



Addendum to the Problem Determination and Service Guide for WebSphere DataPower Integration Blade XI50B

This addendum provides detailed instructions for replacing the USB flash key and the system board in a WebSphere DataPower XI50B Type 4195 appliance. Keep this documentation with your other server documentation.

Notes:

1. For information about the WebSphere DataPower XI50B Type 4195 appliance, go to <http://www.ibm.com/supportportal>.
2. If the IBM WebSphere DataPower Integration Blade XI50B is purchased through Passport Advantage, the machine type is Type 2426-4BX. This document applies to Type 4195-4BX and to Type 2426-4BX appliances until otherwise indicated in new editions.

Before you begin

Before you begin, read the following information:

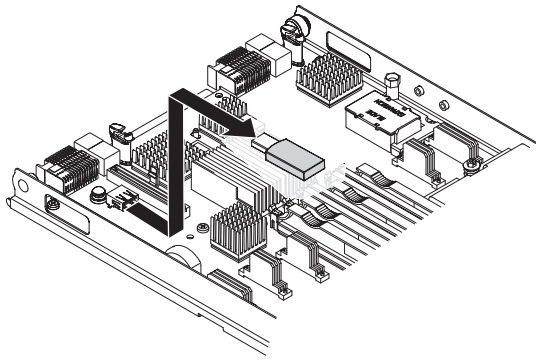
- When you replace the USB flash key or system board, all data stored in the existing USB flash key will be erased. To prevent data lost, you must perform a complete backup of the system data or export the data to another computer. This allows you to restore the data to the replacement USB flash key.
- Some action steps require that the blade appliance be turned on. Do not manually restart the blade appliance unless you are instructed to do so. If you suspect there is a high risk of power failure (for example, due to a thunderstorm), do not proceed with the procedure provided in this document.
- After you have installed the new USB flash key in the blade appliance, you must return the old USB flash key to IBM. You may reformat the USB flash key to erase any sensitive data as required by your local policy. Make sure you follow all packaging instructions and use any packaging materials for shipping that are supplied to you.
- If the blade appliance includes a licensed feature (such as TAM, TIBCO, or Database Connectivity), contact IBM customer support to obtain a special .script2 image that allows you to re-enable the licensed feature after you have replaced the USB flash key or system board.

Replacing the USB flash key

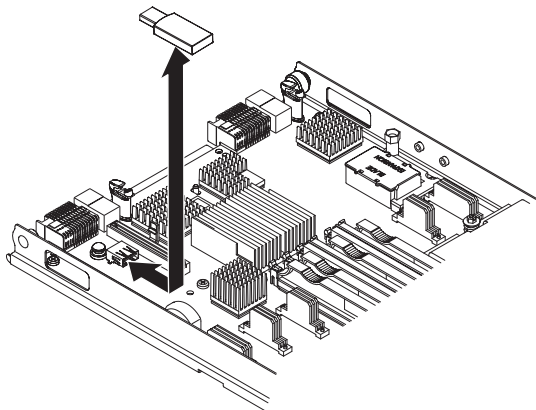
To replace the USB flash key, complete the following steps:

Attention: This procedure must be performed by a trained service technician.

1. See the blade appliance *Installation and User's Guide* for installation guidelines and additional safety information.
2. Turn off the blade appliance (see the *Installation and User's Guide* that came with the blade appliance for instructions).
3. Remove the blade appliance from the BladeCenter[®] unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
4. Remove the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
5. Using your fingers, pull the USB Flash key out of the connector.



6. Orient the connector on the USB Flash key with the USB connector on the blade server; then, use your fingers to push the USB Flash key into the USB connector on the system board.



7. Install the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
8. Install the blade appliance in the BladeCenter unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
9. Use the AMM remote console or KVM switch to establish a video console connection to the blade appliance.

Note: Make sure that the blade appliance does not have ownership of the media tray in the BladeCenter unit and that the AMM is not presenting any simulated USB disk drives to it.

10. After the AMM has recognized the blade appliance, press the power button to turn on the blade appliance.

Attention: Do not turn off the blade appliance unless you are instructed to do so.

11. The system automatically updates the firmware (Broadcom Ethernet, SAS RAID, uEFI, and IMM) on the blade appliance. This update process may take up to 30 minutes. Wait until the update process is complete. During this process, the blade appliance will restart multiple times, KVM connectivity may be lost, and the screen may blank out due to inactivity (you may press [Enter] to refresh it).

