25.03. mSupply client / server installation part 3

These steps need to be carried out after completing the steps described in: 20.01 mSupply client/server installation part 1 20.02 mSupply client/server installation part 2

Obtaining a data file

If you are setting up a sync site for a synced system, then you will need to:

- 1. Generate the XML file for the sync site from the central server refer 29.04. Sync Site Export
- 2. If creating a single-user sync site:
 - 1. Transfer the XML file to the sync site. The Dropbox that you configured in Install Dropbox is handy for this purpose.
 - 2. Create the datafile from this XML file through 29.05. Sync Site Import.
- 3. If creating a server sync site:
 - Create the datafile from this XML file through 29.05. Sync Site Import. This could be done on the server, but is normally easier to do 'locally'. Make sure you are NOT using a version of mSupply more recent than that being installed on the server. Contact support@msupply.foundation to confirm which version to install.
 - 2. Transfer the datafile to the sync site. The Dropbox that you configured in Install Dropbox is handy for this purpose.

Installing mSupply Server software

If you are upgrading from a previous version...

If you are upgrading from a previous version of mSupply, first perform a data backup:

- With mSupply server open as an application click on **File> Backup...**. This will generate a backup file of your current data with file extension .4bk.
- Copy this file to *at least one* safe place, e.g. USB drive, a cloud service such as Dropbox.
- Continue only when the .4bk file has completed transfer to the remote location.

Moving from pre v3.50?

There was a major upgrade of mSupply's internal structure in v3.50. If you are upgrading from a pre v3.50 installation of mSupply, Sustainable Solutions will need to convert your data so that it can be read by mSupply versions after v3.50.



This conversion process is provided free of charge.

Obtain and run the mSupply Server installer

The client/server version of mSupply has two installers:

- One installer, with the word Server in the title, is used to install the **mSupply Server** software on a single server computer.
- The other installer, with the word Client in the title, is used to install the **mSupply Client** software on as many computers as you wish *including on the server computer*. You will be limited in how many clients can *connect* at any one time by the server licence you have purchased.



You must be logged on as Administrator to install mSupply Server with the correct permissions. Please consult your IT support staff if you require assistance to achieve this.

Once you have obtained the mSupply Server installer file, double click it to install. Here is what the mSupply server installation window should look like:

🌄 mSupply Server Setup	×
Installation Folder Where would you like mSupply Server to be installed?	S •
The software will be installed in the folder listed below. To select a different location, new path, or click Change to browse for an existing folder.	either type in a
Install mSupply Server to:	
C:\Program Files\mSupply\mSupply Server	C <u>h</u> ange
Space required: 641.1 MB Space available on selected drive: 880.66 GB	
< <u>B</u> ack <u>N</u> ext >	<u>C</u> ancel

- You may be asked by the operating system whether 'you want to allow this app to make changes to your device?'. Click **Yes**
- At the mSupply Server Setup Welcome screen, click Next
- To proceed with the installation, you will need to click on the 'I agree to the terms of this license agreement' radio button and click **Next**
- Unless you have good reason to do otherwise, *don't* change the installation folder, and click Next
- Unless you have good reason to do otherwise, don't change the Shortcut folder, and click Next
- At the Ready to Install window, click Next
- After some time (minutes!) you will be shown the **Installation Successful** window. Click **Finish**

What is installed where:

We strongly recommend you do not change the default installation directories, which are as follows:

- mSupply Server: C:\Program files\mSupply\mSupply Server
- mSupply Client (see Installing mSupply Client below): C:\mSupply Client

mSupply Server installer also installs the following files and folders:

Last update: 2023/07/24 11:24 adn	nin:server_installation_3 https://docs.msupply.org.nz/admin:	server_installation_3?r	ev=1690197
S COOV	(C:) ▶ Program Files ▶ mSupply ▶ mSupply Server ▶ reports ▶	▼ 49 Search repo	rts p
File Edit View Tools Help			
Organize 👻 Include in library 👻 S	hare with 🔻 New folder		
MSBuild MSBUILD MSBUILD	Name	Date modified	Туре
a 🐊 mSupply Server	J.DS_Store	21/05/2013 11:38 09/05/2013 18:09	File folder DS_STORE
4d Extensions 3 Gomponents	Active_remote_sync_site.pproreP active_remote_sync_site.pproreP backorder_summary.4QR	21/01/2013 13:09 19/03/2013 17:12	PPROREP I
Native Components Native Components	backorder_summary_groupby_name.4qr	21/01/2013 13:09	4D Quick F
Image: Provide the second s	bed_occupancy_rate.4qr bet_bonus_by_cust_tot.4QR	21/01/2013 13:09 21/01/2013 13:09	4D Quick F 4D Quick F
Besources	nt_bonus_by_customer.4QR	21/01/2013 13:09 21/01/2013 13:09	4D Quick F 4D Quick F
Upgrade4DClient > Upgrade4DClient > Upgrade4DClient	bet_donation.4QR	21/01/2013 13:09	4D Quick F
	bet_donation_by_name.4QR	21/01/2013 13:09	4D Quick F

Starting the Server for the first time

- There is no point in carrying out the following steps unless you are ready to create a new mSupply data file, or you have one to load.
 - If this is a satellite site on a synced system, you should have one to load - refer Obtaining a data file.

Run mSupply Server

We need to run mSupply Server as an application until all configuration is completed. Don't run as a Service now as some configuration functionality is not enabled when run as Service.

