



Collecting Service Data on Lenovo ThinkSystem Servers

Planning / Implementation

This document provides the instructions for the various methods of collecting service data on Lenovo servers. Users might be asked to collect service data by Lenovo service personnel or from a qualified business partner when opening a service ticket. This is sometimes referred to as collecting FFDC – short for First Failure Data Capture.

This guide provides simple instruction for users who are new to Lenovo ThinkSystem servers. It will explain the new service data log feature, guide you to choose the right tool and show how to complete the task of collecting service data, which you can send to the qualified service personnel as the next step in the troubleshooting journey.

Looking for System x? For information on System x servers, see Collecting Service Data on Lenovo System x servers.

Server covered in this guide

This guide covers the following servers:

- All ThinkSystem V4 servers
- All ThinkSystem V3 servers, except ST45 V3
- All ThinkSystem V2 servers, except the ST50 V2
- All ThinkSystem servers, except SR635, SR655, ST50
- ThinkEdge servers (includes ThinkSystem SE350)

SR635, SR655: These servers have a firmware stack that is different from other ThinkSystem servers, so the tools and instructions in this guide don't apply to those servers. You can use the embedded ThinkSystem System Manager to collect service data as documented in https://pubs.lenovo.com/tsm/download_service_data.

ST50, ST50 V2, ST45 V3: These entry tower servers don't have a BMC onboard for collecting service data, so the tools and instructions in this guide don't apply to those servers.

New service data log

Service data log used to be saved as proprietary file format. It required a proprietary tool to open the file and specialized skills to make sense of the content.

ThinkSystem servers now offer a service data log (mini log) that is user-friendly and significantly more compact. This new service log feature is available with all new ThinkSystem V3 and V4 servers and also with ThinkSystem and ThinkSystem V2 servers that have XCC firmware dated May 2023 or later.

The log is now saved as zip format and shrunk to a much smaller size (about 500KB). You can expand the zip file to read the **export.html** content in any browser, while individual log files are also provided side-by-side in json format for easy parsing.

The naming convention for the service data log file is: *MachineType+Model_SerialNumber_xcc_mini-log_date_time.zip*

e.g., 7D76WCC_1234567890_xcc_mini-log_20221024-023341.zip

XClarity Controller 2	U I ThinkSystem SR650 V3 MB,EGS System name:	Service Log
A Home	Health Summary Active System Events (2) O System Information and Settings	
Events	Select the file to download:	Power Off
E Inventory	CPU	
III Utilization	2 / 2 installed 7D76WCC_1234567890_xcc_20221024-023341.tzz	
Storage	□ 7D76WCC_1234567890_xcc_20221024-022825.tzz	
🖸 Remote Console	PCI 7D76WCC_1234567890_xcc_mini-log_20221024-014033.zip 8 installed 7D76WCC 1234567890_xcc_20221024-014033.tzz	XCC-7D76-1234567890
🚖 Firmware Update		
Server Configuration	System Board Cancel	4.00 (Build ID: EAL103W)
BMC Configuration		
Dino comiguration		

Figure 1. XCC2 download dialog showing the new service data log and the debug log (aka FFDC)

You can decompress the zip file using Windows Explorer or a third-party tool (unzip, 7zip) to view all the files. Here is an example of the new service data log content.

Collect Service Logs > 7D76WCC_1234567890_	xcc_mini-log_20221024-023341.zip > tmp	~
basic_sys_info.log	C export.html	inventory_card.log
inventory_cpu.log	inventory_dimm.log	inventory_disk.log
inventory_flash_history.log	inventory_fod.log	inventory_fw.log
inventory_imm_settings.log	inventory_ipmi_fru.log	inventory_ipmi_sensor.log
inventory_IPMISEL.log	inventory_IPMISEL_list.log	inventory_ledstatus.log
inventory_psu.log	inventory_restart_cause.log	inventory_uefi_settings.log
inventory_volume.log	inventory_xccreset_history.log	inventory_xccuptime.log
smbios_table_info.log	util-env.log	📄 util-pwrconsum-cpu.log
util-pwrconsum-memory.log	util-pwrconsum-system.log	util-pwrperf.log
📄 util-pwrrt.log	xcc_active_events.log	xcc_audit_events1.log
xcc_audit_events2.log	xcc_audit_events3.log	xcc_maintain.log
xcc_plat_events1.log	xcc_plat_events2.log	xcc_plat_events3.log

Figure 2. Expanded file list from the new service data log file

	C ex	port.html	× +										-	×
\leftarrow	\rightarrow	C i File	D:/Lenovo/UX/Colle	ct%20Service%20Logs/	7D76WCC_1234567890	_xcc_mini-log_2022102	4-023341/tmp/export.html	Aø	Q	to	3	£≡	Ē	
Syst	em I	nformation												^
machine machine serial_ni uuid	_name _typemode imber	ThinkSystem SR650 V3 MB,E0 7D76WCC 1234567890 7B516C45980F43DE8C299021	55,DDR5,SH,2U E160D30E5											
manufac hw_revie power_s server_s	tureid iion tate tate	LNVO 5 Off Power Off												
location lowest_u rack_id room_id		1 a b												
ipv4_ade hostnam current_	lress e time	10.240.218.143 XCC-7D76-1234567890 2022-10-24 02:33:41 UTC+00	0:00											
Acti	ve Ev	vents			_									
time 2022-10-2 2022-10-2	3T10:47:08 3T10:47:05	common_id message 918 FQXSPCA0002M Numeric 789 FQXSPCA0002M Numeric	sensor Fan 1 Tach going low (lov sensor Fan 2 Tach going low (lov	source fr wer critical) has asserted. Cooling wer critical) has asserted. Cooling										
Firn	nwar	e												
index ty 1 BM 2 BM 3 BM	e C(Active) C(Primary) C(Backup)	version build rel 9.20 DVI399T 20 9.20 DVI399T 20 9.20 DVI399T 20 9.02 DVI399T 20	ease_date 22-09-20 22-09-20 22-09-02											
4 UE 5 LX 6 LX 7 LX 8 BM	FI PM PM Windows PM Linux Dri U OS	0.63 ESE107C 20 4.00 EAL103W 20 Drivers * * * * vers * * * *	22-08-16 22-08-30											
СРІ	J													
name fru_nam fru_num	e C ber	PU 1	2 CPU 2											
manuf_i cpu_type		ntel(R) Corporation ENTRAL	Intel(R) Corporation CENTRAL											+

Figure 3. Sample content from the export.html file

While it is great that the new service data log is user-readable and compact, it doesn't contain the debugging data that is sometimes required for deeper troubleshooting. As a result, the former proprietary log file will be continue to be available but is now called *debug log*. The file format and content remain exactly as before. When XCC captures a service data log (zip file), it automatically captures a debug log (tzz file) in parallel just in case it might be needed.

Note: Lenovo technical support often needs the debug log for deeper problem analysis, so it is recommended to always send the debug log when neither is explicitly mentioned.