Before the DataPower login screen displays, you may see the following messages on the screen. These messages do not represent an actual error and you can ignore these messages.

```

DATAPOWER: Starting tcscd.
DATAPOWER: Unlocking encrypted flash from primary key
Command Tspi_NC_ReadValue failed:
TSS_RESULT 0x00000002
layer tpm, code 2, bad memory index
DATAPOWER: Unlocking encrypted flash from secondary key
Unable to create /etc/dpinfo.xml

DATAPOWER: Created TPM key
Command failed: Key 1 not active. Can't wipe.

DATAPOWER: Mounted encyrpted flash filesystem
Error parsing configuration file: /flash2/primary/boot/dpos-boot.xml Failed to open source file

```

12. Wait until the DataPower login screen displays.

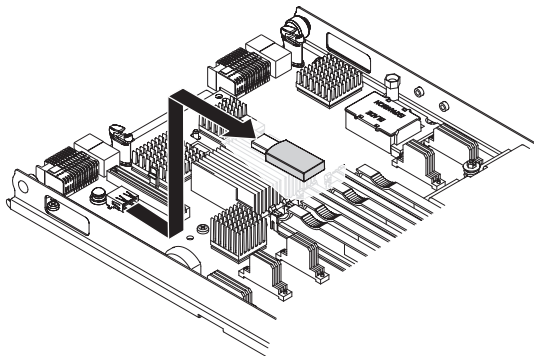
After completing this procedure, you can continue to configure initial settings and install the latest firmware image on your blade appliance (see “Initial configuration and firmware image installation” on page 6 for more information).

Replacing the system board

To replace the system board, complete the following steps:

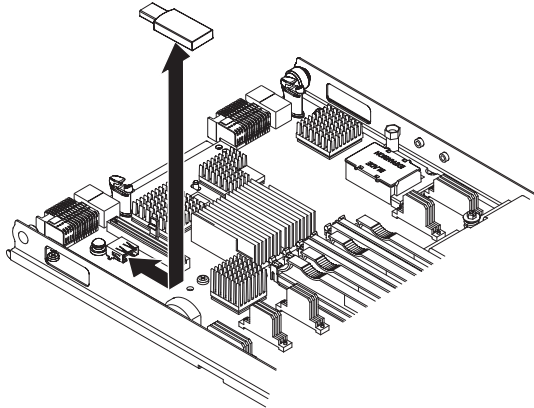
Attention: This procedure must be performed by a trained service technician.

1. See the blade appliance *Installation and User's Guide* for installation guidelines and additional safety information.
2. Turn off the blade appliance (see the *Installation and User's Guide* that came with the blade appliance for instructions).
3. Remove the blade appliance from the BladeCenter unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
4. Remove the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
5. Using your fingers, pull the USB Flash key out of the connector.

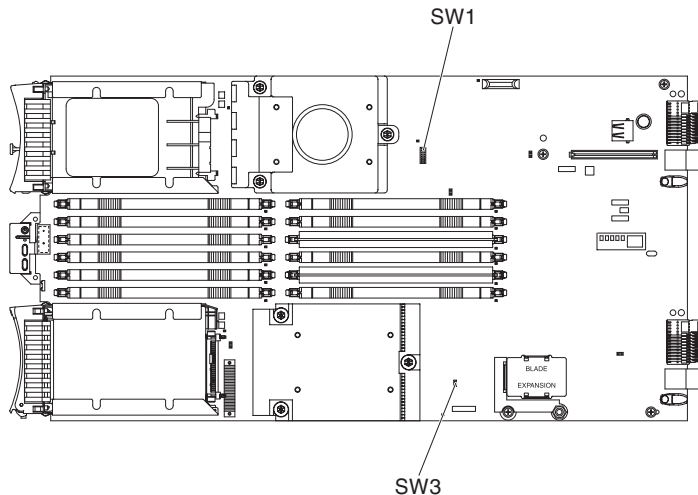


6. Remove the following components from the old system board and install them on the new system board (see the documentation that came with the blade appliance for instructions):
 - Microprocessors
 - Heat sinks
 - Memory modules
7. Attach the IBM Repair Identification (RID) tag to the new system board.
8. Remove GigaRAID cover from the new system board.

9. Orient the connector on the USB Flash key with the USB connector on the blade server; then, use your fingers to push the USB Flash key into the USB connector on the new system board.



10. Locate the SW1 switch block on the system board and set the SW1-2 switch to the on position to enable Trusted Platform Module (TPM) physical presence detection.



11. Install the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
12. Install the blade appliance in the BladeCenter unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
13. Use the AMM remote console or KVM switch to establish a video console connection to the blade appliance.

Note: Make sure the blade appliance does not have ownership of the media tray in the BladeCenter unit and that the AMM is not presenting any simulated USB disk drives to it.

14. After the AMM detects the blade appliance, press the power button to turn on the blade appliance.
15. Run the DSA Preboot (pDSA) diagnostic program from a bootable media you created using the IBM ToolsCenter Bootable Media Creator (BoMC). The following message displays:

WARNING, your Trusted Platform Module's (TPM) physical presence is asserted.
Please disable this to remove potential security vulnerabilities.

