MAC OS HMS UPGRADE OPERATIONS MANUAL

Abstract SOP for upgrading HMS on MacOS from 6.6.x.x or 6.7.x.x. to 6.8.x.x versions

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1) Installation Methods and OS upgrades.

The latest version of HMS is meant to run on version of MacOS 10.15 (Catalina) and above. It is recommended to HMS at MacOS 12 (Monterey) which gives upgraded security features.

This document discusses the nuances of combining the installation of HMS 6.8.x.x with the upgrade of MacOS to its latest versions.

There are 2 methods of installation and OS upgrading:

- 1) HMS installation, then OS upgrade
- 2) OS Upgrade, then HMS installation

However it should be noted that one method becomes invalid if you forget to backup the HLINK folder (backing up the HLINK folder is part of the instructions, however it should be done before the OS upgrade).

If you forget to backup the HLINK folder method 2 becomes invalid. Due to the lost data this essentially makes it look like a fresh customer's first installation.

This is due to the evolving security features of MacOS. During the OS upgrade, anything that is not directly MacOS related is deleted – including the HLINK folder.

It should be noted that by 'invalid', it does not mean 'impossible', just that the HLINK folder and its data will be lost, the actual installation can proceed as normal.

2) Do not try to upgrade 6.6.x.x or 6.7.x.x to 6.8.x.x

Upgrading to 6.8.x.x from an earlier version is not possible due to breaking changes. An error message will be shown by the installer if you try to do so. Subsequent upgrades from 6.8.x.x will be possible once they are released.

		Setup - HealthLink Client 6.8.1.1-SNAPSHOT
ids nts rive Dis	Health Certainty Link in Care	Setup - HealthLink Client 6.8.1.1-SNAPSHOT Information Please read the following important information. When you are ready, click "Finish" to exit the installer. This version of the Setup Wizard does not support an upgrade from the currently installed version of the HealthLink Client. Currently installed HealthLink Client version: 6.7.4.3 Setup Wizard's HealthLink Client version: 6.8.1.1-SNAPSHOT Please contact the HealthLink Help Desk for further information. (AUS: 1800 125 036: NZ: 0800 288 887)
	ť	Finish

VERY IMPORTANT: Please note that for upgrades, only the user that installed the HMS application can run the upgrade for the installation.

	Setup - HealthLink Client 6.8.1.1-SNAPSHOT
>	Information
care	Please read the following important information. When you are ready, click "Finish" to exit the installer.
0.⊑ 	The user who originally installed this application is not the same user trying to upgrade it. This form of upgrade is not supported.
Healt Link	Please contact the HealthLink Help Desk for further information. (AUS: 1800 125 036; NZ: 0800 288 887)
T	
	Finish

VERY IMPORTANT: Please also close the EMR to ensure no more HMS messages are streamed into the HLINK folder before starting the upgrade process.

3) Backup the /HLINK folder

Before the upgrade process starts, make sure to backup the /HLINK folder.

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$\langle \rangle$		· · · · · · · · · · · · · · · · · · ·		Q Search		
(LOG			Untitle	d	+
Favourites () AirDrop Applications	A			X	1	
Recents Desktop Downloads	Applications	HLINK	Library	System	Users	
Documents						
C iCloud Drive						
 Wetwork Tags Red 						
Green						

4) Backup the security folder and the cert/keystore files

Backup the /Applications/Healthlink/Healthlink Client/Security/*.keystore files.

All the *.(cipher/signature).keystore files need to be backed up except for ca.keystore. The new installation will provide an updated version of the ca.keystore file.

