



Lenovo Device Manager Quick Start Guide

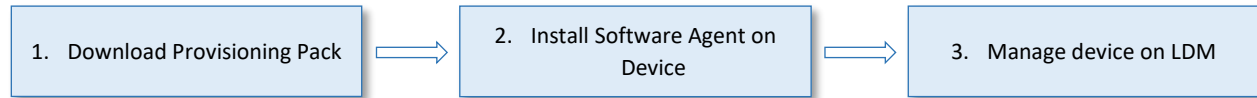
Name of Document	LDM Quick Start Guide
Version Number	V2.1
Release Date	28 July 2022
Modifications/Additions	Updated throughout to align with LDM 2.1

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Overview

The purpose of this guide is to help you smoothly onboard one or more devices in your organization to the Lenovo Device Manager platform.



Note for New User: To set up a new LDM account, it is mandatory to have a Lenovo ID and get an email invitation registered with Lenovo. Once admin account is set up, the administrator can invite other users within the organization to create accounts based on the roles and permissions granted to them.

You can onboard one or more devices to LDM platform through the LDM→Device Management / Devices page. This process may vary based on the device type and operating system as described below. This guide will provide quick instructions for each category type.

Current Device Type Categories				
	PCs	SmartEdge	Tablet / Mobile	AR / VR
Examples	Any Lenovo notebook, desktop, workstation, etc	Any Lenovo edge appliance and servers	Any Lenovo tablets or mobile device	Any Lenovo AR or VR appliance
Current Install Options	 <ul style="list-style-type: none"> Automatically (Provisioning Package download) Manually (individual or bulk) 	 <ul style="list-style-type: none"> Automatically with Provisioning Package download Manually (individual or bulk) 	 <ul style="list-style-type: none"> Automatically with QR code scan Manually (individually) 	Currently Unavailable in LDM 2.1 <i>Will return in LDM 2.2</i>

The UDC software agent bundle includes:

- UDC setup zip file
- Provisioning token
- Provisioning script (ps1)
- Config policy files
- Readme file

1 Add Windows Devices

Lenovo Device Manager supports an automated process that simplifies the onboarding of Windows devices by providing a .zip file with the necessary files to be easily downloaded and applied to devices. Any **Lenovo Windows device** can be automatically claimed on the LDM platform by installing the LDM Provisioning Pack to the device.

The package is a zip file - organization-setup.zip. It has:

1. Installer_jwt file - A JSON Web Token (JWT) format for secure exchange of the information between LDM server and organization devices.
2. Install-ldm.bat – A script that has series of commands for installation for LDM software.
3. README.txt file
4. register-udc-ldm.ps1 - PowerShell script for the registration of Universal Device Client (UDC).
5. Udc.zip - A compressed zip folder that has UDC setup and UDC Service information, task control settings, device parameters to be fetched when the provisioning pack is run on it.
6. config_policy & bridge_config_policy files – These are the encrypted files contains the policy configuration of the organization.

The setup is unique for the organization and must not be shared.

4. Follow **Step 1 on screen** (as shown on Figure 2 below)
 - a. Select “Download Provisioning Pack”. The Provisioning Pack will download and is now available to use on the current device, distribute to multiple devices, or save to USB for on-prem installation.