The naming convention for the debug log file is: MachineType+Model_SerialNumber_xcc_date_time.tzz

e.g., 7D76WCC_1234567890_xcc_20221024-023341.tzz

The XCC service data file *.tzz cannot be extracted using a generic decompression tool, such as unzip or 7zip. Send the service data file to an authorized technical service personnel for further analysis.

Lenovo is continuing to enhance the many service tools to take advantage of this new service data log and debug log to improve customer experience and service experience.

Choose the right tool

It is recommended that you understand all methods for collecting service data that Lenovo provides so that you can quickly collect the data before calling for technical support. This way, you can avoid or minimize workload disruption while capturing the critical information that is needed, at a decisive moment, for precise and efficient troubleshooting.

However, if you are in a hurry, the following table allows you to quickly jump to the section that best suits your current situation. Choose a row at the first column based on what you have access to, then choose one of the server brand columns to link to the right tool and steps.

Task	ThinkSystem V4 servers	ThinkSystem V3 and ThinkEdge V2 servers	ThinkSystem V2 and ThinkEdge V1 servers	ThinkSystem V1 servers
1) I have access to the BMC web management interface.	Use XClarity Controller 3 (XCC3)	Use XClarity Controller 2 (XCC2)	Use XClarity Controller (XCC	
 I have access to the server OS* to run command line applications with root or Administrator privileges. 	Use XClarity Essentials (LXCE) OneCLI V5.0	Use XClarity Essentials OneCLI (LXCE) V4.0	Use XClarity Essentials One (LXCE) any version	
3) I have access to the server locally with KVM (keyboard & video) and am able to reboot the server.	Use XClarity Provisioning Manager (LXPM) V5	Use XClarity Provisioning Manager (LXPM) V4	Use XClarity Provisioning Manager (LXPM) V3	
4) I am managing the servers with XClarity Administrator and would like to use it to collect service data on one or more servers.	Use XClarity Administrator (LXCA) V4.0 Use XClarity Administrator (LXCA) any version			nistrator n
5) I'm managing the servers with XClarity Orchestrator and would like to use it to collect service data on one or more servers.	Use XClarity Orch	estrator		
6) I am managing the servers with XClarity Integrator from the Windows Admin Center console	Use XClarity Integ	rator for Windows A	Admin Center	
7) I am managing the server using XClarity Mobile app on a smart phone running iOS or Android	r Use XClarity Mobile app			
8) I am in front of the server but do not have access to a KVM or a mobile phone.	Use the external d	liagnostics handset	or integrated diagn	ostics panel
9) I'd like to use standard Redfish API with scripting tools.	Use Redfish API LogServices Not supported			Not supported

Table 1. Choose the right tool to collect service data

* The OS here refers to a supported version of Windows and Linux on the server, such as Microsoft Windows Server 2019; RHEL 8; SLES 15. Although VMware ESXi is also supported on the server but it cannot run application directly in the hypervisor, in that case user can use the XClarity Controller, XClarity Administrator or XClarity Provisioning Manager to collect service data.

XClarity Controller 3 (XCC3)

XClarity Controller 3 is the integrated baseboard management controller (BMC) available in all ThinkSystem V4 servers. It continuously monitors the server hardware health status and handle alerts immediately. It plays a key role in ensuring the server firmware authenticity, safety, and integrity. Finally, it also helps to collect service data log and debug log.

Accessing the tool:

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem V4 servers
- Documentation: https://pubs.lenovo.com/xcc3/

Use the following steps to collect service data using XClarity Controller 3 (XCC3):

- 1. Log in to web management interface.
- 2. At the Home page, look for the **Service Log** button at the top banner or in the Quick Actions card as shown in the following figure.

XClarity Controller 3 <	U ! ThinkSystem SD520 V4 Planar Syste	em Name:	Serv	ice Log 🛓 USERID 🕥 5:44 AM 🚍
🔒 Home	Health Summary Active System Events (0)	ø	System Information and Settings	•
 Events Inventory Utilization Remote Console Firmware Update Storage 	CPU Menory 1/1 installed 1/8 installed PCI POINT POINT SUPPY Not Found 3/3 installed shared, non-redundant System Board Others	Local Storage Not Found	ThinkSystem SDS20 V4 Planar Power Off Machine Type/Model 7DFYTOOOW Serial No. 1234567800 System Name 5 Front USB Ownership BMC Only BMC License Lenovo XClar BMC Hodrass 10,240218.1 BMC Hodrass 10,240218.1 BMC Hostname XCC-7DFY-11 Active Chassis Caretaker 10,240216.1 BMC Version 0,74 (Build ID LiceNton 10.10 (Build ID Location LiceNton	W Ity Controller 3 Platinum Upgrade
Server Configuration ~ BMC Configuration ~ Meighbor Group ~	Quick Actions O Power Action D Location LED. Off Remote Console Preview Capture Screen Capture Screen Capture Screen Capture Screen Capture Screen	Crypo Jainded	Power Utilization NiA Output NiA CPU Memory Others Temperature eta is not available.	System Utilization C O

Figure 4. XClarity Controller 3 home page

3. Select the Debug Log (default) or Service Data Log.

XClarity Controller 3 <	U ! ThinkSystem SD520	V4 Planar System Name:		Service Log
♠ Home	CIFS	Select the type of service log to downle	oad: ×	
E Events	Internal storage: 2 GB total, 1957	i 🗗 Debug Log	P Service Data Log	
	Reset Fields	Formerly called FFDC. Contains the entire Service Data Log and adds debug logs for professional service usage.	Contains hardware information in user readable text. Options can add server specific identification data.	
11. Utilization	Update System	Basic Information Network Information/(P. hostname)		
Remote Console		 Telemetry (24 hours data) 	\mathbf{A}	
😧 Firmware Update	System Firmware	Debug LogAudit Log (contains username)	\mathbf{N}	🌣 Auto Sync
A Storage ~	Update key system firmware one	Latest Failure Screen		
0,	Туре	Adapter Firmware Log		Release Date
Server Configuration ~	BMC (Primary)			2024-11-06
BMC Configuration V	BMC (Backup)	Export Browse History		2024-10-17
🗱 Neighbor Group 🛛 🗸	FPGA HPM	Active	2.07 R6FG01I	2024-10-15

Figure 5. Select the type of service log to collect

4. Click Export to collect the data. This may take around 15 seconds to complete, then you will be

prompted by the browser to save the file to your workstation.

XClarity Controller 2 (XCC2)

XClarity Controller 2 is the integrated baseboard management controller (BMC) available in all ThinkSystem V3 servers. It continuously monitors the server hardware health status and handle alerts immediately. It plays a key role in ensuring the server firmware authenticity, safety, and integrity. Finally, it also helps to collect service data log and debug log.

Accessing the tool:

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem V3 servers.
- Documentation: https://pubs.lenovo.com/xcc2/

Use the following steps to collect service data using XClarity Controller 2 (XCC2):

- 1. Log in to web management interface.
- 2. At the Home page, look for the **Service Log** button at the top banner or in the Quick Actions card as shown in the following figure.



Figure 6. XClarity Controller 2 home page

Select the Service Data Log (default) or Debug Log, pay attention to the optional data that could be collected as well if needed.

