1. Synapse Server Overview

Synapse Server Overview

Note that images shown in this manual are for general guidance and version numbers may vary

The Synapse server application provides a data link between the Synapse system hardware devices and the SQL database that is used to store the captured data. It also provides additional functionality for setting up and configuring the Synapse system along with tools for administration functions such as user accounts and alarm action assignments.

Clicking the Help button  available on all Server windows will open this help file at the appropriate page.

The version number for the software is shown in the upper right corner of the application window.
Example
Version 2.0.0.5

Before the Synapse server can be run an SQL ODBC driver must be installed and a database namespace called 'synapse_db2' must be created. All the required database tables are created the first time that the Synapse server application is run. Because all the Synapse system configuration information is stored in the SQL database the application can be uninstalled and reinstalled without losing any settings or data.

Refer to the SQL Database topic for more information on setting up and configuring the SQL database.
Note that the SQL database is not an integral part of the Synapse server application but must be correctly installed and configured before the Synapse application can be run.

When the Synapse server application is started you are presented with the SQL database logon dialog.
The Username and password used here should be the username and password assigned to the database namespace as explained in the SQL database configuration topic.
Once the Server has established a connection to the database a Synapse logon dialog is displayed.
This logon is used to determine the identity of the current user for Validation purposes as required by CFR compliant systems. This logon requires the User Account Firstname, Lastname and password as provided by the system administrator.
Note that only users with Synapse administrator accounts can log onto the server application. Synapse Client account cannot be used to start or logon to the server.
A default Administrator account is setup during initial system installation.

IMPORTANT!
If all administrator passwords or logon names are lost or forgotten then you will be unable to logon to the Synapse system and reinstallation will be required.

The Synapse server application interface has been arranged into a series of tabbed pages with each page containing functions arranged in a logical manner. Several tabs are for information only to assist in system installation and diagnostics. Other tabs are only present when they are required. For example the receiver setup tabs are only present when the receiver has been connected.

The tabbed pages are arranged as follows

Server Status Tab	This page controls system receiver authorisation and provides status information.
User Accounts Tab	This page provides access to user account configuration.
Server Setup Tab	This page contains controls for the server system configuration.
Receiver Setup Tab	These pages contain controls for configuring the system receiver(s)
Database Utilities Tab	This page is used for diagnostic purposes and allows viewing and querying of the system database tables.

Diagnostics Tab This page displays system information and is used for diagnostics only.

CAUTION!
It is important to fully understand the meaning and purpose of any configuration setting before changing it as incorrect or inappropriate settings can cause improper or erratic system operation.

Technical support is available from your system supplier.

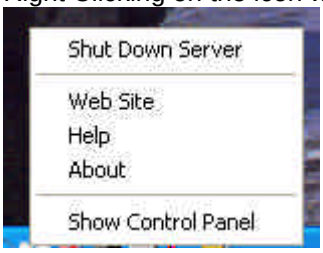
The Synapse server normally runs as a non visible application with just an icon in the windows task bar 

The user interface is usually only accessed when configuration changes are required.
NOTE:
If you attempt to run a second copy of the application the following warning is displayed.

Moving the mouse cursor over the taskbar icon will display the current status of the server.

Taskbar Menu

Right Clicking on the icon will display the taskbar menu for the server.



Selecting 'Shut Down Server' will terminate the Synapse server application and disconnect all system receivers.

Application Lock
In order to prevent unauthorized access the User interface of the server will be closed after 3 minutes of inactivity. It can be re-opened by selecting 'Show Control Panel' from the Synapse task bar menu.

IMPORTANT!

Clicking the 'close window' icon at the upper right corner of the Synapse server interface  does not close the application it merely hides the interface. The server continues to run as a background task.

About
Clicking About opens the Synapse server about box.

Clicking the OK button will close the about box.