				Healt	hlink		
Na	•		•	🚞 Health	Link Client		
	Nar	me		^	Date Modified	Size	Kind
			HM55ervice.txt		20/08/2021 at 8-28 PM	Zero bytes	Plain Text
		-	HMSServiceForMac.conf		Today at 9:53 AM	4 KB	Document
-	►		jars		Today at 9:53 AM		Folder
		-	libwrapper.jnilib		26/08/2021 at 8:28 PM	76 KB	Document
			memory.txt		Today at 11:17 AM	27 KB	Plain Text
		끲	OneTimePassword		Today at 9:53 AM	176 KB	Application
			quantum.sh		26/08/2021 at 8:28 PM	183 bytes	Plain Text
			QuantumServiceForMac.conf		Today at 9:53 AM	4 KB	Document
			sajithsmd.profile		Today at 9:53 AM	21 KB	Document
			sajithsmd profile.original		Today at 9:53 AM	21 KB	Document
	►		security		Today at 9:53 AM		Folder
			splash.jpg		26/08/2021 at 8:28 PM	70 KB	JPEG image
			startAdvancedOptions.command		26/08/2021 at 8:28 PM	241 bytes	Terminll script
			startHMS.command		26/08/2021 at 8:28 PM	217 bytes	Terminll script
			startQuantumAdministrator.command		26/08/2021 at 8:28 PM	246 bytes	Terminll script
			system.profile		Today at 11:11 AM	6 KB	Document
			system.profile.original		Today at 9:53 AM	6 KB	Document
		3	tools.jar		Today at 9:53 AM	105 bytes	Alias
	►		update		Today at 9:59 AM		Folder
		2	UserServiceLogon		Today at 9:53 AM	139 KB	Application
		3	wrapper.jar		26/08/2021 at 8:28 PM	84 KB	Java JAR file



5) Backup the profiles

Backup /Applications/Healthlink/Healthlink Client/*.profile. This is only a safety measure and will not be used later. The installation and subsequent steps will provide more up-to-date versions.

However, it is good to have these files backed up so that Helpdesk and support teams can debug issues that may come up (especially with system.profile).

Any changes to this file in the old version will not be translated into the new version as it is a fresh installation. It will need to be copied over manually after the upgrade. This step will not be required in almost all cases as system.profile will not have been changed originally.

• •	•	📒 Health	Link Client		
Name		^	Date Modified	Size	Kind
	HMSService.txt		20/08/2021 at 8-28 PM	Zero bytes	Plain Text
-	HMSServiceForMac.conf		Today at 9:53 AM	4 KB	Document
Þ 🛅	jars		Today at 9:53 AM		Folder
	libwrapper.jnilib		26/08/2021 at 8:28 PM	76 KB	Document
	memory.txt		Today at 11:28 AM	41 KB	Plain Text
HL	OneTimePassword		Today at 9:53 AM	176 KB	Application
	quantum.sh		26/08/2021 at 8:28 PM	183 bytes	Plain Text
	QuantumServiceForMac.conf		Today at 9:53 AM	4 KB	Document
	sajithsmd.profile		Today at 9:53 AM	21 KB	Document
	sajithsmd.profile.original		Today at 9:53 AM	21 KB	Document
Þ 🚞	security		Today at 11:19 AM		Folder
	splash.jpg		26/08/2021 at 8:28 PM	70 KB	JPEG image
	startAdvancedOptions.command		26/08/2021 at 8:28 PM	241 bytes	Terminll script
	startHMS.command		26/08/2021 at 8:28 PM	217 bytes	Terminll script
	startQuantumAdministrator.command		26/08/2021 at 8:28 PM	246 bytes	Terminll script
	system.profile		Today at 11:11 AM	6 KB	Document
	system.profile.original		Today at 9:53 AM	6 KB	Document
3	tools.jar		Today at 9:53 AM	105 bytes	Alias
Þ 🛅	update		Today at 9:59 AM		Folder
_	UserServiceLogon		Today at 9:53 AM	139 KB	Application
ġ.	wrapper.jar		26/08/2021 at 8:28 PM	84 KB	Java JAR file

6) Folder paths

Take note of the folder paths for the users in HMS Client using the Advanced Options. For example, in 6.7.4.3 for the master EDI the folder base path should be /HLINK.

