



Table of Contents

Links New Access 2.0 Overview	2
Links Access Services and Client Tools	3
Links Access Service	3
Links Access Client Service	3
Links Access Client Tools.....	3
Services Installation	4
Installing Links Access Service	4
Installing Links Access Client Service	6
Installing Links Access Client Tools	7
Configuration of New Access.....	9
Prerequisites	9
Profiles	10
Adding a Controller	11
Adding an Access Point.....	12
Adding a Device	13
IP Devices.....	15
Links ETC.....	15
Configuring Operational Parameters.....	16
Restarting the Access Service and Access Client Service:	20
Access Monitor	20
Trouble Shooting Guide	23
Error Messages.....	23
Links Configuration.....	24
Activities	24
New Access Parameters	26



Links New Access 2.0 Overview

Links Access 2.0 is essentially a 'snap-on' or free floating external application that runs as Windows Service, independent to that of the Links application itself. It interacts with the database via a service that queries the database directly.

These are Microsoft .Net applications therefore all machines that the applications will be installed on must have the latest .Net frameworks and service packs installed.

Links Access Services and Client Tools

The Links Service consists of two main components;

Links Access Service

This is the service that queries the Links database. This service can reside on the database server or any other machine within the local network but this machine should always remain running.

Links Access Client Service

This is a 'Floating' service that coordinates Access Points and devices and passes requests to the Access Service. When dealing with solely IP scanning devices this service can be loaded on any machine in the local network but this machine should always remain running.

Special Circumstances

- In the event that a serial access device is directly connected to a machine, this machine will need to have the access client service installed for the access device to operate.
- When using a multi-location database and access control, the access client service must be loaded locally on at least one machine per location.

Links Access Client Tools

There are also two auxiliary components to the Access Client Service, known as the Links Access Client Tools.

Links Access Setup

This is the main configuration software that is used to:

- Define and Setup Access Points
- Allocate Activities and Permissions to Memberships, Visit Passes, Services and Class Types
- Configure access hardware such as controllers, IP and serial scanners




Links Access Monitor

This tool provides the ability to see the access activity at each of the nominated access points at the facility. Information provided includes:

- Displays the Customers photo
- Displays Customers entry status
- Displays Customers entry reason
- Allows for remote opening of access points

Services Installation

The software is delivered as three separate executable files.

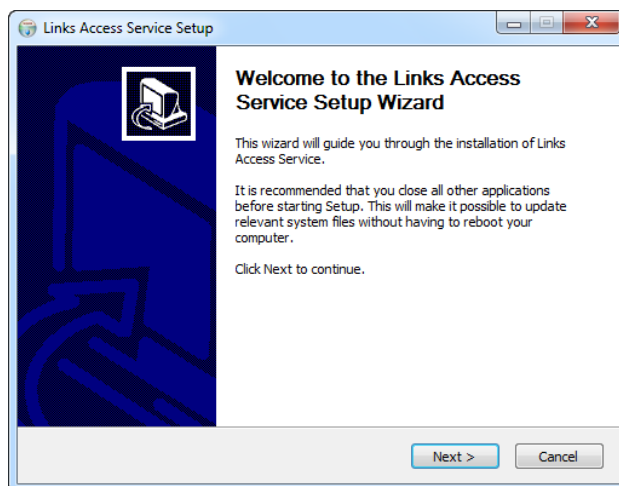
-  Links Access Client Service 2.0.2.exe
-  Links Access Client Tools 2.0.2.exe
-  Links Access Service 2.0.2.exe

The Installation must happen in this order:

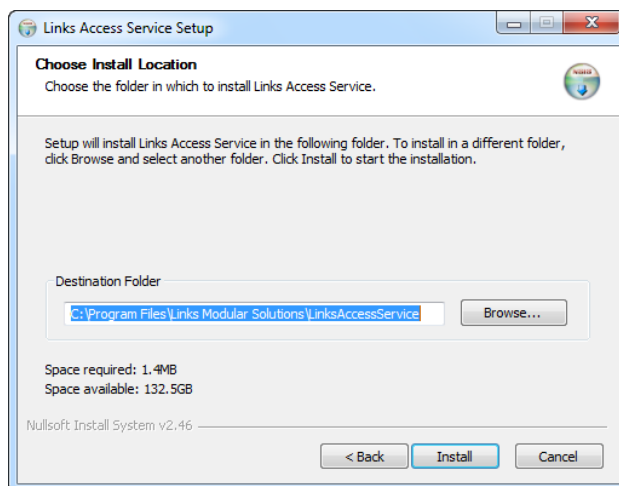
1. Access Service
2. Client Service
3. Client Tools