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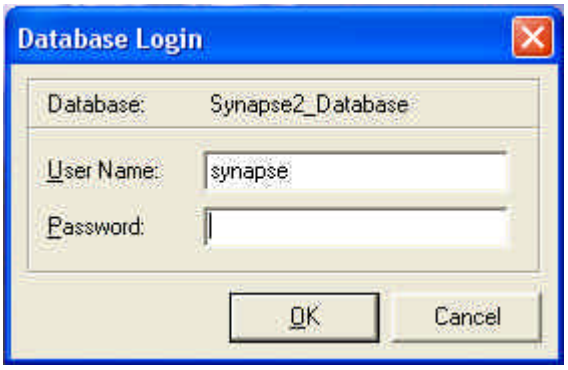
Web Site
Clicking 'Web Site' takes you to the manufactures we site.

Show Control Panel
Clicking 'Show Control panel' will display the Synapse Server user logon dialog. If the correct account details are entered then the user interface is displayed.

2. Database Logon

Database Logon

After starting the Synapse server application the following Database logon is displayed.



The username and password that must be entered is the username and password that has been assigned to the SQL database logon account. This account is configured during the SQL database installation.

NOTE:
If you attempt to run a second copy of the application the following message will be displayed.

After the Synapse server connects to the database server the following Synapse server logon dialog is displayed.

The information that must be entered into this dialog are the Firstname, Lastname and password for the users account as defined by the system administrator.
After the system is first installed the only available account is the default administrator account.

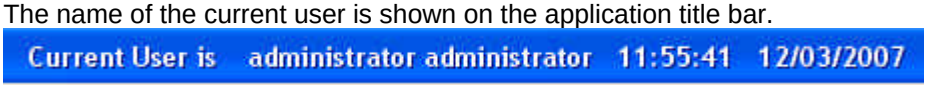
3. Synapse Logon

Synapse Logon

The Synapse Logon is a 21 CFR part 11 compliant user control mechanism and is used to assure that the identity of the User is known.
Once the User has logged on to the required SQl database a Synapse logon dialog is displayed as shown below.

The user should enter their logon Username and Passoword into the appropriate boxes and click the Submit button.

The name of the current user is shown on the application title bar.



All data captured by the server will be 'stamped' with this user name.

Following initial installation only the default administrator account will be available.

4. User Account

User Account

A user account within the Synapse system comprises the following.

First name
Last name
Password

The combination of these three elements must be unique or they will not be accepted by the System.
The user accounts are setup from the User Accounts tab by the system administrator.

NOTE
Once an account has been created it cannot be deleted, it can however be disabled unless it is currently assigned to any system sensors.

5. Default Administrator Password

Default Administrator Password

The default Administrator Logon Username and password after installation is

Firstname = administrator
Lastname = administrator
Password = password

This account should be disabled or the password changed during initial system configuration.

IMPORTANT!
If all administrator passwords or logon names are lost or forgotten then you will be unable to logon to the Synapse system and reinstallation will be required.

6. Taskbar Menu

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7. Server Status Tab

Server Status Tab

The server status page controls system receiver authorisation and provides status information.
A Synapse system can consist of many hardware receiver hubs each of which can be linked to over 100 wireless sensors which are continually sending data back to the central database via the Synapse server. It is therefore very important that each captured data packet can be identified as originating from a specific sensor. In order to ensure that data is originating from only authorised sources the Synapse server uses an Administrator authorisation system in which any hardware receivers detected by the Server must be activated by the system Administrator before data can be captured from them.

As soon as the Synapse server has been started it begins searching the network for compatible Synapse hardware. Once a compatible unit has been found it is added to the receiver table on the Status Tab as shown

below.

Mac Address	IP Address	Activation	Status	Receiver ID	Version	Firstname	Lastname	Timestamp
00:16:5C:00:00:0C	192.168.0.14	Activated	Inactive	0	1.15	administrator	administrator	1173531951
00:16:5C:00:00:0B	192.168.0.9	Activated	Active	2	0.00	administrator	administrator	1173531955

Each detected receiver has its own entry which contains information relating specifically to the unit.
To prevent any potential ambiguity there are some limitations imposed by the server.
1 Each receiver must have a unique MAC address.
2 Each receiver must be assigned a unique receiver number.
3 Each receiver must have a unique and valid IP address.

For example, if the system has already detected a receiver with an ID of 2 and a second receiver also with its ID set to 2 is connected to the network then the second receiver will be ignored by the server.
This prevents ambiguity in the source of the captured data.