XClarity Controller 2	U I ThinkSystem SR650 V3 MI	B,EGS System name:			Service Log
A Home	Health Summary Active System	Select the type of service log to do	wnload: ×	ind Settings	
Events				IB,EGS,DDR5,S	Power Off
: Inventory	СРИ	Contains hardware information in user readable text. Options can add server	IBI Debug Log Formerly called FFDC. Contains the entire Service Data Log and adds debug logs for		7D76WCC 1234567890
1. Utilization	2 / 2 installed	specific identification data.	professional service usage.		Shared mode: owned by BMC
8 Storage	PCI	 Network Information(IP, hostname) Telemetry (24 hours data) 	\backslash		Lenovo XClarity Controller 2 F 10.240.218.143
C Remote Console	8 installed	 Debug Log Audit Log (contains username) 	\backslash		XCC-7D76-1234567890 9.20 (Build ID: DVI399T)
🚖 Firmware Update		Z Latest Failure Screen	•		0.63 (Build ID: ESE107C) 4.00 (Build ID: EAL103W)
Server Configuration	System Board	Export Browse History			
BMC Configuration					

Figure 7. Select the type of service log to collect

- 4. Click **Export** to collect the data. This may take around 15 seconds to complete, then you will be prompted by the browser to save the file to your workstation.
- 5. At any time, you may click on the Browse History button to download previously collected service logs.



Figure 8. Go to Browse History to download previously collected service logs

XClarity Controller (XCC)

XClarity Controller is the integrated baseboard management controller (BMC) available in all ThinkSystem V1 and V2 servers, with the exception of the ST50, ST50 V2, SR655, and SR635 servers. It continuously monitors the server hardware health status and handle alerts immediately. It plays a key role in ensuring the server firmware authenticity, safety, and integrity. Finally, it also helps to collect service data log and debug log.

Service data log: The enhanced new service data log feature has been added to ThinkSystem V1 and V2 servers with the XClarity Controller (XCC) firmware update released after May 2023. After you update the XClarity Controller firmware, the user interface for collecting service log will be similar to that of XClarity Controller 2.

Accessing the tool:

- · Download: This tool is embedded in the firmware of the server
- Documentation:
 - Lenovo XClarity Controller with Intel Xeon SP (1st, 2nd Gen)
 - Lenovo XClarity Controller with Intel Xeon SP (3rd Gen) and AMD EPYC (2nd, 3rd Gen)

Use the following steps to collect service data using XClarity Controller (XCC):

- 1. Log in to XClarity Controller web management interface.
- 2. At the Home page, look for the Quick Actions card as illustrated in Figure 1.
- 3. Click on the Service dropdown menu, then Download Service Data.
- 4. Click **OK** when prompted.
- 5. This may take a few minutes to complete, then you will be prompted by the browser to save the file to your workstation.



Figure 9. XClarity Controller home page

XClarity Essentials OneCLI (LXCE)

XClarity Essentials provides a collection of graphical interface and command line tools for viewing, configuring, and updating ThinkSystem servers. The tools can run inside the target server OS to act on itself, or they can run on a remote PC to act on one or many servers.

This guide provides instruction for the command line tool called OneCLI, running inside the target server OS. But it is also possible to run the same OneCLI command from a remote Windows or Linux PC, provide that the target server's XClarity Controller is accessible on the network and that you have the administrative credentials.

Accessing the tool:

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-tcli
- Documentation: https://pubs.lenovo.com/lxce-onecli/

Use the following steps to collect service data using XClarity Essentials OneCLI (LXCE).

Instruction for Windows:

- 1. Download the latest version of OneCLI from the above location.
- 2. Decompress the downloaded zip file into a new directory.
- 3. Open a command prompt as Administrator and change to the directory where the expanded version of OneCLI is found.
- 4. Run this command to collect service data log: (must have XCC2 and OneCLI V4.0 or later) **OneCli.exe inventory getinfor --servicelog**
- 5. Run this command to collect debug log: (applicable to all servers and all versions of OneCLI) OneCli.exe inventory getinfor --ffdc
- 6. It will take a minute for the service data log and approximatively 15-45 minutes for the debug log to complete.

Instruction for Linux:

- 1. Download the latest version of OneCLI from the above location.
- 2. Decompress the downloaded .tgz file into a new directory.
- 3. Open a shell as root privilege and change to the directory where the expanded version of OneCLI is found.
- 4. Run this command to collect service data log: (must have XCC2 and OneCLI V4.0 or later) ./OneCli inventory getinfor --servicelog
- 5. Run this command to collect service data: (applicable to all servers and all versions of OneCLI) ./OneCli inventory getinfor --ffdc
- 6. It will take a minute for the service data log and approximatively 15-45 minutes for the debug log to complete.

Additional information:

- A new directory will be created under the current execution directory to store the result of each run at logs/OneCli-*pid-date-time* e.g. logs/OneCli-5460-20190326-141910
- The resulting directory contains the service data log (zip) or the debug log (tzz) that was gotten from the XClarity Controller, same as by downloading service data from the web interface.
- The directory also contains a detailed server inventory file that could be useful to technical support. If you'd like to have the detailed inventory in HTML instead of the XML, you can run this command: **OneCli.exe inventory getinfor --ffdc --htmlreport**
- You can compress the result directory as a file to send to technical support.
- To run this command from a remote PC, add the BMC address and credentials to the command, or see this command example.

XClarity Provisioning Manager (LXPM) V4/V5

XClarity Provisioning Manager (LXPM) V4 is an application preloaded in ThinkSystem V3 servers. LXPM V5 is preloaded in ThinkSystem V4 servers. It provides the essential functions to initialize a brand-new system all the way to OS installation wizard, including view hardware inventory, set date/time, BMC networking, RAID volume creation, UEFI setting and OS installation assistance, clone configuration. There are also functions for maintenance service, including collect service data, hardware diagnostics, firmware update, and system event log viewing.

XClarity Provisioning Manager can be used when physically in front of the server via a keyboard, video and mouse (KVM), or it can be accessed via XClarity Controller remote console.

Accessing the tool:

- Download: This tool is embedded in the firmware of the server.
- Documentation: https://pubs.lenovo.com/lxpm-overview/

Follow these steps to collect service data using XClarity Provisioning Manager. You will need a USB memory stick to save the service data to.

- 1. Boot or reboot the server, wait until the POST splash screen is displayed.
- 2. Press F1:System Setup.