Installing Links Access Service

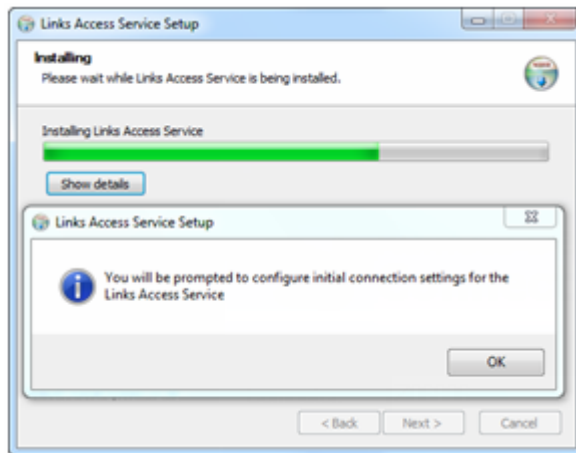
1. Click Next to begin the installation of the Access Service. If the service is being installed on a Windows 7 based machine, right click the installer and choose the 'Run as Administrator'



2. Keep the default installation path



3. You will be prompted for initial connection settings during the installation. The Access Service is being installed and therefore the connection settings that are required are those for connection to the SQL database.



4. Specify database connections in the same manner as when installing the Links client for the first time and test the database connection.
5. Click the General tab and tick "enable logging". Logging is an invaluable troubleshooting utility that can be utilised when devices such as RFID readers fail to 'come online'.



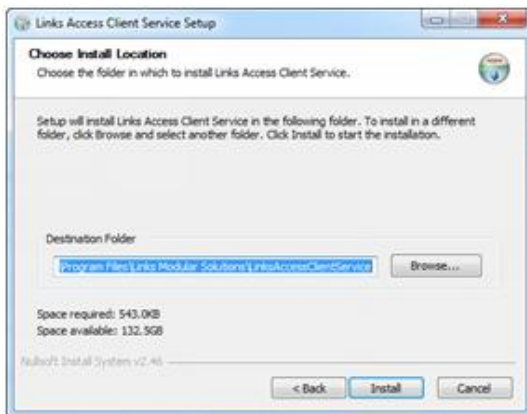
6. Once connection is successful, click Ok and Finish. This concludes the installation of the Access Service.

Installing Links Access Client Service

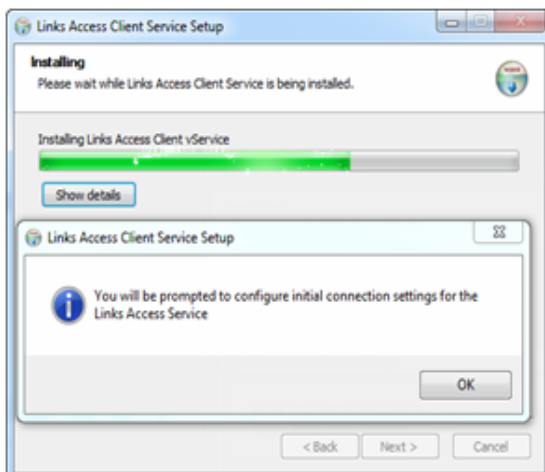
1. Click Next to begin the installation of the Access Client Service. If the service is being installed on a Windows 7 based machine, right click the installer and choose the 'Run as Administrator'.