To allow the system administrators to 'select' which receiver(s) they wish to collect data from the server requires that the administrator 'Activates' each required receiver before any data can be collected from it.
NOTE:
Even if a receiver is listed in the above table it will not send any data until it has been activated.
The connection and activation status of a receiver is shown in the two table columns which are headed

Activation	Status

When a receiver is detected for the first time the receiver will determine if it can be uniquely identified as specified in the rules given above. If it determines that it is unique then it will add it to the table but its 'Activation' setting will be set to 'Pending'

Pending

This means that although it has been detected it has not yet been activated by the Administrator and so no data will be captured from it and it is logically disconnected from the system.
After adding the receiver to the table the server also creates a Receiver Setup Tab specifically for that receiver which is used for configuration of the receiver. The receiver number on the tab will be the same as the receiver ID shown in the table

Receiver ID
0

If the receiver is not required then it can be deleted from the table as follows.

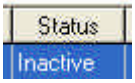
Deleting a Receiver
To delete receiver double click on it's entry in the table.
The following pop up menu will be displayed.

Click 'Delete Receiver'
The receiver will be deleted from the table and the receiver setup tab will be removed.
Note that the contents of this pop up menu are context sensitive and so may vary depending on the current system configuration. The listing functions will however perform the same actions.

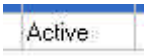
Activating a Receiver
To activate a receiver double click on it's entry in the table.
The following pop up menu will be displayed.

Click 'Activate Receiver'
The Activation entry for that receiver changes from 'Pending' to 'Activated'
Once a receiver has been activated it remains activated even if the server and or receiver are restarted until the

Administrator manually deactivates it.
Once activated the server attempts to establish a logical connection to that receiver and the status of the logical connection is shown in the 'Status' column.
Note that Activating a receiver is effectively giving the server permission to connect to it but does not in itself indicate that it is connected.
If the server is not currently connected to the receiver the status is shown as 'Inactive'



Once the server has established a connection with the receiver the status changes to 'Active'



Establishing the logical connection can take several minutes depending on network activity.
An activated receiver should establish an 'Active' connection automatically each time the server is started once it has been activated but will remain 'Inactive' if it has not been activated.

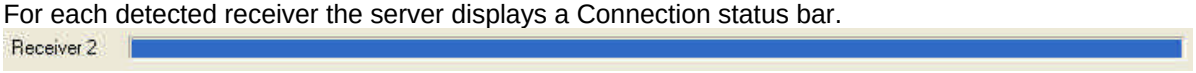
Deactivating a Receiver
To deactivate a receiver double click on it's entry in the table.
The following pop up menu will be displayed.

Click 'De-activate Receiver'
This will set it's activation level back to 'Pending' as described above but will not delete it.
This will cause the logical connection between the server and the receiver to be disconnected and data flow will be suspended as indicated by the status for this receiver changing to 'Inactive'

Data and Time Synchronisation
Each time the server establishes a connection to a receiver it will synchronise the receiver time and date to the time and date of the server host PC and will then synchronise the receiver internal database with the receivers SQL database to ensure that no data has been missed.

NOTE
Should the IP address of a particular receiver change then the logical connection will be reestablished automatically using the new address.

Connection Status Bars
For each detected receiver the server displays a Connection status bar.



This bar indicates the current status of the connection between the server and the receiver.
It should normally be more than 50% but during detection and for receivers that have not been activated it will cycle between 100% and 0%
For receivers that are disconnected or cannot be communicated with the status bar will remain at 0%.
Should this disconnect status continue for more than 60 minutes then a 'LAN Disconnect' alarm will be generated.
If a user account has been assigned as this receivers 'default contact' then the phone number(s) and email addresses will be used to contact a user to inform them of this alarm.

The Server IP address is shown at the bottom left of the Server Status Tab

It is important that the receiver IP address(s) are located on the same subnet otherwise the server will be unable to communicate with them.

8. User Accounts Tab

User Accounts Tab

The User Accounts tab is used to create and control User accounts for access to both the Synapse server application and the Synapse Client Application.