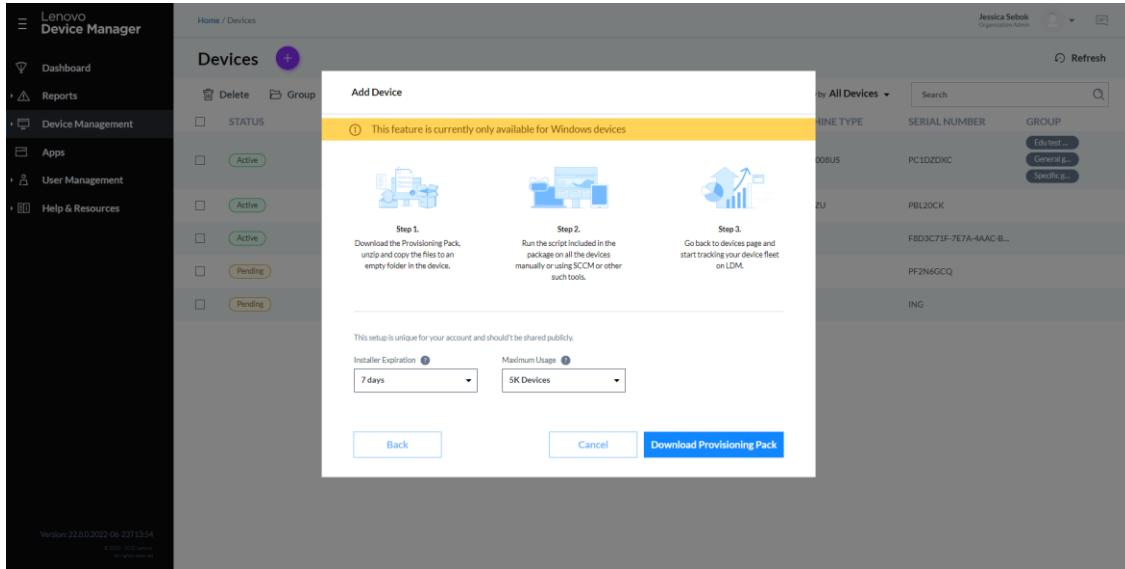


Figure 2

- b. Once installed, a “Download Successful” message will appear.

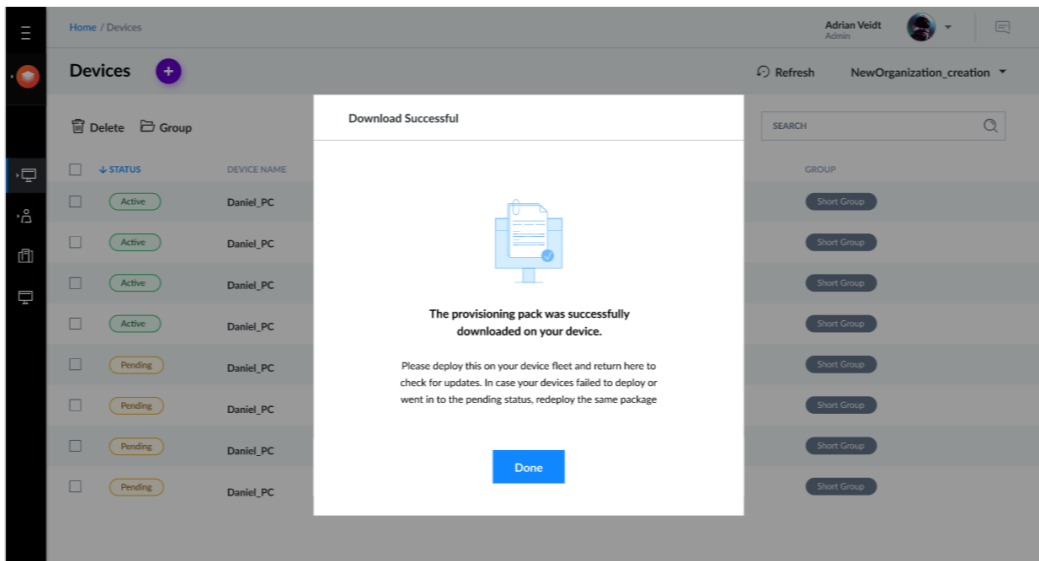


Figure 3

- c. Unzip and copy the files to an empty folder in the device. For example, as shown below into C:\temp\LDM.