• • •		User Settings - HealthLink Client v6.7.4.3	
User Profiles		EDI Details Message Types System Directories	
sajith1 sajithsmd	Add	Message Specifications	
-	Edit	ACC	Add
	Berneue	BROADCST	
	Remove	CBG_QUERY CRC_RESEARCH	Edit
		CMDHBICS	Remove
		DIABETES2	
		GMS	
		CPSURV	
		Options Message Stores Processor	
		Outgoing Message Store	
		Outgoing Message Directory	
		/HLINK/FF_out/ACC	
		Incoming Message Store	
		• File Based Symmetric Web Service	
		Incoming Message Directory	
		/HLINK/FF_in/ACC	
			Edit / More

Whereas for non-master EDIs it should be /HLINK/username

calith1		Los octaria - Message Types - System Directories	
ajithsmd	Add	Message Specifications	
	Edit	ACC	Add
	D	BROADCST	
	Kemove	CBG_QUERY	Edit
		CMDHBICS	Remove
		DIABETES2	Remove
		GMS	
		GP2GP	
		Options Message Stores Processor	
		Outgoing Message Store	
		Outgoing Message Directory	
		/HLINK/sajith2/FF_out/ACC	
		Incoming Message Store	
		• File Based Symmetric Web Service	
		Incoming Message Directory	
		/HLINK/saiith2/FF in/ACC	
			Edit / More
			Eare) more

This becomes important later because in 6.8.x.x, the folder paths change to /Users/Shared/HLINK and /Users/Shared/HLINK/username

Iser Profiles		EDI Details Message Types System Directories	
ajith1	Add		
ajithsmd		Message Specifications	
	Edit	ACC	Add
	D	BROADCST	
	Kemove	CBG_QUERY	Edit
			Demenue
		DIABETES2	Remove
		GMS	
		GP2GP	
		GPSURV	
		Options Message Stores Processor	
		Outgoing Message Store Outgoing Message Directory	
		/Users/Shared/HLINK/FF_out/ACC	
		Incoming Message Store	
		File Based Symmetric Web Service	
		Incoming Message Directory	
		Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC	Edit / More
		Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC	Edit / More
• er Profiles		Incoming Message Directory /Users/Shared/HLINK/FF_In/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT	Edit / More
er Profiles	Add	Incoming Message Directory /Users/Shared/HLINK/FF_In/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories	Edit / More
er Profiles lidb1	Add	Incoming Message Directory /Users/Shared/HLINK/FF_In/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications	Edit / More
er Profiles Jith1 Jith5md	Add Edit	Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications	Edit / More
er Profiles j ith1	Add Edit Pomen	Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications ACC PROADDCST PROADDCST	Edit / More
er Profiles John Jithsmd	Add Edit Remove	Incoming Message Directory /Users/Shared/HLINK/FF_In/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications ACC BROADCST CBC QUERY CBC QUERY	Edit / More
er Profiles Jith1	Add Edit Remove	Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications ACC BROADCST CBC_QUERY CBC_RESEARCH CMDHBICS	Edit / More
er Profiles Jith 1	Add Edit Remove	Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications ACC BROADCST CBC_QUERY CBC_RESEARCH CMDHBICS DUABETSZ	Edit / More
er Profiles jithsmd	Add Edit Remove	Incoming Message Directory /Users/Shared/HLINK/FF_in/ACC User Settings - HealthLink Client v6.8.1.1-SNAPSHOT EDI Details Message Types System Directories Message Specifications ACC BROADCST CBC QUERY CBC QUERY C	Edit / More

Outgoing Message Store Outgoing Message Directory /Users/Shared/HLINK/sajith1/FF_out/ACC

Incoming Message Store

• File Based Symmetric Web Service Incoming Message Directory /Users/Shared/HLINK/sajith1/FF_in/ACC

Options Message Stores Processor

Edit / More

7) Uninstall the existing version - 6.6.x.x or 6.7.x.x

Uninstall the existing version using the uninstaller at /Applications/Healthlink/Healthlink Client/Healthlink Client Uninstaller.app

