



ThinkSmart Edition Tiny (M920q) and Core for Polycom: Recovery Instructions



Version 9.0

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Revisions

Date	Changes
10/25/203	Documentation update for LCD 3.0
1/24/2024	Update for New Images
9/3/2024	Update for LCD 3.1

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1. Introduction

This document describes how to restore an operating system using the Lenovo Cloud Deploy system from Lenovo®.

The three high level steps are as follows:

- Download and install the Media Creation tool.
- Create a USB key to boot the failing machine.
- Restore the machine image from Lenovo Cloud.

The process is performed on a healthy PC with a valid internet connection.

2. Technical requirements

- Microsoft® Windows 10 or higher
- .NET Framework 4.8 or higher must be installed
- Local Ports 5555, 55819
- Internet connection (a wired internet connection is required when using online USB media)
 - Quick Image Capture – 9 Mb/s upload
 - Quick Image Restore, Restore System Wizard, Package Transfer – 1 Mb/s download
- 32 GB USB key (2.0 or 3.0) or greater if caching the image to the key
- Machine has access to the internet
- Machine has a wired connection.
- Default BIOS settings

3. Quick start steps

1. Launch a web browser and go to the following site: <https://lenovoclouddeploy.com/>
2. Click the **Sign in** button.
3. Enter Polycomrecovery@polycomrecovery.com as the email address.
4. Click **Lookup**.
5. Enter the password: **PolyRec920Q** and then click **Submit**.
6. Once you have logged on to the website, scroll down the page. Under Lenovo Cloud Deploy, click on the **Download** button.
7. When the download finishes, run **SetupLCMT_x64.msi**
8. Click **Next** on the Welcome window.
9. Click **FINISH** button after the installation is complete.
10. Lenovo Cloud Deploy launches
Enter the UserID: Polycomrecovery@polycomrecovery.com and then click **Lookup**
11. Then Enter the password: **PolyRec920Q**
12. Click Restore another computer
13. Click Lenovo systems licensed for Windows
14. Click Intel or AMD processor
15. Insert your USB device (must be 32 gig or greater)
16. Click **Next** when the USB device shows in Select your USB
17. On the next screen, choose the image you want to restore by clicking the **On Media** button. Then click **Next**.
18. **Check** the I want this USB media erased and created into Lenovo Cloud Deploy boot media. Then click **Create**. The key is created when you see the screen title **Follow these steps to begin the Lenovo Deployment**. Click **Finish**.
 - a. This step may take a few minutes based on the speed of your network and the size of the image.

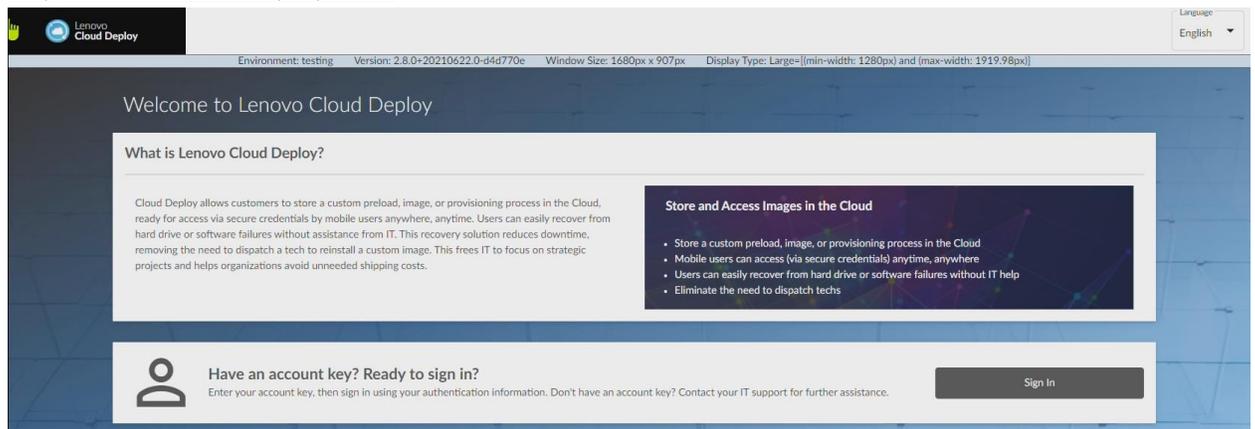
-
- b. Ensure that the USB key you are using is larger than the size of the image you wish to restore.
 19. Connect the Lenovo Cloud Deploy USB Media to the target computer.
 20. Temporarily disconnect the target computer from the network by unplugging the network cable.
 21. Turn on or reboot the computer.
 22. For a Lenovo computer, press **Enter** to interrupt normal startup and select the option to choose a temporary startup device.
 23. Select the appropriate boot entry that references your USB boot media.
 24. The computer boots from the USB device and launches Lenovo Cloud Deploy.
 25. Follow the prompts to recover the system.
 - a. You receive a prompt that “You are not connected to the internet”. Click **Continue**.
 - b. Restore a computer using Lenovo Cloud Deploy. Click **Next**.
 - c. Choose your deployment, then click **Next**.
 - d. Check I understand my internal hard drive will be erased and I am ready to restore my system now.
 - e. Click Restore
 26. The system is recovered when prompted to remove the USB key and click reboot.
 27. Reconnect the system to the network and reboot.