Two types of accounts are available with the following properties.

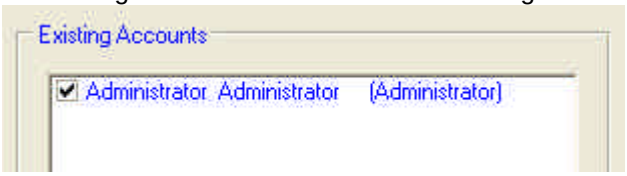
Administrator Account
This type of account can be used to log onto the Synapse Server application and the Synapse Client Application.
Using an Administrator account to log onto the client application gives the same functionality as a client account but with the addition of allowing access to validation data used for system validation.
After initial application installation only a default Administrator account is available and should be used for initial logon.
For system security this account should be disabled or it's password changed during initial system configuration.
Note that it is not possible to disable all Administrator accounts as this would prevent access to the system. If you wish to disable this account you must first create a new Administrator account.

CAUTION!
If all Administrator account logon names and/or passwords are forgotten then you will be unable to log back onto the application and a full reinstallation will be required.

Client Account
This type of account can only be used to log onto the Synapse client application.
It does not allow access to the validation data and cannot be used for logging on to the Synapse Server application.
Note that you cannot disable a client account if it has been assigned to one or more sensors. If you wish to disable a client account you must first make sure that all sensor assignments have been cleared.

IMPORTANT!
Once an account has been created it can be disabled but cannot be deleted. It is therefore important that the user account naming conventions are considered before creating any accounts.

Existing Accounts
All existing accounts are listed in the 'Existing Accounts' list box to the right of the page.



Administrator accounts are identified by the word '(Administrator)' after the entry. This is not part of the user name.
The checkbox to the left of the entry ☑ indicates if the account is enabled.
A tick in the box indicates that the account is enabled and an empty box indicates that the account is disabled.
Clicking on the box will toggle the state of the account.

Creating a Client account
To create a new client account enter the following information into the edit boxes in the 'Create New Account' panel to the left of the page.

Select 'Client' from the 'Account Type' drop down list.
Enter the Users First Name and Last Name (As will be used for the users logon) into the
Appropriate boxes.
Type a default password into the 'Password' box and again into the 'Confirm Password' box.
Note the password must be at least 8 characters long.
Alternatively click the 'Default Password' button to use the current default password as set in the Server Setup tab.
The password is encrypted so may appear to contain the wrong number of characters but this is normal.
This information (First name, Last name and password) should be passed on to the intended User.
Note that the user will not be able to log onto the client application using the default password and will be prompted to change it at the first log on attempt.

Phone Number
If this users account is to be used for generating phone messages during system alarm events then enter the phone number(s) that are to be called during an alarm event into the 'Phone Number' box.
You can enter more than one phone number and each number should be separated by either a space or ; or : or ,

Maximum string length is 250 characters
The phone dialling sequence is explained here.

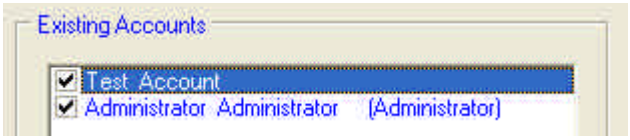
If email alerts are required then enter the full email address into the 'Email Address' box.
Multiple emails can be entered and should be separated by either a space or ; or : or ,
An email will be sent to all listed email addresses should an alarm occur.

Maximum string length is 250 characters

Once all the required information has been entered click on the 'Add Account' button to create the account.

The account has now been added to the account list.

Note that the account has been created disabled an must be enabled by clicking the checkbox before it can be used.



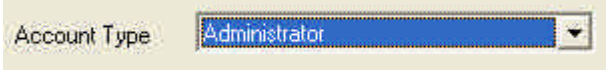
If the account already exists then the following message is displayed.

Once the account has been created it can be selected for editing by double clicking its entry in the Existing Account list. Note that the account type and the account name along with the password are greyed out and cannot be edited. The password can however be set back to the default password by clicking the 'Default Password' button. This will reset the password to the default password and the status of the password so that the user will be prompted to change the password when they next attempt to log onto the Client application.