	🔴 🛑 🔚 He	HealthLink Client				
Name		 Date Modified 	Size	Kind		
0	bootstrap.jar	26/08/2021 at 8:28 PM	25 KB	Java JAR file		
	debug.properties	26/08/2021 at 8:28 PM	530 bytes	Document		
	debug.txt	Today at 11:19 AM	8 KB	Plain Text		
	error.txt	Today at 11:11 AM	Zero bytes	Plain Text		
- 20	HealthLink Advanced Options	Today at 9:53 AM	176 KB	Application		
	HealthLink Client Uninstaller	Today at 9:53 AM	133 KB	Application		
H	HealthLink Quantum Administrator	Today at 9:53 AM	176 KB	Application		
HL	HealthLink Quantum Server	Today at 9:53 AM	176 KB	Application		
-	HealthLinkService	26/08/2021 at 8:28 PM	234 KB	Unix executable		
HL	HealthLinkSystemTray	Today at 9:53 AM	176 KB	Application		
HL	HMS	Today at 9:53 AM	176 KB	Application		
HL	HMS.ico	26/08/2021 at 8:28 PM	4 KB	Windon image		
	hms.sh	26/08/2021 at 8:28 PM	127 bytes	Plain Text		
	hmsonlineService.txt	26/08/2021 at 8:28 PM	Zero bytes	Plain Text		
	HMSService.txt	26/08/2021 at 8:28 PM	Zero bytes	Plain Text		
-	HMSServiceForMac.conf	Today at 9:53 AM	4 KB	Document		
۱ 📔	jars	Today at 9:53 AM		Folder		
	libwrapper.jnilib	26/08/2021 at 8:28 PM	76 KB	Document		
	memory.txt	Today at 11:20 AM	31 KB	Plain Text		
HL	OneTimePassword	Today at 9:53 AM	176 KB	Application		
	auantum ah	06/09/2021 at 2:22 DM	100 hutee	Diain Taut		

8) Copy the HLINK folder to /Users/Shared

Copy over the backed up HLINK folder to /Users/Shared, making it /Users/Shared/HLINK. This should help merge the old HLINK and new HLINK folder correctly during the installation. The installer will override the important files with its new ones.

$\langle \rangle$					
	hms_mac_testing_resource	es	He	althLink Client	
Favourites AirDrop Recents Applications Desktop Documents Output	Network Remote Disc Untitled	Applications Applications System System Users	 admin sajith Shared testuser testuser2 	HINK	4

9) Install 6.8.x.x

Install 6.8.x.x as a fresh installation. Note that the new installation ends up in the /Users/username/Applications/Healthlink folder, not the common /Application/Healthlink folder anymore. This is in keeping with Apple's best practice guidelines.

<>					(Q Search
		Healthlink			HealthLink Client	-
Favouries (M) AirDop A: Applications A: Applications Deventors Deventors Documents A: Cloud Drive A: C	Appleations HLNK HLNK Start St	dinin d	Confidence Confidence Device Device Device Dournets Dournes Dournes Dournets Dour	 Healthrik Healthrik Healthrik 	 HeathLink Clent HeathLink Quantum 	Bootstrap.jer devog.tri devog.t

10) Master EDI and other EDI entry

You need to enter the details of the master EDI during the 6.8.x.x installation as follows:

		Setup - HealthLin	k Client 6.8.1.1-SNAPSHOT
s ts v	Health Certainty in Care	Setup - HealthLin User Identification Please enter your EDI actissued to you by Health you to the HealthLink CO Organisation Name: EDI Account Name: EDI Account Password:	k Client 6.8.1.1-SNAPSHOT Dn count name and password that have been Link. This information is used for identifying lient Messaging System. sajithsmd sajithsmd
			< Back Next > Cancel

Using Advanced Options, add the rest of the EDIs. The customer will be able to provide the passwords for all the EDIs. PTO for example screens:

HealthLink Advanced C	ptions File Configu	ration Utilities L	Logon/Logoff Help // 🖇 🛜 🐲 Tue 11:58 /
			User Settings - HealthLink Client v6.8.1.1-SNAPSHOT
-bash -bash j0.43 j0.451 m/.481 h1.84/ p0.451 m/.481 h1.84/ p0.451 m/.481 h1.84/ p0.451 m/.482 h1.84/ p0.452 m/.482 h1.84/ m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m48208-Proi6.8.1.0 m808. p0.411 m.1000 m.1000 m808. p0.411 m.1000 m.1000 m808. p0.411 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m808. p1.442 m.1000 m.1000 m.1000 m808. p1.442 m.10000 m.1000 m.1000 m.1000 m.1000 m.1000 m.10000 m.1000 m.1000 m.10000 m.1000 m.10000 m.1000 m.10000 m.10000 m.10000 m.100000000000000000000000000000	Liser Profiles Pajith1 sajithsmd	Add Edit Remove	ED/ Details Message Types System Directories - Standard Settings EDI Account Name sajith1 EDI Account Password • - - Certificates Certificate Server URL(s)
0.0.0		l llsor S	Settings - Healthl ink Client v6.8.1.1-SNADSHOT
- User Profiles		0361 0	Setungs - Heatthclink Chent 40.0.151-514AF31101
	Edit Remove	 Standard Set EDI Account sajithsmd EDI Account • 	ttings : Name : Password
		Certificates Sc Certificate Sc	Add item Organisation Name: sajith1 EDI Account Name: sajith1 EDI Account Password: Copy selected profile Cancel OK

11) Adding back the .keystore files

Next copy all the *.keystore files from the backed-up security folder and paste them to /Users/Applications/Healthlink/Healthlink Client/security:

		Healthlink		security				
AirDrop AirDrop A Applications Recents Desktop Downloads Downloads Downloads Coursents AirCloud Drive Remote Disc Remote Disc Network ags Red Green Blue	 Admin Application Shared 	 M Applications M Deaktop M Deaktop M Deaktop M Deaktop M Deaktop M Deaktop M Market M Market M Market M Market Public 	 Healthick Heal	debugtit HealthLink Client HealthLink Quentum	Locaray L	oxkeystore publicky key salthand claim fit salthand signature pix		

DO NOT copy over the ca.keystore or the publickey.key, only the username.cipher/signature.keystore files

12) Validate keystores

To make sure the security folder is set up correctly go to: Advanced Options -> Utilities -> Security Tool

	Filename-Recipient Mapping Editor	nk Client v6.8.1.1-SNAPSHOT	
Current Uses SO-bash up-o- Winder.sofithent,net.head Applications/Healthlink/ Applications/H	Log File Sender Log File Sender Log File Printer Rejected File Sender Security Tool Test Message Generator Please enter your One Time Password EDI Account: sajith1 One Time Password : Connection Password to protect y this password whenever you logon to Enter Connection Password: Confirm Connection Password: IT IS IMPORTANT THAT YOU DO NOT I You will not be able to receive any me	anage: Certificate Details Key Import anage: Certificate Details Key Import anage: For the Edi Account. our personal keystore. You will need to enter the Healthlink Client. coccet YOUR CONNECTION PASSWORD. ssages without your connection password.	Proceed

For EDIs that do not have their certificates setup correctly, the One Time Password screen will show up as follows:

urrent Users	Key Manager Certificate Details Key Import
ajithsmd	Security One Time Password Please enter your One Time Password for the Edi Account. EDI Account: sajith1
	One Time Password: Connection Password Please choose a password to protect your personal keystore. You will need to enter this password whenever you logon to the Healthlink Client. Enter Connection Password:
	Confirm Connection Password:
	IT IS IMPORTANT THAT YOU DO NOT FORGET YOUR CONNECTION PASSWORD. You will not be able to receive any messages without your connection password.