4. Guided walkthrough

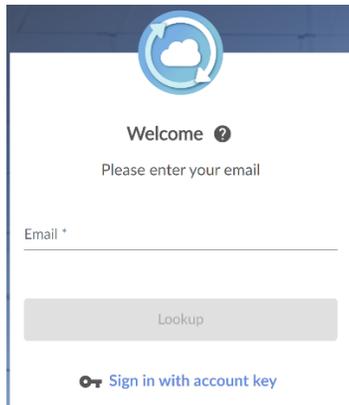
Downloading and installing the Media Creation tool

1. Launch a web browser and go to the following site:

<https://lenovoclouddeploy.com/>



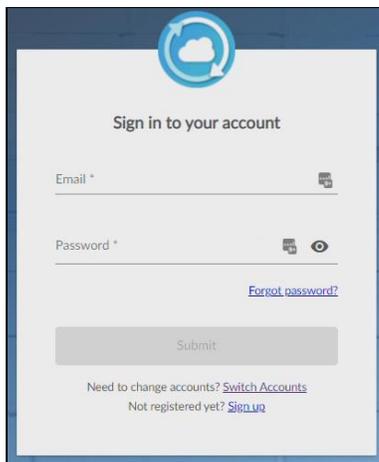
2. Click **Sign in**.



3. Enter: Polycomrecovery@polycomrecovery.com

4. Click **Lookup**

5. Enter your password: **PolyRec920Q**



6. Alternatively, click on **Sign in with account key**

7. Enter in the key: **AVFPWECXUM4KV7YFEHHW**, then click the **Submit** button.

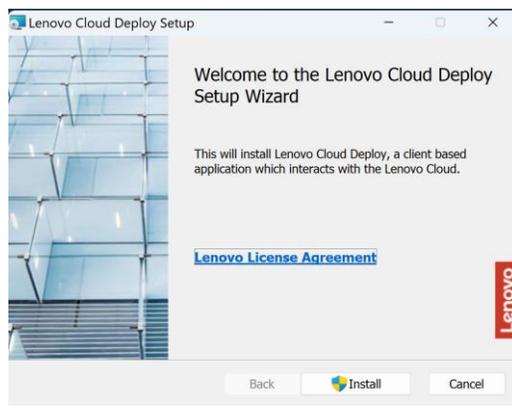
- If the password or email does not allow you to login, please ensure you are typing the information correctly. Make sure the Language selection in the upper right hander corner of the screen matches your keyboard. The application will default to the windows OS language and keyboard. This is also critical when restoring the system from the USB key. The languages and keyboard on the USB key will default to the language and keyboard of the system that you created the recovery key on.
- The “forgot password” and “not registered yet” buttons are not supported on this recovery account. If the account becomes locked, please wait 10 minutes before proceeding.

- The process no longer requires the use of a customer key. If you use the user ID, Polycomrecovery@polycomrecovery.com, you do not need the key.

8. Click on the **Download** button under Lenovo Cloud Deploy



9. When the download finishes, click SetupLCMT_x64.msi
10. When the installation program launches, you see the welcome screen.



Follow the onscreen instructions to install the Lenovo Cloud Deploy Application

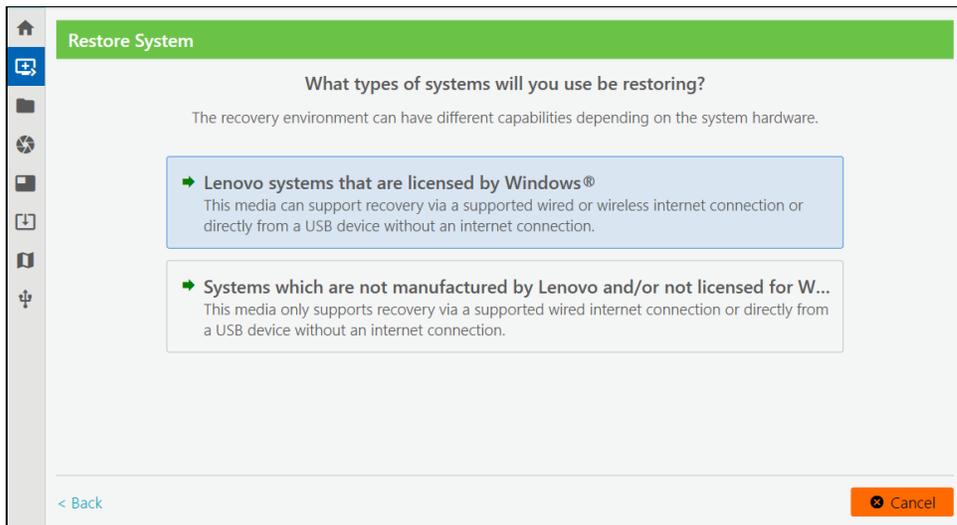
11. When the installation is complete, ensure the **Launch** button is checked (It is by default).
12. When the installation is complete, click the **Finish** button, Lenovo Cloud Deploy application will launch

