System x3850 X6 and x3950 X6 IBM to Lenovo Upgrade Installation Guide

Machine Type: 6241

Note

Before using this information and the product it supports, read the general information in and the *Safety Information*, and *Environmental Notices and User's Guide*, and the *Warranty* document that comes with the server.

Contents

Chapter 1. IBM to Lenovo server upgrade procedure

This topic describes how to perform the IBM to Lenovo (ITL) upgrade of an IBM System x3850 X6 and x3950 X6 Type 3837 server to a Lenovo System x3850 X6 and x3950 X6 Type 6241 server.

Installing an IBM to Lenovo (ITL) upgrade kit in an IBM System x3850 X6 and x3950 X6 Type 3837 server upgrades it to a Lenovo System x3850 X6 and x3950 X6 Type 6241 server, allowing the server to receive the latest system updates and improvements from Lenovo.

Attention: Installation of the ITL kit must be performed by a Lenovo-approved service technician.

Upgrade task summary

Several processes need to be completed to perform an IBM to Lenovo server upgrade. Some tasks must be completed to prepare for the upgrade in advance of performing the actual upgrade. Each task is described in detail by the sub-topics following the task summary.

- In advance of performing the ITL upgrade, the customer needs to complete the following tasks:
    - Order the ITL upgrade kit for the server.
    - Verify access to IBM websites.
    - Request transfer of Features on Demand (FoD) keys or new FoD keys.
- When the service technician is ready to perform the ITL upgrade, they will need to complete the following tasks before they begin:
    - Download the latest versions of IBM and Lenovo software tools needed to perform the ITL upgrade.
    - Make sure that the FoD key transfer was completed or that new FoD keys were received.
    - Verify the contents of the ITL upgrade kit.
    - Record the system information needed to upgrade the Lenovo service agreements.
    - Backup the IBM server configuration and vital product data (VPD).
- To perform the ITL upgrade, service technician will complete the following tasks:
    - Replace IBM components with the Lenovo components included in the ITL upgrade kit.
    - Update server firmware to the latest Lenovo version.
    - Restore the server configuration and VPD.
    - Restore the transferred FoD keys or install the new FoD keys.
    - Relabel the server as a Lenovo server.
- After the ITL upgrade is complete, the service technician will verify that the conversion is successful and update the customer records.

Preparing for the upgrade

Before a a service technician can begin upgrading a customer server, the customer must complete the following tasks, in advance:

1. Order the correct ITL kit for the Lenovo x3850 X6 or Lenovo x3950 X6 server.
2. Verify that the customer IDs and passwords are valid for the IBM Support portal (http://www.ibm.com/support/), IBM Fix Central (http://www.ibm.com/support/fixcentral/), and the Features on Demand (FoD) website (https://fod.lenovo.com/lkms). The customer will need to access these IBM websites to download tools and information for their IBM server before the service technician can perform the upgrade.

3. If any Features on Demand (FoD) options or features are being used in the IBM server, the customer must complete the following steps to manually transfer or request new FoD keys for use in the Lenovo server:

   a. Make a list of all the FoD activation keys that are active for the IBM server. Select **Retrieve history** at the Features on Demand website (https://www.ibm.com/systems/x/fod) to view the active keys for the IBM server.

   b. Verify which FoD are installed in the IBM server (see the *IBM Integrated Management Module II User's Guide* at https://www.ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5086346 for information about how to check if FoD keys are installed in the server and instructions about how to import and export the FoD keys).

   c. Request a manual transfer of the FoD activation keys from the original IBM machine type to the new Lenovo machine type, or request new FoD activation keys for use with the new Lenovo machine type. To request a manual transfer or new activation keys, the customer must send an email request to Features on Demand Support at `fod@lenovo.com`. Make sure that this email includes a reference to the ITL kit and provides the following information:

      • The original IBM server serial number.

      • The machine type of the original IBM server (Type 3837).

      • The machine type of the upgraded Lenovo server (Type 6241).

      • A list of the FoD activation keys to transfer or replace, that were gathered in step 3a.

Before you begin

Before the service technician can begin physically upgrading the server, the customer and service technician must complete the following tasks:

1. Download the following software tools and associated documentation. Both IBM and Lenovo tools are needed to backup and restore the server configuration. IBM tools will be used to backup server configuration information in preparation for the ITL upgrade. Lenovo tools will be used to restore server configuration information after the ITL upgrade.

   • IBM Advanced Settings Utility (https://www.ibm.com/support/entry/portal/docdisplay?lndocid=tool-asu)

   • Lenovo Advanced Settings Utility (https://support.lenovo.com/solutions/LNVO-ASU)

   • Lenovo Bootable Media Creator (https://support.lenovo.com/solutions/LNVO-BOMC)

   • Lenovo UpdateXpress (http://www.ibm.com/support/entry/ portal/docdisplay?lndocid=SERV-XPRESS)

2. Verify that the IBM Features on Demand activation keys that were previously requested for transfer or replacement are available to install on the upgraded Lenovo server.

3. Verify the contents of the ITL upgrade kit:

   • The Lenovo x3850 X6 ITL upgrade kit contains:

      – One standard I/O book

      – One 4U-high right EIA bezel with Lenovo logo

      – One service card

      – System information update labels

      – One MAC address label

   • The Lenovo x3950 X6 ITL upgrade kit contains:

      – Two standard I/O books

      – One 8U-high right EIA bezel with Lenovo logo

      – One service card

- System information update labels
- Two MAC address labels

4. Record (take a photograph of the barcode label or write down the barcode number) the 11S serial number for each Lenovo standard I/O book that comes with the ITL kit. This is required to update the customer entitlement and service offering support.

   Note: You will need the server IMM IP address, user name, and password to perform the following step. If you are upgrading a x3950 server, you will need the IP address for both IMMs.

5. Using the *IBM Advanced Settings Utility (ASU)* tool, backup (export) the system configuration, Features on Demand (FoD) keys, and vital product data (VPD) for the IBM server.

   Note: See the *IBM Integrated Management Module II User's Guide* at https://www.ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5086346 and the *IBM Advanced Settings Utility User's Guide* at http://toolscenter.lenovofiles.com/help/topic/asu/asu_guide.pdf for information about how to use these tools and commands.

   • ***Access the IBM ASU tool***

     Access the IBM ASU tool by completing the following steps:

     Note: For an IBM System x3950 X6 8-socket system, the following procedure must be performed twice, once for each of the standard I/O books in the system.

     a. Connect a laptop computer to the IMM management network port of the server.

     b. Configure your laptop operating system network settings to match the IMM network settings.

     c. Open a command prompt and navigate to the directory where the ASU files are installed.

     Note: To run the ASU commands, you must be in the directory where the ASU files are installed.

   • ***Backup system configuration***

     To backup the system configuration of the IBM server to a file, use the `ASU save` *<filename>* command, where *<filename>* is the complete path name of the file where the configuration is to be saved.

   • ***Backup Features on Demand (FoD) keys***

     To backup the Features on Demand (FoD) keys of the IBM server:

     – To export the FoD inventory information for the IBM server, use the `ASU fodcfg reportkey` command.

     – To export the FoD keys for the IBM server, use the `ASU fodcfg exportkey` command.

   • ***Backup vital product data (VPD)***

     Notes:

     – Make sure that you are using the latest version of the IBM ASU tool.

     – For an IBM System x3950 X6 8-socket system, the following procedure must be performed twice, once for each of the standard I/O books in the system.

     To backup the VPD data for the IBM server:

     – To save the VPD information for an IBM System x3850 X6 4–socket system, complete the following steps. Save the files in secure location, as the values they contain will need to be re-entered after installing the new Lenovo standard I/O book.

       a. To save the system VPD information into a file, run the ASU command:

          `asu64 show SYSTEM_PROD_DATA --host` *<IMM IP>* `--user` *<IMM userid>* `--password` *<IMM password>* `>` *<serial>*`_system.txt`

where:

    <IMM IP> is the IMM IP address

    <IMM userid> is the IMM user name

    <IMM password> is the IMM password

    <serial> is the serial number of the standard I/O book (allows each data file to be identified)

b. To save the system component VPD information into a file, run the ASU command:

`asu64 show VPD --host` *<IMM IP>* `--user` *<IMM userid>* `--password` *<IMM password>* ›
<serial>`_component.txt`

where:

    <IMM IP> is the IMM IP address

    <IMM userid> is the IMM user name

    <IMM password> is the IMM password

    <serial> is the serial number of the standard I/O book (allows each data file to be identified)

– To save the VPD information for an IBM System x3950 X6 8–socket system, complete the following procedures. Save the files in secure location, as the values they contain will need to be re-entered after installing the new Lenovo standard I/O books.

  – To save the system VPD information for node 1 of an IBM System x3950 X6 8–socket system, complete the following steps:

    a. To save the system VPD information for node 1 into a file, run the ASU command:

    `asu64 show SYSTEM_PROD_DATA --host` *<IMM IP>* `--user` *<IMM userid>* `--password` *<IMM password>* › *<serial>*`_Node1_system.txt`

    where:

        <IMM IP> is the IMM IP address

        <IMM userid> is the IMM user name

        <IMM password> is the IMM password

        <serial> is the serial number of the standard I/O book (allows each data file to be identified)

    b. To save the system component VPD information for node 1 into a file, run the ASU command:

    `asu64 show VPD --host` *<IMM IP>* `--user` *<IMM userid>* `--password` *<IMM password>* ›
    <serial>`_Node1_component.txt`

    where:

        <IMM IP> is the IMM IP address

        <IMM userid> is the IMM user name

        <IMM password> is the IMM password

        <serial> is the serial number of the standard I/O book (allows each data file to be identified)

  – To save the system VPD information for node 2 of an IBM System x3950 X6 8–socket system, complete the following steps:

    a. To save the system VPD information for node 2 into a file, run the ASU command:

    `asu64 show SYSTEM_PROD_DATA --host` *<IMM IP>* `--user` *<IMM userid>* `--password` *<IMM password>* › *<serial>*`_Node2_system.txt`

where:

<IMM IP> is the IMM IP address

<IMM userid> is the IMM user name

<IMM password> is the IMM password

<serial> is the serial number of the standard I/O book (allows each data file to be identified)

b. To save the system component VPD information for node 2 into a file, run the ASU command:

`asu64 show VPD --host` <IMM IP> `--user` <IMM userid> `--password` <IMM password> `>` <serial>`_Node2_component.txt`

where:

<IMM IP> is the IMM IP address

<IMM userid> is the IMM user name

<IMM password> is the IMM password

<serial> is the serial number of the standard I/O book (allows each data file to be identified)

6. Make sure that the server is operating correctly and that there are no errors messages (see "Error messages" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*). Correct any problems that are indicated, unless they relate to components or firmware being replaced as part of the ITL upgrade.

