

This document provides information about how to enable the premium feature key for the Lenovo ThinkSystem™ DE Series storage, or retrieve a previously generated key. When you are ordering a new premium feature or changing the storage host protocol, enable the premium feature key first.

Obtaining the premium feature key

- [“When ordering a new premium feature” on page 1](#)
- [“When changing the storage host protocol” on page 2](#)

When ordering a new premium feature

To obtain the premium feature key when you are ordering a new premium feature, prepare the storage machine type, chassis serial number, and feature enable identifier first.

Step 1. Locate the chassis serial number.

- a. From ThinkSystem System Manager, select **Support → SUPPORT CENTER**.
- b. Select the **Support Resources** tab, and then scroll to the **View top storage array properties** section.
- c. Locate the **Chassis Serial Number**.
- d. Copy and paste this value to a text file.

Step 2. Locate the feature enable identifier.

- a. From ThinkSystem System Manager, select **Settings → System**.
- b. Scroll down to **Add-ons**.
- c. Under **Enable a Premium Feature**, locate the **Feature Enable Identifier** (which is also referred to as the Safe ID).
- d. Copy and paste this value to a text file.

Step 3. Go to [Lenovo Features on Demand](#) to obtain the premium feature key.

- a. Log in to the Lenovo FoD Web site with your user account and password. If you have not previously registered, register first.
- b. Click the **Request activation key** tab.
- c. Enter your authorization code which was supplied to you by e-mail or on hard copy as part of the ordering process, and then click **Continue**.
- d. In the **Machine Type** field, select your machine type from the drop-down list box.
- e. In the **Machine Serial number** field, enter the chassis serial number.
- f. In the **Lenovo Storage Licensing Number** field, enter the feature enable identifier (Safe ID).
- g. Follow the instructions on the screen to generate the premium feature key.

The premium feature key can be downloaded or sent to a specified e-mail address after the authorization process is completed on the Lenovo FoD Web site.

When changing the storage host protocol

To obtain the premium feature key when you are changing the storage host protocol, first locate the feature code from the right-hand column of the table below, along with the machine type, CTO, chassis serial number, and feature enable identifier of your storage.

Step 1. Find the feature code for the desired configuration in the following tables. For DE4000H and DE4000F, the HIC port protocol setting only applies to the 16Gb FC/10GbE HIC (option PN: 4C57A14366).

For all other non-configurable HICs, only the base-board port selection applies, and HIC ports are not affected. Depending on your configuration, the controller might be shipped with or without two base-board ports on the rear.

- For the controller that has two base-board ports on the rear:

Table 1. Feature codes for DE2000H (7Y70CTO1WW, 7Y71CTO1WW)

DE2000H starting configuration		DE2000H ending configuration		Feature code
Controller submodel ID	Base-board ports	Controller submodel ID	Base-board ports	
422	FC	423	iSCSI	B4DH
423	iSCSI	422	FC	B4XC

Table 2. Feature codes for DE4000H (7Y74CTO1WW, 7Y75CTO1WW, 7Y77CTO1WW)

DE4000H starting configuration			DE4000H ending configuration			Feature code
Control-ler submo-del ID	Base-board ports	HIC ports (only for 16Gb FC/ 10GbE HIC)	Control-ler submo-del ID	Base-board ports	HIC ports (only for 16Gb FC/ 10GbE HIC)	
424	FC	FC	425	iSCSI	FC	B4XH
424	FC	FC	427	iSCSI	iSCSI	B4E1
424	FC	FC	426	FC	iSCSI	B4XK
425	iSCSI	FC	424	FC	FC	B4XJ
425	iSCSI	FC	426	FC	iSCSI	B4XM
425	iSCSI	FC	427	iSCSI	iSCSI	B4XP
426	FC	iSCSI	424	FC	FC	B4XL
426	FC	iSCSI	425	iSCSI	FC	B4XN
426	FC	iSCSI	427	iSCSI	iSCSI	B4XR
427	iSCSI	iSCSI	424	FC	FC	B4XG
427	iSCSI	iSCSI	425	iSCSI	FC	B4XQ
427	iSCSI	iSCSI	426	FC	iSCSI	B4XS

