update Program launches:
  - a. The program verifies the system configuration. It then prompts you to press any key to continue.
  - b. The program prompts you to confirm that you want to replace the existing BIOS For example:  
About to replace Dell System PowerEdge M620 BIOS  
Press Y to replace "2.1.6 [Amulet 1.0.20]" BIOS  
with "2.1.6 [Amulet 1.0.31]" BIOS
  - c. Wait while the BIOS is updated. When the update is complete, the program prompts you:  
Done! – press any key to reboot
  - d. Restart the blade.
  - e. When the blade restarts, the Amulet Hotkey Boot Options screen shows the new BIOS version.  
Confirm that the new BIOS version is correct:



BIOS version details

Amulet Hotkey Boot Options screen

## 5.4 Amulet Hotkey-to-Dell BIOS updates

This BIOS update effectively reverts the Amulet Hotkey DXM blade to a Dell blade server. The update is a two-step process:

1. First, replace the existing Amulet Hotkey BIOS with an Amulet Hotkey 'SP' BIOS:
  - a. Identify the SP executable in the BIOS update package from Amulet Hotkey. See step 3 in [section 3](#).
  - b. Rename and copy the Amulet Hotkey SP BIOS executable to your USB flash drive. See [section 5.1](#).
  - c. Follow the Amulet Hotkey-to-Amulet Hotkey BIOS update procedure described in [section 5.3](#).
2. Second, replace the Amulet Hotkey SP BIOS with the required Dell BIOS.
  - a. Contact Amulet Hotkey for the Dell BIOS. See [section 3](#).  
Dell BIOS executables use a filename format such as M620-020019C.exe.
  - b. Copy and rename the Dell executable to your USB flash drive. See [section 5.1](#).  
Use 8.3 format for the new filename. For example:  
[M620-020019C.exe](#) → [6200019C.exe](#)
  - c. Follow and adapt the Dell-to-Amulet Hotkey BIOS update procedure in [section 5.2](#):
    - In [section 5.2.1](#) step 10, when the virtual console starts it displays the *Amulet Hotkey Boot Options* screen.
    - In [section 5.2.2](#) step 4, run the *Dell BIOS executable* at the resulting DOS prompt.  
For example:  
C: \>6200019C

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