Perform the ITL upgrade

Attention: Installation of the ITL kit must be performed by a Lenovo-approved service technician.

To upgrade an IBM server to a Lenovo server, the service technician must complete the following steps:

Step 1. Mark and disconnect all cables from the IBM standard I/O books.

Step 2. Replace each IBM standard I/O book, originally installed in the server, with a Lenovo standard I/O book, that comes with the ITL kit (see "Replacing the standard I/O book" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for information and instructions).

Note: The service technician will need to perform this procedure twice when upgrading an IBM x3950 X6 server to a Lenovo x3950 X6 server.

a. Remove the IBM standard I/O book from the shuttle (see "Removing the standard I/O book" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for instructions).

Important: Before opening the release levers to extract the standard I/O book from the system, look for missing or broken tabs on the chassis that the release levers pry against. Missing or broken tabs can make removal of the standard I/O book from the chassis difficult. If tabs are missing or broken, open an online service request at https://www.ibm.com/support/servicerequest/Home.action.

Figure 1. Damaged extraction tab on standard I/O book

b. Transfer components and devices (adapters, fans, USB embedded hypervisor flash device, and flash power modules) from the IBM standard I/O book, originally installed in the server, to the new Lenovo standard I/O book, that comes with the ITL kit (see "Replacing the standard I/O book" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for instructions).

Important:

- When installing the standard I/O book in the system, look for missing or broken tabs on the chassis that the release levers pry against. Missing or broken tabs can make installation of the standard I/O book in the chassis difficult. If tabs are missing or broken, open an online service request at https://www.ibm.com/support/servicerequest/Home.action.
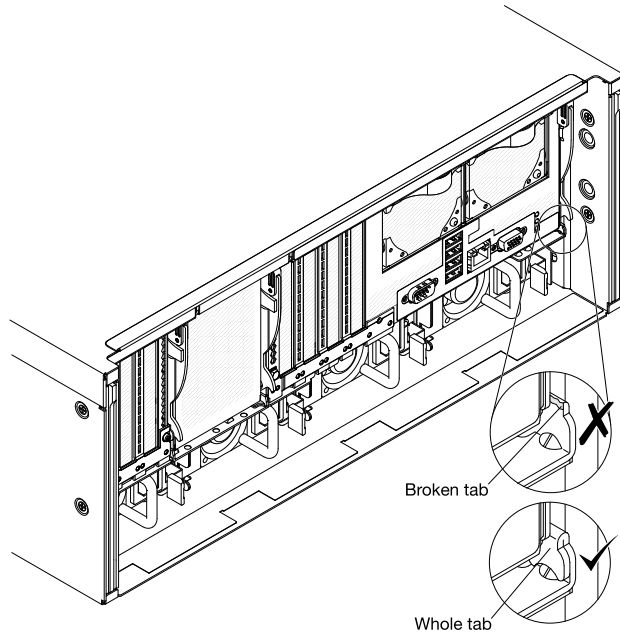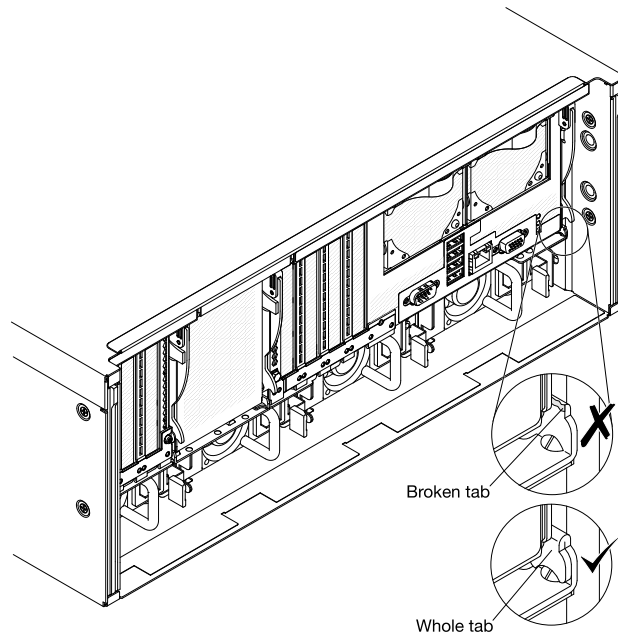
Figure 2. Damaged extraction tab on standard I/O book

- Check for the white bracket (stuck to mechanical wall under the air baffle). If it is present, remove it.
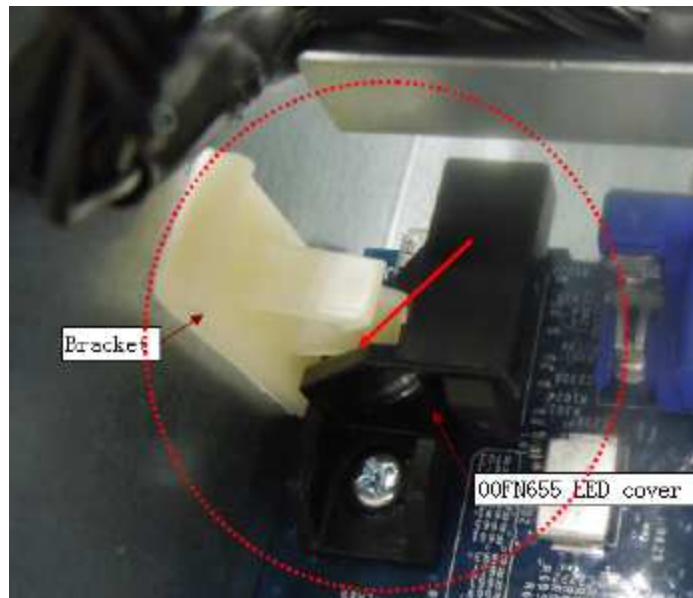
- Make sure that the standard I/O book air baffle is fully seated, as shown in the following illustration, before installing the standard I/O book in the chassis. You might need to adjust placement of the fan cables to fully seat the air baffle.
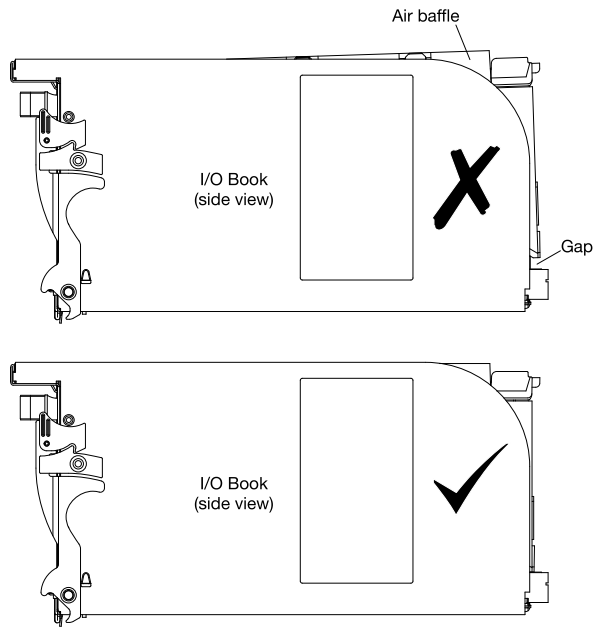
Figure 3. Air baffle position for standard I/O book

Step 3.   Install the Lenovo standard I/O book in the system (see "Replacing the standard I/O book" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for instructions).

Notes:

- Make sure that all of the feet (mounted on bottom side standard I/O book) engage the slots in the mechanical assembly.

- Check the fan cable of the standard I/O book and make sure that it is properly seated in the channel slot.

Step 4. Make sure that the Lenovo firmware is updated to the latest level (see "Updating the firmware" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for information).