Sometime it has been useful to allow the *mSupply.exe* to run as Administrator by default. This gives the application the right to modify data in folders that may have been unknowingly restricted by operating system.

View the *mSupply.exe* file inside the mSupply installation folder. View properties then Compatibility tab and set the file to always Run this program as an administrator. View the image below for better guidance.

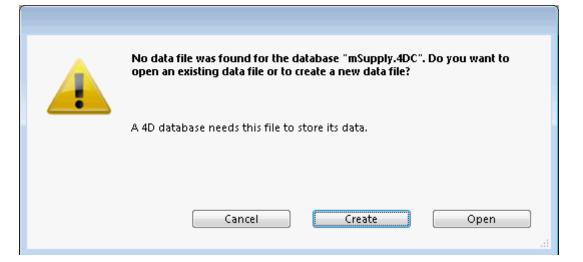
Name	Date modified Type	Size
Components	12/05/2020 19:03 File folder	
Licenses	12/05/2020 19:05 File folder	
Native Components	to mSupply.exe Properties	×
Plugins	a mouphy.exe Properties	^
reports	General Compatibility Security Details Previous Versions	
Resources	If this program isn't working correctly on this version of Windows,	
Server Database	try running the compatibility troubleshooter.	
Upgrade4DClient	Run compatibility troubleshooter	
to mSupply.exe	How do I choose compatibility settings manually?	9,650 KB
4D Compiler.dll	Compatibility mode	548 KB
4Dlibzip.dll	Run this program in compatibility mode for:	112 KB
🚳 4DMsg.dll	Windows 8	7 KB
4DSLI.dll	Windows 8	24 KB
4Dzlib.dll	C-Ward	80 KB
codeeditor.dll	Settings Reduced color mode	397 KB
DB4D.dll		6,111 KB
Graphics.dll	8-bit (256) color 🛛 🗸	2,185 KB
🗟 GUI.dll	Run in 640 x 480 screen resolution	2,219 KB
httpserver.dll	Disable display scaling on high DPI settings	505 KB
🚳 icu.dll	Run this program as an administrator	3,850 KB
Kernel.dll		2,084 KB
KernellPC.dll		352 KB
Ianguagesyntax.dll		1,258 KB
LDAPComponent.dll	Change settings for all users	437 KB
🚳 libeay32.dll		1,624 KB
🚳 libhunspell.dll	OK Cancel Apply	446 KB

We need to run the mSupply Server software as Administrator.

Find the mSupply Server executable (C:\Program files\mSupply\mSupply Server\mSupply.exe), right-click on it and select **Run as administrator**

	Open
	Open file location
9	Run as administrator
-	Troubleshoot compatibility
	Pin to Start
٩	Upload to MEGA (1 file)
	Edit with Notepad++
	Scan with F-PROT Antivirus
	Pin to Taskbar
	Send to +
	Cut
	Сору
	Create shortcut
-	Delete
	Rename
	Properties

You will then be presented with the following dialogue box:



Click **Create** to create a new data file or **Open** to choose an existing data file. The below image shows an existing data file.

Select a 4D Data File	data[0010] ▶ data file ▶ 🔷 🗸	• 5earch data_file	×
Organize Vew folder		i≡ ▼ []	0
 MSupply mSupply Server Nigeria mSupply_data 	Documents library	Arrange by: Folder	•
 Axios server 110321 axios_data Axios_foundation Kiribati Kiribati latest data nms SOL NMS_mSupply_data[0078] nms_v12_data nrh datafile server_data[0010] 	Name ₯ temporary files ➡ server_data.4dd		
 data_file temporary files Preferences 	•		•
File name:		 ✓ 4D Data File (*.4dd;*.data) Open Cance 	• el
issues with permissio individual user folder: Therefore, it is now h file in the folder: C : \	on 1803 and following, th ns to access folders loca s such as under My Docu ighly recommended to sa ServerName_ mSupply_ ne with the mSupply serv mSupply_data.	ted in uments. ave your data _data	

You may get a question from the Windows Firewall requesting permission for mSupply to communicate through the Firewall.

💣 Windows Secu	urity Alert		\times
💓 Windo	ws Firewall	has blocked some features of this app	
Windows Firewall h	as blocked some	features of 4D Server on all public and private networks.	
4.	Name:	4D Server	
3.ª	Publisher:	4D	
	Path:	C:\program files (x86)\msupply\msupply server \msupply.exe	
Allow 4D Server to	communicate on	these networks:	
🗹 Private netw	orks, such as my	home or work network	
		e in airports and coffee shops (not recommended In have little or no security)	
What are the risks	of allowing an ap	p through a firewall?	
		Allow access Cancel	

Allow mSupply to communicate on both private and public networks.

If the above steps have succeeded, you should see the **4D Server Administration** window:

Last update: 2023/07/24 11:24 admin:server_installation_3 https://docs.msupply.org.nz/admin:server_installation_3?rev=1690197876



Configure backups

- Edit > Settings > User settings for Data file > Backup tab
 - Scheduler: Set Automatic Backup: to Every day, at 20:00 or later, as long as it is a time when work is likely to be finished. It will have to be set earlier, say 16:00 if the server is switched off of an evening.
 - Configuration:
 - Content:
 - tick Data File
 - untick Structure File
 - untick User Structure File
 - Delete all 'Attachments' except the .4DIndx file.
 - Add the journal (journal) files to the backup. The Journal file cannot be selected until you have configured it under Log Management below, and run the backup once, which you can do once the backup settings have been configured. Once these have been configured, the backup contents should look something like this:

Scheduler	Configuration	Backup & Restore	
Conte	nt		
			🔽 Data
			Structure
			User Structure (only for binary database)
		Attachments	: Juine 14.4DIndx "Interne H-journal" in volume "D:"
			Delete Add folder Add file

 If this server uses the Dashboard, then add the dashboard configuration files (normally C:\Progran Files\mSupply Dashboard\data\grafana.db and C:\Program Files\mSupply Dashboard\conf\custom.ini) to the backup - see here (noting that the journal file hasn't been added yet!):

Content	☑ Data File □ Structure File		
	User Structure File		
Attachments:	"grafana.db" in volume "C:" "custom.ini" in volume "C:" ./ data.4Dindx		^
			~
	Delete	Add folder	Add file

• Backup File Destination Folder

- $\circ\,$ If on physical hardware, this should be a separate physical disk (e.g.
 - D:\mSupply_backups).
- If on a virtual machine it is preferable to store the backups on a separate virtual disk.
- Log Management: Set .journal to the same parent folder as the backups.

If a location of the log file is already specified, and you want to change it, you need to untick the "Use Log" tick-box and then when you re-tick it you will be prompted for a new location.

• Backup & Restore

• General settings

- tick Keep only last 30 backup files (dependent on disk storage space).
- tick Backup only if the data file has been modified
- Delete oldest backup file after backup
- If backup fails: select Retry after 30 Seconds
- tick Cancel the operation after 5 attempts.

• Archive

- Segment Size (Mb): None
- Compression Rate: Compact
- Interlacing Rate: None
- Redundancy Rate: None

Automatic Restore

- tick Restore last backup if database is damaged
- tick Integrate last log if database is incomplete

Last update: 2023/07/24 11:24

Click OK

You may see the following dialogue box:

Warning



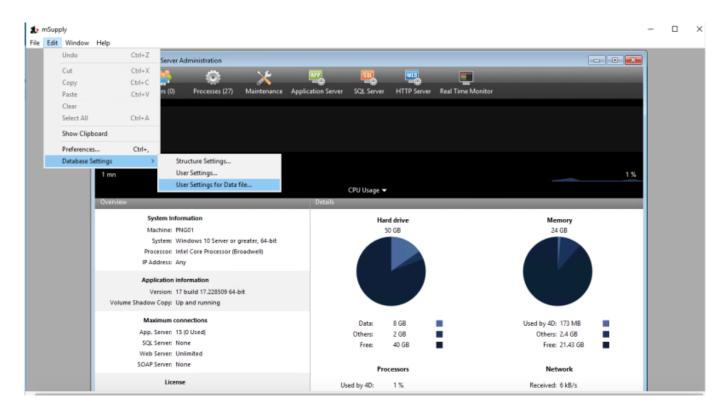
The log file will be activated after the next backup of the data file. Do you want to start the backup automatically?



• Click **OK** to create the first backup.

Configure cache

Edit > Database Settings > User settings for Data file



Select **Database** and then set up the cache memory.

- Tick Calculation of adaptive cache
- Memory to be reserved for other applications and for the system: = 512 MB (default?)
- Percentage of the available memory used for cache = 100%. According to the 4D v 16.5

Database/Memory page, 'Percentage of the available memory used for the cache = 100% since there is only one 4D Server application.' If other applications running on the server need additional RAM, it should be added to the figure above.

- Minimum size = 1,000 MB (default?)
- Maximum size = can be set to any number, including greater than available RAM. If this number is greater than the available RAM, 4D will adapt the size of the cache according to the actual available RAM.
- Flush Cache every: 2 Minutes

t n	Supply
File C mSt	mSupply - User Settings for Data file
Mo	Interface Database Backup Client-server Web SQL PHP
100 %	Memory
	Database Cache Settings
	Calculation of adaptive cache
	Memory to be reserved for other applications and for the system: 512 MB
1 mn	Percentage of available memory used for cache: 100 %
	Minimum Size: 1000 MB
Overv	Maximum Size: 16000 MB
	Physical Memory: 16383 MB
	Current Cache: 2500 MB
	Cache on Restart: 15871 MB
	Flush Cache every: 2 Minutes 👻

- Click OK
- Exit 4D Server Administration window.
- Check that the settings.4DSettings file has been created in the <DataFolder>/Settings folder

Setting the server software to run as a service

The server should now be set to start automatically when the machine is turned on. This can be accomplished by setting the server to run as a service. Choose **File > Register Current Database as Service**.



If the **Register Current Database as Service** option is greyed out, you are probably not running the mSupply Server as Administrator. You need to quit the server and run **as Administrator**.

約 n	nSupply	
File	Edit Window Help	
1 10	New	+
	Open	Ctrl+O
	Open Recent	•
	Close Database	Ctrl+Shift+Alt+W
	Close Window	Ctrl+W
	Close All Windows	Ctrl+Alt+W
	Register Current Database as Service	
	Unregister Current Database	
	Unregister all Server Services	
	Flush Data Buffers	Ctrl+Shift+Alt+S
	Backup	
	Restore	
	Quit	Ctrl+Q

Once you have registered the Current Database as Service, Quit the 4D by clicking the close box on the top right (or choose *File > Quit* from the menus). You will then be shown a disconnect window something like this (you can select Disconnect all clients and quit if no users are currently active):

4D Server	
	 Disconnect from Server in: 10 min. Wait for all clients to disconnect. (Ignore sleeping clients)
	O Disconnect all clients and quit. Cancel OK

Pin Services to the taskbar

It is important to be able to quickly observe the status of the 4D / mSupply Service. Therefore, we pin

Services to the taskbar:

- Click Windows icon
- Type Services
- Right-click the Services Desktop App
- Select Pin to taskbar

Configure mSupply Service settings

Click on **Services** in the task bar. You will be shown a window like this.