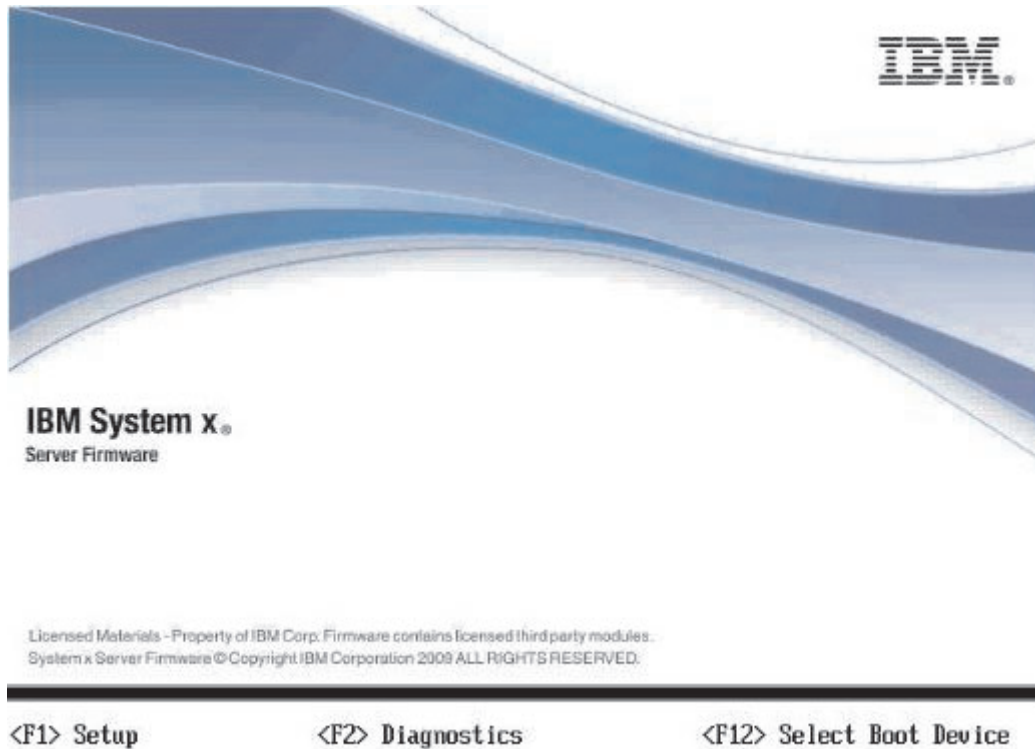
16. Remove the pDSA bootable media; then, disconnect the blade appliance from the media tray.
17. Restart the blade appliance.

Attention: Do not turn off the blade appliance unless you are instructed to do so.

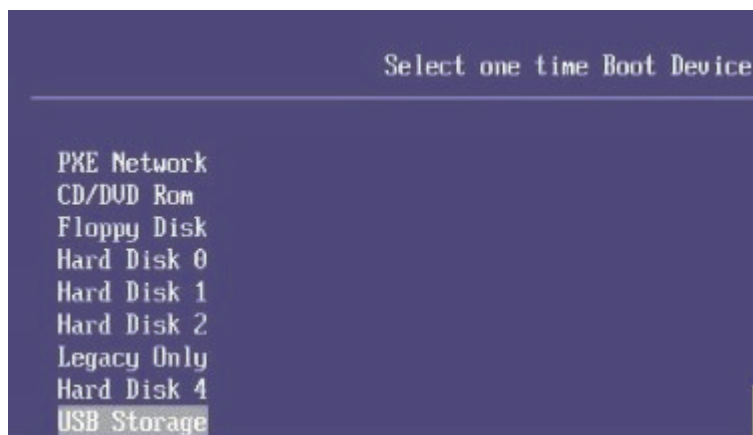
The following message displays:

WARNING, your Trusted Platform Module's (TPM) physical presence is asserted.
Please disable this to remove potential security vulnerabilities.

18. When the prompt <F12> Select Boot Device is displayed, press F12.



19. Select **USB Storage** and press [Enter].



20. When prompted to enter the system serial number, type the serial number of your blade appliance. You can find the serial number on the Repair Identification (RID) tag you attached to the new system board. The serial number has seven alphanumeric characters.
21. The system automatically updates the firmware (Broadcom Ethernet, SAS RAID, uEFI, and IMM) on the blade appliance. This update process may take up to 30 minutes. Wait until the update process is complete. During this process, the blade appliance will restart multiple times, KVM connectivity may be lost, and the screen may blank out due to inactivity (you may press [Enter] to refresh it).