Step 5. Make sure that the UUID and DMI/SMBIOS data is updated (see "Updating the Universal Unique Identifier and DMI/SMBIOS data" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* for information).
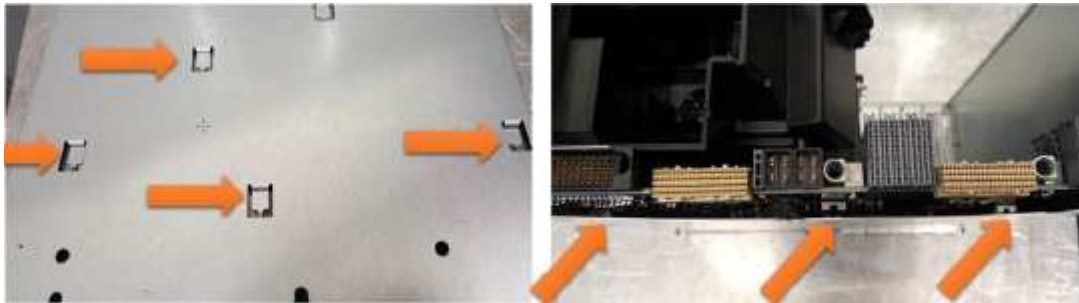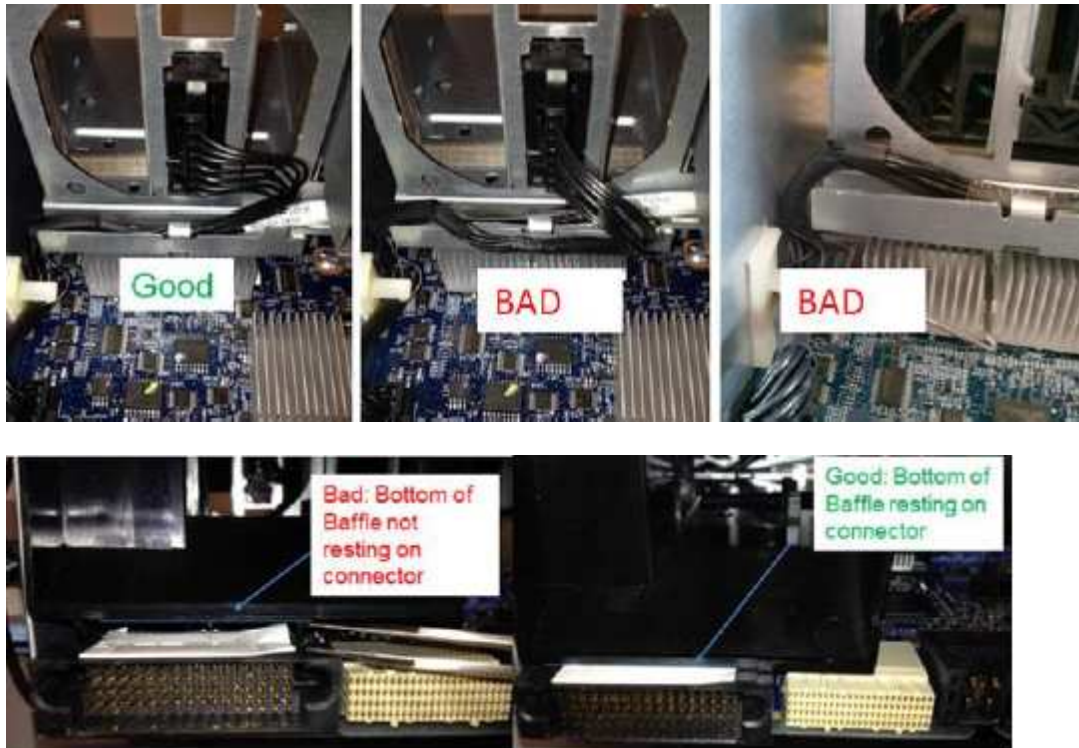
Step 6. Using the *Lenovo Advanced Settings Utility (ASU)* tool, restore the system configuration, vital product data (VPD), and Features on Demand (FoD) keys to the upgraded Lenovo server.

Note: See the Lenovo Integrated Management Module II InfoCenter at http://systemx.lenovofiles.com/help/topic/com.lenovo.sysx.imm2.doc/product_page.html and the Lenovo Advanced Settings Utility InfoCenter at http://toolscenter.lenovofiles.com/help/topic/asu_lenovo/asu_main.html for information about how to use these tools.

- ***Access the Lenovo ASU tool***

  Access the Lenovo ASU tool by completing the following steps:

  Note: For a Lenovo System x3950 X6 8-socket system, the following procedure must be performed twice, once for each of the standard I/O books in the system.

  1. Connect a laptop computer to the IMM management network port of the server.
  2. Configure your laptop operating system network settings to match the IMM network settings.
  3. Open a command prompt and navigate to the directory where the ASU files are installed.

  Note: To run the ASU commands, you must be in the directory where the ASU files are installed.

- ***Restore system configuration***

To restore the saved system configuration to the Lenovo server:

1. Restore the saved system configuration using the `ASU restore <filename>` command, where *<filename>* is the complete path name of the file where the configuration was saved.

2. Restore the original IMM IP address, user name, and password. If upgrading an x3950 server, you will need to restore this information for both IMMs.

- **Restore Features on Demand (FoD) keys**

  Import the transferred or newly purchased FoD keys to the upgraded Lenovo server using the `ASU fodcfg installkey` command.

- **Restore vital product data (VPD)**

  Notes:

  – Make sure that you are using the latest version of the Lenovo ASU.

  – Make copies of the original VPD files captured from the IBM server before you begin making modifications. If you make any mistakes when creating the batch files for restoring VPD to the Lenovo server, these copies will allow you to start over.

  – For a Lenovo System x3950 X6 8-socket system, the following procedure must be performed twice, once for each of the standard I/O books in the system.

  To modify and restore the saved IBM vital product data (VPD) to the Lenovo server, create and run batch files using the Lenovo Advanced Settings Utility (ASU) as described in the following tasks.

  Create a VPD upgrade batch file

  The batch files for Lenovo System x3850 X6 4-socket and Lenovo System x3950 X6 8-socket systems are different.

  – To create a VPD batch file for a Lenovo System x3850 X6 4-socket system:

    1. Open a new *<serial>*`_system.bat` file (where *<serial>* is the serial number of the standard I/O book, allowing each batch file to be identified). This file will be edited to create a VPD update batch file.

    2. Complete the following steps to add commands to the *<serial>*`_system.bat` file:

       a. Open the *<serial>*`_system.txt` file (where *<serial>* is the serial number of the standard I/O book). This file was saved from the IBM System x3850 X6 4-socket system during the Backup vital product data (VPD) procedure.

       b. Locate the IBM server machine type and model string in the *<serial>*`_system.txt` file. This string has the following format:

          `SYSTEM_PROD_DATA.SysInfoProdName=`*<IBM_machine_type_model>*

          where: *<IBM_machine_type_model>* is a 7–character field that combines the 4–character machine type and the 3–character model number.

       c. Change the IBM server machine type to the Lenovo server machine type by replacing the IBM server 4-character machine type, 3837, with the Lenovo server 4-character machine type, 6241. The 3-character model number remains unchanged between the IBM and Lenovo servers.

          For example, if the original IBM server machine type and model number was **3837**FT4, the new Lenovo server machine type and model number would be **6241**FT4.

       d. Add a command line to the batch file for the Lenovo server machine type and model created in the previous step. (this model number varies based on the original IBM server model number), following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoProdName <Lenovo_machine_type_model>
--host <IMM_IP> --user <IMM_userid> --password <IMM_password>
```

where:

- *<Lenovo_machine_type_model>* is a 7–character field that combines the new Lenovo 4–character machine type and the original IBM 3–character model number
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

e. Add a command line to the batch file for the Lenovo server product identifier, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoProdIdentifierEx "<product_id>" --override
--host <IMM_IP> --user <IMM_userid> --password <IMM_password>
```

where:

- *<product_id>* is *Lenovo System x3850 X6* for 4-socket systems
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

f. Locate the IBM server serial number in the *<serial>_system.txt* file. This string has the following format:

```
SYSTEM_PROD_DATA.SysInfoSerialNum=<serial_number>
```

where: *<serial_number>* is a 7–character field for the product serial number.

Note: The Lenovo server system serial number remains unchanged: it is the same serial number that was used for the IBM server.

g. Add a command line to the batch file for the Lenovo server serial number, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum <serial_number> --host <IMM_IP>
--user <IMM_userid> --password <IMM_password>
```

where:

- *<serial_number>* is a 7–character field for the product serial number (the Lenovo server and the IBM server use the same serial number)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

h. Add a command line to the batch file for the Lenovo server UUID, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoUUID <uuid> --host <IMM_IP> --user <IMM_
userid> --password <IMM_password>
```

where:

- *<uuid>* is a 16–character hexadecimal field for the server UUID
  - Contact the customer to determine if the original UUID value should be used or if a new UUID value should be generated for the upgraded server.

- If needed, locate the original IBM server UUID in the *<serial>*`_system.txt` file. This string has the following format:

  `SYSTEM_PROD_DATA.SysInfoUUID=`*<uuid>*

  – *<IMM_IP>* is the IMM IP address
  – *<IMM_userid>* is the IMM user name
  – *<IMM_password>* is the IMM password

i. Open the *<serial>*`_component.txt` file (where *<serial>* is the serial number of the standard I/O book). This file was saved from the IBM System x3850 X6 4-socket system during the Backup vital product data (VPD) procedure.

j. Locate the IBM server component part numbers in the *<serial>*`_component.txt` file. There are multiple component part numbers in the following format:

   `VPD.CompVPD_PartNumber.#` *<p/n>*

   where:

   – # is the component numeric identifier:

     1 for the 4–socket midplane

     3 for the front I/O panel assembly

     4 for LCD display panel

   – *<p/n>* is a 7–character component part number

   Notes:

   – The Lenovo server component part numbers remain unchanged: they are the same part numbers that were used in the IBM server.

   – The component part number is the first six characters following the "11S" of the 11S barcode. In the following example, the part number is shown in bold:

     11S**12X4567**YJ1105A34567

k. Add a command line to the batch file for each Lenovo server component part number, following the form:

   `asu64 set VPD.CompVPD_PartNumber.#` "*<p/n>*[sp][sp][sp][sp][sp]" `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

   where:

   – # is the component numeric identifier:

     1 for the 4–socket midplane

     3 for the front I/O panel assembly

     4 for LCD display panel

   – *<p/n>* is the first 7–characters of a 12–character field, followed by five padding spaces, for the component part number (the Lenovo server and the IBM server use the same component part numbers)

   – *<IMM_IP>* is the IMM IP address
   – *<IMM_userid>* is the IMM user name
   – *<IMM_password>* is the IMM password

l. Locate the IBM server component FRU part numbers in the *<serial>*`_component.txt` file. There are multiple component FRU part numbers in the following format:

`VPD.CompVPD_FRUNumber.# ` *<fru_number>*

where:

- – # is the component numeric identifier:

     1 for the 4–socket midplane

     3 for the front I/O panel assembly

     4 for LCD display panel

- – *<fru_number>* is a 7–character FRU part number

Note: The Lenovo server component FRU part numbers remain unchanged: they are the same FRU numbers that were used in the IBM server.

m. Add a command line to the batch file for each Lenovo server component FRU part number, following the form:

`asu64 set VPD.CompVPD_FRUNumber.# ` "*<fru_number>*`[sp][sp][sp][sp][sp]`" `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

- – # is the component numeric identifier:

     1 for the 4–socket midplane

     3 for the front I/O panel assembly

     4 for LCD display panel

- – *<fru_number>* is the first 7–characters of a 12–character field, followed by five padding spaces, for the component FRU part number (the Lenovo server and the IBM server use the same component FRU numbers)

- – *<IMM_IP>* is the IMM IP address

- – *<IMM_userid>* is the IMM user name

- – *<IMM_password>* is the IMM password

n. Locate the IBM server component serial numbers in the *<serial>*`_component.txt` file. There are multiple component serial numbers in the following format:

`VPD.CompVPD_SerialNumber.# ` *<s/n>*

where:

- – # is the component numeric identifier:

     1 for the 4–socket midplane

     3 for the front I/O panel assembly

     4 for LCD display panel

  Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.