Lenovo			
ThinkSystem	n SR650 V3 MBEGSDDR5SH	Think	system
System Events	s 😕 6 🔺 0	UEFI:RUN SE	TUP
Serial Number Machine Tyne	1234567890	F1 triggered remotely System Setup	, preparing to boot into
BMC IP	10. 240. 218. 143	128 GB memory detecte Independent mode, usa	d ble capacity 128 GB
UEFI Version BMC Version	0. 63 ESE107C (08/16/2022) 9. 20 DV1399T (09/20/2022)	2 processor(s) detect Intel(R) Xeon(R) Plat	ed, 112 cores enabled inum 8480+
		F1:System Setup	F10:PXE Boot
Licensed Materials - Property c Lenovo is a trademark of Leno	of Lenovo. © Copyright Lenovo and other(s) 2022. vvo in the United States, other countries, or both.	F2:Diagnostic	F12:One Time Boot Device

Figure 10. ThinkSystem server POST splash screen

3. If it shows the text mode UEFI setup, choose the option to Launch Graphical System Setup.



Figure 11. ThinkSystem server text mode UEFI setup utility

4. After launching into XClarity Provisioning Manager (LXPM), click on Diagnostics.

Provisioning Manager	ThinkSystem SR650 V3 MB,EGS,DDR5,SH,2U Image: Control of the system set of the s								
금 System Summary	XClarity Provisioning Manager								
💣 RAID Setup	XClarity Provisioning Manager provides an easy-to-use interface for setting up your server. After you click Apply or Skip, this page will not show again. You can access it anytime from the "?" icon at upper right corner. Note: 1: Exer maximum puttime integrity run a full memory test prior to nutting a server into production 2: Only 15 keyboard is applicable for								
OS Installation	correct output.								
🟦 Firmware Update	Basic System Settings								
📒 UEFI Setup	System Date:	2022 🗸	10 🗸	24 🗸					
🕒 Cloning	System Time:	03 🗸	30 🗸	00 🗸	Boot Mode:	Legacy Mode 🗸 🗸			
Diagnostics	Language:	English		~	First Boot Device:	CD/DVD Rom 🗸			
前 Effortless Reset	Management Network Basi	c Configurat	ion						
\	Network Interface Port:	Dedicated	Port	~					
\ \	IP Address:	10.240.218	3.143		Subnet Mask:	255.255.254.0			
1	Host Name:	XCC-7D76-	123456789	90	Default Gateway:	10.240.218.1			
	BMC Credentials								
	Current User Name:	USERID			New User Name:				
	Current Password:				New Password:				
					Confirm Password:				
문문 User Guide	Apply Skip								
Server Documentation			1	Z					
문문 Tech Support									

Figure 12. XClarity Provisioning Manager system summary page

5. Choose Collect Service Data.



Figure 13. XClarity Provisioning Manager Diagnostics page

6. Wait until the task is completed then save the file to a local storage device.

Provisioning Manager	ThinkSystem SR650 V3 MB,EGS,DDR5,SH,2U MTM: SN: 1234567890	۲	۵	0	n
금 System Summary	Diagnostics				
💣 RAID Setup	Select one of the following actions:				
OS Installation	> Effortless Diagnostics				
🏦 Firmware Update	Run diagnostics test, collect service data and RAID log, automatically save the log files.				
📰 UEFI Setup					
📙 Cloning	> Run Diagnostics				
Diagnostics	Check the system health, view active events, or test the memory and hard disk drives installed in the system.				
💼 Effortless Reset					
Collect Set	ffdr tzz, which might take several minutes [73%]				
User Guide					

Figure 14. XClarity Provisioning Manager collect service data in progress

XClarity Provisioning Manager (LXPM) V3

XClarity Provisioning Manager V3 is an application preloaded in ThinkSystem V1 or V2 servers. It provides the essential functions to initialize a brand-new system all the way to OS installation wizard, including view hardware inventory, set date/time, BMC networking, RAID volume creation, UEFI setting and OS installation assistance, clone configuration. There are also functions for maintenance service, including collect service data, hardware diagnostics, firmware update, and system event log viewing.

XClarity Provisioning Manager can be used when physically in front of the server via a keyboard, video and mouse (KVM), or it can be accessed via XClarity Controller remote console.

Accessing the tool:

- Download: This tool is embedded in the firmware of the server.
- Documentation: https://pubs.lenovo.com/lxpm-overview/

Follow these steps to collect service data using XClarity Provisioning Manager. You will need a USB memory stick to save the service data to.

- 1. Boot or reboot the server, wait until the POST splash screen is displayed.
- 2. Press F1:System Setup.



Figure 15. ThinkSystem server POST splash screen

3. If it shows the text mode UEFI setup, choose the option to Launch Graphical System Setup as shown in *Figure 3*.



Figure 16. ThinkSystem server text mode UEFI setup utility

4. After launching into XClarity Provisioning Manager (LXPM), click on Diagnostics.



Figure 17. XClarity Provisioning Manager system summary page

5. Choose Collect Service Data and click on the right arrow.



Figure 18. XClarity Provisioning Manager diagnostics page

6. Wait until the task is completed then click on the right arrow.



Figure 19. XClarity Provisioning Manager collecting service data

7. Choose a USB drive in the list; then click Save.



Figure 20. XClarity Provisioning Manager save service data

XClarity Administrator

XClarity Administrator provides centralized management, monitoring and provisioning of several hundreds of Lenovo devices, such as ThinkSystem servers, ThinkEdge servers, ThinkSystem storage, and ThinkSystem networking switches.

Accessing the tool:

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-Ixcaupd
- Documentation: https://pubs.lenovo.com/lxca/

Use the following steps to collect service data using XClarity Administrator :

- 1. Log in to the XClarity Administrator management interface.
- 2. Click on the menu Administration > Service and Support, then on the Endpoint Actions.
- 3. Select one or more endpoints on which you'd like to collect service logs, then click the menu All Actions > Collect Service Data, confirm the action when prompted.

Lenovo. XClarity	^r Admir	nistrator			🔪 Repo	rt Problem	🔽 Status 🔹 📘	Jobs -
🚱 Dashboard 🛛 Hardware 👻	Provision	ning 🗸 Monitoring 🕇 Adminis	stration 👻					
m.		Endpoint Actions						
		Perform Call Home Test Perform Mai	nual Call Home 🍴 🏠	📑 l 🗂 📝	💌 🎅	All actions -	rice Data	Filte
		Endpoint	Status	Product Name	UUID	Lenovo Upl	oad Selected	Ла
Service and Support		SN#Y030BG4BA020	Normal	Chassis	F44E92339683385	Create Con	tact Profile	łc
Service data collection		Demo - 000220LHB4	Normal	Rack-Tower Server	CFEC7691C59F36	Edit Contac	t Profile lact Profile	lo
Management Server Files						Refresh		
Endpoint Service Data						Customize	Columns	
						Maintenanc	e	
Endpoint Actions						Perform Ca	II Home Test	
📫 Endpoint Actions 🛛 🔫						Perform Ma	inual Call Home	
Automatic service data forwarding						Enable Call	Home on all supported e	ndpoints
					1	Disable Cal	I Home on all supported e	endpoints

Figure 21. XClarity Administrator endpoint actions

- 4. The task will be launched in the background and should take a few minutes to complete.
- 5. To download the service data file to your workstation, navigate to Endpoint Service Data.
- 6. Select a file then click on the toolbar button or the equivalent menu in **All Actions > Download Selected Service Files**.