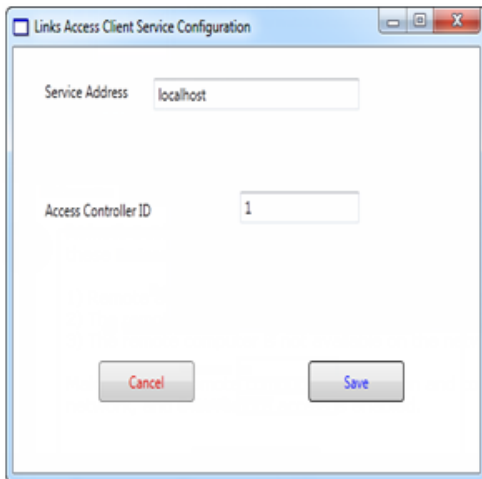
2. Keep the default installation path



3. You will be prompted for initial connection settings during the installation. The Access Client Service is being installed and therefore the connection settings that are required are those for connection to the floating service. In most cases the Access Service will be installed on the same machine as the Client Service and therefore the connection address required is simply 'localhost' or 127.0.0.1.



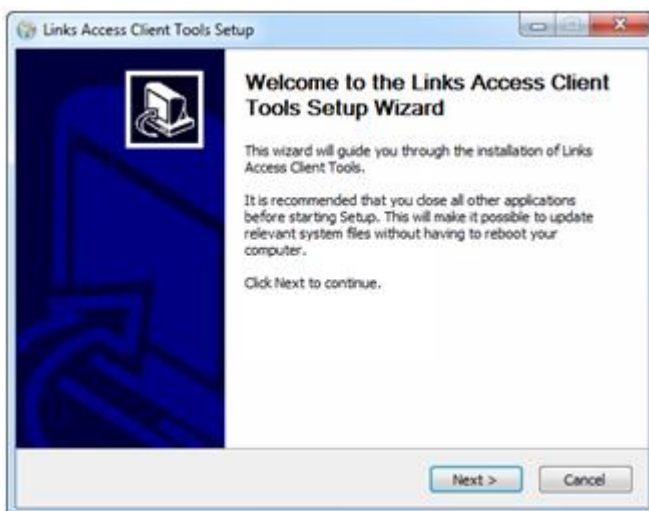
4. As above the service address will generally be the localhost, unless the Access Service has been installed on another machine, and therefore the service address would be that address. The access controller Id should in most cases remain as '1'. This value refers to which controller this machine will be, it could possibly be two and above if a more intricate setup were to be applied where multiple controllers were employed for each physical bank of Access Points. An example being a controller for gym turnstiles and a controller for health club gates.



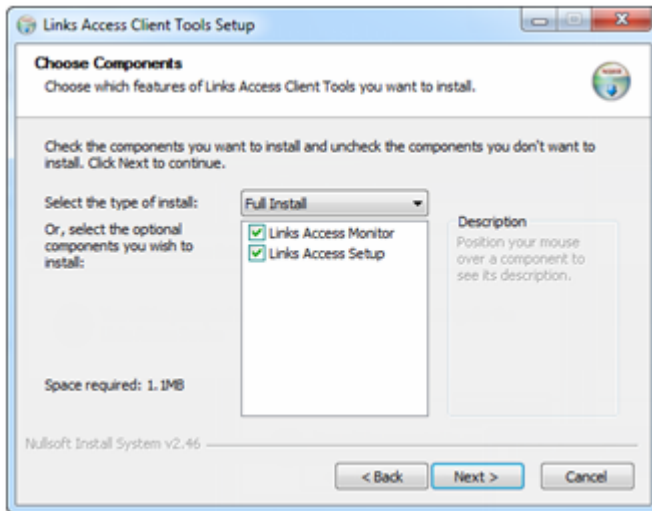
5. Click Save and Finish to complete the installation.

Installing Links Access Client Tools

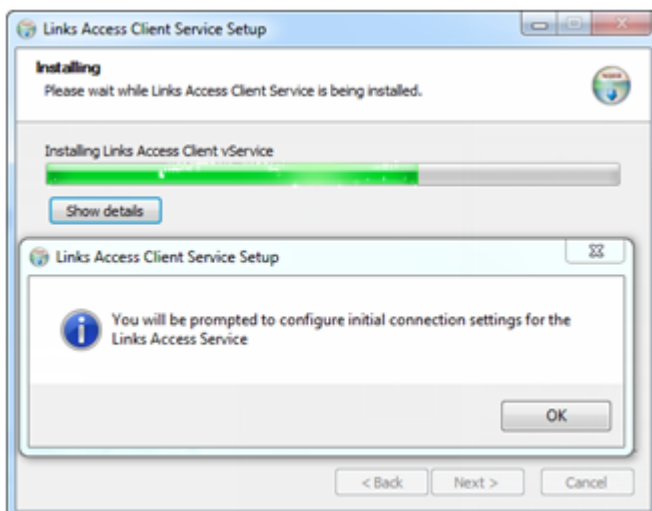
1. Click Next to begin the installation of the Access Client Tools. If the service is being installed on a Windows 7 based machine, right click the installer and choose the 'Run as Administrator'.