Before the DataPower login screen displays, you may see the following messages on the screen. These messages do not represent an actual error and you can ignore these messages.

```
DATAPOWER: Starting tcscd.  
DATAPOWER: Unlocking encrypted flash from primary key  
Command Tspi_NC_ReadValue failed:  
TSS_RESULT 0x00000002  
layer tpm, code 2, bad memory index  
DATAPOWER: Unlocking encrypted flash from secondary key  
Unable to create /etc/dpinfo.xml  
  
DATAPOWER: Created TPM key  
Command failed: Key 1 not active. Can't wipe.  
  
DATAPOWER: Mounted encrytpyed flash filesystem  
Error parsing configuration file: /flash2/primary/boot/dpos-boot.xml Failed to open source file
```

22. When the DataPower login screen displays, check the firmware version of the blade appliance in the AMM (select **Monitors > Firmware VPD**). You should see the following firmware version information on the screen. After subsequent firmware updates, this information changes.

```
FW/BIOS FSE147A 05/28/2010 1.00  
Diagnostics DSYT70P 05/25/2010 3.10  
Blade Sys Mgmt Processor YU0072F 1.13
```

23. If the firmware version does not match the information as shown above, obtain a new USB flash key and update the firmware again (see “Replacing the USB flash key” on page 1 for more information).
24. Turn off the blade appliance (see the *Installation and User's Guide* that came with the blade appliance for instructions).
25. Disable Trusted Platform Module (TPM) physical presence detection:
- Remove the blade appliance from the BladeCenter unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
 - Remove the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
 - Locate the SW1 switch block on the system board and set the SW1-2 switch to the off position.
 - Install the expansion unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
 - Install the blade appliance in the BladeCenter unit (see the *Installation and User's Guide* that came with the blade appliance for instructions).
26. Turn on the blade appliance and wait until the DataPower login screen displays.

After completing this procedure, you can continue to configure initial settings and install the latest firmware image on your blade appliance (see “Initial configuration and firmware image installation” for more information).

Initial configuration and firmware image installation

To configure the blade appliance for the initial setup and firmware image installation, complete the following steps:

- At the DataPower login screen, type "admin" for the username and password, and press [Enter] to log on to the blade appliance.
- Follow the on-screen prompt to configure the network, SSH, and web interface settings on the blade appliance.
- Obtain the same firmware image the blade appliance was using before it was serviced. You need to use the same firmware level if you use secure backup on the blade appliance. You can download the firmware image from the IBM Fix Central website at <http://www.ibm.com/support/docview.wss?rs=2362&uid=swg27015333>.

Note: If you use a licensed feature on the blade appliance, contact IBM customer support to obtain a customized firmware image to be installed first on your blade appliance.

4. Use one of the following methods to load the firmware image on the blade appliance:
 - Configure a network interface to connect to a server where the firmware image is located (you will need to obtain the firmware image from the IBM Fix Central website and store the image file on the server). Access the CLI and use the config-mode copy command to copy the firmware image file to the **image:** folder.
 - Configure the web interface and use the web interface to load the firmware image.

Note: Do not use the web interface to install the firmware image.

5. If you have a customized firmware image, use the `top; config; flash; boot image <special build image name>` command in CLI to install the customized firmware image first.
6. Install the firmware image on the blade appliance. In CLI, use the `top; config; flash; boot reflash <image name>` command. The boot reflash command resets the settings (such as the password and the initial configuration) on the blade appliance.
7. After the blade appliance restarts, the login screen displays. Type "admin" for the username and password, and press [Enter] to log on to the blade appliance. Configure the blade appliance as you would a new blade appliance (see Step 2 on page 6).
8. If you have performed a secure backup copy of the blade appliance, import the backup image into the blade appliance.
9. Create a new administrator account. The following shows an example where a new administrator account "adminTWO" is created.

```
xi50b(config)# user adminTWO
New User configuration
xi50b(config user adminTWO)# reset
xi50b(config user adminTWO)# password
Enter new password: *****
Re-enter new password: *****
xi50b(config user adminTWO)# access-level privileged
xi50b(config user adminTWO)# exit
xi50b(config)write mem
```

Note: Make sure you use a different account name. Do not use "adminTWO" for the new administrator account on your blade appliance.

10. Use the `top; show time` command to check the system date and time. If the system date and time is incorrect, use the `top; clock` command to configure the settings and restart the blade appliance.
11. Use the `"top; config; service battery-installed` command to have the system log the time the battery was changed. This information allows you to determine the time for battery replacement.

After you have completed the steps described above, you can continue to configure your blade appliance or restore backup information.

Notes:

1. If your blade appliance is using a firmware image level between 3.8.2.0 and 3.8.2.2, consider upgrading to firmware level 3.8.2.3, which includes mandatory fixes, or a newer level.
2. If you are planning to install a *dco* image, you must install the *odbc* image first before you install the *dco* image.

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This edition applies to Type 4195-4BX and to Type 2426-4BX appliances until otherwise indicated in new editions.

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