Creating the USB recovery key

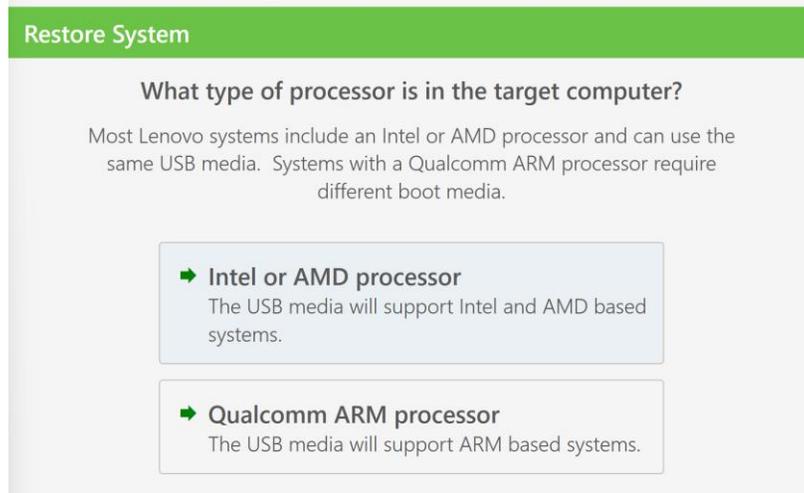
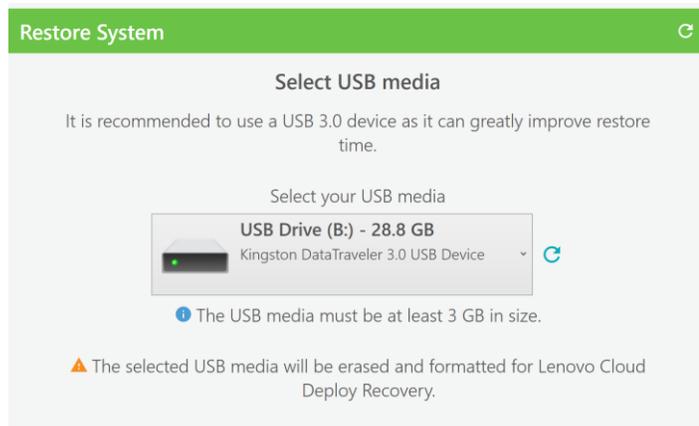
1. Launch Lenovo Cloud Deploy
2. The login populates the username Polycomrecovery@polycomrecovery.com.
3. Enter the password: **PolyRec920Q** and then click **Sign In**.
4. Click Restore another computer.



5. Select **Lenovo systems that are licensed by Windows®**



6. Select Intel or AMD processor

7. The next screen shows **Let's create bootable USB media for online deployments.** Insert a USB key of 32GB or greater.8. The page should refresh, identifying the USB key. Click **Next**.

- Note that the description for Select your USB Media may differ as it depends on the key.

- Due to security measures, the key is only valid for 180 days.
- You can have multiple images on the USB key

9. The following screen appears. Click **On Media** to switch it on. Then click **Next**.

Note that you can have multiple images on the USB key.

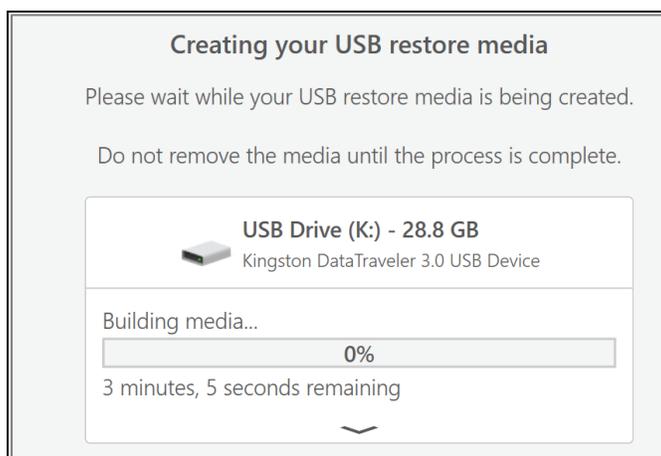
<input type="checkbox"/>		ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - US English Language Support (21H2)	 Production	6/5/2023 1:42:26 PM	8.79 GB
<input type="checkbox"/>		ThinkSmart Edition CORE Zoom for Poly - US English Language Only Support	 Production	1/24/2022 1:46:25 PM	7.89 GB
<input type="checkbox"/>		ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - Multi Language Support (21H2)	 Production	6/5/2023 1:42:34 PM	17.1 GB
<input type="checkbox"/>		ThinkSmart Edition CORE Zoom for Poly - WW Language Support	 Production	1/24/2022 1:46:19 PM	15.0 GB

10. There are 4 images contained in the Poly Recovery Portal

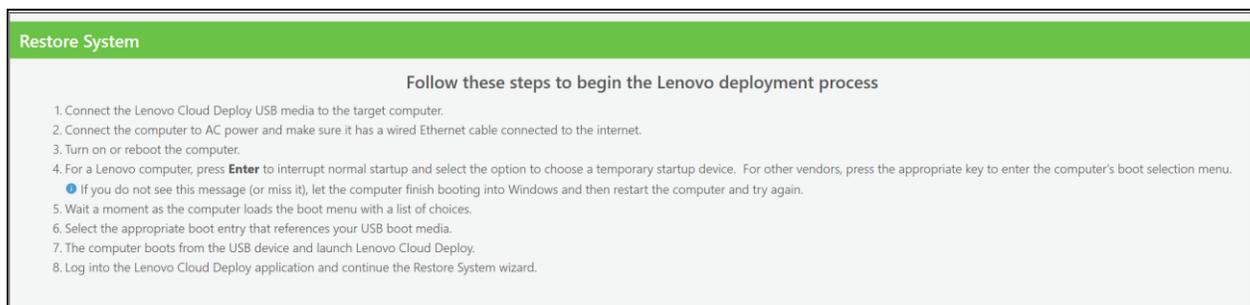
- f. ThinkSmart Edition Core Zoom for Poly – WW Language Support
- g. ThinkSmart Edition Core Zoom for Poly – US English Language Only Support
- h. ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - Multi Language Support (21H2)
- i. ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - US English Language Support (21H2)

- Ensure that you choose the correct image for your system as these images are not interchangeable.
- If you choose the wrong image, you can restore the correct image, but you will need to recreate your key.