- – *<s/n>* is a 6–character component serial number

Notes:

- – The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.

- – The serial number is the last six characters of the 11S barcode. In the following example, the serial number is shown in bold:

11S12X4567YJ1105**A34567**

o. Add a command line to the batch file for each Lenovo server component serial number, following the form:

`asu64 set VPD.CompVPD_SerialNumber.# <s/n> --host <IMM_IP> --user <IMM_userid> --password <IMM_password>`

where:

– # is the component numeric identifier:

   1 for the 4–socket midplane

   3 for the front I/O panel assembly

   4 for LCD display panel

   Note: A serial number for the front I/O panel assembly (3) is not required.

– *<s/n>* is a 6–character component serial number (the Lenovo server and the IBM server use the same component serial numbers)

– *<IMM_IP>* is the IMM IP address

– *<IMM_userid>* is the IMM user name

– *<IMM_password>* is the IMM password

p. Locate the IBM server component serial number prefixes in the *<serial>*`_component.txt` file. There are multiple component serial number prefixes in the following format:

`VPD.CompVPD_PrefixSerialNumber.#` *<prefix_s/n>*

where:

– # is the component numeric identifier:

   1 for the 4–socket midplane

   3 for the front I/O panel assembly

   4 for LCD display panel

   Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.

– *<prefix_s/n>* is a 6–character component serial number prefix

Notes:

– The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.

– The serial number prefix is the six characters of the 11S barcode that follow the first 10 characters of the 11S barcode (the six characters preceding the component serial number portion of the 11S barcode). In the following example, the serial number prefix is shown in bold:

11S12X4567**YJ1105**A34567

q. Add a command line to the batch file for each Lenovo server component serial number prefix, following the form:

`asu64 set VPD.CompVPD_PrefixSerialNumber.#` *<prefix_s/n>*`--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

– # is the component numeric identifier:

1 for the 4–socket midplane

3 for the front I/O panel assembly

4 for LCD display panel

Note: A serial number for the front I/O panel assembly (3) is not required.

– *<prefix_s/n>* is a 6–character component serial number prefix (the Lenovo server and the IBM server use the same component serial number prefixes)

– *<IMM_IP>* is the IMM IP address

– *<IMM_userid>* is the IMM user name

– *<IMM_password>* is the IMM password

Note: To view an example VPD batch file, see Chapter 2 "IBM to Lenovo server upgrade batch file examples" on page 31.

3. Save and close the file.

– The Lenovo System x3950 X6 8-socket system requires separate batch files for each node.

   – To create a VPD batch file for node 1 of a Lenovo System x3950 X6 8-socket system:

      1. Open a new *<serial>*`_Node1_system.bat` file (where *<serial>* is the serial number of the standard I/O book in node 1, allowing each batch file to be identified). This file will be edited to create a VPD update batch file for node 1.

      2. Complete the following steps to add commands to the *<serial>*`_Node1_system.bat` file:

         a. Open the *<serial>*`_Node1_system.txt` file (where *<serial>* is the serial number of the standard I/O book in node 1). This file was saved from node 1 of the IBM System x3950 X6 8-socket system during the Backup vital product data (VPD) procedure.

         b. Locate the IBM server machine type and model string in the *<serial>*`_Node1_system.txt` file. This string has the following format:

            `SYSTEM_PROD_DATA.SysInfoProdName=`*<IBM_machine_type_model>*

            where: *<IBM_machine_type_model>* is a 7–character field that combines the 4–character machine type and the 3–character model number.

         c. Change the IBM server machine type to the Lenovo server machine type by replacing the IBM server 4-character machine type, 3837, with the Lenovo server 4-character machine type, 6241. The 3-character model number remains unchanged between the IBM and Lenovo servers.

            For example, if the original IBM server machine type and model number was **3837**FT4, the new Lenovo server machine type and model number would be **6241**FT4.

         d. Add a command line to the batch file for the Lenovo server machine type and model created in the previous step (this model number varies based on the original IBM server model number), following the form:

            `asu64 set SYSTEM_PROD_DATA.SysInfoProdName `*<Lenovo_machine_type_model>* `--host `*<IMM_IP>* `--user `*<IMM_userid>* `--password `*<IMM_password>*

            where:

            • *<Lenovo_machine_type_model>* is a 7–character field that combines the new Lenovo 4–character machine type and the original IBM 3–character model number

            • *<IMM_IP>* is the IMM IP address

            • *<IMM_userid>* is the IMM user name

- *<IMM_password>* is the IMM password

e. Add a command line to the batch file for the Lenovo server product identifier, following the form:

   `asu64 set SYSTEM_PROD_DATA.SysInfoProdIdentifierEx "`*<product_id>*`" --override --host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

   where:

   - *<product_id>* is *Lenovo System x3950 X6* for 8-socket systems
   - *<IMM_IP>* is the IMM IP address
   - *<IMM_userid>* is the IMM user name
   - *<IMM_password>* is the IMM password

f. Locate the IBM server serial number in the *<serial>*`_Node1_system.txt` file. This string has the following format:

   `SYSTEM_PROD_DATA.SysInfoSerialNum=`*<serial_number>*

   where: *<serial_number>* is a 7–character field for the product serial number.

   Note: The Lenovo server system serial number remains unchanged: it is the same serial number that was used for the IBM server.

g. Add a command line to the batch file for the Lenovo server serial number, following the form:

   `asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum` *<serial_number>* `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

   where:

   - *<serial_number>* is a 7–character field for the product serial number (the Lenovo server and the IBM server use the same serial number)
   - *<IMM_IP>* is the IMM IP address
   - *<IMM_userid>* is the IMM user name
   - *<IMM_password>* is the IMM password

h. Add a command line to the batch file for the Lenovo server system node 1 UUID, following the form:

   `asu64 set SYSTEM_PROD_DATA.SysInfoUUID` *<node1_uuid>* `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

   where:

   - *<node1_uuid>* is a 16–character hexadecimal field for the server node 1 UUID
     - Contact the customer to determine if the original UUID value should be used or if a new UUID value should be generated for the upgraded server.
     - If needed, locate the original IBM server UUID in the *<serial>*`_Node1_system.txt` file. This string has the following format:

       `SYSTEM_PROD_DATA.SysInfoUUID=`*<node1_uuid>*
   - *<IMM_IP>* is the IMM IP address
   - *<IMM_userid>* is the IMM user name
   - *<IMM_password>* is the IMM password

i. Open the *<serial>*`_Node1_component.txt` file (where *<serial>* is the serial number of the standard I/O book in node 1). This file was saved from node 1 of the IBM System x3950 X6 8-socket system during the Backup vital product data (VPD) procedure.

j. Locate the IBM server component part numbers in the *<serial>*`_Node1_component.txt` file. There are multiple component part numbers in the following format:

`VPD.CompVPD_PartNumber.#` *<p/n>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

- *<p/n>* is a 7–character component part number

Notes:

- The Lenovo server component part numbers remain unchanged: they are the same part numbers that were used in the IBM server.

- The component part number is the first six characters following the "11S" of the 11S barcode. In the following example, the part number is shown in bold:

    11S**12X4567**YJ1105A34567

k. Add a command line to the batch file for each Lenovo server component part number, following the form:

`asu64 set VPD.CompVPD_PartNumber.#` "*<p/n>*`[sp][sp][sp][sp][sp]`" `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

- *<p/n>* is the first 7–characters of a 12–character field, followed by five padding spaces, for the component part number (the Lenovo server and the IBM server use the same component part numbers)

- *<IMM_IP>* is the IMM IP address

- *<IMM_userid>* is the IMM user name

- *<IMM_password>* is the IMM password

l. Locate the IBM server component FRU part numbers in the *<serial>*`_Node1_component.txt` file. There are multiple component FRU part numbers in the following format:

`VPD.CompVPD_FRUNumber.#` *<fru_number>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

3 for the front I/O panel assembly

4 for LCD display panel

- *<fru_number>* is a 7–character FRU part number

Note: The Lenovo server component FRU part numbers remain unchanged: they are the same FRU numbers that were used in the IBM server.

m. Add a command line to the batch file for each Lenovo server component FRU part number, following the form:

`asu64 set VPD.CompVPD_FRUNumber.#` "*<fru_number>*[sp][sp][sp][sp][sp]" `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

- *<fru_number>* is the first 7–characters of a 12–character field, followed by five padding spaces, for the component FRU part number (the Lenovo server and the IBM server use the same component FRU numbers)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

n. Locate the IBM server component serial numbers in the *<serial>*`_Node1_` `component.txt` file. There are multiple component serial numbers in the following format:

`VPD.CompVPD_SerialNumber.#` *<s/n>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.

- *<s/n>* is a 6–character component serial number

Notes:

- The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.
- The serial number is the last six characters of the 11S barcode. In the following example, the serial number is shown in bold:

    11S12X4567YJ1105**A34567**

o. Add a command line to the batch file for each Lenovo server component serial number, following the form:

```
asu64 set VPD.CompVPD_SerialNumber.# <s/n> --host <IMM_IP> --user <IMM_
userid> --password <IMM_password>
```

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required.
- *<s/n>* is a 6–character component serial number (the Lenovo server and the IBM server use the same component serial numbers)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

p. Locate the IBM server component serial number prefixes in the *<serial>*`_Node1_`
`component.txt` file. There are multiple component serial number prefixes in the following format:

`VPD.CompVPD_PrefixSerialNumber.#` *<prefix_s/n>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.
- *<prefix_s/n>* is a 6–character component serial number prefix

Notes:

- The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.
- The serial number prefix is the six characters of the 11S barcode that follow the first 10 characters of the 11S barcode (the six characters preceding the component serial number portion of the 11S barcode). In the following example, the serial number prefix is shown in bold:

    11S12X4567**YJ1105**A34567

q. Add a command line to the batch file for each Lenovo server component serial number prefix, following the form:

```
asu64 set VPD.CompVPD_PrefixSerialNumber.# <prefix_s/n>--host <IMM_IP> --user
<IMM_userid> --password <IMM_password>
```

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

4 for LCD display panel

> **Note:** A serial number for the front I/O panel assembly (3) is not required.