Table 3. Feature codes for DE4000F (7Y76CTO1WW)

DE4000F starting configuration			DE4000F ending configuration			Feature code
Control- ler submo- del ID	Base- board ports	HIC ports (only for 16Gb FC/ 10GbE HIC)	Control- ler submo- del ID	Base- board ports	HIC ports (only for 16Gb FC/ 10GbE HIC)	
428	FC	FC	429	iSCSI	FC	B4DK
428	FC	FC	430	FC	iSCSI	B4XU
428	FC	FC	431	iSCSI	iSCSI	B4G7
429	iSCSI	FC	428	FC	FC	B4DL
429	iSCSI	FC	430	FC	iSCSI	B4XW
429	iSCSI	FC	431	iSCSI	iSCSI	B4XY
430	FC	iSCSI	428	FC	FC	B4XV
430	FC	iSCSI	429	iSCSI	FC	B4XX
430	FC	iSCSI	431	iSCSI	iSCSI	B4Y0
431	iSCSI	iSCSI	428	FC	FC	B4XT
431	iSCSI	iSCSI	429	iSCSI	FC	B4XZ
431	iSCSI	iSCSI	430	FC	iSCSI	B4LZ

Table 4. Feature codes for DE6000H (7Y78CTO1WW, 7Y80CTO1WW)

DE6000H starting configuration			DE6000H ending configuration			Feature code
Controller submodel ID	Base-board ports	HIC ports	Control- ler submo- del ID	Base-board ports	HIC ports	
432	FC	Per HIC	433	iSCSI	Per HIC	B4JM
433	iSCSI	Per HIC	432	FC	Per HIC	B4XD
441	Disabled	NVMe-oF	433	iSCSI	Per HIC	B6Z0
433	iSCSI	Per HIC	441	Disabled	NVMe-oF	B6Z1
441	Disabled	NVMe-oF	432	FC	Per HIC	B6Z2
432	FC	Per HIC	441	Disabled	NVMe-oF	B6Z3

Table 5. Feature codes for DE6000F (7Y79CTO1WW)

DE6000F starting configuration			DE6000F ending configuration			Feature code
Controller submodel ID	Base-board ports	HIC ports	Controller submodel ID	Base-board ports	HIC ports	
434	FC	per HIC	435	iSCSI	per HIC	B4JK
435	iSCSI	per HIC	434	FC	per HIC	B4XE
442	Disabled	NVMe-oF	435	iSCSI	per HIC	B6Z4
435	iSCSI	per HIC	442	Disabled	NVMe-oF	B6Z5
442	Disabled	NVMe-oF	434	FC	per HIC	B6Z6
434	FC	per HIC	442	Disabled	NVMe-oF	B6Z7

Note: NVMe-oF includes NVMe over RoCE and NVMe over Fibre Channel, based on the installed HIC.

- For the controller that has no base-board ports on the rear:
No feature code is available for DE2000H (7Y70CTO2WW, 7Y71CTO2WW).

Table 6. Feature codes for DE4000H (7Y74CTO2WW, 7Y75CTO2WW, 7Y77CTO2WW)

DE4000H starting configuration		DE4000H ending configuration		Feature code
Controller submodel ID	HIC ports (only for 16Gb FC/10GbE HIC)	Controller submodel ID	HIC ports (only for 16Gb FC/10GbE HIC)	
424	FC	427	iSCSI	BQGY
427	iSCSI	424	FC	BQGZ

Table 7. Feature codes for DE4000F (7Y76CTO2WW)