It is however possible to edit the phone number and/or email(s).
Once the required changes have been made click the 'Update Account' button.
If you wish to abort the changes then just don't click the 'Update Account' button.

Clicking the 'Clear Fields' button will clear the edit boxes ready for creation of the next account.

Creating an Administrator account
To create an administrator account follow the steps required to create a Client account described above except that instead of selecting 'Client' from the Account Type drop down list select Administrator.



The Synapse application suite is supplied under a licensing agreement whereby the number of Named or Concurrent user is limited. The number of licences can be increased (at cost) on request.

The standard licences are 5 named users and 3 concurrent users.
You can create as many accounts as you want but you will only be able to enable as many as the Named user License limit and the number of users who can concurrently access the system is limited to the Concurrent user license limit.
Attempting to use more licenses than are available will display a warning message.

9. Server Setup Tab

Server Setup Tab

This tab contains the Synapse Server configuration controls.
It is important that the configuration settings made on this page are correct if the Server is to function correctly.
The purpose of each setting is explained below.

Customer Settings
Customer name
The text entered into this box will appear at the top of all graphical and tabular printouts.

Default Contact
The email address and/or phone number in this Users account are used in the event of and alarm if there is not default Receiver (or Sensor) contact specified in the Receiver setup tab.

Custom Message
The text entered into this box is appended to the end of all alarm notification emails that are generated by the Server.

General Settings
Broadcast IP Address
This IP address is used for the UDP detection address. the default is 255.255.255.255 which causes the server to search all accessible subnets for Synapse hardware.

Default Password
The text entered into this box is used as the default password which is assigned to a user account when the 'Default Password' button is clicked on the User Account Tab.

MKT Block Size
The value entered here is used by the Synapse client application to calculate the Mean kinetic Temperature values and represents the number of data points in each averaging block.
The default value is 10

MKT Heat of activation
The value entered here is used by the Synapse client application to calculate the Mean kinetic Temperature values and represents the heat of activation for the material being monitored which the MKT calculation is applied to.
Its default value is 83.0 and this value is approximately mid point in the possible range of values.
Unless the actual heat of activation is known this value should be used.

Start with control panel visible
This check box controls the display of the Server interface after logon.
If the box is not checked the user interface is not shown after the server has been started and it will be running as a background task.
If the box is checked the user interface is displayed after logon.

Activation Code
The code entered into this box is used to activate various server cost options.
The value supplied by the vendor is typed or pasted into this box and the 'Save Settings' button clicked to activate the features.

Email Settings
SMTP Server SMTP server to be used for sending emails.
SMTP User Name SMTP user name of the SMTP account used for sending emails.
SMTP Password SMTP password of the SMTP account used for sending emails.

Return Address Many SMTP server require a return address before they will accept an email. A valid address should be entered into this box.

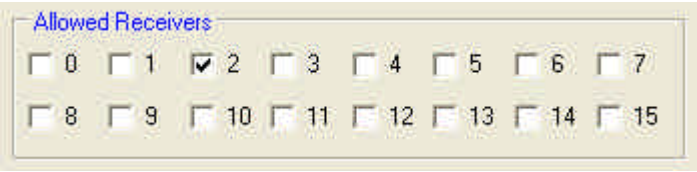
The 'Test Email' button and text box are used to send a test email to check the SMTP server settings. Entering a valid email address and clicking the button should cause a preformatted test email to be sent to the intended recipient.

Phone Settings
Phone device
This drop down list shows all the Voice modems detected by the server. A voice modem is required if the server is to send Voice messages in response to an alarm condition. A modem should be selected from the list and tested as described below.

The 'Test Phone Device' button and text box are used to send a test phone message to check the that the selected modem is compatible with the Synaspe server. Entering a valid phone number and clicking the button should cause a preformatted test voice message to be sent to the intended recipient.

Key pressed
This box shows the key pressed by the phone voice call recipient in response to the test call.

Allowed Receivers
The checkboxes in this panel are used to control which receivers the Server is allowed to connect to.
The server will only detect and allow connection to Synapse receivers where the receiver ID matches one of the checked boxes.



In the following example only Receivers 1 can be detected by this server.