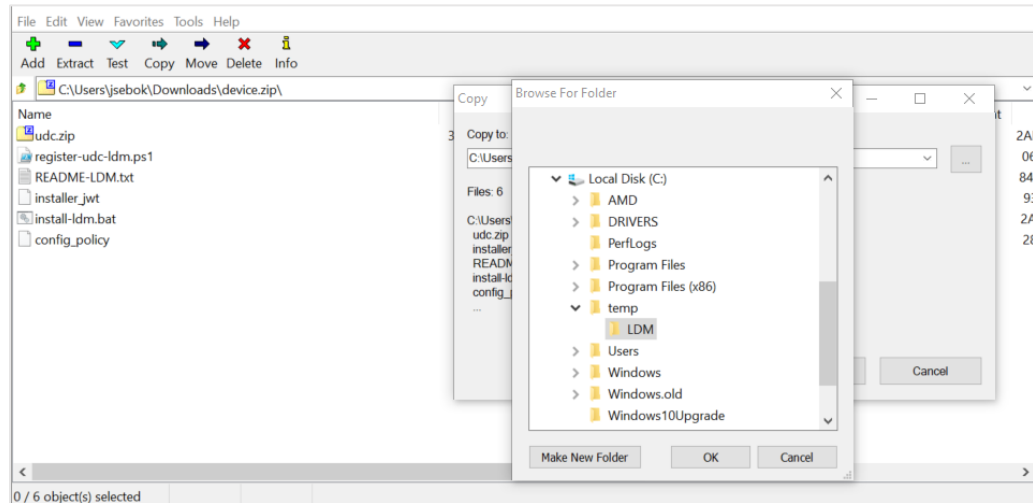
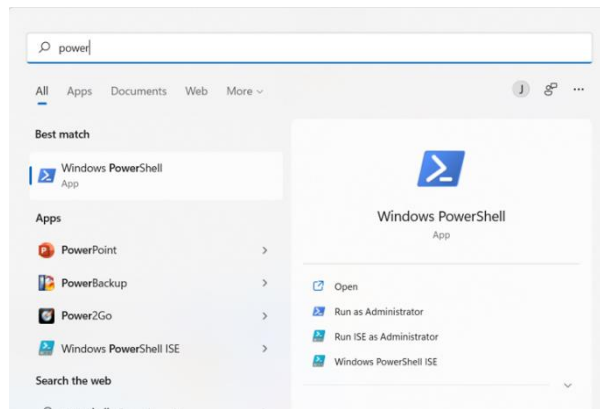


Figure 4

5. Follow **Step 2 on screen** (as shown on Figure 2)

- a. Execute the PowerShell script as an Administrator.
 - Open an administrative command prompt
 - Type Powershell to open PowerShell in the command line
 - From CMD prompt, enter:


```
> cd C:\temp\LDM\  
C:\temp\LDM> .\register-udc-ldm.ps1
```



Note: If you get an “UnauthorizedAccess” message, please run the following command to enable the PowerShell script to run without issues: > Set-ExecutionPolicy Unrestricted

6. Follow **Step 3 on screen** (as shown on Figure 2)

- a. Check the device list. Once the device status should now be listed as Active.

Note: If onboarding is not successful, check the [error listing](#) at the end of this guide for follow up actions.

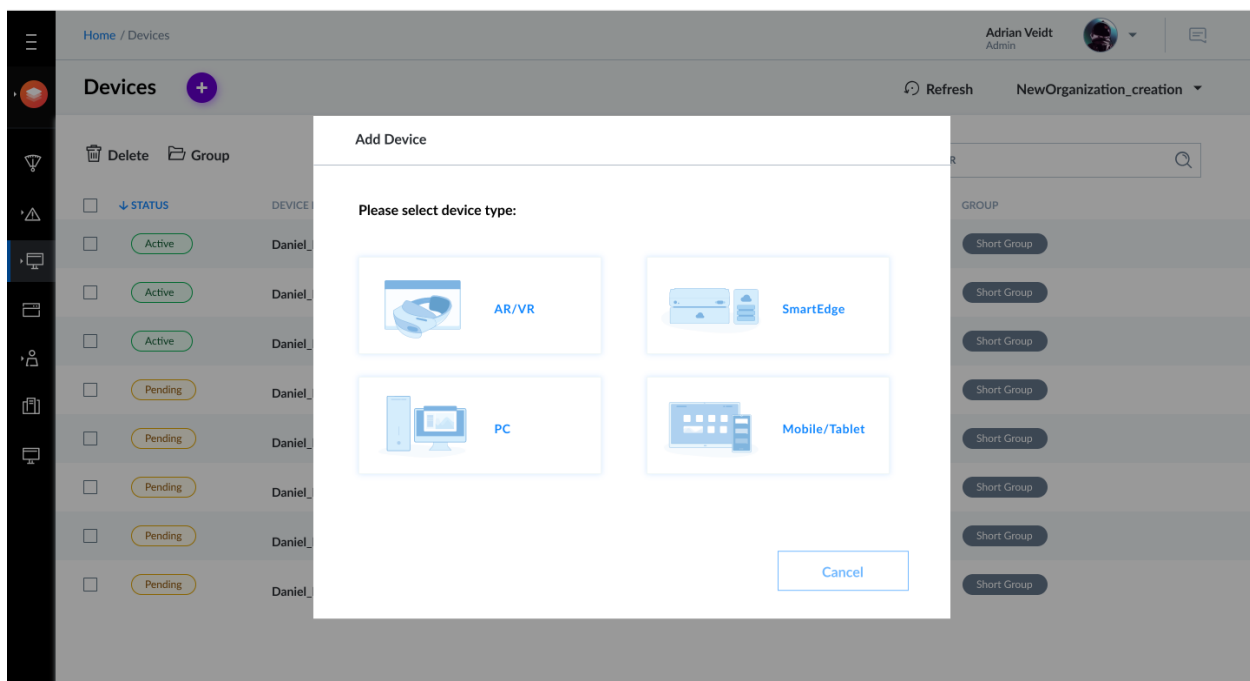
7. Execute the previous steps on every Windows device in the fleet.