Lenovo. XClarity A	dministrator	🔪 Report Problem	8 Status * 😵 Jobs * 🕒 CCHHUOR *
🖓 Dashboard Hardware 🗸	Provisioning - Monitoring - Administration -		
	Endpoint Service Data		
	Use this tab to download diagnostic files collected from the endpoir	nts.	^
Service and Support	🚯 📑 🧭 🔁 🛛 All actions 🗸		Filter
	File Event ID	System Component	Date and Time
Service data collection	combined_9532AC1_23CPCYF_I 0E01000C	SN#Y034BG176046: ite-bv-1538: Ba ite-bv-1538	Mar 21, 2019, 05:18:14
Management Server Files	combined_9532AC1_23CPCWM 0E010007	SN#Y034BG176046: ite-bv-1534: Ba ite-bv-1534	Mar 21, 2019, 05:19:39
Endpoint Service Data	combined_9532L45_23CPCYH_i 0E010004	SN#Y034BG176046: ite-bv-1511: Ba ite-bv-1511	Mar 21, 2019, 05:19:47
Endpoint Actions	combined_9532AC1_23CPXAN_i 0E01000B	SN#Y034BG176046: ite-bv-1546: Ba ite-bv-1546	Mar 21, 2019, 05:20:45
Endpoint Actions	✓ combined_9532LAB_23CPCXZ_i 0E010006	SN#Y034BG176046: ite-bv-1518: Ba ite-bv-1518	Mar 21, 2019, 05:31:49
Automatic service data forwarding	combined 9532AC1_23CPCWD 0E010008	SN#Y034BG176046: ite-bv-1501: Ba ite-bv-1501	Mar 21, 2019, 10:08:39
Tusage Data	combined 9532LAB 23CPCVX I 0E010008	SN#Y011BG32302H: ite-by-1507: Balte-by-1507	Mar 21, 2019, 10:27:01
Call Home Configuration	combined 786310X 1003BCB i 800702172C02EEEE	SN#Y034BG17604F: ite-bt-1173: Ba ite-bt-1173	Mar 21, 2019, 11:37:23
Service Forwarders	combined 8737AC1 06LNMX3 i 800702172C02FFFF	SN#Y034BG17604E- ite-bt-227- Bay, ite-bt-227	Mar 21, 2019, 11:37:27
Service Ticket Status	combined 786310X 0664AAB i 800702172002FFFF	SN#Y034BG17604E- ite_bt_213: Bay, ite_bt_213	Mar 21, 2019, 11:38:05
Service Settings	combined 7906AC1 06PCA28 i 806F0812264FFFF	SN#Y034BG17604E- ite_kt_020: Bay ite_kt_020	Mar 21, 2019, 11:38:38
DC Server Logging Settings	combined 7906AC1 06PCA28 2504049D	SN#Y034BG17604E- ite_kt_020- Bay ite_kt_020	Mar 21, 2019, 11:38:38
Service Recovery Reseword	combined_166310X_1003BCB i	SN#V034RG17604E- ite bt 1173- Ba ite bt 1173	Mar 21, 2010, 11:30:40
Warranty Status	combined_1906AC1_06PCA34_i	SN#Y034BC476045- ite kt 023- Boy ite kt 023	Mar 21, 2019, 11:30:40
Warranty	combined_1300x01_00PCA94_i35010488	Childron 47204F: ite id 025, Bay ite id 025	Mar 24, 2010, 11:30:42
dity	combined_rsubAct_udPCA04_i 3501048C	Charles 0.04DC47504F: He-Ht-020; Day IIE-KI-020	Mar 21, 2019, 11:39:47
	combined_rsuck_loopCA21_I 3501048E	SIN#1034DG17004F: IR-KI-022: BBy IR-KI-022	Mar 21, 2019, 11:39:50
	combined_7906AC1_06PCA05_I 3501048A	SN#Y034BG17604F: Ite-kt-011: Bay Ite-kt-011	Mar 21, 2019, 11:39:51
	RS160_TS_20190321-101143.tgz Manual Collect	AMID05099C86A4E AMID05099C86	A4E Mar 21, 2019, 22:12:32
	RD550_MJ0224ZA_TS_2019032 Manual Collect	008CFAC8749E 008CFAC8749E	Mar 21, 2019, 22:12:57

Figure 22. XClarity Administrator endpoint service data

7. With XClarity Administrator V4.0 or higher, there would be a new File Type column displayed, the zip file type is the new service data log while the tzz file type is the debug log.

XClarity Orchestrator

XClarity Orchestrator provides federated management of several XClarity Administrator instances for large environments that have tens of thousands of managed devices. It also provides advanced analytics for data visualization and failure prediction.

Accessing the tool:

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-Ixco
- Documentation: https://pubs.lenovo.com/lxco/

Use the following steps to collect service data using XClarity Orchestrator:

- 1. Log in to the XClarity Orchestrator management interface.
- 2. Click on the menu Administration > Service and Support, then on the Device Actions.

XClarity Orchestrator ×	Home / Administration / Service and	d Support /	Device Actions			Current scope: Al	Resources 👻 💄 userid 👻
↑ Dashboard	Service Data	Device	Actions				
Sesources	Warranty		Device :	Status 0	Туре 0	Power :	Product Name :
Monitoring	Service Tickets		OceanCat-SDV-1	Normal	Server	(U) On	Lenovo ThinkSystem S
Provisioning Provisioning Analytics i	Periodic Data Upload Contact Information		OceanCat-SDV-2 OceanCat-SDV-3	Normal	Server	OnOn	Lenovo ThinkSystem S
Administration	N		OceanCat-SDV-4	🛕 Warning	Server	lon On	Lenovo ThinkSystem S
Security		0 Selected	OceanCat-SDV-5 / 5 Total Rows per page: 15	🛕 Warning	Server	(U) On	Lenovo ThinkSystem S
Service and Support							
Networking							
Date and Time							
J ^L Maintenance							

Figure 23. XClarity Orchestrator Device Actions page

3. Select one or more devices on which you'd like to collect service logs, then click the toolbar button or the equivalent menu All Actions > Collect Service Data.

XC	≡	😑 Home / Administration / Service and Support / Device Actions Current scope: All Resources 👻 🛓 userid 👻											
^	9	Service Data		Device	Actions								
	2	> Device Actions		C	All Actions	Filters 🔻						Search	Ч×
٢	4	Warranty			Device :	Status		Туре :		Power 0	Product	Name :	
-∿-	۲	Call Home Configuration			OceanCat-SDV-1	V No	rmal	Server		(U) On	Lenovo	ThinkSystem SD650	
_	•	Service Tickets								•			
2	æ	Periodic Data Upload	/		OceanCat-SDV-2	No No	rmal	Server		On On	Lenovo	ThinkSystem SD650	
ø	i,	Contact Information	_/		OceanCat-SDV-3	Ma	rmal	Server		🕘 On	Lenovo	ThinkSystem SD650	
~					OceanCat-SDV-4	🗹 No	rmal	Server		🕘 On	Lenovo	ThinkSystem SD650	
*					OceanCat-SDV-5	V No	rmal	Server		😃 On	Lenovo	ThinkSystem SD650	
ع				1 Selected	/ 5 Total Rows per page: 15	Ŧ							

Figure 24. XClarity Orchestrator collect service data action

- 4. To download the service data file to your workstation, go to Service Data.
- 5. Select a file then click on the toolbar button or the equivalent menu All Actions > Save service files.