- *<prefix_s/n>* is a 6–character component serial number prefix (the Lenovo server and the IBM server use the same component serial number prefixes)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

Note: To view an example VPD batch file, see Chapter 2 "IBM to Lenovo server upgrade batch file examples" on page 31.

3. Save and close the file.

– To create a VPD batch file for node 2 of a Lenovo System x3950 X6 8-socket system:

1. Open a new *<serial>*`_Node2_system.bat` file (where *<serial>* is the serial number of the standard I/O book in node 2, allowing each batch file to be identified). This file will be edited to create a VPD update batch file for node 2.

2. Complete the following steps to add commands to the *<serial>*`_Node2_system.bat` file:

   a. Open the *<serial>*`_Node2_system.txt` file (where *<serial>* is the serial number of the standard I/O book in node 2). This file was saved from node 2 of the IBM System x3950 X6 8-socket system during the Backup vital product data (VPD) procedure.

   b. Locate the IBM server machine type and model string in the *<serial>*`_Node2_system.txt` file. This string has the following format:

   `SYSTEM_PROD_DATA.SysInfoProdName=`*<IBM_machine_type_model>*

   where: *<IBM_machine_type_model>* is a 7–character field that combines the 4–character machine type and the 3–character model number.

   c. Change the IBM server machine type to the Lenovo server machine type by replacing the IBM server 4-character machine type, 3837, with the Lenovo server 4-character machine type, 6241. The 3-character model number remains unchanged between the IBM and Lenovo servers.

   For example, if the original IBM server machine type and model number was **3837**FT4, the new Lenovo server machine type and model number would be **6241**FT4.

   d. Add a command line to the batch file for the Lenovo server machine type and model created in the previous step (this model number varies based on the original IBM server model number), following the form:

   `asu64 set SYSTEM_PROD_DATA.SysInfoProdName `*<Lenovo_machine_type_model>* `--host `*<IMM_IP>*` --user `*<IMM_userid>*` --password `*<IMM_password>*

   where:

   - *<Lenovo_machine_type_model>* is a 7–character field that combines the new Lenovo 4–character machine type and the original IBM 3–character model number
   - *<IMM_IP>* is the IMM IP address
   - *<IMM_userid>* is the IMM user name
   - *<IMM_password>* is the IMM password

   e. Add a command line to the batch file for the Lenovo server product identifier, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoProdIndentifierEx "<product_id>" --override
--host <IMM_IP> --user <IMM_userid> --password <IMM_password>
```

where:

- *<product_id>* is *Lenovo System x3950 X6* for 8-socket systems
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

f. Locate the IBM server serial number in the *<serial>*`_Node2_system.txt` file. This string has the following format:

```
SYSTEM_PROD_DATA.SysInfoSerialNum=<serial_number>
```

where: *<serial_number>* is a 7–character field for the product serial number.

Note: The Lenovo server system serial number remains unchanged: it is the same serial number that was used for the IBM server.

g. Add a command line to the batch file for the Lenovo server serial number, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum <serial_number> --host <IMM_IP>
--user <IMM_userid> --password <IMM_password>
```

where:

- *<serial_number>* is a 7–character field for the product serial number (the Lenovo server and the IBM server use the same serial number)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

h. Add a command line to the batch file for the Lenovo server system node 2 UUID, following the form:

```
asu64 set SYSTEM_PROD_DATA.SysInfoUUID <node2_uuid> --host <IMM_IP> --user
<IMM_userid> --password <IMM_password>
```

where:

- *<node2_uuid>* is a 16–character hexadecimal field for the server node 2 UUID
  - Contact the customer to determine if the original UUID value should be used or if a new UUID value should be generated for the upgraded server.
  - If needed, locate the original IBM server UUID in the *<serial>*`_Node2_system.txt` file. This string has the following format:

    ```
    SYSTEM_PROD_DATA.SysInfoUUID=<node2_uuid>
    ```

- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

i. Open the *<serial>*`_Node2_component.txt` file (where *<serial>* is the serial number of the standard I/O book in node 2). This file was saved from node 2 of the IBM System x3950 X6 8-socket system during the Backup vital product data (VPD) procedure.

j. Locate the IBM server component part numbers in the *<serial>*`_Node2_component.`
   `txt` file. There are multiple component part numbers in the following format:

   `VPD.CompVPD_PartNumber.#` *<p/n>*

   where:

   - # is the component numeric identifier:

      2 for the 8–socket midplane

      3 for the front I/O panel assembly

      4 for LCD display panel

   - *<p/n>* is a 7–character component part number

   Notes:

   - The Lenovo server component part numbers remain unchanged: they are the
     same part numbers that were used in the IBM server.

   - The component part number is the first six characters following the "11S" of the
     11S barcode. In the following example, the part number is shown in bold:

     11S**12X4567**YJ1105A34567

k. Add a command line to the batch file for each Lenovo server component part
   number, following the form:

   `asu64 set VPD.CompVPD_PartNumber.#` "*<p/n>*`[sp][sp][sp][sp][sp]`" `--host` *<IMM_*
   IP> `--user` *<IMM_userid>* `--password` *<IMM_password>*

   where:

   - # is the component numeric identifier:

      2 for the 8–socket midplane

      3 for the front I/O panel assembly

      4 for LCD display panel

   - *<p/n>* is the first 7–characters of a 12–character field, followed by five padding
     spaces, for the component part number (the Lenovo server and the IBM server
     use the same component part numbers)

   - *<IMM_IP>* is the IMM IP address

   - *<IMM_userid>* is the IMM user name

   - *<IMM_password>* is the IMM password

l. Locate the IBM server component FRU part numbers in the *<serial>*`_Node2_`
   `component.txt` file. There are multiple component FRU part numbers in the
   following format:

   `VPD.CompVPD_FRUNumber.#` *<fru_number>*

   where:

   - # is the component numeric identifier:

      2 for the 8–socket midplane

      3 for the front I/O panel assembly

      4 for LCD display panel

   - *<fru_number>* is a 7–character FRU part number

Note: The Lenovo server component FRU part numbers remain unchanged: they are the same FRU numbers that were used in the IBM server.

m. Add a command line to the batch file for each Lenovo server component FRU part number, following the form:

`asu64 set VPD.CompVPD_FRUNumber.#` "*<fru_number>*[sp][sp][sp][sp][sp]" `--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

- *<fru_number>* is the first 7–characters of a 12–character field, followed by five padding spaces, for the component FRU part number (the Lenovo server and the IBM server use the same component FRU numbers)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

n. Locate the IBM server component serial numbers in the *<serial>*`_Node2_ component.txt` file. There are multiple component serial numbers in the following format:

`VPD.CompVPD_SerialNumber.#` *<s/n>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.

- *<s/n>* is a 6–character component serial number

Notes:

- The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.
- The serial number is the last six characters of the 11S barcode. In the following example, the serial number is shown in bold:

    11S12X4567YJ1105**A34567**

o. Add a command line to the batch file for each Lenovo server component serial number, following the form:

`asu64 set VPD.CompVPD_SerialNumber.#` *<s/n>* `--host` *<IMM_IP>* `--user` *<IMM_ userid>* `--password` *<IMM_password>*

where:

- # is the component numeric identifier:

2 for the 8–socket midplane

3 for the front I/O panel assembly

4 for LCD display panel

Note: A serial number for the front I/O panel assembly (3) is not required.

- *<s/n>* is a 6–character component serial number (the Lenovo server and the IBM server use the same component serial numbers)
- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

p. Locate the IBM server component serial number prefixes in the *<serial>*`_Node2_ component.txt` file. There are multiple component serial number prefixes in the following format:

`VPD.CompVPD_PrefixSerialNumber.#` *<prefix_s/n>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required and might not be listed.

- *<prefix_s/n>* is a 6–character component serial number prefix

Notes:

- The Lenovo server component serial numbers remain unchanged: they are the same serial numbers that were used in the IBM server.
- The serial number prefix is the six characters of the 11S barcode that follow the first 10 characters of the 11S barcode (the six characters preceding the component serial number portion of the 11S barcode). In the following example, the serial number prefix is shown in bold:

    11S12X4567**YJ1105**A34567

q. Add a command line to the batch file for each Lenovo server component serial number prefix, following the form:

`asu64 set VPD.CompVPD_PrefixSerialNumber.#` *<prefix_s/n>*`--host` *<IMM_IP>* `--user` *<IMM_userid>* `--password` *<IMM_password>*

where:

- # is the component numeric identifier:

    2 for the 8–socket midplane

    3 for the front I/O panel assembly

    4 for LCD display panel

    Note: A serial number for the front I/O panel assembly (3) is not required.

- *<prefix_s/n>* is a 6–character component serial number prefix (the Lenovo server and the IBM server use the same component serial number prefixes)

- *<IMM_IP>* is the IMM IP address
- *<IMM_userid>* is the IMM user name
- *<IMM_password>* is the IMM password

Note: To view an example VPD batch file, see Chapter 2 "IBM to Lenovo server upgrade batch file examples" on page 31.

3. Save and close the file.

Restore VPD using the batch files

Note: For a Lenovo System x3950 X6 8-socket system, the following procedure must be performed twice, once for each node batch file.