DE4000F starting configuration		DE4000F ending configuration		Feature code
Controller submodel ID	HIC ports (only for 16Gb FC/10GbE HIC)	Controller submodel ID	HIC ports (only for 16Gb FC/10GbE HIC)	
428	FC	431	iSCSI	BQH0
431	iSCSI	428	FC	BQH1

Table 8. Feature codes for DE6000H (7Y78CTO2WW, 7Y80CTO2WW)

DE6000H starting configuration		DE6000H ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
441	NVMe-oF	432	Per HIC	BQH3
432	Per HIC	441	NVMe-oF	BQH2

Table 9. Feature codes for DE6000F (7Y79CTO2WW)

DE6000F starting configuration		DE6000F ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
442	NVMe-oF	434	Per HIC	BQH5
434	Per HIC	442	NVMe-oF	BQH4

Note: NVMe-oF includes NVMe over RoCE and NVMe over Fibre Channel, based on the installed HIC.

Table 10. Feature codes for DE6400H (7DB6CTO2WW)

DE6400H starting configuration		DE6400H ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
530	FC	531	NVMe/FC	BT7H
531	NVMe/FC	530	FC	BT7J
530	NVMe/RoCE	531	NVMe/IB	BS87
530	NVMe/RoCE	532	iSER	BS88
530	NVMe/RoCE	533	SRP	BS89
531	NVMe/IB	530	NVMe/RoCE	BSV1
531	NVMe/IB	532	iSER	BSV2
531	NVMe/IB	533	SRP	BSV3
532	iSER	530	NVMe/RoCE	BSV4
532	iSER	531	NVMe/IB	BSV5
532	iSER	533	SRP	BSV6
533	SRP	530	NVMe/RoCE	BSV7
533	SRP	531	NVMe/IB	BSV8
533	SRP	532	iSER	BSV9

Table 11. Feature codes for DE6400F (7DB6CTO1WW)

DE6400F starting configuration		DE6400F ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
546	FC	547	NVMe/FC	BT7L
547	NVMe/FC	546	FC	BTK1
546	NVMe/RoCE	547	NVMe/IB	BS84
546	NVMe/RoCE	548	iSER	BS85
546	NVMe/RoCE	549	SRP	BS86
547	NVMe/IB	546	NVMe/RoCE	BSVM
547	NVMe/IB	548	iSER	BSVN
547	NVMe/IB	549	SRP	BSVP
548	iSER	546	NVMe/RoCE	BSVQ
548	iSER	547	NVMe/IB	BSVR
548	iSER	549	SRP	BSVS
549	SRP	546	NVMe/RoCE	BSVT
549	SRP	547	NVMe/IB	BSVU
549	SRP	548	iSER	BSVW

Table 12. Feature codes for DE6600H (7DB7CTO2WW)

DE6600H starting configuration		DE6600H ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
534	FC	535	NVMe/FC	BT7K
535	NVMe/FC	534	FC	BTK0
534	NVMe/RoCE	535	NVMe/IB	BS8D
534	NVMe/RoCE	536	iSER	BS8E
534	NVMe/RoCE	537	SRP	BS8F
535	NVMe/IB	534	NVMe/RoCE	BSVB
535	NVMe/IB	536	iSER	BSVC
535	NVMe/IB	537	SRP	BSVD
536	iSER	534	NVMe/RoCE	BSVE
536	iSER	535	NVMe/IB	BSVF
536	iSER	537	SRP	BSVG
537	SRP	534	NVMe/RoCE	BSVH
537	SRP	535	NVMe/IB	BSVJ
537	SRP	536	iSER	BSVK

Table 13. Feature codes for DE6600F (7DB7CTO1WW)