xc	Home / Administration / Service a	and Support / Service Data			Current sco	pe: All Resources 👻 💄 userid 👻
↑ ≎	Service Data Device Actions Warranty	Device Service Data Use this page to downlost diagnostic files C 💽 💼 📽 🖻 🕞 All A	s collected from the devices.			Search Q X
-∿-	Call Home Configuration	File :	Device 0	Date and Time 0	Groups 0	Parse Status 🗧
ł	Periodic Data Upload	7X58CT01WW_0CCT9C230 1 Selected / 1 Total Rows per page: 15	OceanCat-SDV-3	10/12/22, 4:26 PM	Not Available	Parsing Failed
٢		Orchestrator Service Data				
۵		Save the XClarity Orchestrator service data	a file to your local workstation.			
e e		Save As				

Figure 25. XClarity Orchestrator Device Service Data page

XClarity Integrator for Windows Admin Center

XClarity Integrator provides centralized management and monitoring of ThinkSystem servers running on Microsoft Windows Server. It provides additional hardware visibility that complement the software platform, including better hardware inventory, events and alerting, and collect service data.

Accessing the tool:

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-Ixci-wac
- Documentation: https://pubs.lenovo.com/lxci-wac/

Use the following steps to collect service data using XClarity Integrator for Windows Admin Center:

- 1. Login to the Windows Admin Center then choose the Server Manager view and pick the server that you'd like to collect service logs.
- 2. At the left navigation tree, look for Lenovo XClarity Integrator under Extensions.
- 3. Inside the XClarity Integrator page, navigate to Service Data page.
- 4. Now you can click on the Collect Service Data button to trigger the action.
- 5. Or you may select a file that was previously collected and click on Download Files to transfer it to your local workstation.

Windows Admin Center Server Manag	ger ~ 🗲 🕇 1	Microsoft	≻ 6	° 🐵 ?
win-r041.wacxci.local				
Tools <	Lenovo. XClari	t y Integrator	< C 🗉	ﷺ …
Search Tools	Lenovo Server KKD-R Data Source: Native OS Managemen	141 (Switch to Lenovo XClarity Administrator)		
📥 Networks	Menu <	Service Data		
Packet monitoring	合 Summary	🗐 Collect Service Data 🚽 Download Files 📋 Delete \cdots	2 items 1 selected X	Q
M Performance Monitor	∃ Inventory	File Name	Date \downarrow	
PowerShell	≡ Alerts	7Z20CTO1WW_J3001WA4_xcc_221012-163300.tzz	10/12/2022, 4:36:00 PM	
Processes	Event Log	Z 7Z20CTO1WW_J3001WA4_xcc_220913-175328.tzz	9/13/2022, 5:57:31 PM	
Registry	Audit Log			
🛞 Remote Desktop	→ Power Consumption and Temperature			
📲 Roles & features	C. Feature on Demand Keys			
5 Scheduled tasks	E Service Data	3		
💎 Security		Ŭ		
₀✿ Services	Opulies			
Storage				
Storage Replica				
1 System Insights				
😡 Updates				
Virtual machines				
III Virtual switches				
Extensions				
XC Lenovo XClarity Integrator	2			

Figure 26. XClarity Integrator for Windows Admin Center

XClarity Mobile app

The XClarity Mobile app can be used as a client to XClarity Administrator server. It can view all the managed devices status and inventory, receive alerts, take power actions, and collect service data.

The XClarity Mobile app can also be used in standalone mode connecting directly to the server via the management USB port. It provides direct access to XClarity Controller to view hardware inventory, setup BMC networking, take power actions and collect service data.

Accessing the tool:

- From the phone's app store: search for "XClarity Mobile" or use the following links:
 - Google Play: https://play.google.com/store/apps/details?id=com.lenovo.xcmob
 - Apple Store: https://apps.apple.com/us/app/lenovo-xclarity-mobile/id1023231345
- Documentation: https://pubs.lenovo.com/lxca/lxca_usemobileapp.html

Using the Mobile app as client to XClarity Administrator

Instruction for the mobile app acting as client to XClarity Administrator:

1. Connect to the XClarity Administrator then go to the Hardware



Figure 27. XClarity Mobile app Hardware tab

2. Select the target server, then open the top right options menu (3 vertical dots icon), select **Service options** in the menu.

1:15 🌣 🎮 🖪 @	¢ م ر الم
← Details	< Share details
Details	Service options
🔇 Ger	F Power options
Name	Location LED options
228_Congo5	Edit properties
Status	
Critical	🔒 Go home
Power state	
Off	
Product name IBM Flex System	x440 Compute Node
Bay	
11-12	
Manufacturer	
IBM	
Type-Model	
7917-AC1	
Serial number	
Not available	
UUID	
691E8A80E8B71	1E1829EA1322A584281
EDII	
88Y6238	
Description	
Not available	

Figure 28. XClarity Mobile app server options menu

3. Finally, select **Collect service data**.

1:15 🕻	× M • & •	०० 💎 🖌 🔒
C	Collect service data	
L	Test Call Home	
	Manually open a problem record	
×	Cancel	
Statu	s al r state	
Off	ict name	
IBM F	Flex System x440 Compute Node	
Bay 11-12	2	
Manu IBM	facturer	
Type-	Model -AC1	
Serial Not a	number vailable	
UUID 691E	8A80E8B711E1829EA1322A584281	
FRU 88Y6	238	
Descr Not a	iption vailable	
	<	

Figure 29. XClarity Mobile app Service options menu

4. The debug data file will be collected and stored on XClarity Administrator, follow the instruction in the XClarity Administrator section to download the data file to your workstation if you need it.

Using the mobile app to connect to the server via USB

Instruction for the mobile app connecting directly to the server via USB:

1. Launch the app, then click on the USB icon at the upper right.

10:39 💠 등 🕅 🛛 🔤	⊽⊿ 8
Newsfeed	ψQ
	규는
Newsfeed Hardware Monitoring	Settings
Ensure that you have a network connection t	hrough
a VPN and appropriate CA certificates are in	stalled.
Connect	
Enter a host name or IP address	
User name	
	6
Password	
Connect	
나는 이 비 나는 이 !! 나는 이 !!	

Figure 30. XClarity Mobile app Newsfeed page

2. Connect the phone to the server front management USB port (the port with a wrench sign), enable USB tethering on the phone OS setting if it wasn't already done. The mobile app continuously verifies the connection and setting until they are satisfied (indicate by check mark).



Figure 31. XClarity Mobile app USB Discovery page

- 3. Click on **Discover**.
- 4. An item will be available under the section for USB attached server. Expand it to select the discovered server.

10:40 💠 号 M			∞ 🖓 ⊿ 🗓
Newsfeed			∲ Q
Newsfeed	Hardware	Monitoring	Settings
Ensure a VPN	that you have and appropriat	a network connecti e CA certificates ar	on through e installed.
Connect			
Enter a host nan	ne or IP addres	s	
User name			
Password			9
USB attack	ned server nnected ←	scovered. Collectin	_{Jā} OK

Figure 32. XClarity Mobile app USB attached server discovered

5. Open the top right options menu (3 vertical dots icon) and choose **Login**. Input the server's XClarity Controller login credentials (e.g. USERID / xxx).