11. The following screen appears while the USB key is created. Note that the process can take up to and more than 45 minutes.



12. When the USB key creation is complete, the following screen appears:



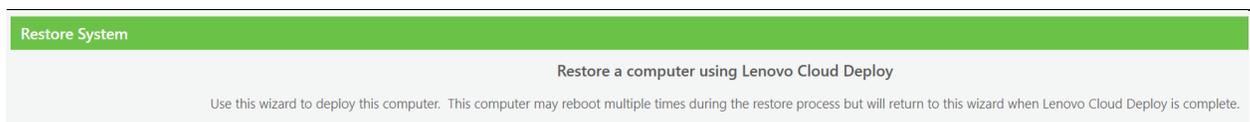
Restoring your machine (Media Restore)

- Note that before you begin, you need to confirm the machine's BIOS settings are set to default. Refer to the system documentation for instructions.

1. Insert the Lenovo Cloud Deploy USB Media into the target computer.
2. Connect the computer to the AC power and temporarily remove the systems from the network i.e. unplug the ethernet cable.
3. Turn on or reboot the computer.
4. For a Lenovo computer, press **Enter** to interrupt normal startup and select the option to choose a temporary startup device.

- Note that if you do not see/make this selection, let the computer finish booting into Windows and then restart the computer and try again.

5. Wait a moment as the computer loads the boot menu with a list of choices.
6. Select the appropriate boot entry that references your USB device.
7. The computer boots from the USB device and launches Lenovo Cloud Deploy.
8. The message appears: "You are not connected to the Internet". Click **Continue**.
9. The **Restore System** screen opens. Click **Next**.



10. The **Choose Deployment** screen appears. Ensure the box for the image is checked, and click **Next**.

<input type="checkbox"/>		ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - US English Language Support (21H2)	 Production	6/5/2023 1:42:26 PM	8.79 GB
<input type="checkbox"/>		ThinkSmart Edition CORE Zoom for Poly - US English Language Only Support	 Production	1/24/2022 1:46:25 PM	7.89 GB
<input type="checkbox"/>		ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - Multi Language Support (21H2)	 Production	6/5/2023 1:42:34 PM	17.1 GB
<input type="checkbox"/>		ThinkSmart Edition CORE Zoom for Poly - WW Language Support	 Production	1/24/2022 1:46:19 PM	15.0 GB

11. There are 4 images contained in the Poly Recovery Portal

- a. ThinkSmart Edition Core Zoom for Poly – WW Language Support
- b. ThinkSmart Edition Core Zoom for Poly – US English Language Only Support
- c. ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - Multi Language Support (21H2)
- d. ThinkSmart Edition CORE and M920q MTR Recovery Image for Poly - US English Language Support (21H2)

- Ensure that you choose the correct image for your system as these images are not interchangeable.
- The core image is for core machines (i.e. models starting with 22R). the Tiny M920Q image is for Tiny M920Q systems (models starting with 10T).
- If you choose the wrong image, you can restore the correct image, but you will need to recreate your key.

12. On the next screen, check the box for I understand my internal hard drive will be erased. Then click Restore.

Restore System



Once the deployment begins, the internal hard drive will be erased and all user data will be lost!

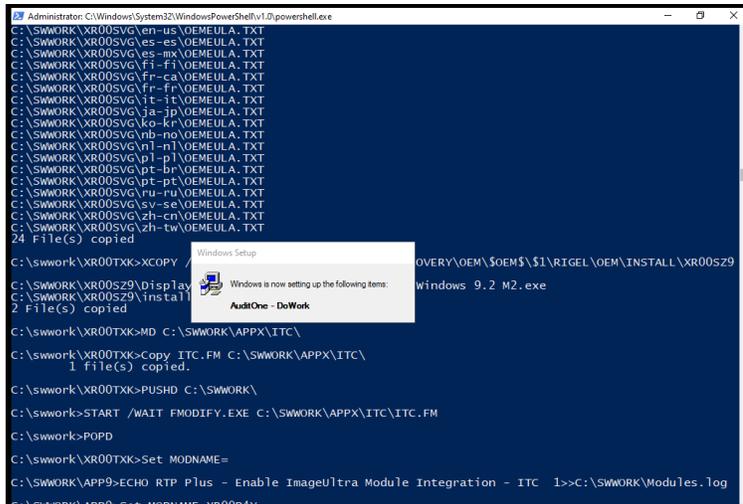
I understand my internal hard drive will be erased and I am ready to restore my system now.

13. The restore process begins. The process will require several reboots and you will see various screens.

- You can use the drop down to see how many steps are left to restore the image.

- After the image is restored from the cloud, the machine will boot into the image to run the MTR configuration process. Leave the USB key in the device until told to remove it.
- The machine will reboot several times.
- The duration of this step will depend on your Internet connection. Average times can range from 20 to 30 minutes.