2 Add Android Devices

Any Lenovo Android device can be claimed and provisioned by scanning a QR code from the LDM platform.

2.1 Claim a device with a QR code

1. Go to **Device Manager** → **Devices** and click on **+** ("Claim Device") button
2. Select the *Device Type* that fits the device to be added: "Mobile/Tablet" (Note: AR/VR devices are not supported in LDM 2.1 but will return in LDM 2.2).



3. **Scan the QR Code using the camera on the device** to register the device to the LDM organization, install the UDC agent AND provision all device configurations automatically.

4. **If the device is not immediately available to scan the QR code** or you need to distribute it to multiple devices, you can also select “Download the QR Code” to download it in the following formats:

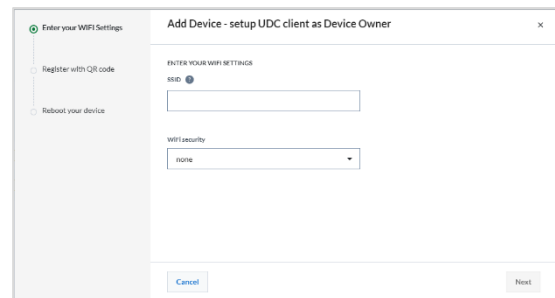
- PNG
- JPEG
- SVG
- PDF



5. **To set up the UDC client as Device Owner**, select the “Setup UDC client as Device Owner” option

a. Add WIFI information:

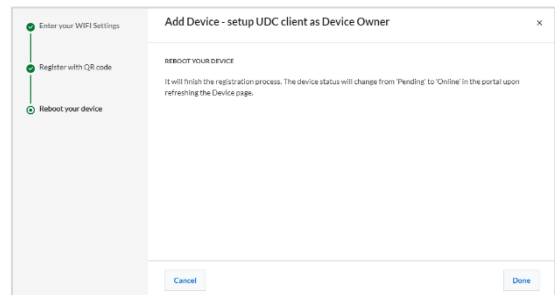
- Enter SSID
- Select WIFI security from dropdown (wpa, wep, or eap)
- Click “Next” button



b. Scan QR Code with device and click “Next”



c. Reboot your device to finish the registration process.