To restore the saved VPD using a batch file, run the ASU command:

`asu64 batch` *<batch file>* `--host` *<IMM IP>* `--user` *<IMM UserID>* `--password` *<IMM Password>*

where:

<batch file> is the full path name of the batch file for the VPD data being restored

<IMM IP> is the IMM IP address

<IMM userid> is the IMM user name

<IMM password> is the IMM password

Step 7. Replace IBM server labelling with Lenovo labelling.

a. Replace the IBM right EIA server bezel with the Lenovo right EIA server bezel that comes with the ITL kit. Transfer any customer labels on the IBM bezel to the Lenovo bezel.
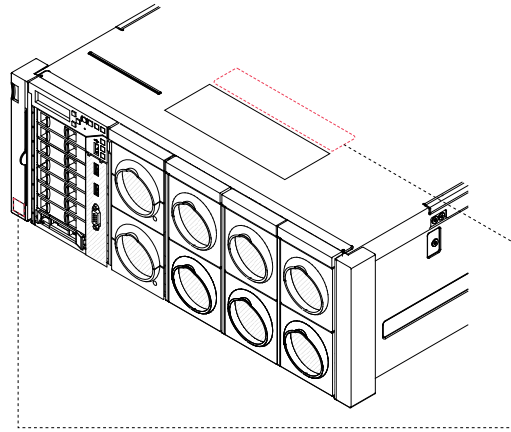
Figure 4. Right EIA server bezel replacement
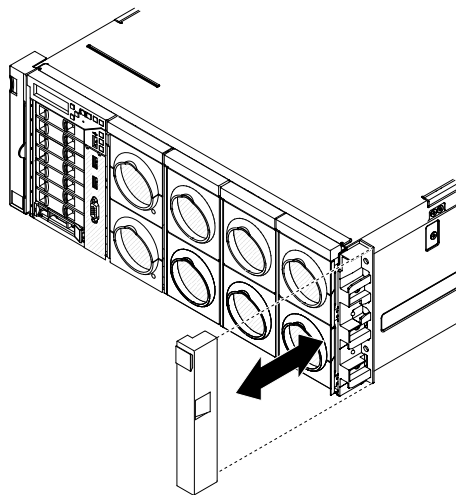
To replace the right EIA bezel, complete the following steps.

1. Pull the IBM right EIA bezel forward; then, remove the bezel from the server.
2. Position the secure the Lenovo right EIA bezel on the server; then, press it fully into place.

b. Replace the IBM system labels with Lenovo system labels.

Figure 5. Agency label location

Install this label above the Agency label in the approximate position as shown here.

Lenovo

Marca Registrada ® Registered Trademark of Lenovo (Beijing) Limited Corporation China
EU Contact Address: Einsteinova 21, 851 01
Bratislava, Slovakia
http://support.lenovo.com

Copyright Code and Parts Contained Herein.
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All Rights Reserved.

Manufactured for Lenovo PC HK Limited
Made in China   V   中国制造

This label represents a change in the Machine Type (MT) from IBM MT 3837 to Lenovo MT 6241.
The Serial Number on the adjacent agency label remains the same.
MT: 6241   SN: (See Below ⬇)

Install this label on top of the existing label on left EIA bezel.

IBM   AGENCY LABEL EXAMPLE

MT: 3837
Model: xxx
SN: SSSSSSS
MFG date: YYYYMMDD
Product ID:
PN:

MT 6241
See Info
Label
for SN

⚠ **DANGER**

Be careful when sliding the server forward to attach the new agency label. Moving the server too far forward can cause the rack to tip or the server to fall out of the rack.

1. Slide the server forward in the rack.
2. Enter the serial number that is shown on the IBM agency label on the Lenovo agency label that comes with the ITL kit; then, attach the new Lenovo agency label to the top of the server chassis, as close as possible to the original IBM agency label.
3. Slide the server back in the rack.

c. Remove the IBM machine type label from the left EIA bezel and replace it with the Lenovo machine type label.

d. Replace the IBM system Service Card with the Lenovo system Service Card that comes with the ITL kit. The following illustration shows the location of the system Service Card. To remove the system Service Card, grasp the blue tab and pull the card out.

Figure 6. Service card replacement
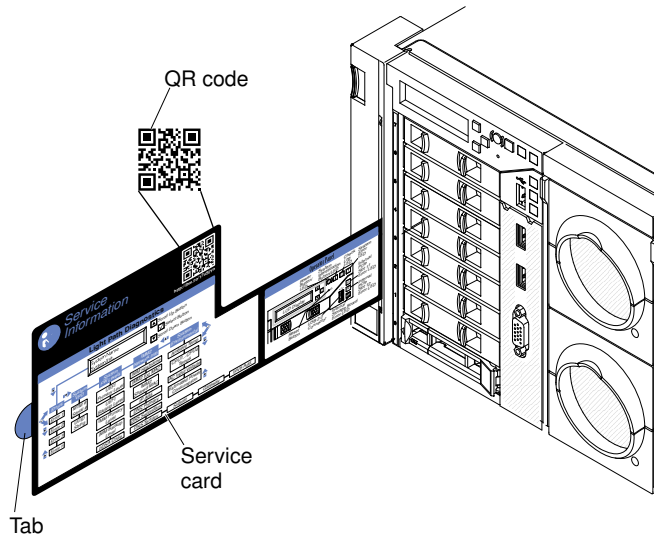
e. Attach the a new Lenovo MAC address label tag to each standard I/O book.

Figure 7. MAC address label tag location
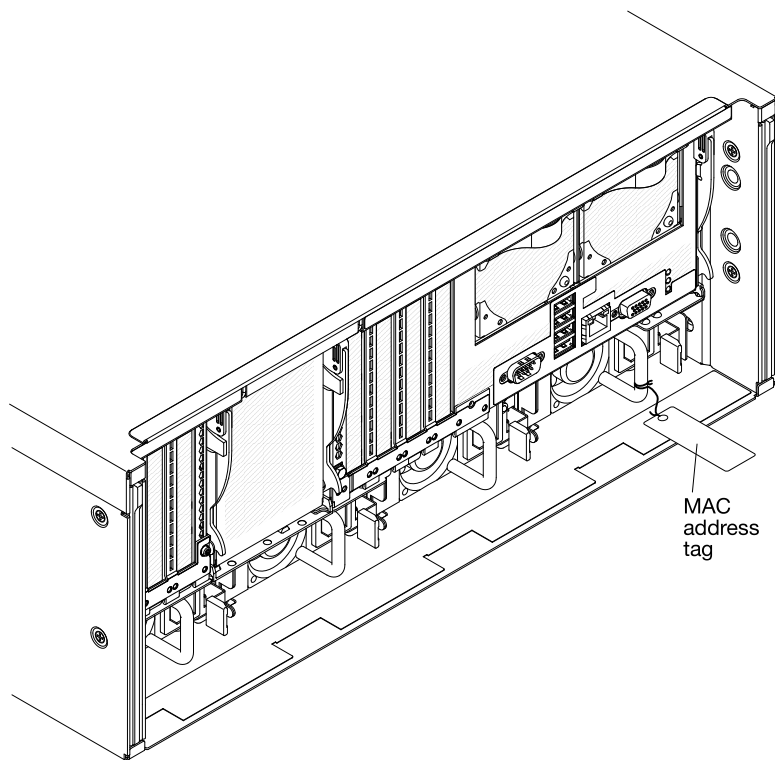
Step 8. Make sure that all adapters from the IBM server have been transferred to the upgraded Lenovo server and that all cables to the server are reconnected.

Update firmware and device drivers for installed components

After performing the physical conversion and updating server firmware, the service technician must also update the firmware and device drivers for all components installed in the server to their Lenovo versions. Lenovo firmware and device drivers for installed components are available at http://

datacentersupport.lenovo.com/. See the documentation for each device for additional information about how to perform the update.

Verification

After the ITL server upgrade is complete, the service technician must complete the following steps to verify operation of the Lenovo server:

1. Make sure that the server powers up and passes UEFI initialization (see "Turning on the server" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide* and "Using the Setup utility" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*).

2. Make sure that you are able to access the IMM (see "Using the integrated management module" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*).

3. Verify that all server vital product data (VPD) is correct (see the *Integrated Management Module II User's Guide* at https://systemx.lenovofiles.com/help/topic/com.lenovo.sysx.imm2.doc/printable_doc.html).

4. Make sure that all server firmware is updated to the latest level (see "Updating the firmware" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*).

5. Make sure that there are no errors messages (see "Error messages" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*).

If problems are encountered following the ITL upgrade, troubleshoot the system using standard methods (see "Start here" in the *Lenovo System x3850 X6 and x3950 X6 Type 6241 Installation and Service Guide*). If you are unable to resolve the problem, open an online service request, go to https://www.ibm.com/support/servicerequest/Home.action. Be prepared to provide information about any error codes and collected data.

Update customer and service records

After the ITL server upgrade is complete and verified, the service technician must contact regional support to update customer and service records as soon as possible after completing the ITL upgrade. Refer to "Servicer Only Tech Tip Document ID 5097919" for detailed contact information.

The following information is required to update the customer entitlement database:

- The original IBM server Machine Type and serial number.

- The upgraded Lenovo server Machine Type and serial number.

- Include a photograph of the 11S barcode or type the serial number for each Lenovo standard I/O book that was installed.

- IBM parts are property of the customer and should be left with the customer.

- Service technicians in each geography should report the upgrade activity, as follows:

  - For USA and China, record SC 44, AC01 against the original IBM Machine Type and serial number.

  - For EMEA, record SC 46, AC06 against the RCMS case opened for the original IBM Machine Type and serial number.

  - For Canada, record SC 33, ECA=DRA against the original IBM Machine Type and serial number.

Regional contacts:

Region	Contact
NA	DCG_SERVICE@lenovo.com
EMEA	**Note:** Make sure that you copy Mark Hof (mhof@lenovo.com) on all EMEA inquires

Region		Contact
	UKIR	Steven Anderson3 (sanderson3@lenovo.com)
	France/Benelux/Scandin. & Finland	Regis Clermont (rclermont@lenovo.com)
	Italy/Iberia	Samuel Benedetti (sbenedetti@lenovo.com)
	North-West Africa	Angel Carreras Fernandez1 (afernandez1@lenovo.com)
	Russia/EECA	Alexander Totikov (atotikov@lenovo.com)
	PL, CZ and SK (AR+UN)/ SEE (IN +UN)/ Greece (IN+UN	Mark Hof (mhof@lenovo.com) **Acting**
	Middle-East/Pakistan	Alaa Halime (ahalime@lenovo.com)
	DACH (Shared)/Israel (Andre)/ Baltics (Andre)	Uwe Nunweiler (ununweiler@lenovo.com) Andre Reuber (areuber@lenovo.com)
	Southern Africa/Eastern Africa/ Egypt and Turkey	Amir Yassien (ayassien@lenovo.com)
AP/PRC		Kevin Yuan (yuanxh2@lenovo.com)

Chapter 2. IBM to Lenovo server upgrade batch file examples

This topic provides examples of the VPD batch files used to upgrade an IBM System x3850 X6 and x3950 X6 Type 3837 server to a Lenovo System x3850 X6 and x3950 X6 Type 6241 server.