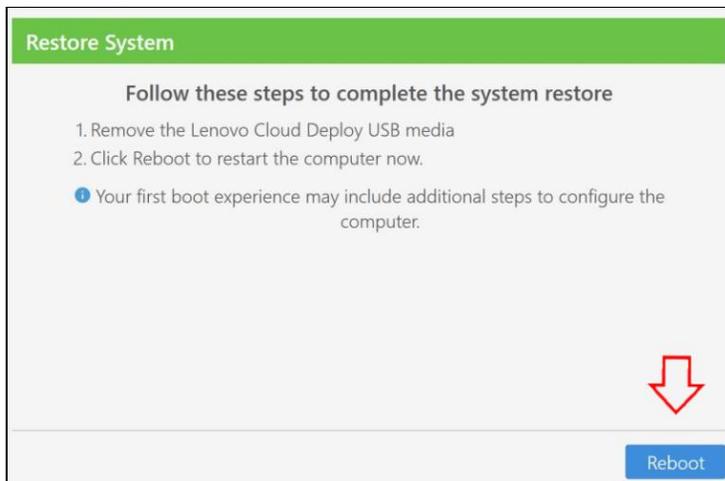
14. The following screen is displayed:



```

Administrator: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
C:\SWORK\XR00SVG\en-us\OEMEULA.TXT
C:\SWORK\XR00SVG\es-es\OEMEULA.TXT
C:\SWORK\XR00SVG\es-mx\OEMEULA.TXT
C:\SWORK\XR00SVG\fr-fr\OEMEULA.TXT
C:\SWORK\XR00SVG\fr-ca\OEMEULA.TXT
C:\SWORK\XR00SVG\fr-fr\OEMEULA.TXT
C:\SWORK\XR00SVG\fr-fr\OEMEULA.TXT
C:\SWORK\XR00SVG\ja-jp\OEMEULA.TXT
C:\SWORK\XR00SVG\ko-kr\OEMEULA.TXT
C:\SWORK\XR00SVG\nb-no\OEMEULA.TXT
C:\SWORK\XR00SVG\nl-nl\OEMEULA.TXT
C:\SWORK\XR00SVG\pt-pt\OEMEULA.TXT
C:\SWORK\XR00SVG\pt-br\OEMEULA.TXT
C:\SWORK\XR00SVG\pt-pt\OEMEULA.TXT
C:\SWORK\XR00SVG\ru-ru\OEMEULA.TXT
C:\SWORK\XR00SVG\sv-se\OEMEULA.TXT
C:\SWORK\XR00SVG\zh-cn\OEMEULA.TXT
C:\SWORK\XR00SVG\zh-tw\OEMEULA.TXT
24 File(s) copied
C:\swork\XR00TXK>XCOPY /O /Y /E /R /S /H /I /X /M /C /F /D /E /OEM\OEM$\$1\RIGEL\OEM\INSTALL\XR00sZ9
C:\swork\XR00sZ9\Display
C:\swork\XR00sZ9\install
2 File(s) copied
C:\swork\XR00TXK>MD C:\SWORK\APPX\ITC\
C:\swork\XR00TXK>Copy ITC.FM C:\SWORK\APPX\ITC\
1 File(s) copied.
C:\swork\XR00TXK>PUSHD C:\SWORK\
C:\swork>START /WAIT /MODIFY.EXE C:\SWORK\APPX\ITC\ITC.FM
C:\swork>POPD
C:\swork\XR00TXK>Set MODNAME=
C:\SWORK\APP9>ECHO RTP Plus - Enable ImageUltra Module Integration - ITC I>C:\SWORK\Modules.log
  
```

15. When the process is complete, the following screen appears. Click **Reboot**.



5. Troubleshooting

USB key issues

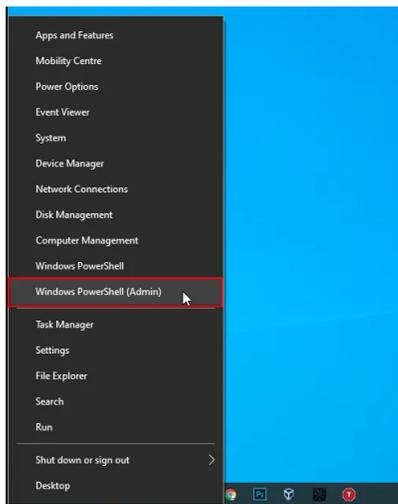
When the following error appears, it could be due to an IO error or a bad key:

- Try clicking **OK**, and then try running the process again.
- If this does not work, try:
 - Using DiskPart
 - Using Lenovo Cloud Deploy again to generate a new USB key.