Figure 33. XClarity Mobile app server options menu

6. After successful login, open the top right options menu again, choose **Service options** and then **Download service data**. Answer Yes to the confirmation prompt.

10:42 🌣	9 M	∞ ♀⊿ û
C (Clear event log	
± [Download event log	
	Download service data	
بر ا	JSB Port Management	
×	Cancel	
7Z72A00	iei D1WW	
1A1384E	04CFE811EA9FDF927C88442BE7	
System n	ame	
Anarky-S	R650v2-53-129	_
Coriol pur	wher	
1234567	890	_
Deveration		-
Off	ate	-
Server sta	ate If	
0	Network	~
±	Firmware	~
1	Temperatures	~
0	Voltages	~
	<	

Figure 34. XClarity Mobile app Service options menu

7. When the data collection is completed, you will be given the option to save the file locally or hand it over to another app (send email, cloud storage, etc.).

10:45 🏟 🗄	5 M	cə L1	'E 🔺 🕯
	Details		
	USB connection		
٢	General		^
Family ThinkSyste	m SR650 V2 MB		
7Z72A001	WW		
UUID 1A1384[System n Anarky-S	Do you want to send the file by email or s it locally as a Note?	d save	
Serial nur 1234567 Power str	YES	NO	
Off			
Server state Power off			
0	Network		~
<u>+</u>	Firmware		~
1	Temperatures		\sim
Do request	download		ок
	<		

Figure 35. XClarity Mobile app file handling prompt

External diagnostics handset or Integrated diagnostics panel

Some ThinkSystem servers have an external diagnostics connector on the server front that you can use it to collect service data. It enables you to collect the debug log and write the file to a USB storage device. When writing files to a USB storage device, the device should be formatted as FAT, FAT32 or exFAT, and be plugged to the XCC controlled USB port at the server front.

Some servers have an integrated diagnostics panel at the server front that can be pulled out when needed. The instruction is same for both external and integrated devices, except that you don't need to connect the integrated device manually.

Accessing the tool:

- Hardware: The external diagnostics handset must be purchased from Lenovo using part number 4TA7A64874. The integrated diagnostics panel is available in some server models.
- Documentation: In the Lenovo documentation home page, navigate to the desired server model, expand the section Server components > Front view > External diagnostics handset.

Instructions:

1. Connect the USB storage device to the XCC controlled USB port (with the wrench icon).



Figure 36. Front view of the ThinkSystem SR650 V2

2. Connect the external diagnostics handset to the external diagnostics connector.



Figure 37. Connecting the external diagnostics handset to the connector

3. Scroll to the Actions menu, and then to Generate / Download FFDC Service Data.



Figure 38. External diagnostics handset navigation flow

4. Trigger the action and follow the instruction on screen.



Figure 39. External diagnostics handset instruction on screen

Redfish API LogServices

Standard Redfish API can be used to collect the service data log from XCC and XCC2. Only the full service data log, a.k.a. debug log, FFDC, can be collected from this method.

Documentation: https://pubs.lenovo.com/xcc2-restapi/collect_bmc_diagnostic_data_post

Follow these steps to collect service data using this API.

1. Initiate the service data collection task.

```
curl -L -s -k -u USERID:password -X POST 'https://10.1.1.224/redfish/v1/Sy
stems/1/LogServices/DiagnosticLog/Actions/LogService.CollectDiagnosticData
' -H 'Content-Type: application/json' --data '{"DiagnosticDataType" : "Man
ager"}' | jq
```

Response:

```
"TaskMonitor": "/redfish/v1/TaskService/f152fee2-1877-41ab-8614-3e7010
dc5adb",
    "@odata.etag": "\"1708987633087\"",
    "Description": "This resource represents a task for a Redfish implemen
tation.",
    "Messages": [],
    "HidePayload": true,
    "@odata.id": "/redfish/v1/TaskService/Tasks/9bceab02-d75e-441d-9fc7-cc
4cecc96558",
    "StartTime": "2024-04-06T22:47:13+00:00",
    "@odata.context": "/redfish/v1/$metadata#Task.Task",
    "Id": "9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "Name": "Task 9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "@odata.type": "#Task.v1 6 1.Task",
    "TaskState": "New"
}
```

2. Retrieve task status

```
curl -L -s -k -u USERID:Passw0rd1234 -X GET 'https://10.1.1.224/redfish/v1
/TaskService/Tasks/9bceab02-d75e-441d-9fc7-cc4cecc96558' | jq
```

```
{
    "TaskMonitor": "/redfish/v1/TaskService/f152fee2-1877-41ab-8614-3e7010
dc5adb",
    "@odata.etag": "\"1708987633158\"",
    "Description": "This resource represents a task for a Redfish implemen
tation.",
    "Messages": [],
    "HidePayload": true,
    "TaskState": "Running",
    "StartTime": "2024-04-06T22:47:13+00:00",
    "@odata.context": "/redfish/v1/$metadata#Task.Task",
    "Id": "9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "Name": "Task 9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "@odata.type": "#Task.v1 6 1.Task",
    "@odata.id": "/redfish/v1/TaskService/Tasks/9bceab02-d75e-441d-9fc7-cc
4cecc96558"
}
```

When data collection finishes, the response looks like this:

```
{
    "EndTime": "2024-04-06T22:48:05+00:00",
    "TaskMonitor": "/redfish/v1/TaskService/f152fee2-1877-41ab-8614-3e7010
dc5adb",
    "@odata.etag": "\"1708987685412\"",
    "Description": "This resource represents a task for a Redfish implemen
tation.",
    "TaskState": "Completed",
    "Messages": [
        {
            "MessageArgs": [],
            "@odata.type": "#Message.v1 1 2.Message",
            "MessageId": "Base.1.14.Success",
            "Message": "The request completed successfully.",
            "MessageSeverity": "OK",
            "Resolution": "None"
        },
        ł
            "MessageArgs": ["FFDC"],
            "@odata.type": "#Message.v1 1 2.Message",
            "MessageId": "LogService.1.0.DiagnosticDataCollected",
            "Message": "'FFDC' diagnostic data collected.",
            "MessageSeverity": "OK",
            "Resolution": "None."
        }
    ],
    "HidePayload": true,
    "StartTime": "2024-04-06T22:47:13+00:00",
    "TaskStatus": "OK",
    "@odata.context": "/redfish/v1/$metadata#Task.Task",
    "Id": "9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "Name": "Task 9bceab02-d75e-441d-9fc7-cc4cecc96558",
    "@odata.type": "#Task.v1 6 1.Task",
    "@odata.id": "/redfish/v1/TaskService/Tasks/9bceab02-d75e-441d-9fc7-cc
4cecc96558"
```