The following sections show sample VPD batch files for Lenovo System x3850 X6 4-socket and Lenovo System x3950 X6 8-socket systems

Example VPD batch file for a Lenovo System x3850 X6 4-socket system

The Lenovo System x3850 X6 4-socket system requires a single VPD batch file. An example batch file is shown below:

```
rem Lenovo server machine type and model requires a total of 7 characters with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoProdName 6241F4Y --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server product indentifier requires double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoProdIdentifierEx "Lenovo System x3850 X6" --override --host 192.168.70.125
--user USERID --password  PASSWORD

rem Lenovo server serial number requires a total of 7 characters with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum KQ7CFR3 --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server UUID requires a total of 16 characters entered in hexadecimal with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoUUID 5CCEDA3465F436E8ADFA6EAE8B4B77B9 --host 192.168.70.125 --user USERID
--password  PASSWORD

rem Lenovo server component part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_PartNumber.1  "00D0485      "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.3  "00D0510      "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.4  "78P3448      "  --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server component FRU part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_FRUNumber.1 "00D0051      "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.3 "00FG825      "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.4 "00D0464      "  --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server component serial numbers require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_SerialNumber.1 456047  --host 192.168.70.125  --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_SerialNumber.4 44H874  --host 192.168.70.125  --user USERID --password  PASSWORD

rem Lenovo server component serial number prefixes require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_PrefixSerialNumber.1 Y011BG  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PrefixSerialNumber.4 YK51XD  --host 192.168.70.125 --user USERID --password  PASSWORD
```

Example VPD batch files for a Lenovo System x9850 X6 8-socket system

The Lenovo System x3850 X6 4-socket system requires separate VPD batch file for each node.

- **Example VPD batch file for node 1:**

   An example batch file for node 1 is shown below:

   ```
   rem Lenovo server machine type and model requires a total of 7 characters with no double quotes
   asu64 set SYSTEM_PROD_DATA.SysInfoProdName 6241JAY --host 192.168.70.125 --user USERID --password  PASSWORD

   rem Lenovo server product indentifier requires double quotes
   ```

```
asu64 set SYSTEM_PROD_DATA.SysInfoProdIdentifierEx "Lenovo System x3950 X6" --override --host 192.168.70.125
--user USERID --password  PASSWORD

rem Lenovo server serial number requires a total of 7 characters with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum KQ7CFR3 --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server UUID requires a total of 16 characters entered in hexadecimal with no double quotes
(Note: 8-Socket Node 1 and Node 2 have different UUID's)
asu64 set SYSTEM_PROD_DATA.SysInfoUUID 5CCEDA3465F436E8ADFA6EAE8B4B77BA --host 192.168.70.125 --user USERID
--password  PASSWORD

rem Lenovo server component part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_PartNumber.2  "00WA088     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.3  "00D0510     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.4  "78P3448     "  --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server component FRU part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_FRUNumber.1 "00FN638     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.3 "00FG825     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.4 "00D0464     "  --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server component serial numbers require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_SerialNumber.1 456047  --host 192.168.70.125  --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_SerialNumber.4 44H874  --host 192.168.70.125  --user USERID --password  PASSWORD

rem Lenovo server component serial number prefixes require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_PrefixSerialNumber.1 Y011BG  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PrefixSerialNumber.4 YK51XD  --host 192.168.70.125 --user USERID --password  PASSWORD
```

- **Example VPD batch file for node 2:**

  An example batch file for node 2 is shown below:

```
rem Lenovo server machine type and model requires a total of 7 characters with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoProdName 6241JAY --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server product indentifier requires double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoProdIdentifierEx "Lenovo System x3950 X6" --override --host 192.168.70.125
--user USERID --password  PASSWORD

rem Lenovo server serial number requires a total of 7 characters with no double quotes
asu64 set SYSTEM_PROD_DATA.SysInfoSerialNum KQ7CFR3 --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server UUID requires a total of 16 characters entered in hexadecimal with no double quotes
(Note: 8-Socket Node 1 and Node 2 have different UUID's)
asu64 set SYSTEM_PROD_DATA.SysInfoUUID 5CCEDA3465F436E8ADFA6EAE8B4B77BB --host 192.168.70.125 --user USERID
--password  PASSWORD

rem Lenovo server component part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_PartNumber.2  "00WA088     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.3  "00D0510     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PartNumber.4  "78P3448     "  --host 192.168.70.125 --user USERID --password  PASSWORD

rem Lenovo server component FRU part numbers require double quotes and a total of 12 characters including
insertion of 5 blanks
asu64 set VPD.CompVPD_FRUNumber.1 "00FN638     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.3 "00FG825     "  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_FRUNumber.4 "00D0464     "  --host 192.168.70.125 --user USERID --password  PASSWORD
```

```
rem Lenovo server component serial numbers require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_SerialNumber.1 456047  --host 192.168.70.125  --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_SerialNumber.4 44H874  --host 192.168.70.125  --user USERID --password  PASSWORD

rem Lenovo server component serial number prefixes require a total of 6 characters with no double quotes
asu64 set VPD.CompVPD_PrefixSerialNumber.1 YO11BG  --host 192.168.70.125 --user USERID --password  PASSWORD
asu64 set VPD.CompVPD_PrefixSerialNumber.4 YK51XD  --host 192.168.70.125 --user USERID --password  PASSWORD
```

Appendix A. Getting help and technical assistance

If you need help, service, or technical assistance or just want more information about Lenovo products, you will find a wide variety of sources available from Lenovo to assist you.

Use this information to obtain additional information about Lenovo and Lenovo products, and determine what to do if you experience a problem with your Lenovo system or optional device.

Note: This section includes references to IBM web sites and information about obtaining service. IBM is Lenovo's preferred service provider for the System x, Flex System, and NeXtScale System products.

Before you call

Before you call, make sure that you have taken these steps to try to solve the problem yourself.

If you believe that you require warranty service for your Lenovo product, the service technicians will be able to assist you more efficiently if you prepare before you call.

- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system and any optional devices are turned on.
- Check for updated software, firmware, and operating-system device drivers for your Lenovo product. The Lenovo Warranty terms and conditions state that you, the owner of the Lenovo product, are responsible for maintaining and updating all software and firmware for the product (unless it is covered by an additional maintenance contract). Your service technician will request that you upgrade your software and firmware if the problem has a documented solution within a software upgrade.
- If you have installed new hardware or software in your environment, check http://www.lenovo.com/serverproven/ to make sure that the hardware and software is supported by your product.
- Go to http://datacentersupport.lenovo.com/ to check for information to help you solve the problem.
- Gather the following information to provide to the service technician. This data will help the service technician quickly provide a solution to your problem and ensure that you receive the level of service for which you might have contracted.
    - Hardware and Software Maintenance agreement contract numbers, if applicable
    - Machine type number (Lenovo 4-digit machine identifier)
    - Model number
    - Serial number
    - Current system UEFI and firmware levels
    - Other pertinent information such as error messages and logs
- Go to https://www.ibm.com/support/servicerequest/Home.action to submit an Electronic Service Request. Submitting an Electronic Service Request will start the process of determining a solution to your problem by making the pertinent information available to the service technicians. The Lenovo service technicians can start working on your solution as soon as you have completed and submitted an Electronic Service Request.

You can solve many problems without outside assistance by following the troubleshooting procedures that Lenovo provides in the online help or in the Lenovo product documentation. The Lenovo product documentation also describes the diagnostic tests that you can perform. The documentation for most systems, operating systems, and programs contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the documentation for the operating system or program.

Using the documentation

Information about your Lenovo system and preinstalled software, if any, or optional device is available in the product documentation. That documentation can include printed documents, online documents, readme files, and help files.

See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. Lenovo maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to http://datacentersupport.lenovo.com/.

Getting help and information from the World Wide Web

Up-to-date information about Lenovo products and support is available on the World Wide Web.

On the World Wide Web, up-to-date information about Lenovo systems, optional devices, services, and support is available at http://datacentersupport.lenovo.com/. The most current version of the product documentation is available in the following product-specific Information Centers:

- **ThinkSystem products**:

  https://thinksystem.lenovofiles.com/help/index.jsp
- **XClarity products:**

  https://sysmgt.lenovofiles.com/help/index.jsp
- **Flex System products:**

  https://flexsystem.lenovofiles.com/help/topic/com.lenovo.acc.common.nav.doc/ic-homepage.html
- **System x products:**

  https://systemx.lenovofiles.com/help/topic/com.lenovo.systemx.common.nav.doc/ic-homepage.html
- **NeXtScale System products:**

  https://nextscale.lenovofiles.com/help/topic/com.lenovo.nxt.common.nav.doc/ic-homepage.html

How to send DSA data

You can use the Enhanced Customer Data Repository to send diagnostic data to Lenovo.

Before you send diagnostic data to Lenovo, read the terms of use at http://www.ibm.com/de/support/ ecurep/terms.html.

You can use any of the following methods to send diagnostic data:

- **Standard upload:** http://www.ibm.com/de/support/ ecurep/send_http.html
- **Standard upload with the system serial number:** http://www.ecurep.ibm.com/app/ upload_hw
- **Secure upload:** http://www.ibm.com/de/support/ ecurep/send_http.html#secure
- **Secure upload with the system serial number:** https://www.ecurep.ibm.com/ app/upload_hw

Creating a personalized support web page

You can create a personalized support web page by identifying Lenovo products that are of interest to you.

To create a personalized support web page, go to http://datacentersupport.lenovo.com/. From this personalized page, you can subscribe to weekly email notifications about new technical documents, search for information and downloads, and access various administrative services.

Software service and support

Through the Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with your Lenovo products.

