

Mandatory file permissions for Linux Agents

For security reasons it is common practice to avoid Root user permissions for applications. The Linux Agent requires Root permission to provide full functionality and flexibility. However in many scenarios the full flexibility is not required and so it would make sense to install and run the agent as a user without Root permission.

UC4 System Configuration Settings

In order to use the agent without root permission it is required to change following two configuration properties in UC_HOSTCHAR_DEFAULT variable of client 0.

ANONYMOUS_FT = Y

ANONYMOUS_JOB = Y

Do not to forget to edit the *ucxjli3.ini* where to enable following setting:
login_check=no

It runs a job as anonymous user, which is necessary since only user Root has the permission to switch user in order der executes tasks as the given user.

Note: The Agent provides also a rich set of security related permissions. The Linux Agent help describes the settings in great details.

Mandatory directory and file permissions

One user will install and run the agent

Directory permissions of the agent directory

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
<agent directory>	x	X	x				x				x	
<agent>/bin	x	X	x				x				x	
<agent>/out	x	X	x				x				x	
<agent>/temp	x	X	x				x				x	

File permissions of all files which are located in the *bin* directory of the agent

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
bin/ucxeli3f	x		x				x				x	
bin/ucxjli3m	x		x				x				x	
bin/ucxjli3	x		x				x				x	
bin/ucx.msl	x											
bin/ucxjli3.ini	x	X										

Note: The 64 Bit version of the Linux Agent uses different file names but the file permission requirements are identical.

The users who will install and run the agent are different

Directory permissions of the agent directory

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
<agent directory>	x	X	x		x	x	x				x	
<agent>/bin	x	X	x		x	X	x				x	
<agent>/out	x	X	x		X	x	x				x	
<agent>/temp	x	X	x		x	x	x				x	

File permissions of all files which are located in the *bin* directory of the agent

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
bin/ucxeli3f	x		x		x		x				x	
bin/ucxjli3m	x		x		x		x				x	
bin/ucxjli3	x		x		x		x				x	
bin/ucx.msl	x				x							
bin/ucxjli3.ini	x	X			x	x						

Root user will install and run the agent

Directory permissions of the agent directory

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
<agent directory>	x	X	x		x	x	x				x	
<agent>/bin	x	X	x		x	X	x				x	
<agent>/out	x	X	x		X	x	x				x	
<agent>/temp	x	X	x		x	x	x				x	

File permissions of all files which are located in the *bin* directory of the agent

	User				Group				Others			
	R	W	X	S	R	W	X	S	R	W	X	T
bin/ucxeli3f	x	X	x	x	x		x				X	
bin/ucxjli3m	x	X	x	x	x		x				X	
bin/ucxjli3	x	X	x	x	x		x				X	
bin/ucx.msl	x											
bin/ucxjli3.ini	x	x										

Note: The [SETUID \(S\)](#) Bit is required if **only** the **root** should have permission to run the agent.

It is mandatory that all files and directories are **owned** by <user:group> *root:uc4* and that all users are in a Linux group called 'uc4'.

ucxjli3.keystore notes

The *ucxjli3.keystore* file will be generated at the first start of the agent. It stores the connection key which consists of company key, username and other information. It implies to remove this keystore file in order to run the agent with a different user. It is also recommended to remove the agent object in client 0.

Note For security reason it is recommended that the file has only read permission for the user.

Troubleshooting

Transfer key could not be loaded (Ret='00070000', minor='000003EC'). Please check, if the keystore exists and the Agent is authenticated.

Agent was started with a different user as previously. In case you want to run from now on always with this user, you have to delete ucxjli3.keystore, the './Backup' directory and remove the agent object in client 0.

Invalid 'chown' call, file name './temp/JAAFYJQ.TXT'. Error code: ('1' - 'Operation not permitted')

Agent is running without root permissions and the user from the UC4 Login Object is different to the one who runs the agent. → Fix: Change the user of the Login Object .

Any permission errors

Check if SELinux reject requests

UC4 jobs failed with an 'Username or Password not correct' error message

Either ANONYMOUS_JOB or login_check are not configured correctly. See above

MFT Job failed with 'Username or Password not correct' error message

Until V9 SP4 Hotfix 4 Managed File Transfer with Non-Root Agents are not possible due to an issue. This was fixed with SP4 Hotfix 4.