Action View	> 🛍 🖬 🖻 🛱 🖳	<u>€</u> ▶		F		
ree	Name 🛆	Description	Status	Startup Type	Log On As	
Services (Local)	4D Server: mSupply			Manual	LocalSystem	
,,,	🆓 Alerter	Notifies sel		Manual	LocalSystem	
	🆓 Application Manage	Provides s		Manual	LocalSystem	
	🦓 ClipBook	Supports C		Manual	LocalSystem	
	🦓 COM+ Event System	Provides a	Started	Manual	LocalSystem	
	🦓 Computer Browser	Maintains a	Started	Automatic	LocalSystem	
	Note: Client 🏀	Manages n	Started	Automatic	LocalSystem	
	🆓 Distributed Link Tra	Sends notif	Started	Automatic	LocalSystem	
	🆓 Distributed Transac	Coordinate	Started	Manual	LocalSystem	
	🆓 DNS Client	Resolves a	Started	Automatic	LocalSystem	
	🦓 Event Log	Logs event	Started	Automatic	LocalSystem	
	🆓 Fax Service	Helps you		Manual	LocalSystem	
	🆓 Indexing Service			Manual	LocalSystem	
	🦓 Internet Connectio	Provides n		Manual	LocalSystem	
	Note: The section of	Manages I	Started	Automatic	LocalSystem	
	🆓 Logical Disk Manager	Logical Disk	Started	Automatic	LocalSystem	
	🆓 Logical Disk Manage	Administrat		Manual	LocalSystem	
	Messenger 🖏	Sends and	Started	Automatic	LocalSystem	
	🆓 Net Logon	Supports p		Manual	LocalSystem	
	NetMeeting Remote	Allows aut		Manual	LocalSystem	
	Network Connections	Manages o	Started	Manual	LocalSystem	

Double-click on **4DServer: mSupply** - fortunately it is usually the first item in the list!

You will be shown the **4DServer: mSupply service properties** window. Change the *Startup type* in the drop-down list to *automatic (Delayed start)*.

4D Server: mSup	oply Propertie	s (Local Computer)	×
General Log O	n Recovery	Dependencies	
Service name:	4DS msup	ply	
Display name:	4D Server	: mSupply	
Description:			\sim
Path to execut C:\Program File		oly\mSupply Server\mSupply.ex	e -s "C:\Prograd
Startup type:		: (Delayed Start)	~
	Automatic Automatic Manual	: (Delayed Start)	
Service status:	Disabled		
Start	Stop	Pause	Resume
You can specif from here.	y the start para	ameters that apply when you sta	it the service
Start paramete	18:		
		OK Cancel	Apply

Log on as administrator account

With mSupply 3.85+ on Windows Server 2012+ and Windows 10 1803+ the service has had to be assigned to "Log On" to an administrator account for mSupply service to start:

Services (Local)	_	
4D Server: mSupply	Nam	4D Server: mSupply Properties (Local Computer) X
Stop the service Restart the service	(), A (), A (), A (), A (), A (), A	General Log On Recovery Dependencies Log on as: CLocal System account Allow service to interact with desktop
	(), A (), A (), A	This account: .V.Administrator Browse Password:
	9. A 9. A 9. A	Confirm password:
	Q, A Q, A Q, B	
	i Ba i Ba	
	©, ВІ ©, ВІ ©, СІ	
	©,c ©,c	
	040 040	OK Cancel Apply

Configure the computer to restart if the mSupply service does not start

- Sometimes, for some reason, including, for example, after certain Windows OS updates, the mSupply Service will not automatically start, even though you have configured it to.
- To guard against this, it may be worth configuring the computer to restart if the mSupply service has not started after a LONG delay, say 120 minutes. This is done on the **Recovery** tab:

Services						- 🗆	\times
File Action View	Help						
Þ 🔿 📊 🛅 🧕) 📑 🛛 🖬 🕨 🔳 🕪						
Services (Local)	Services (Local)	4D Server: mSupply Propertie	s (Local Computer)	\times			
	4D Server: mSupply	General Log On Recovery	Dependencies			Status	Start ^
	<u>Stop</u> the service <u>Restart</u> the service	Select the computer's respons actions.	e if this service fails. <u>Help me set up rec</u>	overy	oftware up to date. If this service is oftware up to date. If this service is	Running	Autc Man Autc
		First failure:	Restart the Service	\sim	Control validation for the installatio	Kunning	Man
		Second failure:	Restart the Service		<u></u>	D	X
		Subsequent failures:	Restart the Computer	Kestart	Computer Options		~
		Reset fail count after:	0 days	Restart	computer after: 120 minutes		
		Restart service after:	1 minutes	Befo	ore restart, send this message to computers	on the netwo	ırk:
		Enable actions for stops wi	ith errors. Restart Computer Options				^
		Run program					
		Program:					
			Browse				~
		Command line parameters:					
		Append fail count to end	d of command line (/fail=%1%)		0	ĸ	Cancel
					is used by Windows Backup to perf		Man

Manually starting the Service

Despite being configured so, the mSupply Service sometimes will not start when the server hardware starts. The service can be started through the Services:

Q,		Servi	ces				_ 0 ×
File Action View	Help						
() 🗐 🖬 ()) 🔂 🛐 🕨 🗉 🗤 🕪						
Services (Local)	Services (Local)						
	4D Server: mSupply	Name 📩	Description	Status	Startup Type	Log On As	^
Start the service		🐫 4D Server: mSupply			Automatic (D	Local Syste	
		端 ActiveX Installer (AxInstSV)	Provides Us		Manual	Local Syste	_
		🎑 Advanced Monitoring Agent		Running	Automatic	Local Syste	=
		🧠 Advanced Monitoring Agen	Add-on ser	Running	Automatic (D	Local Syste	
		🔍 App Readiness	Gets apps re		Manual	Local Syste	

Manually stopping the mSupply Server Service

• To manually stop the mSupply Server Service, first make sure clients are not connected, then double-click the "Services" shortcut you made on the desktop, highlight the 4D Server service, and click the square "stop" button (looks like a "Stop" button on a media player)

Creating a new data file or choosing a different data file

From this point there should be no need to revisit any of the above procedures to operate mSupply.

However, if you are testing, or starting a data file for a second organisation, you may wish either to change the data file mSupply is using or to create a new file.

The mSupply program (the files named "mSupply.4DC" and "mSupply.RSR") store the path to the last data file used, and the next time mSupply is started, the previous data file that was open is opened again unless there is user intervention or the "old" data file has been moved to a new location.

To intervene, hold down the "alt" key as the 4D server starts up.

You will be shown the standard open/save window:

Open						? ×
Look in:	🔁 Data		-	(= 🗈 💣		
History Desktop My Documents My Computer	WebFolder	ata				
My Network P	File name: Files of type:	my_precious_data Data File (*.4dd)		• •	- L	_

To create a new data file, click the "New" button.

To select an existing data file, navigate to the file's location then click the "Open" button.

SSL Certificate

The mSupply server also has a webserver as mentioned here.

It is recommended that a public facing web server should have an SSL certificate installed. For the mSupply server a 'cert.pem' and 'key.pem' need to be generated using the purchased SSL certificate that has been purchased from a SSL vendor.

Theses files needs to be stored inside the folder C:\Program Files\mSupply\mSupply Server\Server Database as shown in the image below.

← → × ↑ 📙 α más	pply > mSupplyServer > ServerDr	tabase > v o .0	Search Server Da	tabase	
_ ^	Name	Date modified	Type:	Size	
This PC	Documentation	24/07/2023 7:50 pm	File folder		
30 Objects	node	24/07/2023 8:13 pm	File folder		
Desktep	Resources	24/07/2023 0:13 pm	File folder		
	Settings	24/67/2023 8:20 pm	File folder		
Documents	seb_dummy	24/07/2023 8:14 pm	File folder		
🖶 Downloads	WebFolder	24/67/2023 8t13 pm	File folder		
Music	Cetpern	13/06/20/3 5i15 pm	PEM File	9 KB	
Pictures	dhparams.pom	24/67/2023 8:30 pm	PEM File	1 KB	
Kidecu	key.pem	Torrest DEALED	PEM File	2.108	
the branch of the	mSupply.4DZ	Size: 424 bytes	4DZ File	34,042 KB	
Local Disk (C)		Date modified: 24/07/2023 8:30 pm			
Dets (D:)					

The cert.pem file contains the certificate in the following format and can have the root as well as the intermediate certificate.

----BEGIN CERTIFICATE-----

MIIGUzCCBTugAwIBAgIRAP9nsdfsfdsdfYH0oEZgg3k28WUoYQgQwDQYJKoZIhvc gY8xCzAJBgNVBAYTAkdCMRswGQYDVQQIExJHcmVhdGVyIE1hbmNoZXN0ZXIxEDAO BgNVBAcTB1NhbGZvcassdsdmQxGDAWBgNVBAoTsdfsD1NlY3RpZ28gTGltaXRlZD AxMuU2VjdGlnbyBSU0EgRG9tYWluIFZhbGlkYXRpb24gU2VjdXJlIFNlcnZlciBD QTAeFw0yMzA2MTYwMDAwMdsadsdDBaFw0yNDA2MTUyMzU5NTlaMCExHzAdBgNVB Junk

-----END CERTIFICATE-----

----BEGIN CERTIFICATE-----

MIIGEzdddhuyuyuyuCCA/ugAwIBAasdasdgIQfVtRJrR2uhHbdBYLvFMNpzANBg iDELMAkGA1UEBhMCVVMxEzARBgNVBAgTCk5ldyBKZXJzZXkxFDASBgNVBAcTC0pl cnNleSBDaXR5MR4wHAYDVQQKExVUaGUgVVNFUlRSVVNUIE5ldHdvcmsxLjAsBgNV BAMTJVVTRVJUcnVzdCBSU0EgQsdsd2VydGlmaWNhdGlvbiBBdXRob3JpdHkwHhc MTAyMDAwMDAwWhcNMzAxMjMxMjM10TU5WjCBjzELMAkGA1UEBhMCR0IxGzAZBgNV Junk