For more information about Support Line and other IBM services, see http://www3.lenovo.com/us/en/data-center/software/c/software?menu-id=explore_software or see https://datacentersupport.lenovo.com/us/en/supportphonelist for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

Hardware service and support

IBM is Lenovo's preferred service provider for the System x, Flex System and NeXtScale System products.

You can receive hardware service through your Lenovo reseller or from IBM. To locate a reseller authorized by Lenovo to provide warranty service, go to https://datacentersupport.lenovo.com/us/en/serviceprovider and click **Business Partner Locator**. For IBM support telephone numbers, see https://datacentersupport.lenovo.com/us/en/supportphonelist. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

Taiwan product service

Use this information to contact product service for Taiwan.

委製商/進口商名稱: 荷蘭商聯想股份有限公司台灣分公司
進口商地址: 台北市內湖區堤頂大道2段89號5樓
進口商電話: 0800-000-702 (代表號)

Appendix B. Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area.

Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service.

Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document is not an offer and does not provide a license under any patents or patent applications. You can send inquiries in writing to the following:

Lenovo (United States), Inc.
1009 Think Place
Morrisville, NC 27560
U.S.A.
Attention: Lenovo VP of Intellectual Property

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Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Trademarks

Lenovo, the Lenovo logo, Flex System, System x, NeXtScale System, and x Architecture are trademarks of Lenovo in the United States, other countries, or both.

Intel and Intel Xeon are trademarks of Intel Corporation in the United States, other countries, or both.

Internet Explorer, Microsoft, and Windows are trademarks of the Microsoft group of companies.

Linux is a registered trademark of Linus Torvalds.

Other company, product, or service names may be trademarks or service marks of others.

Important notes

Processor speed indicates the internal clock speed of the microprocessor; other factors also affect application performance.

CD or DVD drive speed is the variable read rate. Actual speeds vary and are often less than the possible maximum.

When referring to processor storage, real and virtual storage, or channel volume, KB stands for 1 024 bytes, MB stands for 1 048 576 bytes, and GB stands for 1 073 741 824 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1 000 000 bytes, and GB stands for 1 000 000 000 bytes. Total user-accessible capacity can vary depending on operating environments.

Maximum internal hard disk drive capacities assume the replacement of any standard hard disk drives and population of all hard-disk-drive bays with the largest currently supported drives that are available from Lenovo.

Maximum memory might require replacement of the standard memory with an optional memory module.

Each solid-state memory cell has an intrinsic, finite number of write cycles that the cell can incur. Therefore, a solid-state device has a maximum number of write cycles that it can be subjected to, expressed as `total bytes written` (TBW). A device that has exceeded this limit might fail to respond to system-generated commands or might be incapable of being written to. Lenovo is not responsible for replacement of a device that has exceeded its maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the device.

Lenovo makes no representations or warranties with respect to non-Lenovo products. Support (if any) for the non-Lenovo products is provided by the third party, not Lenovo.

Some software might differ from its retail version (if available) and might not include user manuals or all program functionality.

Recycling information

Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. For information on recycling Lenovo products, go to: http://www.lenovo.com/social_responsibility/us/en/product_recycling_program.html.

Particulate contamination

Attention: Airborne particulates (including metal flakes or particles) and reactive gases acting alone or in combination with other environmental factors such as humidity or temperature might pose a risk to the device that is described in this document.

Risks that are posed by the presence of excessive particulate levels or concentrations of harmful gases include damage that might cause the device to malfunction or cease functioning altogether. This specification sets forth limits for particulates and gases that are intended to avoid such damage. The limits must not be viewed or used as definitive limits, because numerous other factors, such as temperature or moisture content of the air, can influence the impact of particulates or environmental corrosives and gaseous contaminant transfer. In the absence of specific limits that are set forth in this document, you must implement practices that maintain particulate and gas levels that are consistent with the protection of human health and safety. If Lenovo determines that the levels of particulates or gases in your environment have caused damage to the device, Lenovo may condition provision of repair or replacement of devices or parts on implementation of appropriate remedial measures to mitigate such environmental contamination. Implementation of such remedial measures is a customer responsibility.

Table 1. Limits for particulates and gases

Contaminant	Limits
Particulate	- The room air must be continuously filtered with 40% atmospheric dust spot efficiency (MERV 9) according to ASHRAE Standard 52.2[1]. - Air that enters a data center must be filtered to 99.97% efficiency or greater, using high-efficiency particulate air (HEPA) filters that meet MIL-STD-282. - The deliquescent relative humidity of the particulate contamination must be more than 60%[2]. - The room must be free of conductive contamination such as zinc whiskers.
Gaseous	- Copper: Class G1 as per ANSI/ISA 71.04-1985[3] - Silver: Corrosion rate of less than 300 Å in 30 days

[1] ASHRAE 52.2-2008 - *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*. Atlanta: American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

[2] The deliquescent relative humidity of particulate contamination is the relative humidity at which the dust absorbs enough water to become wet and promote ionic conduction.

[3] ANSI/ISA-71.04-1985. *Environmental conditions for process measurement and control systems: Airborne contaminants*. Instrument Society of America, Research Triangle Park, North Carolina, U.S.A.

Telecommunication regulatory statement

This product may not be certified in your country for connection by any means whatsoever to interfaces of public telecommunications networks. Further certification may be required by law prior to making any such connection. Contact a Lenovo representative or reseller for any questions.

Electronic emission notices

When you attach a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices that are supplied with the monitor.

Federal Communications Commission (FCC) statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Lenovo is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that might cause undesired operation.

Industry Canada Class A emission compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Australia and New Zealand Class A statement

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility. Lenovo cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the installation of option cards from other manufacturers.

This product has been tested and found to comply with the limits for Class A equipment according to European Standards harmonized in the Directives in compliance. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

Lenovo, Einsteinova 21, 851 01 Bratislava, Slovakia

CE

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Germany Class A statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der Klasse A der Norm gemäß Richtlinie.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Lenovo empfohlene Kabel angeschlossen werden. Lenovo übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Lenovo verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Lenovo gesteckt/eingebaut werden.

Deutschland:

Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Betriebsmitteln Dieses Produkt entspricht dem „Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln" EMVG (früher „Gesetz über die elektromagnetische Verträglichkeit von Geräten"). Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln, EMVG vom 20. Juli 2007 (früher Gesetz über die elektromagnetische Verträglichkeit von Geräten), bzw. der EMV EU Richtlinie 2014/30/EU, für Geräte der Klasse A.

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraf 5 des EMVG ist die Lenovo (Deutschland) GmbH, Meitnerstr. 9, D-70563 Stuttgart.

Informationen in Hinsicht EMVG Paragraf 4 Abs. (1) 4: **Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.**

Nach der EN 55022: „Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen."

Nach dem EMVG: „Geräte dürfen an Orten, für die sie nicht ausreichend entstört sind, nur mit besonderer Genehmigung des Bundesministers für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind." (Auszug aus dem EMVG, Paragraph 3, Abs. 4). Dieses Genehmigungsverfahren ist nach Paragraph 9 EMVG in Verbindung mit der entsprechenden Kostenverordnung (Amtsblatt 14/93) kostenpflichtig.

Anmerkung: Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den Handbüchern angegeben, zu installieren und zu betreiben.

Japanese electromagnetic compatibility statements

Japan VCCI Class A statement

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波障害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。　　　　ＶＣＣＩ－Ａ

JEITA harmonics guideline - Japanese Statement of Compliance for Products More than 20A

定格電流が 20A／相を超える機器 (For products where input current is less than 20A/Phase of one PSU, but total system power is over 20A/Phase)

本製品は、１相当たり20Aを超える機器ですが、個々のユニットが「高調波電流規格 JIS C 61000-3-2適合品」であり、

本製品はその組み合わせであるため、「高調波電流規格 JIS C 61000-3-2適合品」としています

Korea Communications Commission (KCC) statement

이 기기는 업무용(A급)으로 전자파적합기기로
서 판매자 또는 사용자는 이 점을 주의하시기
바라며, 가정외의 지역에서 사용하는 것을 목
적으로 합니다.

This is electromagnetic wave compatibility equipment for business (Type A). Sellers and users need to pay attention to it. This is for any areas other than home.

Russia Electromagnetic Interference (EMI) Class A statement

ВНИМАНИЕ!
Настоящее изделие относится к оборудованию класса А. При использовании в бытовой обстановке это оборудование может нарушать функционирование других технических средств в результате создаваемых индустриальных радиопомех. В этом случае от пользователя может потребоваться принятие адекватных мер.

People's Republic of China Class A electronic emission statement

中华人民共和国"A类"警告声明

声 明
此为A级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

Taiwan Class A compliance statement

警告使用者:
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Taiwan BSMI RoHS declaration

單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
機架	○	○	○	○	○	○
外部蓋板	○	○	○	○	○	○
機械組合件	−	○	○	○	○	○
空氣傳動設備	−	○	○	○	○	○
冷卻組合件	−	○	○	○	○	○
內存模塊	−	○	○	○	○	○
處理器模塊	−	○	○	○	○	○
鍵盤	−	○	○	○	○	○
調製解調器	−	○	○	○	○	○
監視器	−	○	○	○	○	○
滑鼠	−	○	○	○	○	○
電纜組合件	−	○	○	○	○	○
電源	−	○	○	○	○	○
儲備設備	−	○	○	○	○	○
電池匣組合件	−	○	○	○	○	○
電池	−	○	○	○	○	○
有mech的電路卡	−	○	○	○	○	○
無mech的電路卡	−	○	○	○	○	○
雷射器	−	○	○	○	○	○

備考1.〝超出0.1 wt％〞及〝超出0.01 wt％〞係指限用物質之百分比含量超出百分比含量基準值。

Note1 : "exceeding 0.1wt%" and "exceeding 0.01 wt%" indicate that the percentage content
of the restricted substance exceeds the reference percentage value of presence condition.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note2 : "○"indicates that the percentage content of the restricted substance does not exceed the
percentage of reference value of presence.

備考3.〝−〞係指該項限用物質為排除項目。

Note3 : The "-" indicates that the restricted substance corresponds to the exemption.