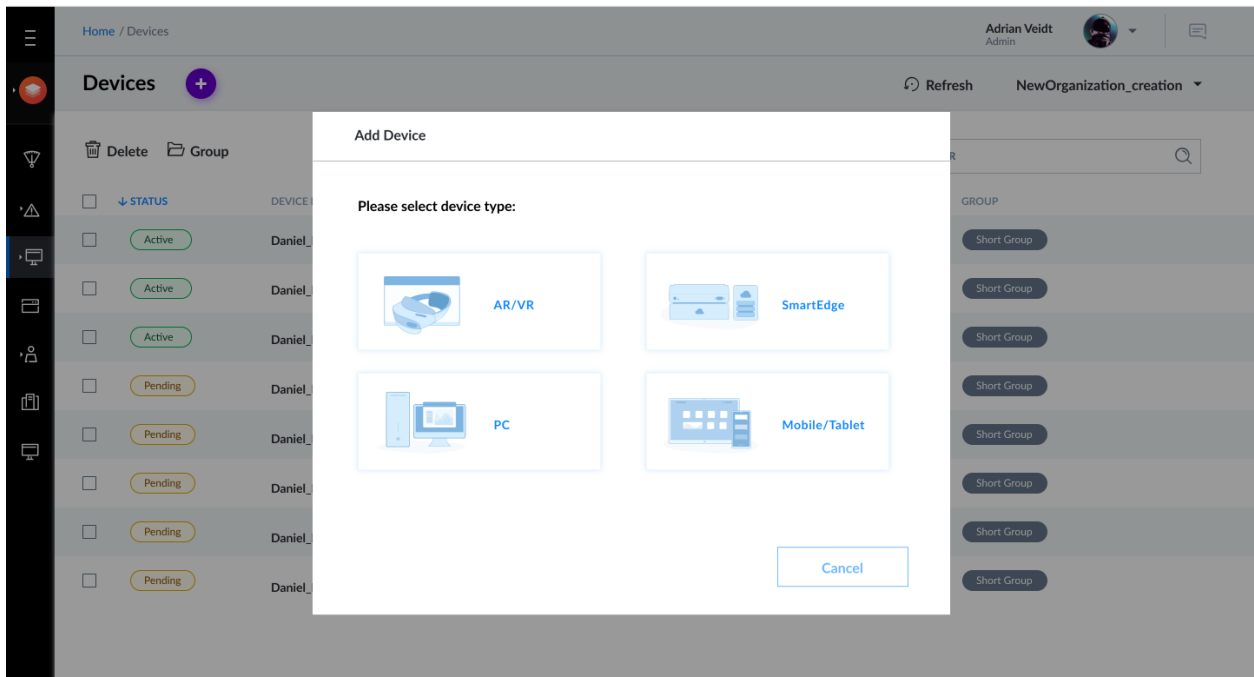


6. Check/refresh the device list. Once the device status should now be listed as **Active**.

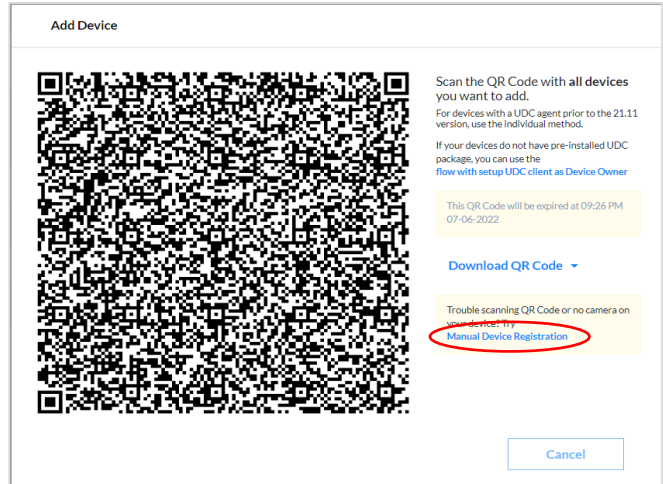
2.2 Manually register an Android device

If the device does not have a camera or there are issues scanning the QR code, you can manually register device:

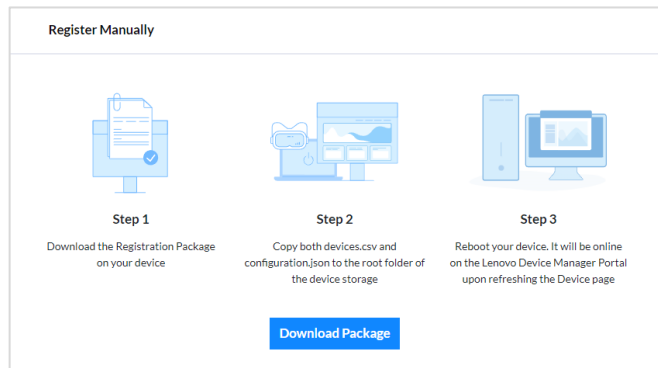
1. Go to **Device Manager** → **Devices** and click on **+** ("Claim Device") button
2. Select the *Device Type* that fits the device to be added: "Mobile/Tablet" (Note: AR/VR devices are not supported in LDM 2.1 but will return in LDM 2.2).