- The options for installation include either the Links access monitor, access setup or both. If the client tools are being installed on the server then the access setup is only required as it is the component that administers and maintains all aspects of access, whereas the monitor simply displays the data on the Access Point communication channels.



- If the tools are being installed on a POS machine then only the monitor would probably be installed. This would be used on occasions where POS has a secondary monitor to display visits.
- You will be prompted for initial connection settings during the installation. The Access Monitor is being installed and therefore the connection settings that are required are those for the Links Access Service. This is where the monitor derives its data from.
- Click Next, test the settings, when settings are successful click finish to complete the installation.



Configuration of New Access

The entire configuration of New Access 2.0 is carried out via the Access Setup Client tool.

Careful planning is required in developing the schema of how access control will work in the designated facility. This is particularly relevant if the facility is to have multiple access points and access points with varying restrictions based on Membership, Visit Passes, Classes and Casual entry.

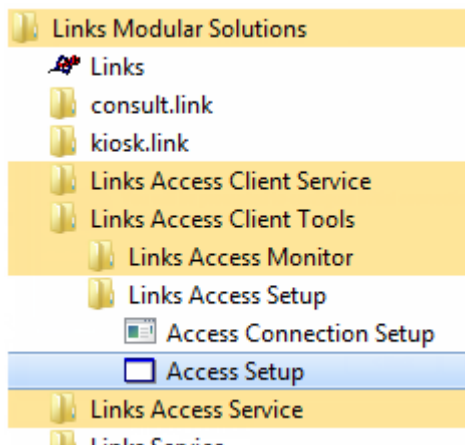
It is important that the access configuration is discussed with a Links staff member before commencing or planning.

Depending on the situation, in the case of a single entry access control point, the original access module may be better suited.

Prerequisites

The following prerequisites are required prior to setup:

- A fixed IP address is required for each IP device or scanner
- Activities created in the Links database.
- Communication settings of any serial device (i.e. Comm. Port, baud rate, etc)

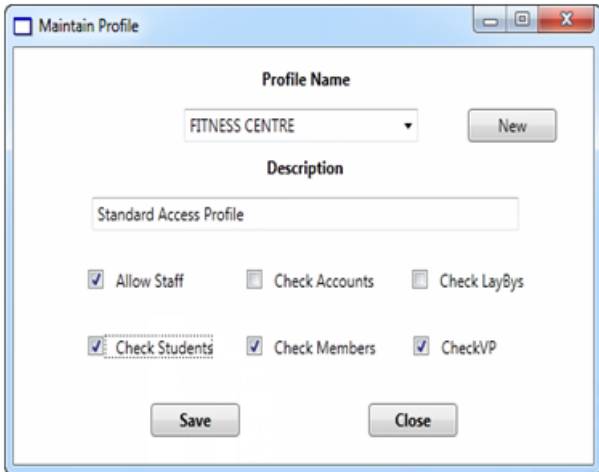


1. From the Windows in the start menu, select the All Programs item, then the Links Modular Solutions menu.
2. Under the Links Access Client Tools sub menu, select the Links Access Setup> Access Setup.
3. A log in screen will be displayed.
4. Only the staff nominated as Links Administrators will the ability to utilise this tool.

Profiles

Profiles define what types of customers will be processed by the Access Controller and Access Points. A profile must be created before any further action can be taken.

This screen can be opened from the Settings Menu > Maintain Profiles sub-menu.



1. Press the New button to create a new profile
2. Type in the profile
3. Type a name for the description to differentiate between other profiles
4. Specify general conditions for the service to check during an entry request

Allow Staff	An active staff member will be allowed entry through the access point. This will ignore any other validation.
Check Accounts	Will check if the customer has an outstanding customer invoice payment and stop entry.
Check Laybys	Will check if the customer has an outstanding layby payment and stop entry if it is due.
Check Students	Will check and validate customers who have current student bookings.
Check Members	Will check and validate customers who have membership contracts.
Check VP	Will check and validate customers who have visit pass contracts.