Broadcast Discoveries
If only receivers 0 to 3 are used then the server uses a broadcast method to detect the receivers. It will send out a request for all receivers on the network to respond at once.
This can be seen in the diagnostics tab by the word 'ALL' being displayed in the Discovery ID window as in the following image.

This allows for rapid detection of up to 4 receivers simultaneously. this method can be unreliable on busy networks so a second method is available which is targeted discoveries and this method should be used if you encounter problems in the detection of receivers by the Synapse server.

Targeted Discoveries
For larger installations or on very busy networks the Synapse server can use a targeted method of receiver discovery instead of the broadcast method described above.
In targeted discovery mode the Synapse server actively searches the network for any possible receiver based on the receiver ID number.
Each selected number is searched for and then the search repeats.
Receivers that are not selected (Allowed) are not searched for and will not be detected.
Note that targeted discoveries are only supported by receivers having firmware 4.14 or later.

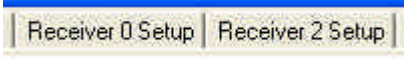
Receivers with versions prior to 4.14 will only operate in broadcast mode and are limited to receiver ID numbers 0 to 3.
To enable targeted discoveries simply select any receiver ID in the Allowed Receivers box from 4 to 15.
Enabling any receiver ID from 4 to 15 causes the Synapse server to use the targeted discovery mode.
Note that in this mode any receivers with firmware prior to 4.14 will not be detected.
Should you wish to use targeted discovery mode on a system using receiver ID's less than 4 then you should also enable a receiver ID from 4 to 15 even if you do not intend to use that ID in your system.
When the Synapse server is running in targeted discovery mode the current ID search number is indicated in the Discovery ID window on the diagnostics tab as in the following image.

Saving Settings
After making any changes you must click the 'Save Settings' button before any changes are saved.

10. Receiver Setup Tab

Receiver Setup Tab

A receiver setup tab is created for every Synapse receiver that has been detected by the Server.



These tabs allows settings that are specific to each receiver to be made.
Note that some of these settings can also be made at the receiver, See the Synapse user manual for details.
Some of the information shown on the receiver setup tabs is retrieved from the receiver when the tab is selected and so the table contents may take a few seconds to be completed or may remain empty if the receiver is not currently accessible.

General Settings
Default Contact
The account email address(s) and/or phone number of receiver default contact, if specified, is used to create automated messages in the event of a sensor alarm condition unless a contact has been specifically assigned to that sensor (See below).
This account is also used in the event of a 'LAN disconnect' Alarm.

Receiver Commands
Update Firmware
This function is currently unavailable.

Time Sync
Clicking the 'Time Sync' button sends a time synchronisation command to the receiver causing it's real time clock to be synchronised with the Server PC real time clock.
The receiver real time clock is used to time stamp all data captured by the system.
Note that the time and date of the receiver is automatically synchronised at regular intervals so it is not usually necessary to manually send this command.

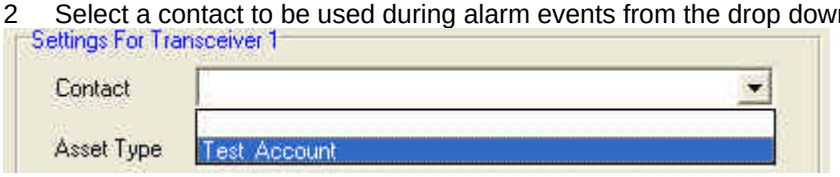
Restart Download
Clicking the 'Restart Download' button sends a command to the receiver to request that it begins to sent the entire contents of its internal data log to the server. This can be used to refresh the server database in the event of a PC related problem. Under normal operating conditions the Synapse server always ensures that the database is synchronised with the receiver data log. Should the receiver and server connection be broken for any reason (Cable unplugged, power failure etc) then the server automatically synchronises the database and receiver log at the next connection.

At the top of the page a table shows the current settings for all the sensors that can be used with this receiver. The table shows all possible sensors and not just those currently in use.
The table is automatically populated when the tab is selected as long as the receiver is connected to the server.
To edit the settings for a particular sensor follow these steps.