3. Select the **“Manual Device Registration”** option from the **“Add Device”** screen



4. Follow the instructions to manually install the Provisioning Package on the device:
 - a. Click on **“Download File”** to download the .json file
 - b. Copy the .json file to your device
 - c. Reboot your device



5. Check/refresh the device list. Once the device status should now be listed as **Active**.

3 Installing the Intel vPro® Agent

The Intel vPro® agent can be installed to devices with the Intel vPro® chip automatically during provisioning or manually after the devices are claimed on LDM. To install the Intel vPro® agent, follow the steps found in the LDM User Guide, section 3.4 *Intel vPro® Support*.

4 Requirements

Client software for this solution has a few requirements that the device must meet

Category	Requirement
Manufacturer	Currently any Lenovo device (Windows or Android) is supported
Operating System	Windows 10 version 1809 ("October 2018 Update") or higher <ul style="list-style-type: none"> • 64-bit OS • Special editions such as "10 S" or "10x" are not currently supported Android version 10 or higher
Hardware	<ul style="list-style-type: none"> • Trusted Platform Module (TPM) 2.0 enabled • Processor supports x86 instruction set architecture
Environment	<ul style="list-style-type: none"> • Access to the Internet - specifically *.uds.lenovo.com on ports 80, 443 & 8883 • Proxy is supported in some scenarios. Devices may require additional configuration to support. Refer to Using the Troubleshooter Section for details

Note: Intel vPro functionality may vary based on the version of vPro installed on the device. Devices with versions prior to Intel Gen 15 may not have full remote management capabilities.

Note: Virtual machines and virtual machine hypervisors are not supported

Important Note on Proxy

UDC uses a security feature called certificate pinning. UDC does not support the scenario where a proxy service in your environment performs TLS inspection (decrypting and re-encrypting traffic using an alternate certificate). You must completely exclude the traffic for *.uds.Lenovo.com from the proxy or disable TLS inspection for that endpoint. Please refer to your proxy service documentation for how to achieve this.

5 Resources

5.1 Lenovo Device Manager User Guide

To access full user instructions for Lenovo Device Manager, in the LDM portal:

1. Select Help & Resources → *User Guides*
2. Download the latest user guide .pdf

5.2 Troubleshooting

If there is an error during the Windows Provisioning Pack installation, check the error code table to identify the error and rectify it by following the remedial tip.

Error Code	Error Name	Remedial Tip
0	Ok	
-1	InvalidArguments	Provide valid arguments / Run limit has been hit - to continue, delete HKLM:\SOFTWARE\Lenovo\Udc\Status\ScriptRunCount registry
-2	InvalidPrivileges	Run the script as an administrator
-4	PortalUnreachable	Ensure network connectivity and check the connection to the UDS portal
-5	CertificateMismatch	Portal certificate is not valid. Check for https proxy (like Fiddler) that overrides server certificate. Otherwise - contact Lenovo, because server certificate could have been changed
-6	UdcSetupFileNotFound	When defining -UdcFilename parameter, it is necessary to provide the file
-7	InvalidInfSetupPackage	UDC setup file does not contain files needed for the installation. Check if a valid file is provided
-8	UntrustedSetupFiles	UDC installation files doesn't have a valid issuer certificate. Check if a valid file is provided
-9	TokenExpired	LDI portal token has expired, or the device registration limit set for this token is over. Request for a new provisioning package with a new token
-10	TokenNotValidated	UDS does not accept provided token. Create another provision package or contact the administrator
-11	RegisteredToAutomaticOrg	The device was registered to an automatic organization. Restart UDService and try again. If it fails, contact the administrator
-12	DeviceAlreadyRegistered	This device was already registered in the portal. No other action may be needed, but to use the script registration, delete the device from the portal
-13	Unable to RetrieveClaimCode	The script /UDC was not able to retrieve the activation code required for registration of the device in the portal. Restart UDService and try again. If it fails, contact the administrator
-14	UdcInstallationFailed	UDC installation failed, check the script log file for details
-99	AnotherInstanceRunning	Another script instance is running. Wait for it to finish