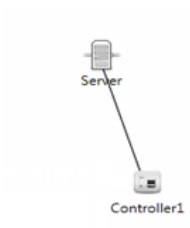
Adding a Controller

The first step in creating the 'Access Chain' is to specify the 'Controller'. This refers to the machine that has the Access Service installed.



To create a controller setting, grab and drop the Controller icon from the right hand icons and place it on the Server icon.

A connection line is now drawn between the Server icon and the Controller icon. The controller icon can be moved around the screen and the connection line will remain unbroken.



Controller Configuration

In the middle right hand section of the screen the controller settings screen is displayed.

Enter the:

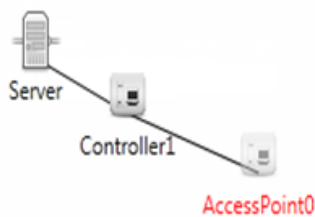
- Controller description
- IP address of the Server
- A display (identity) name

Settings	
Controller ID	1
Description	Controller 1

Adding an Access Point

The second step is to specify and create an Access Point to attach to the controller. Think of the Access Points as a visual representation of the actual access point points in the facility and name them accordingly.

1. To attach an Access Point to a controller, click and highlight the newly created linked controller and then drag and drop an Access Point icon from the right hand side onto the controller icon
2. A connection line is now drawn between the Controller icon and the icon. The Access Point icon can be moved around the screen and the connection line will remain unbroken.



Access Point Configuration

There are several options that can be selected which will define how the access point will operate once utilised.

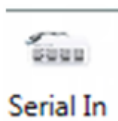
Centre Access	This will perform a full and validation check of the customer of upon scanning. This will also create a visitation record against the membership or visit pass or student attendance. Generally used for entry through turnstiles / gates into a specific areas.
Internal Access	Used at secondary scan points. This will only allow entry if the customers has entered through a related valid centre access point. This will not create a visitation record but it will record a related activity attendance.
Gender	This setting will allow for access exclusion based on gender. Choose one of the options male, female or mixed mode.
Profile	Select the preferred profile as created in the first step of this configuration document.
Save Visit	Defines if the Access Point should record visit against customer.
Settings	Specify a description and name for Access Point. The Name specified will be used when recording attendances in Links.

1. Leave the box ticked for centre access or un-tick for internal access.
2. Use the drop down arrow to select the gender type.
3. Use the drop down arrow to select a profile.
4. Untick the Save Visit box to disable attendance recording in Links

Adding a Device

There are several different devices and device variations that can be added to an access point. These include:

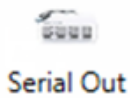
Serial Devices



Use this device setting when there is no requirement to control/open access hardware i.e. turnstile or doors. This can be used for member self scan points at reception and in this scenario the scanner is directly connected to the reception computer.



Use this device setting when utilizing a Links supplied, serial only, turnstile controller/relay trigger. These are used to control/open access hardware i.e. turnstile or doors.

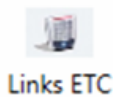


This is an old legacy device setting for clients who utilise a non Links controller/relay trigger. This device setting will send a relay pulse to the nominated serial port.

IP Devices



Use this device setting when utilizing the Gantner brand of IP based access scanners.



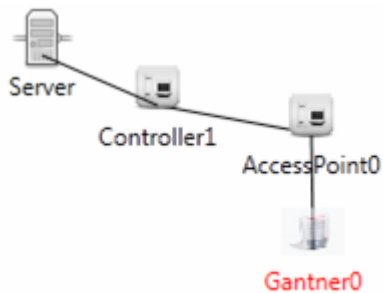
Use this device setting when utilizing a Links supplied, IP turnstile controller/relay trigger. These are used to control/open access hardware ie turnstile or doors.

Device Configuration

This section provides the ability to specify and configure the access device.

To attach a device to an Access Point, click and highlight the newly created linked Access Point and then drag and drop a Device icon from the right hand side onto the Access Point icon.

A connection line is now drawn between the Access Point icon and the Device icon. The Device icon can be moved around the screen and the connection line will remain unbroken.