	Security Tool - HealthLink Client v6.8.1.1-SNAPSHOT			
Current Users sajith1 sajithsmd	Security Tool - HealthLink Client v6.8.1.1-SNAPSHOT Key Manager Certificate Details Key Import Change Connection Password Current Connection Password: Veve Connection Password: New Connection Password: Confirm New Connection Password: Veve Connection Password:		Cha	inge

For EDIs that have been setup correctly, a different screen will appear as follows:

You can also view the certificate details for reference by going to the Certificate Details tab and selecting a certificate type and entering the password (which is customer specific):

	Security Tool - HealthLink Client v6.8.1.1-SNAPSHOT
Current Users	Key Manager Cartificate Details Key Import
sajith1 sajithsmd	Signature Certificate details Encryption Certificate details
	Certificate Property Value Version Serial Number Signature Algorithm Issuer Valid from Valid from Valid to Subject
	Enter Connection Password Enter Connection Password
	• Ok Cancel
Current Users	Security Tool - HealthLink Client v6.8.1.1-SNAPSHOT Key Manager Certificate Details Key Import
sajithsmd	O Signature Certificate details O Encryption Certificate details
	Certificate Property Value Version 3 Serial Number 72039635317011186123173553514181426289028207611 Signature Algorithm SHA512WITHRSA
	Issuer C=NZ,O=HealthLink Group Limited,OU=Certification Services,CN= Valid from Fri Dec 16 10:57:15 NZDT 2022 Valid to Sun Dec 15 10:57:15 NZDT 2024 Subject E=sajithsmd@healthlink.net,CN=sajithsmd,O=Healthlink ltd,L=a

13) HLINK folder validation (Advanced Options)

Make sure the HLINK folder paths match up correctly for the EDIs (refer step 5)

Jser Profiles		EDI Details Message Types System Directories							
sajith1	Add	- Massaga Chasifications							
sajithsmd		Message specifications							
	Edit	ACC AC	id						
	Remove	CBG_QUERY Ed	it						
		CBG_RESEARCH							
		CMDHBICS Rem	ove						
		GMS							
		GP2GP							
		GPSURV							
		Options Message Stores Processor							
		Outgoing Message Store							
		Outgoing Message Directory							
		/Users/Shared/HLINK/FF_out/ACC							
		- Incoming Message Store							
		• File Based • Symmetric Web Service							
		Incoming Message Directory							
		/Users/Shared/HLINK/FF_in/ACC							
		Edit / Mo	re						

It is vitally important that the folder paths are updated to /Users/Shared/HLINK/(username)

14) EMR updates

Note that now the HLINK folder has moved to /Users/Shared/HLINK. EMRs will have to update their configuration to point to these new folders. EMRs reliant on hms config.xml can find it at /Users/Shared/HLINK/hms_config.xml, and will have to update their configuration paths to point to this file in order to derive HMS Client folder locations.

15) HMS Registry folder

The HMS Registry folder which is used to manage upgrades of HMS Client is still found at the root /Applications/HMS Registry folder:



16) Mac OS HMS folder permissions

For security purposes the Mac OS installation starting from 6.8.x.x will be given more restrictive permissions to its folders.

An understanding of the file permissions in *nix based systems has been reproduced below

Permission string	Octal code	Meaning	
rwxrwxrwx	777	Read, write, and execute permissions for all users.	
rwxr-xr-x	755	Read and execute permission for all users. The file's owner also has write permission.	
rwxr-x 750 Read and execute permission for the owner and grou file's owner also has write permission. Users who are file's owner or members of the group have no access			
rwx	700	Read, write, and execute permissions for the file's owner only; all others have no access.	
rw-rw-rw-	666	Read and write permissions for all users. No execute permissions for anybody.	
rw-rw-r	664	Read and write permissions for the owner and group. Read- only permission for all others.	
rw-rw	660	Read and write permissions for the owner and group. No world permissions.	
rw-rr	644	Read and write permissions for the owner. Read-only permission for all others.	
rw-r	640	Read and write permissions for the owner, and read-only permission for the group. No permission for others.	
rw	600	Read and write permissions for the owner. No permission for anybody else.	
r	400	Read permission for the owner. No permission for anybody else.	

Reference: https://www.wikihow.com/Change-File-Permissions-in-Linux-from-the-Terminal

The 744 permission's description can be found below:

744, which is a typical default permission, allows read, write, and execute permissions for the owner, and read permissions for the group and "world" users.