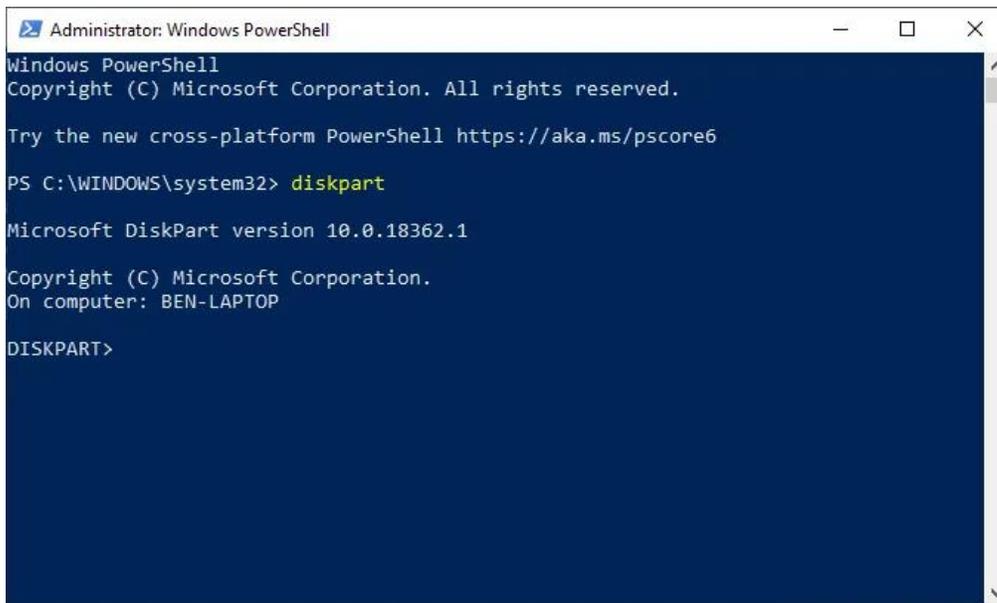
DiskPart instructions

- Caution: DiskPart is a destructive tool, requires administrative privileges, and must be used with care. If you are not comfortable with doing this, obtain a new key.
- Note that your disk number and drive letters may vary.

1. Open a Windows command line or PowerShell terminal. (To do this, right-click your Windows Start menu button and then click Windows PowerShell [Admin].)



2. Type **diskpart** and then press **Enter**. The DISKPART prompt appears.



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> diskpart

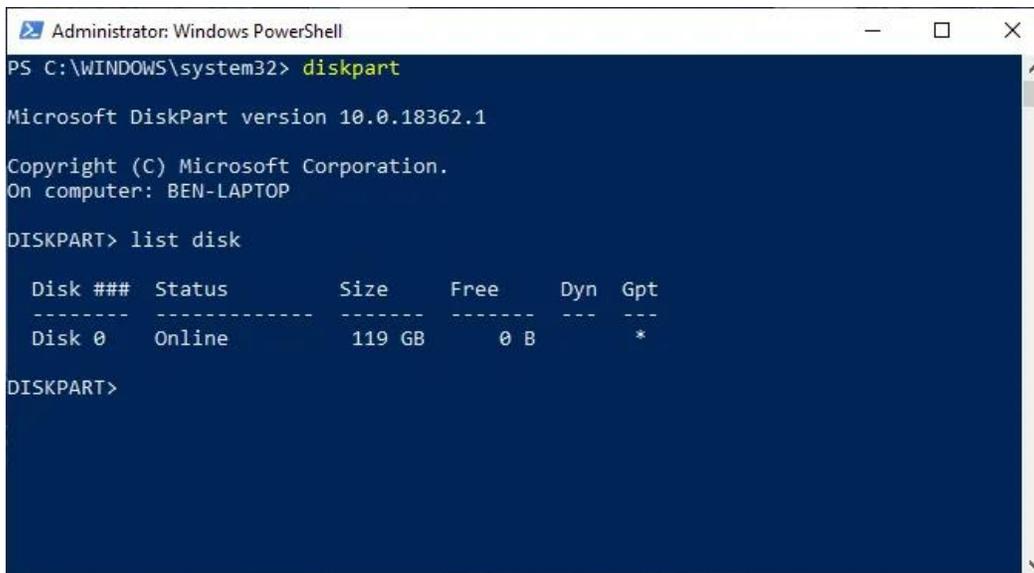
Microsoft DiskPart version 10.0.18362.1

Copyright (C) Microsoft Corporation.
On computer: BEN-LAPTOP

DISKPART>
```

3. At the **DISKPART>** prompt, type **list disk** and press **Enter**. Starting with the number zero, DiskPart will list any detected disks. You will need to remember the disk number (for instance, **0** for your Windows hard drive) to use with future DiskPart commands.

In this instance the USB drive in question is disk 6.



```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> diskpart

Microsoft DiskPart version 10.0.18362.1

Copyright (C) Microsoft Corporation.
On computer: BEN-LAPTOP

DISKPART> list disk

   Disk ###  Status              Size               Free              Dyn  Gpt
   -----  -
   Disk 0    Online              119 GB              0 B               *

DISKPART>
```

- Note that you can also ask DiskPart for a list of detected volumes. At the **DISKPART>** prompt, type **list volume**.

```

Administrator: Command Prompt - powershell
Microsoft Windows [Version 10.0.18363.900]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>powershell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> diskpart

Microsoft DiskPart version 10.0.18362.1

Copyright (C) Microsoft Corporation.
On computer: HOMESTATION

DISKPART> list disk

   Disk ###  Status         Size           Free           Dyn  Gpt
   -----  -
   Disk 0     Online         3726 GB        0 B            *
   Disk 1     Online         3726 GB        0 B            *
   Disk 2     Online         3726 GB        0 B            *
   Disk 3     Online         3726 GB        0 B            *
   Disk 4     Online          953 GB        0 B            *
   Disk 5     Online          953 GB        0 B            *
   Disk 6     Online           28 GB        0 B            *