1. Enter the Baud rate of the Serial Port (generally 9600)
2. Enter the Communication Port Number on the computer that the unit will use
3. Enter the No of Data Bits (usually 8)
4. Enter the No of Stop Bits (usually 1)
5. Output State is used to set the actions of the trigger relay on a successful entry.
 - Off – no relay action
 - RTS Off – relay will activate on successful entry
 - RTS On – relay is on and deactivated on successful entry.
 - RTS Hold – The number entered will define the length of time (in seconds) that the relay signal is active or deactivated
6. Enter Description and Name for device.
7. RFID Prefix - Used if there is a need to remove data from an RFID id number.
8. Select the serial type as defined previously

Comm Settings	
Baud Rate	9600
Comm Port	1
No of Data Bits	8
No of Stop Bits	1
Output State	RTS Off
RTS Hold	1
Settings	
Description	test
Name	test
RFID Prefix	
Type	SerialInOut

IP Devices

A fixed IP address is required for each IP device being utilised.


1. Enter the Description for the device
2. Gantner State – This can't be modified
3. IP Address – Insert the IP address
4. Port – Don't modify the default number

Settings	
Description	
Gantner State	GATACCESS
IP Address	192.168.10.226
Name	Gantner0
Port	8000

Links ETC

1. Enter Description for the device
2. IP Address – Insert the IP address
3. Port – Don't modify the default number
4. Relay - Used to set the actions of the relay on a successful entry
 - Relay 1– Only this relay will activate on successful entry
 - Relay 2 – Only this relay will activate on successful entry
 - Both – Both relays will activate on successful entry
 - Both RTS On –Both relays are on and relays are deactivated on successful entry
5. Relay Length - The number entered will define the length of time (in mille-seconds) that the relay signal is active or deactivated.

LinksETC Gym Door



X

Settings	
Description	Gym Door
IP Address	192.168.68.51

Configuring Operational Parameters

New Access 2.0 has been developed using many of the principles of security systems and the expectations of old access users. Whilst customers are fully validated on each scan, access points can now have defined time limits, grouped permissions and ease staff movement.

Prerequisites

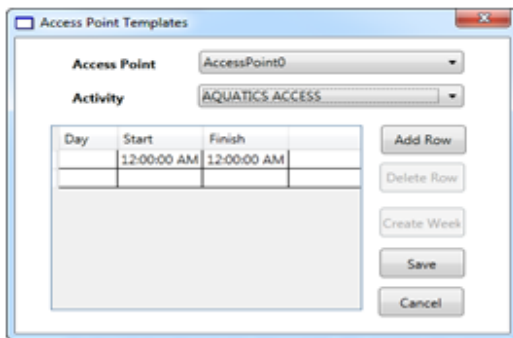
Activities need to have been created in Links and these activities designated for use in new Access 2.0.

Step 1 - Assigning Activity & Availability Times to an Access Point

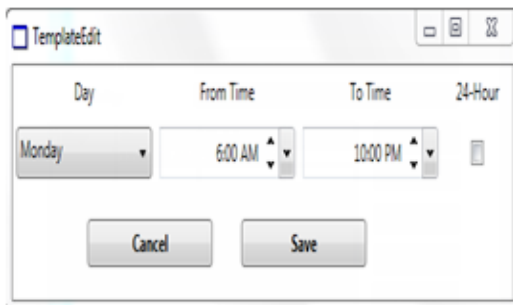
From the main menu in the access setup application select Access Points menu and the Templates sub menu.

It is possible to apply several activities to an access point but be aware that a customer can't have multiple reasons to go through the access point.

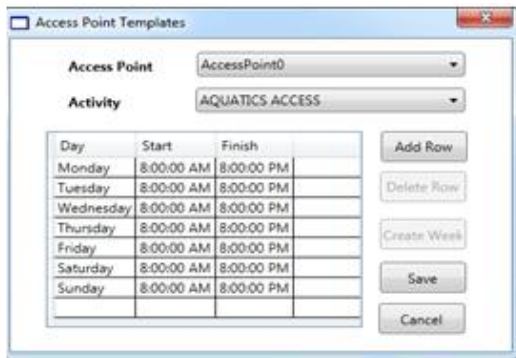
1. Access Point - Use the dropdown button to select an access point
2. Activity - Use the dropdown button to select an activity
3. Press the Add Row button and the following screen is displayed



4. Use the drop down buttons to select a Day, From Time and To Time
5. Tick the 24-Hour Box for 24hr access
6. Click Save



7. This window will now have availability for Monday. Perform the above process for each day or press the Create Week button, and the entire week will be created with access times mimicking that of Monday. Each day can be manually edited, for reduced to resent the operating hours required.