Reference: https://www.linode.com/docs/guides/modify-file-permissions-with-chmod/

- The /Users/Shared/HLINK folder has been given 777 permissions so that anyone can read/write to it.
- The Healthlink folder has been given 777 permissions.
- The Healthlink/Healthlink Client and Healthlink Quantum folder has been given 755 permissions.
- The files inside the Client and Quantum folder have been given 700 permissions.
- The system.profile has been given 644 permissions
- The Healthlink Client/updates folder has been given 744 permissions.
- The Quantum/logs folder has been given 744 permissions.
- The HMS Registry folder has been set to 744 permissions
- The xml file inside the registry folder has been set to 644 permissions.

HLINK folder permissions



Healthlink and Client folder permissions

			Q Search	
althlink			update	
Capitations Applications Capitation Capitation	Heathlink T777	 debugat debugat HealthLink Quantum 	 bostrap.jar bebug properties debug properties debug properties debug properties debug properties renthildink Aneed Options Healthlink Oduministator Healthlink O.	

Quantum logs folder permissions

	Healthlin	k			logs				
admin	Þ	Applications	Þ	Healthlink	Þ	debug.txt	i hmsonline	bootstrap.txt	
▶ 🏫 sajith	Þ	Desktop	Þ			HealthLink Client	🖿 logs	hmsonline.txt	
Shared	Þ	Documents	Þ			HealthLink Quantum		hmsonlineService.txt	
Þ		Downloads	Þ					httpRequest.txt	
F		Movies	Þ				744		
		📶 Music	Þ					744	
		Pictures	Þ						
		Public	Þ						

HMS Registry folder permissions



Healthlink Client folder permissions viewed by terminal

Admins-MacB	ook-l	Pro:Heal	thLink	Client	sa	jith	\$ ls -:	lrth
'total 4356	0							
-rwx	1	sajith	staff	22K	24	Jan	11:57	sajithsmd.profile.bak2
-rwx	1	sajith	staff	6.5K	24	Jan	11:57	system.profile.bak2
-rwx	1	sajith	staff	24K	24	Jan	12:06	sajith1.profile
-rwx	1	sajith	staff	5.3K	24	Jan	13:08	install4jError622081261591805176.log
-rwx	1	sajith	staff	124K	24	Jan	13:09	wrapper.jar
-rwx	1	sajith	staff	17M	24	Jan	13:09	tools.jar
-rwx	1	sajith	staff	68K	24	Jan	13:09	splash.jpg
-rwx	1	sajith	staff	509B	24	Jan	13:09	quantum-wrapper-license.conf
-rwx	1	sajith	staff	0B	24	Jan	13:09	memory.txt
-rwx	1	sajith	staff	234K	24	Jan	13:09	libwrapper.jnilib
-rwx	1	sajith	staff	0B	24	Jan	13:09	hmsonlineService.txt
-rwx	1	sajith	staff	518B	24	Jan	13:09	hms-wrapper-license.conf
-rwx	1	sajith	staff	530B	24	Jan	13:09	debug.properties
-rwx	1	sajith	staff	18K	24	Jan	13:09	bootstrap.jar
-rwx	1	sajith	staff	105K	24	Jan	13:09	QuantumService
-rwx	1	sajith	staff	105K	24	Jan	13:09	HmsService
-rwx	1	sajith	staff	1.2M	24	Jan	13:09	HealthLinkService
-rwx	1	sajith	staff	0B	24	Jan	13:09	HMSService.txt
-rwx	1	sajith	staff	4.2K	24	Jan	13:09	HMS.ico
drwx	3	sajith	staff	96B	24	Jan	13:25	HMS.app
drwx	3	sajith	staff	96B	24	Jan	13:25	HealthLink Advanced Options.app
drwx	3	sajith	staff	96B	24	Jan	13:25	HealthLink Client Uninstaller.app
drwx	3	sajith	staff	96B	24	Jan	13:25	HealthLink Quantum Administrator.app
drwx	3	sajith	staff	96B	24	Jan	13:25	HealthLink Quantum Server.app
drwx	3	sajith	staff	96B	24	Jan	13:25	HealthLinkSystemTray.app
drwx	3	sajith	staff	96B	24	Jan	13:25	OneTimePassword.app
drwx	3	sajith	staff	96B	24	Jan	13:25	UserServiceLogon.app
drwx	159	sajith	staff	5.0K	24	Jan	13:25	jars
drwx	7	sajith	staff	224B	24	Jan	13:25	security
-rw-rr	1	sajith	staff	22K	24	Jan	13:26	sajithsmd.profile.bak1
-rwx	1	sajith	staff	22K	24	Jan	13:26	sajithsmd.profile.original
-rw-rr	1	sajith	staff	6.5K	24	Jan	13:26	system.profile.bak1
-rwx	1	sajith	staff	6.5K	24	Jan	13:26	system.profile.original
-rwx	1	sajith	staff	3.8K	24	Jan	13:26	QuantumServiceForMac.conf
-rwx	1	sajith	staff	3.9K	24	Jan	13:26	HMSServiceForMac.conf
drwxr-xr-x	2	sajith	staff	64B	24	Jan	13:30	update
-rwxrwxrwx	1	sajith	staff	22K	24	Jan	13:33	sajithsmd.profile
-rwxrwxrwx	1	sajith	staff	24K	24	Jan	13:34	sajithtest.profile
-rwxrwxrwx	1	sajith	staff	6.9K	24	Jan	13:34	system.profile
-rwx	1	sajith	staff	15K	24	Jan	13:34	error.txt
-rwx	1	sajith	staff	95K	24	Jan	13:34	debug.txt
Admins-MacB	ook-l	Pro:Heal	thLink	Client	sa	jith	\$ '	