1 Double click the entry you wish to modify. Its values will be transferred to the edit boxes.

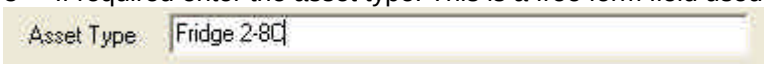
Note that the panel title shows the sensor that has been selected.

2 Select a contact to be used during alarm events from the drop down list.

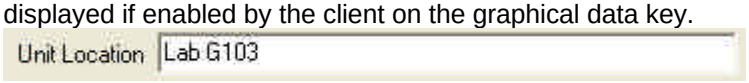


Note that only client accounts are shown. Administrator accounts cannot be assigned to sensors and client accounts that have been assigned top sensors cannot be disabled.

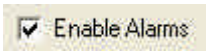
3 If required enter the asset type. This is a free form field used to identify the unit being monitored.



4 If required enter the location of the unit. This is a free form field used to indicate the location of the sensor and is displayed if enabled by the client on the graphical data key.

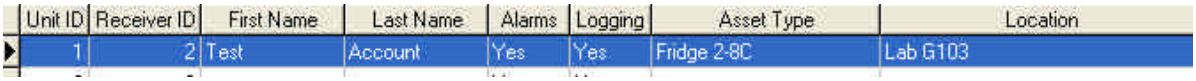


5 If this sensor is required to generate alarms then ensure that the 'Enable Alarms' checkbox is checked, otherwise uncheck it.



6 If this sensor is required to log data then ensure that the 'Enable Logging' checkbox is checked, otherwise uncheck it.

7 Click the 'Update Unit' Button. The Table will be updated to show the changes that have been made. The changes are also sent to the receiver if it is connected.



Note that if the receiver is not connected the table remains empty and so it will not be possible to update any settings.

These steps should be repeated for all sensors in the system.

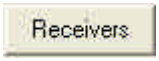
11. Database Utilities Tab

Database Utilities Tab

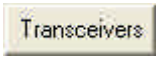
The database utilities tab allows viewing of the Synapse SQL database tables using either predefined queries or custom queries.
The results of the query is shown in the grid above the buttons.
The number of records returned by the query is displayed at the bottom right of the page.

Clicking on the button sends the following queries.

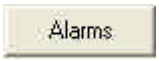
select sensorid, receiverid, sensordata, datatype, timedate, firstname, lastname from Sensor_Data order by timestamp desc



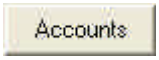
*select * from Receivers*



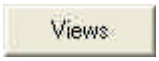
*select * from Transceivers*



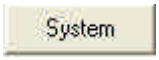
select sensorid, receiverid, sensordata, timedate, alarmtype, firstname, lastname, comment, serviced from Alarms order by timestamp desc



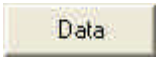
select firstname, lastname, active, type, phonenumber, emailaddress from Accounts



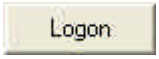
*select * from Views*



*select * from System_Data*



select sensorid, receiverid, sensordata, datatype, timedate, firstname, lastname from Sensor_Data order by timestamp desc



*select * from Logon_Table*

The function of each of these tables is integal to the functionality of the synapse system and the user does not need to understand the details of each table and so a full explanation is not provided in this help file.
For users who understand the SQL langauge format they may find this tab of use for examining the table structures.
A custom query can be typed into the edit box and sent by clicking the 'Send Query' button.
The synapse server will however block any queries that attempt to modify either the tables or the data stored in them.

12. Diagnostics Tab

Diagnostics Tab

The diagnostics tab displays the following information.

Data Flow

Bytes received	Total number of bytes received since the server last started.
Bytes sent	Total number of bytes sent since the server last started.
UDP in count	Total number of Synapse UDP packets received since the server last started.
UDP outcount	Total number of Synapse UDP packets sent since the server last started.
Main timer count	Total number of seconds that the server has been running.