3. Find the location of the service data file produced.

```
curl -L -s -k -u USERID:Passw0rd1234 -X GET 'https://10.1.1.224/redfish/v1
/Systems/1/LogServices/DiagnosticLog/Entries' | jq
```

```
{
    "Description": "A collection of DiagnosticLogEntry resource instances.
",
    "Members@odata.count": 3,
    "Modata_id": "/redfisb/w1/Systems/1/LogServices/DiagnosticLog/Entries"
```

```
CONSTST · / TEATTOIL AT DASCENS / TO ASET ATCES / DTSANDSCTOTOA / ENCLTES
    "@odata.context": "/redfish/v1/$metadata#LogEntryCollection.LogEntryCo
llection",
    "@odata.etag": "\"b99a3f5cb05232c73e0e1\"",
    "Name": "DiagnosticLogEntryCollection",
    "@odata.type": "#LogEntryCollection.LogEntryCollection",
    "Members": [
        {
            "EntryType": "Oem",
            "OemRecordFormat": "Lenovo",
            "AdditionalDataSizeBytes": 18458411,
            "Description": "This resource is used to represent a log entry
for log services for a Redfish implementation.",
            "Created": "2024-04-06T22:48:00+00:00",
            "DiagnosticDataType": "Manager",
            "AdditionalDataURI": "/imm dump/FFDC/7D75 J1111111 xcc 240406-
224717.tzz",
            "@odata.etag": "\"3bf9b21a8f3d27e8a1d\"",
            "@odata.context": "/redfish/v1/$metadata#LogEntry.LogEntry",
            "Id": "FFDC",
            "Name": "FFDC",
            "@odata.type": "#LogEntry.v1 13 0.LogEntry",
            "@odata.id": "/redfish/v1/Systems/1/LogServices/DiagnosticLog/
Entries/FFDC"
        },
        ł
            "EntryType": "Oem",
            "OemRecordFormat": "Lenovo",
            "AdditionalDataSizeBytes": 0,
            "Description": "This resource is used to represent a log entry
for log services for a Redfish implementation.",
            "DiagnosticDataType": "OS",
            "AdditionalDataURI": null,
            "@odata.etaq": "\"3829a0dfb400266551b\"",
            "@odata.context": "/redfish/v1/$metadata#LogEntry.LogEntry",
            "Id": "FailureScreen",
            "Name": "Failure Screen",
            "@odata.type": "#LogEntry.v1 13 0.LogEntry",
            "@odata.id": "/redfish/v1/Systems/1/LogServices/DiagnosticLog/
Entries/FailureScreen"
        },
        {
            "@odata.etaq": "\"12629f2da6cf2ae17ee\"",
            "@odata.context": "/redfish/v1/$metadata#LogEntry.LogEntry",
            "Codata.type": "#LogEntry.v1 13 0.LogEntry",
            "@odata.id": "/redfish/v1/Systems/1/LogServices/DiagnosticLog/
Entries/MPFA"
      }
```

}

4. Create a Redfish X-Auth-Token to be used for downloading the service data file.

```
curl -D header.txt -L -s -k -u USERID:password -X POST 'https://10.1.1.22
4/redfish/v1/SessionService/Sessions' -H 'Content-Type: application/json'
--data ' { "UserName": "USERID", "Password" : "password" }
```

Response:

```
{
    "UserName": "USERID",
    "@odata.etag": "\"1d08af338c332a22cf6\"",
    "Context": "",
    "Oem": {
       "Lenovo": {
       }
    },
    "CreatedTime": "2024-04-06T22:53:42+00:00",
    "SessionType": "Redfish",
    "@odata.context": "/redfish/v1/$metadata#Session.Session",
    "Password": null,
    "Id": "25",
    "Name": "25",
    "@odata.type": "#Session.v1 5 0.Session",
    "@odata.id": "/redfish/v1/SessionService/Sessions/25"
}
```

5. Find the X-Auth-Token in header.txt file.

cat header.txt

```
HTTP/1.1 201 Created
Date: Sat, 06 Apr 2024 22:53:42 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Connection: keep-alive
Location: /redfish/v1/SessionService/Sessions/25
X-Auth-Token: 552B0845264B078EEE52204EA11071CD0486134B
ETag: "1d08af338c332a22cf6"
OData-Version: 4.0
Content-Language: en
Cache-Control: no-store
Server: XCC Web Server
Strict-Transport-Security: max-age=31536000; includeSubDomains
Content-Security-Policy: default-src 'self'; connect-src *; script-src 'se
lf'; img-src 'self' data:; style-src 'self'; font-src 'self'; child-src 's
elf'; object-src 'none'; frame-ancestors 'none'
X-XSS-Protection: 1; mode=block
X-Content-Type-Options: nosniff
Cache-Control: no-cache, no-store, must-revalidate, private
X-Frame-Options: DENY
Referrer-Policy: same-origin
X-Permitted-Cross-Domain-Policies: value
X-Download-Options: value
```

6. Download the service data file.

```
wget --header="X-Auth-Token: 552B0845264B078EEE52204EA11071CD0486134B" htt
ps://10.1.1.224/imm_dump/FFDC/7D75_J1111111_xcc_240406-224717.tzz --no-che
ck-certificate
```

Tools summary

This section provides a summary of the links to all the tools covered in this document.

XClarity Controller 3 (XCC3)

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem V4 servers
- Documentation: https://pubs.lenovo.com/xcc3/

XClarity Controller 2 (XCC2)

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem V3 servers.
- Documentation: https://pubs.lenovo.com/xcc2/

XClarity Controller (XCC)

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem V1 and V2 servers (except ST50, ST50 V2, SR635, SR655).
- Documentation: https://pubs.lenovo.com/xcc/

XClarity Essentials OneCLI (LXCE)

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-tcli
- Documentation: https://pubs.lenovo.com/lxce-overview/

XClarity Provisioning Manager (LXPM)

- Download: This tool is embedded in the firmware of Lenovo ThinkSystem servers.
- Documentation: https://pubs.lenovo.com/lxpm-overview/

XClarity Administrator (LXCA)

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-Ixcaupd
- Documentation: https://pubs.lenovo.com/lxca/

XClarity Orchestrator (LXCO)

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-Ixco
- Documentation: https://pubs.lenovo.com/lxco/

XClarity Integrator (LXCI) for Windows Admin Center

- Download: https://datacentersupport.lenovo.com/us/en/solutions/Invo-lxci-wac
- Documentation: https://pubs.lenovo.com/lxci-overview/

XClarity Mobile app (LXCM)

- Download: From the phone's app store: search for "XClarity Mobile" or use the following links:
 - Google Play: https://play.google.com/store/apps/details?id=com.lenovo.xcmob
 - Apple Store: https://apps.apple.com/us/app/lenovo-xclarity-mobile/id1023231345
- Documentation: https://pubs.lenovo.com/lxca/lxca_usemobileapp.html

External diagnostics handset or integrated diagnostics panel

- Download: The external diagnostics handset must be purchased from Lenovo. The integrated diagnostics panel is available in some server models by default or as an option.
- Documentation: Go to https://pubs.lenovo.com, navigate to the desired server model, expand the section Server components > Front view > External diagnostics handset.

Related product families

Product families related to this document are the following:

• Lenovo XClarity

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