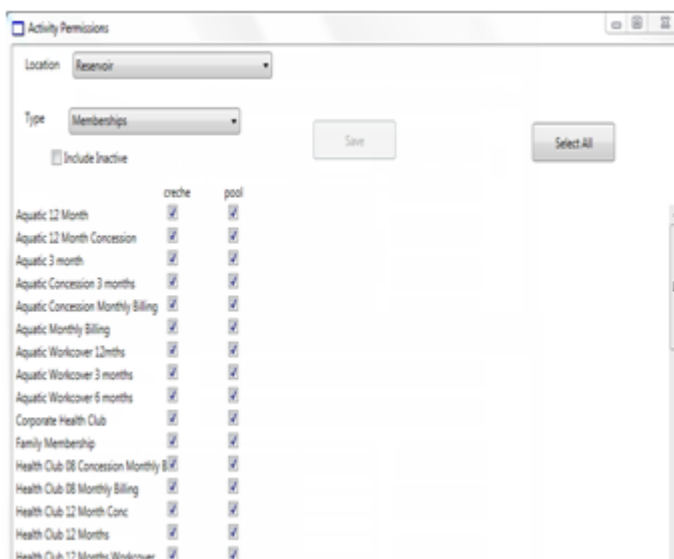
Step 2 - Activities Assignment

The next step in access configuration is to assign an activity(s) to Memberships, Visit Passes, Class Types, Services, or Guest Pass as required.

This function can also be performed in the Links but not as a bulk process.

From the main menu in the access setup application select Activities menu and the Permissions sub menu.

1. Location – Use the dropdown button to select the location (if applicable)
2. Type - Use the dropdown button to select from
 - Services
 - Memberships
 - Visit Passes
 - Class Types
 - Guest Passes
3. Tick the box to apply an item against an access point
4. Press the Save button once selection is completed



Global Activities – Reciprocal Rights

In a multi-location database it is possible to allow customers to utilize their membership, visit pass or student status, at another location(s), commonly known as reciprocal rights. This function is performed by the use of Global Activities which are also created in Links.

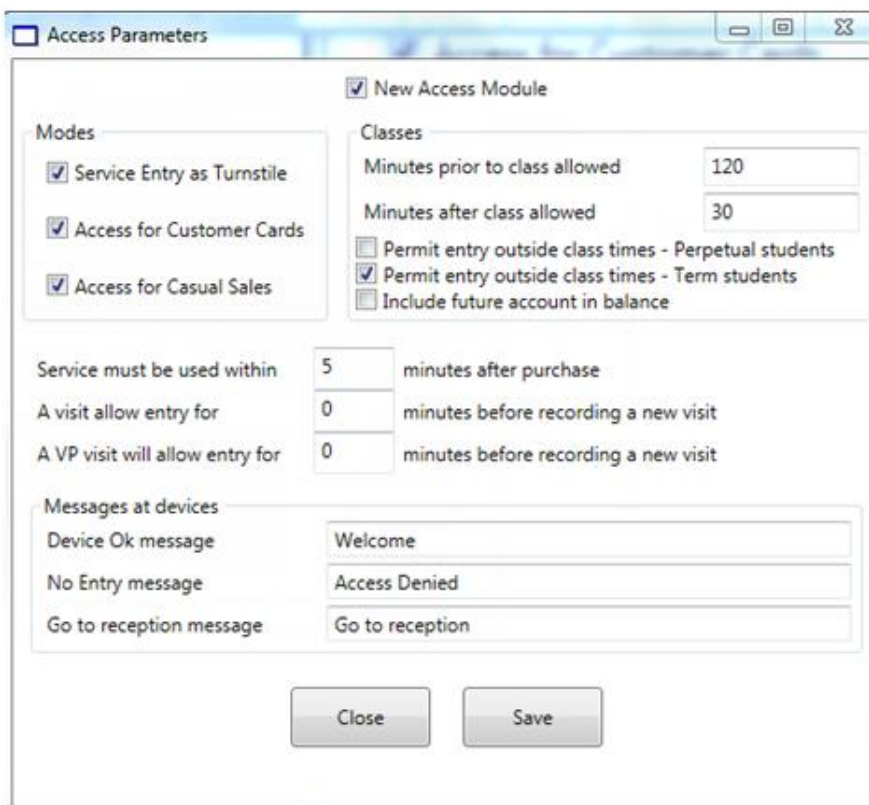
Global activities will also display in this screen and it is up to the host location to identify the membership, visit pass or student status that they wish to identify as having reciprocal rights.