Healthlink folder's permission's viewed by terminal

total 16 -rw-r--r-- 1 sajith staff 4.5K 24 Jan 13:06 debug.txt drwxr-xr-x 4 sajith staff 128B 24 Jan 13:25 HealthLink Quantum drwxr-xr-x 45 sajith staff 1.4K 24 Jan 13:34 HealthLink Client Admins-MacBook-Pro:Healthlink sajith\$

Quantum logs folder permissions viewed by terminal

Admins-MacBook-Pro:HealthLink Quantum sajith\$ ls -lrth total 0 drwx----- 12 sajith staff 384B 24 Jan 13:25 hmsonline drwxr--r-- 6 sajith staff 192B 24 Jan 13:25 logs Admins-MacBook-Pro:HealthLink Quantum sajith\$ **Base Healthlink folder's permissions**

```
[Admins-MacBook-Pro:Applications sajith$ ls -lrth
total 0
drwxr-xr-x 6 sajith staff 192B 24 Jan 11:52 Healthlink
```

HMS Registry folder permissions viewed by terminal

drwxr--r-- 3 sajith admin 96B 26 Jan 09:33 HMS Registry admins-MacBook-Pro:Applications sajith\$

```
admins-MacBook-Pro:HMS Registry sajitn$ is -irtn
total 8
-rw-r--r- 1 sajith admin 966B 26 Jan 10:18 com.installer.hms.xml
admins-MacBook-Pro:HMS Registry sajith$
```

17) Start HMS Service (HMS Advanced Options)

IMPORTANT NOTE: Due to the limitations of MacOS, the HMS service is no longer installed by default during the HMS installation. Instead it has to be manually installed by going to the HMS Advanced Options -> Mac Service.

Additional Note: For first time users/installers a popup may be shown by the MacOs when first trying to install the HMS service (shown below). This is a MacOS security feature. Press 'Ok' to install the HMS service.



18) Start Quantum Service (HMS Quantum Administrator)

IMPORTANT NOTE: Due to the limitations of MacOS, the Quantum service is no longer installed by default during the HMS installation. Instead it has to be manually installed by going to the HMS Quantum Administrator.

🕒 😑 🔹 HealthLink Quantum Administrator		
	Mac Service	Standard Application
Install/Uninstal	l Service	Start/Stop Service Start Stop Service not started
Output		