Last Discovery Packet

Receiver ID	ID of the receiver that sent the packet.
Receiver IP address	IP address of the receiver that sent the packet.
Receiver MAC address	MAC address of the receiver that sent the packet.
Receiver Response	This indicates 'OK' if the packet was valid.
Firmware Version	Firmware version of the receiver that sent the packet.
Total Discoveries	Total number of discovery packets received since the server last started.

NOTE:
The firmware version is not returned from receivers with firmware versions prior to 1.15 but this does not affect functionality.

System Monitors

Alarm Timer	Total number of alarm check cycles performed since the server last started.
Time Sync Count	Total number of time syncs sent since the server last started.
Unhandled Alarms	Total number of unprocessed alarms since the server first started.
Sleep Interval	Delay in milliseconds between LAN events.
Discovery ID	The current receiver ID being searched for or 'ALL' indicating broadcast discovery mode.
Calling Phone #	This box displays the phone number that the system is currently dialing.
Last Phone Key	This box displays the last keypad digit returned from a call recipient.

Server IP Address
The Server IP address is displayed in the bottom left of the page.

13. SQL Database Installation

SQL Database Installation

The SQL database installation is not part of the Synapse server system and so is only described briefly here. For more details the SQL server documentation should be referred to.

Before any elements of the synapse software can be run an SQL database namespace called 'synapse_db2' must be created. The way in which this is done will vary depending on the SQL server that is being used.
For the SQL database server that is supplied on the Synapse CD the following method can be used.

Log on to the SQL configuration utility
Following installation of the SQL server a Windows command line window should be opened.
Open the database configuration utility using the 'Root' account by entering the following at the Prompt from the 'bin' directory of the SQL installation. Only type the italic text.

mysql --user=root --password=password (Press Enter)

Create Synapse Database
The configuration utility prompt should now be visible.
Create the required database by entering the following. Only type the italic text.

create database synapse_db2; (Press Enter)

Select Synapse Database
Select the synapse database by typing the following. Only type the italic text.

use synapse_db2; (Press Enter)

Creating an SQL user account for local access only (same PC)
Create an account by entering the following. Only type the italic text.

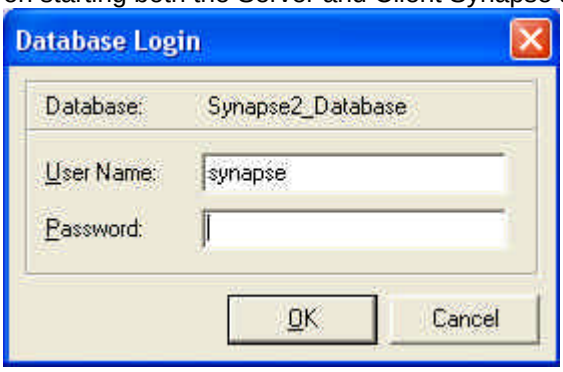
*grant all privileges on *.* to 'synapse'@'localhost' identified by 'password' with grant option;*
(Press Enter)

Creating an SQL user account for remote access only (network PC)
Create an account by entering the following. Only type the italic text.

*grant all privileges on *.* to 'synapse'@'%' identified by 'password' with grant option;*
(Press Enter)

Here the account user name is 'synapse'
and the Password is 'password'

Any username and password can be used and they should be entered into the database logon dialog which is displayed on starting both the Server and Client Synapse applications.



NOTE
The SQL configuration utility should respond to each command with a 'Query OK' message.
If you see any errors then check that you have typed in the command correctly.

14. Phone Alarms

Phone Alarms

If phone alarms have been enabled by entering one or more phone numbers into a user account and then assigning that account to one or more transceivers or as a receiver default contact then the following call sequence is used.

The first phone number in the list is dialled.
If this call is answered then the call recipient will hear a message relating to the alarm that triggered the call and will be instructed to 'press the 8 key to cancel the alarm'

If they press the '8' key on their phone key pad then the alarm calling sequence will be aborted and no more calls relating to that particular alarm will be made. In addition the current receiver alarm will be cancelled.

If the call recipient hangs up the phone without pressing the '8' key then the next number in the list is called.

This process continues until either a call recipient presses the '8' key on their phone or there are no more numbers to call.

Once all numbers have been called or the alarm has been cancelled then the alarm is marked as 'serviced'