DISKPART>
    
```

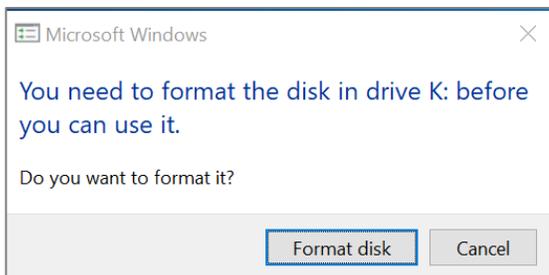
4. Type **sel disk 6** and press Enter. Disk 6 is now the selected disk.

5. Type **clean**. You should see the following:

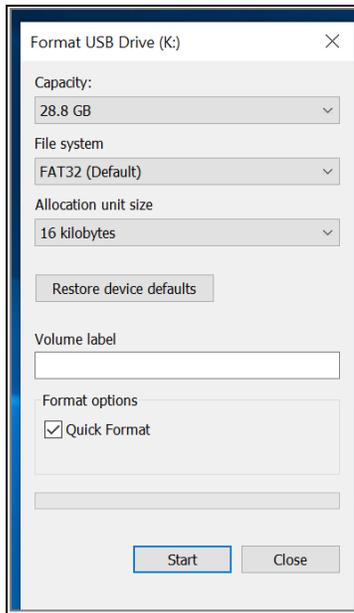
```

DiskPart succeeded in cleaning the disk
Create part prim
Diskpart succeeded in creating the specified partition
Assign
DiskPart successfully assigned the drive letter or mount point
    
```

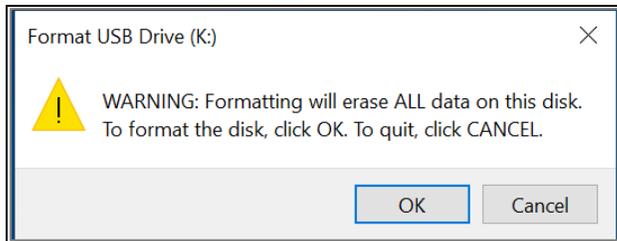
6. The following pop-up box appears. Click **Format disk**.



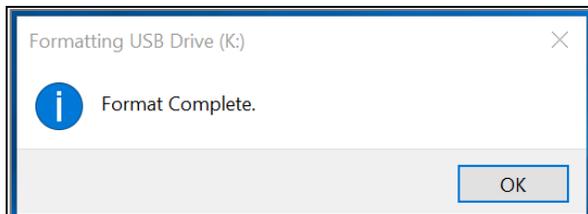
7. At the next pop-up box, click **Start**.



8. Click **OK**.



9. The system returns a message that formatting is complete. Click **OK**, and then click **Close**.



10. Return to the command prompt and type **exit**.

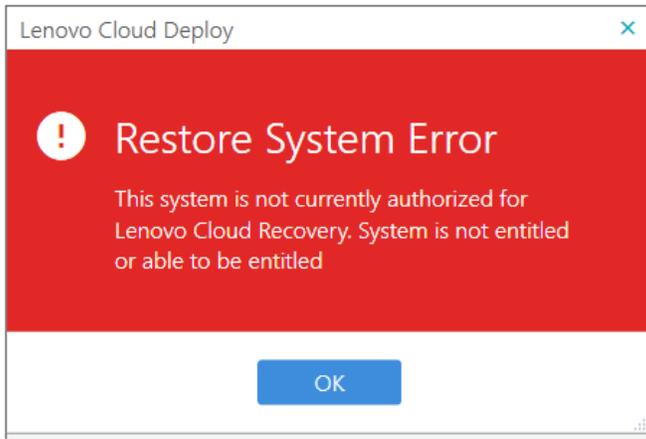
11. Type **exit** again to exit PowerShell.

12. Type **exit** again to exit the command prompt.

13. When you have completed using DiskPart, go back into the LCD tool and try recreating your key.

Unauthorized system

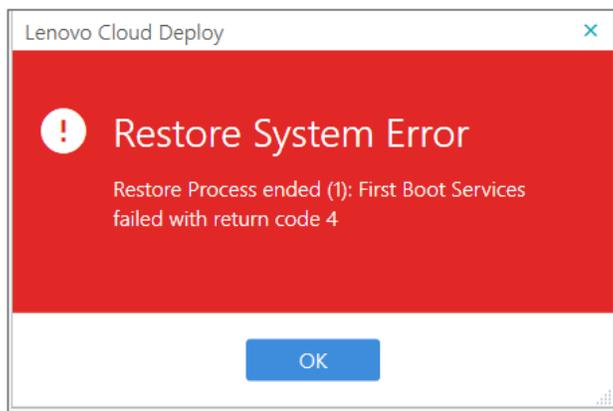
If your system is not authorized, you see the following error:



- This occurs if the machine was not registered in manufacturing.
- If the machine was serviced, you need to ensure that the serial and model numbers match the unit purchased from manufacturing.
- If the serial number and model number matches the unit purchased, please contact Premier support and ask for an escalation path

Wrong Digital Product Key

The following error appears when the wrong digital product key was entered.



You may need the system board replacing with the correct digital product key.

Log files

Whenever there is an issue using Lenovo Cloud Deploy, logs are required to help identify and resolve it.

In Windows, the application logs may be found in the `%TEMP%` directory. These two logs should always be included when opening tickets:

`LCD.LOG` (which is current/last run of LCD.EXE)

`LCD.LOG.1` (which contains all previous runs of LCD.EXE)

The service logs may be found in `%PROGRAMDATA%\Lenovo\Lenovo Cloud Deploy\Logs`. These logs are useful for debugging issues specific to the installed LCD service.

When using boot media, the files are found in the LOGS folder of the media.

Restore from Lenovo Cloud Deploy log files

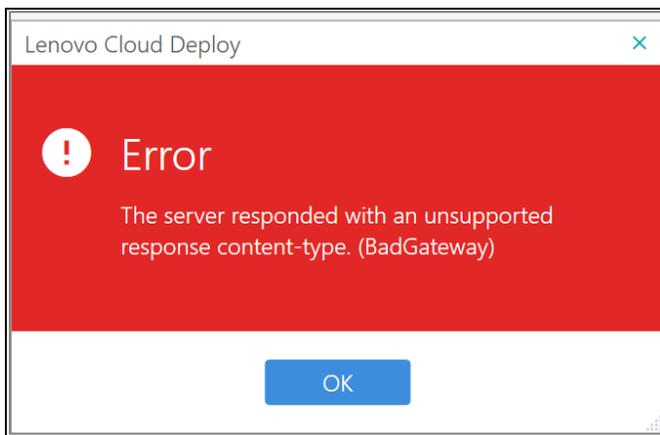
1. To open the help file, press F1 while in WinPE.

- **Note:** Translation is not supported in WinPE.

2. Press **CTRL+SHIFT+C** to open a command prompt.
3. The command prompt automatically opens into the relevant directory.
 - If LCD is running -> Z:\LOGS
 - If a restore is in process -> Z:\CURRENT_DEPLOY
4. Copy the folder and send the folder to Lenovo.

Network Drop Errors

The following error appears if the network connection is dropped.



Click **OK** and try again. If network issues keep happening, [obtain the logs](#), and provide them to Premier Support.

Lenovo Cloud Deploy Updates

From time to time, Lenovo Cloud Deploy will be updated. Some updates will require the user to update their installation and keys. The user will be prompted to update when launching the Lenovo Cloud Deploy application. If the customer is booting from an older key, they will also receive a warning that they will need to refresh the key.

Firewall Requirements

The Lenovo Cloud Deploy application uses the standard https port 443 and Transport Layer Security (TLS) version 1.2 to communicate with the cloud back-end environment. Corporate firewalls may need additional rules set up to allow communication with the Lenovo Cloud Deploy infrastructure.

Firewall Wild Cards

The following domains need to be whitelisted:

- **lenovoclouddeploy.com** – maintains all the customer, user, and content meta data.
- ***.lenovoclouddeploy.com** – delivers content.
- ***.s3.amazonaws.com** – receives uploaded content.

Firewall Wild Cards Unsupported

If your firewall does not support wildcards, then use the following values:

- **lenovoclouddeploy.com** – maintains all the customer, user, and content meta data.
- **diav4v6bggwod.lenovoclouddeploy.com** – delivers the content.

Depending on your Customer S3 Region, its associated domain will need to be whitelisted to support uploading content. See table below.

Domain	Region
lcd-production-us-east-1.s3.amazonaws.com	US East (N. Virginia)
lcd-production-ca-central-1.s3.amazonaws.com	Canada (Central)
lcd-production-ap-south-1.s3.amazonaws.com	Asia Pacific (Mumbai)
lcd-production-ap-southeast-2.s3.amazonaws.com	Asia Pacific (Sydney)
lcd-production-ap-northeast-1.s3.amazonaws.com	EU (Frankfurt)
lcd-production-eu-central-1.s3.amazonaws.com	Asia Pacific (Tokyo)
lcd-production-us-west-2.s3.amazonaws.com	EU (London)
lcd-production-sa-east-1.s3.amazonaws.com	South America (São Paulo)

Firewall Requires IP Addresses

If your firewall requires specific IP addresses, then please reference the following AWS website maintained by Amazon. It provides instructions on how to download a JSON file containing IP ranges for AWS services:

<https://docs.aws.amazon.com/general/latest/gr/aws-ip-ranges.html>

For the website, all entries matching the following region and service need to be allowed:

```
"region": "us-east-1", "service": "AMAZON"
```

For downloading content all entries matching the following service need to be allowed.

```
"service": "CLOUDFRONT"
```

Depending on your Customer S3 Region, the associated service “S3” needs to be whitelisted to support uploading content.

Domain	Region
lcd-production-us-east-1.s3.amazonaws.com	US East (N. Virginia)
lcd-production-ca-central-1.s3.amazonaws.com	Canada (Central)
lcd-production-ap-south-1.s3.amazonaws.com Asia	Pacific (Mumbai)
lcd-production-ap-southeast-2.s3.amazonaws.com	Asia Pacific (Sydney)
lcd-production-ap-northeast-1.s3.amazonaws.com	EU (Frankfurt)
lcd-production-eu-central-1.s3.amazonaws.com Asia	Pacific (Tokyo)
lcd-production-us-west-2.s3.amazonaws.com	EU (London)
lcd-production-sa-east-1.s3.amazonaws.com	South America (São Paulo)

Proxy Requirements

Proxy servers must support Transport Layer Security (TLS) version 1.2. The API end points use request headers to identify and authorize the client application. An example request header may appear as follows:

```

LN-API-VERSION: 1.0
Authorization: Bearer
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4gRG9lIiwiaWF0IjoiYWRtaWwifQ.W4iOnRydWV9.TJVA95OrM7E2cBab30RMhrHDcEfxjoYZgeFONFh7HgQ
Ln-Auth-Cid: FKLAERADFE9898A
x-ln-product-name: Thinkpad T470
x-ln-serial-number: 89AD23D
x-ln-bios-version: ABC
x-ln-bios-vendor: Lenovo.com
x-ln-manufacturer: Lenovo.com
x-ln-version: 01
x-ln-enclosure-type: Notebook
user-agent-language: en-us

```

Companies that use a proxy server may need to configure it to leave these header values intact, to support Lenovo Cloud Deploy.