----END CERTIFICATE-----

The the key.pem file contains

----BEGIN PRIVATE KEY-----

MIIEvAIBADANBgkasasdfqhkiG9w0BhgghAQEFAASCBKYwggSiAgEAAoIBAQCqPA TZB5GnFA0DhHMTU+pqGD8eS6N0zWwhoyb2dvZv1w2Gh6fcprPUpATltvcMe8q+fe +ITiYylKfcs2nNYyirr2sdfsdfSPGMKR277MW6G7etFCGjBH/Ae9gRcFk4z8Arnj e9oRf/UCh021bHjN9itHGIT/7ssp068EufJ+thAdDxzp3xNw70lkAXMxzsZhSJ8k CTvUxUF6Niul/1ZReUURCZp6coIweewerRhoLe6KXpgfuuIqtpvy0s2AcGRI6qfx iC20nTBKweefzPg4Uo9d6DdhQD7xdklD1SXlcTgEXpa0Cc/iUGthXWvyWyff5uB junk==

-----END PRIVATE KEY-----

More recently we have moved towards using Caddy server software which setup a reverse proxy server which use Let's Encrypt to automatically update SSL certificates. This will avoid the need to manually watch and update expiring SSL

Installing mSupply Client

Needed: mSupply Client software of the same version (or relatively recent) as the mSupply Server.

 The mSupply server should run as a service on the server computer - see above. If any user needs to use mSupply on the server (not recommended, but possible, and sometimes necessary) then they should **not** be running the mSupply *Server* software. They should run the mSupply *Client* software, which should be made available to all user accounts.

Obtain and run mSupply Client installer

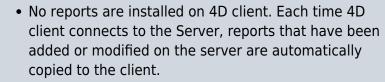
You must be logged on as Administrator to install mSupply Client with the correct permissions. Please consult your IT support staff if you require assistance to achieve this.

• Once you have obtained the mSupply Client installer file, double click it to install.

The mSupply client will be installed in the folder C:\mSupply\mSupply client on your computer.

mSupply client installer also installs the following files and folders:

- A shortcut on the Desktop called mSupply client.
- A folder called "\4D\Network" in the Windows folder on the startup volume, which contains network component files that need to be present for 4D to communicate over a TCP (and other types of) network(s).



 Installers have been set up to overwrite existing files, so reinstalling the software will restore any potentially corrupted files to their original state. The installer will not overwrite your data files, unless you have been unwise enough to name your data file "example data"

and put it in the "example data" folder

For convenience, pin the mSupply client desktop shortcut to the taskbar.

If any other Windows users will use this computer to access mSupply, it is worth copying the mSupply client desktop shortcut to the C:\Users\Public\Desktop folder. This will place the shortcut on the desktop of each user. Each user will need to pin this shortcut from their desktop to the taskbar.



The C:\Users\Public\Desktop folder is normally a hidden folder. You will likely need to make it visible).

Additionally, if this computer is primarily used for running mSupply, then it is worth copying the mSupply client desktop shortcut to the Startup folder. The actual folder

name changes with Windows version of so here are instructions: How to Add Programs, Files, and Folders to System Startup in Windows.

Starting the mSupply Client

Once the installation is completed, double-click the "start mSupply Client" shortcut on your desktop. A window something like this should appear:

E Con	welcome			×
	nt Available Custor	m		
	mSupply	BULLETTRAIN		
🗌 Dis	play this dialog at ne	ext startup		
			Cancel	OK

The window lists available mSupply servers on your network (there should be only one!) Click on the server you wish to connect to.

- Once you have connected successfully, the mSupply Client 'remembers' which Server you last connected to and stores this in the **Recent** tab. Whenever you run the mSupply Client, it will automatically connect to that server.
 If, mSupply Client cannot connect to the mSupply Server, this window will pop up showing the **Recent** tab. You can try choosing the server there.
 - If, for some reason, network settings have been changed and you cannot connect from the **Recent** tab, remember to look at the **TCP/IP** tab as well.

Clicking the "OK" button will take you to the mSupply password entry window. For new data files, the password is user1 for the first user in the list. Click on the first user, then enter the password and click **OK**

Forcing mSupply Client to re-sync files from the server

Occasionally the mSupply client may fail to connect with the server for un-known reasons. Errors such as the "This database has not been compiled for 64-bit processors" has been encountered and can be fixed in the following manner. Please read on.



Sometimes simply forcing the mSupply client to retrieves all setup files from the server may just fix things.

To do this Double click on the mSupply Client icon and hold the "Alt" (option on MAC) key. You should see such a window open.

Connection to 4D Server	×
Welcome to 4D Recent Available Custom	
Servers mSupply CF ITS	
Display this dialog at next startup Cancel OK	
Cancel OK	

On the above window select the server and click the custom tab.

Connection to 4D Server	×
Welcome to 4D	
Recent Available Custom	
Name and Address of a published 4D Server:	
Database Name: mSupply	
ex accounting	
Network Address: 8 .70:19813	
ex: accounting.company.com or: 192.121.122.123:8858 or: [2001:0db8:85a3:0000:0000:8a2e:0370:7334]:19813	
Force the update of the local resources	
Display this dialog at next startup	
Cancel OK	

On the above window check the *Force update of local resources* checkbox and click the **OK** button.

This will force the mSupply client to get the resources from the server and past issue may now be resolved.

Close mSupply and restart normally without the "Alt" key and mSupply client should be able to connect to the server without errors.

mSupply Client software cannot see the mSupply Server?

Server is not visible?

- To make it easy for you to connect, mSupply Server publishes details about available servers on a specific port. It is quite possible that products such as "Zone Alarm" and "Norton Personal Firewall" will block access to this port and stop discovery of the servers. Contact your system administrator if the list of available servers is blank.
- Of course, it may be possible that the mSupply Server service is not running. Check Services to establish that.
- Lastly, the Windows firewall may be blocking the Server publishing it's presence - see below.