DE6600F starting configuration		DE6600F ending configuration		Feature code
Controller submodel ID	HIC ports	Controller submodel ID	HIC ports	
542	FC	543	NVMe/FC	BT7M
543	NVMe/FC	542	FC	BTK2
542	NVMe/RoCE	543	NVMe/IB	BS8A
542	NVMe/RoCE	544	iSER	BS8B
542	NVMe/RoCE	545	SRP	BS8C
543	NVMe/IB	542	NVMe/RoCE	BSVX
543	NVMe/IB	544	iSER	BSVY
543	NVMe/IB	545	SRP	BSVZ
544	iSER	542	NVMe/RoCE	BSW0
544	iSER	543	NVMe/IB	BSW1
544	iSER	545	SRP	BSW2
545	SRP	542	NVMe/RoCE	BSW3
545	SRP	543	NVMe/IB	BSW4
545	SRP	544	iSER	BSW5

Step 2. Locate the chassis serial number.

- From ThinkSystem System Manager, select **Support → SUPPORT CENTER**.
- Select the **Support Resources** tab, and then scroll to the **View top storage array properties** section.
- Locate the **Chassis Serial Number**.
- Copy and paste this value to a text file.

Step 3. Locate the feature enable identifier.

- From ThinkSystem System Manager, select **Settings → System**.
- Scroll down to **Add-ons**.
- Under **Change Feature Pack**, locate the **Feature Enable Identifier** (which is also referred to as the Safe ID).
- Copy and paste this value to a text file.

Step 4. Go to [Lenovo Features on Demand](#) to obtain the premium feature key.

- Log in to the Lenovo FoD Web site with your user account and password. If you have not previously registered, register first.
- Click the **Storage Host Protocol Change** tab.
- In the **Machine Type** field, select your machine type from the drop-down list box.
- In the **CTO** field, select your CTO from the drop-down list box.
- In the **Feature** field, select the feature code from the drop-down list box.
- In the **Machine Serial** field, enter the chassis serial number.
- In the **Safe ID or Feature Enable Identifier** field, enter the feature enable identifier (Safe ID).
- Follow the instructions on the screen to generate the premium feature key.

The premium feature key can be downloaded or sent to a specified e-mail address after the authorization process is completed on the Lenovo FoD Web site.

Note: For more information about changing the host protocol, refer to the “Host port protocol” section in the *ThinkSystem DE Series Hardware Installation and Maintenance Guide for 2U Enclosures* at: https://thinksystem.lenovofiles.com/storage/help/topic/thinksystem_storage_de_series/overview.html

Enabling the premium feature key with ThinkSystem System Manager

Once the premium feature key is ready, use the ThinkSystem System Manager to apply the premium feature key and activate the premium feature.

Note: Ensure that you have downloaded the premium feature key on the management client (the system with a browser for accessing the ThinkSystem System Manager).

- Step 1. Select **Settings** → **System**.
- Step 2. Under **Add-ons**, select **Enable Premium Feature**.
The Enable a Premium Feature window opens.
- Step 3. Click **Browse**, and then select the premium feature key file.
The file name is displayed in the window.
- Step 4. Click **Enable**.

Retrieving a license key

To retrieve a license key that has been previously generated for a DE series storage, go to [Lenovo Features on Demand](#) Web site.

- Step 1. Log in to the Lenovo FoD Web site with your user account and password. If you have not previously registered, register first.
- Step 2. Click the **Retrieve history** tab on the left bar.
- Step 3. In the **Search type** field, select your search type from the drop-down list box.
- Step 4. In the **Search value** field, enter the corresponding search value data.

Notes:

- If you have selected **Search history via UID** in the **Search type** field, enter the feature enable identifier (Safe ID) of the DE Storage system(s) that require the license key.
- If you have selected **Search history by machine type serial number** in the **Search type** field, an example format is **7Y75 J200BDJ6**.

- Step 5. Click **Continue**.
- Step 6. From the Retrieve history screen, you can select the license key(s) that need to be retrieved or you can select **Select All**. Then select **Email**.
- Step 7. When the license key is received, follow the instructions in [“Enabling the premium feature key with ThinkSystem System Manager” on page 8](#) to apply the license key.

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