Configuring Windows firewall on server

The Windows firewall may need to be adjusted to allow the Client to receive Server identification.

To locate an mSupply server on a network mSupply client broadcasts over the subnet on random UDP ports from 49157 and above. As such inbound UDP ports from 49157 upwards should be opened on the server firewall. If these UDP ports are not open on the server then the clients cannot automatically find the server. However clients can still be manually directed to the server IP address by holding alt when client is opening, and entering the IP address in the network address field of the custom tab.

The default ports for client/server communication in mSupply server are TCP 19812 & 19813. The server firewall will require inbound TCP ports 19812 and 19813 to be opened (however these ports can be changed in mSupply server if required).

The firewall on the Client machines could also block access to the server machine. Testing with the firewalls on the server / client machines temporarily turned off in various combinations will help to establish whether firewalls are blocking communications.

Manually configuring the mSupply client

Due to firewall or if you connect to mSupply server via a router, then you may need to enter in the IP address on the mSupply Client custom setting window.

Connection to 4D Server	×
Welcome to 4D	
Recent Available Custom	
Name and Address of a published 4D Server:	
Database Name: mSupply	
ex accounting	
Network Address: 192.168.3.250 ex: accounting.company.com or: 192.121.122.123:8858 or: [2001:0db&:85a3:0000:0000:8a2e:0370:7334]:19813	
Force the update of the local resources	
Display this dialog at next startup	
Cancel OK	1
	ai

The data base name is always : **mSupply**

If mSupply server is serving via the default port (19813) then simply enter in the IP address. Otherwise, see more details on the Custom Tab.

> As part of the installation, a batch file with the name **Reset** client temp folder is installed on the desktop. This is for use if the client begins to behave incorrectly in the future, as described on the 28.01. How to re-set the mSupply client page. It is not for use during installation so you can safely ignore it until it is needed in the future. It is safe to move the batch file to somewhere other than the desktop if needed.

Forcing mSupply client to connect to a specific mSupply Server

Within an organisation it is possible to have multiple mSupply server running like in the image shown below.

Ö	Welcome to 4D		
	Available Custom		
Sum	isso[_data Supply Supply	SussalNepalBalenServer's Mac mi SUSSOLWORK53F3 NEW-NEPAL	
Displ	ay this dialog at next startu		DIK

Now you as a administrator may require a particular mSupply client to connect to one of the server and to ignore the others. To reduce confusion to the user you may require the user to connect to a particular mSupply client.

It is possible to direct a mSupply client application to look out for a particular mSupply server only. Let us assume that you want a certain computer to access the mSupply server with a IP address of : 192.168.3.200

- Install the mSupply Client.
- Navigate to `C:\mSupply client\Database`
- You will see the `EnginedServer.4DLink` file, use Notepad to open it.
- For the server path `server_path=":19813"` Enter a valid msupply server IP like `server_path="192.168.3.200:19813"`
- save the `EnginedServer.4DLink` file
- Now when you start the mSupply client, it will know where the mSupply server is and will look for the IP : 192.168.3.200

	1	<u> </u>	W	
	Database .		×	
	⊙ New - 🔏 🚺 🗇	🖻 🗊 îl∉ Sort × 🗮 View × …		
	← → × ↑ 🚬 > This PC > Local Dir	sk (C:) > mSupply client > Database	✓ C Search Database ,P	
	👻 🌟 Quick accass	Name	Date modified Type Size	
	Townloads	# EnginedServer	12/16/2022 4:22 PM 4D Connection file 1 KB	
	To cuments			
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	Cesktop	File Edit View		٢
	E Dropbox (Mac)	Varsions"1.8" anodines"(ITE-8")vdatab	ase_shortcut is_remote="true" server_database_name="mSupply"	server nath="-19813"
	🚞 Google Drive (Mac)	cache_folder_name="mSupplyClient"/>	ase_shorecar as_remote the server_anase_name asappay	server gradie 125025
	🚞 Demo data			
	🛅 mSupply			
(Ge	📒 Nisha Dangol			
	Passwords		Add the mSupply Server IP before the	
	🛩 🜉 This PC		port.	
	> 🔚 Desktop			
	> Documents			
	> 🛅 Downloads			
9.6	> 🔚 Munic			

mSupply Server configuration

Register mSupply

The procedure is described earlier in "Preferences" chapter of the mSupply manual. See The Register button

You will either have to phone or email the information to Sustainable Solutions to obtain a registration code.

The registration code is keyed to your Organisation name and the MAC address of the server. Changing either of these will require a new code, which we shall willingly provide. So, **take care when setting the Organisation Name!**

Configure mSupply preferences

Once registered, you may want to systematically to go through the mSupply Preferences and choose appropriate settings, and particularly setting up the **Secondary backups**! Start here: Preferences > General

Turn off web dashboard

If the web dashboard has been set up on the Primary Server, then the dashboard preferences will be copied to the Satellite site datafile. In most cases, the web dashboard is not being used on the Satellite site and it is an unnecessary interaction with the scheduler, so may as well be turned off:

Before v4.04:

- 1. File > Preferences... > Dashboard
- 2. Untick the 'We use the web dashboard'
- 3. Click **OK**

After v4.04, the dashboard is managed through the Admin page of the navigator:

1. Admin > Dashboard > Export Settings

- 2. Clear the Postgres Server entries
- 3. Click **OK**

ard			
pard Reports Dashbo	ard Tab Export Settings		
Postgres Server	Clear these		
Server	localtost		
Server	ocanose		
Port	5432		
User	postgres		
	progres		
Password			
Database Name	dashboard		Test connection
Database Name	dashboard		Test connection
Database Name	dashboard		Test connection
	dashboard		Test connection
Database Name Export Settings			Test connection
	Table	Export	Test connection
	Table		Test connection
	Table		Test connection
	Table abbreviation account Admitted_from eggregator		Test connection
	Table abbreviation account Admited_from eggregator esset		Test connection
	Table abbreviation account Admitted_from eggregator		Test connection
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	Table abbreviation account Admitted_from aggregator asset_ asset_ asset_location asset_location asset_location		
	Table abbreviation account Admitted_from aggregator asset_ asset_ asset_location asset_location asset_location		

Configure secondary backups

You should have already configured the primary backup. We recommend setting up a secondary backup which will send a backup off-site using a service such as Dropbox. The frequency of this depends largely on what bandwidth your site can afford. Each backup can easily get to GB sizes...:

- File > Preferences... > Backup 2
 - Configure secondary backups

Turn on Synchronisation

When you are finally ready to turn on synchronisation:

- File > Preferences... > Synchronise > Click to un-lock, enter code to edit.
 - Set the Sync time interval to 1
 - Click **OK**

Your installation of mSupply may have customisations made specifically for your work scenario. Please contact our support staff on support@msupply.org.nz to manage these customisations.

Configure label printer

If you are dispensing, you will need to set up label printer preferences

Graceful shutdown in the event of a power failure

Your mSupply server should be attached to a UPS. The UPS should be fitted with a control cable (serial, USB or network cable) that allows control software to detect a low power situation and shut down the server.

In the UPS control software set the shutdown to start at least two minutes before the power will fail.

Set it to run a batch file at that point. The file should contain the single line "net stop Service name" where the service name is the name displayed in the properties when you double-click the service name in the services window. In the example below the service name is "4DS mSupply.4DC" (not to be confused with the display name)

Service name:	4DS mSupply.4DC
Display name:	4D Server: mSupply
Description:	

You may wish to test your typing skills by opening a command prompt:

C:\WINNT\System32\cmd.exe	
Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985-1999 Microsoft Corp.	
C:∖>net stop "4DS mSupply.4DC" The 4D Server: mSupply service is stopping The 4D Server: mSupply service was stopped successfully.	
C:\>	

Accessing mSupply client on a cloud server

If the mSupply client software is running on a PC, there are a range of applications that can be used for accessing the cloud hosted mSupply server including Microsoft's own Remote Desktop Connection software that comes included with Microsoft Windows.

We recommend TS-Plus, which allows users to access client on the server via their web browser.

Troubleshooting

Permission for backup setting file

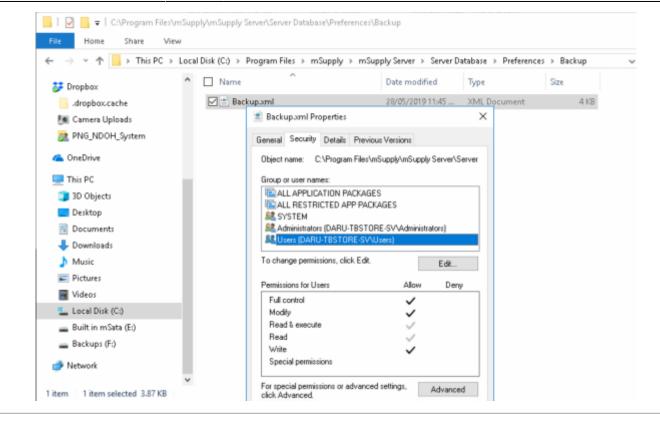
Since v17 of 4D (the database engine underlying mSupply), when running mSupply as a Service, logging on as the Local System Account (**LSA**, as described below), mSupply **MAY** no longer have sufficient permissions to access the folder: C:\Program Files\mSupply\mSupply Server\Server Database\Preferences\Backup

If this is the case, it will result in the following error:

intime	Error					
4	9 т Р	90 The document can Permissions error. /	ecuting the meth not be opened. Attempt to open locke erver Database\Prefere	d file for writing. (File	e: C:\Program Files\m	
() D)etails		Edit	Trace	Continue	Abort
		cupProcess	Edit	Trace	Continue Save	Abort Copy
	ss 9 Back	upProcess	Edit	Trace		
Proces	ss 9 Back Descr	ription	Edit npt to open locked fil		Save	Сору
Proces No	ss 9 Back Descr Permi	ription issions error. Atter		e for writing. (File: C:\	Save	Copy
Proces No -54	ss 9 Back Descr Permi Acces	ription issions error. Atter	npt to open locked fil	e for writing. (File: C:\	Save	Copy
Proces No -54 5	ss 9 Back Descr Permi Acces	ription issions error. Atter ss denied C:\Progr	npt to open locked fil	e for writing. (File: C:\	Save	Copy
Proces No -54 5	ss 9 Back Descr Permi Acces	ription issions error. Atter ss denied C:\Progr	npt to open locked fil	e for writing. (File: C:\	Save	Copy
Proces No -54 5	ss 9 Back Descr Permi Acces	ription issions error. Atter ss denied C:\Progr	npt to open locked fil	e for writing. (File: C:\	Save	Copy

If this happens, it needs to be fixed. The Solution is to edit permission of **Users** to allow Full control/Modify/Write to the Backup.XML file as shown here:

29/29



Previous: 25.02. mSupply client / server installation part 2 || Next: 25.04. Schedules and periods

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