Step 3 New Access Parameters

The following screen provides the opportunity to add further functionality to the access program and includes the ability to cater for casual entry

This screen can also be found in the Links program but the Links version has one additional setting and a section that displays New Access Points names.

From the main menu in the Access setup application select the Settings menu and the Global Settings sub menu.



New Access
Module

This flag is used to set Access 2.0 at a site level.

Service Entry at
Turnstile

Activates the casual receipts process in Links.

Access For Customer Cards	Will display a specialised screen at reception when purchasing a casual service. This screen can be used to enter a card number and the card can then be used to enter through an access point.
Access For Casual Sales	Will allow the validation of a barcode at an access point that is produced when a casual service is purchased.
Service Must Be Used Within	Specifies the amount of time allowed before a barcode generated from the sale of a service must be used before it will expire.
A visit will allow entry for	Specifies the amount of time before a new visit will be registered at an access point against a Membership.
Minutes prior to class allowed	Specifies the amount of time before a class commences that a student is able to gain entry through an Access Point.
Minutes after class allowed	Specifies the amount of time after a class commences that a student is able to gain entry through an Access Point.
Permit Entry Outside of Class Times – Perpetual Students	Allows unconditional access for students but they must have a current booking and are booked in as reoccurring (perpetual) Students.
Permit Entry Outside of Class Times – Term Students	Allows unconditional access for Students but they must have a current booking and booked in for a fixed number of weeks.
Include Future Account in Balance	Access validation will look for any outstanding future class fee balances and prevent entry if there is an outstanding balance.
Messages at Devices	Insert the message that will be displayed for Device OK (successful validation), No Entry (unsuccessful validation) and Go to Reception. These are only relevant if using Gantner devices.

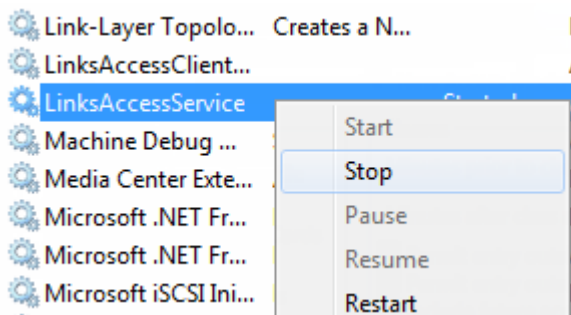
Restarting the Access Service and Access Client Service:

Once all initial configurations have been completed, the services should be restarted. This process is completed through the 'Services' menu in the Control Panel. This can be found via "START > Control Panel > Administrative Tools > Services".

Scroll down the list to "LinkService" and 'LinkAccessClientService'.

The services can be started by right clicking and stopping the service and then right clicking and starting them again.

The Client Service must be stopped first followed by the Access Service. The Access Service must then be started first followed by the Client Service.



Access Monitor

The Access Monitor provides a visual identification of the customer utilising the Access Point. Identification is by:

- Photo of the customer
- Background colour – Green for 'allowed entry' or Red for 'rejected entry'
- Customers name and membership or visit pass description
- Reason for rejected entry

The monitor also has the ability to manually activate the access point relay (if applicable), to open a door or release a turnstile remotely.

From the start menu click on 'Links Modular Solutions > Links Client Tools > Access Monitor' and log in with a staff code.



There a number of sub menus under the File menu that allows for user modification.

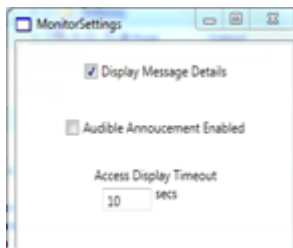
Clear Layout Items Clears the monitor layout settings

Save Layout Saves the monitor layout settings

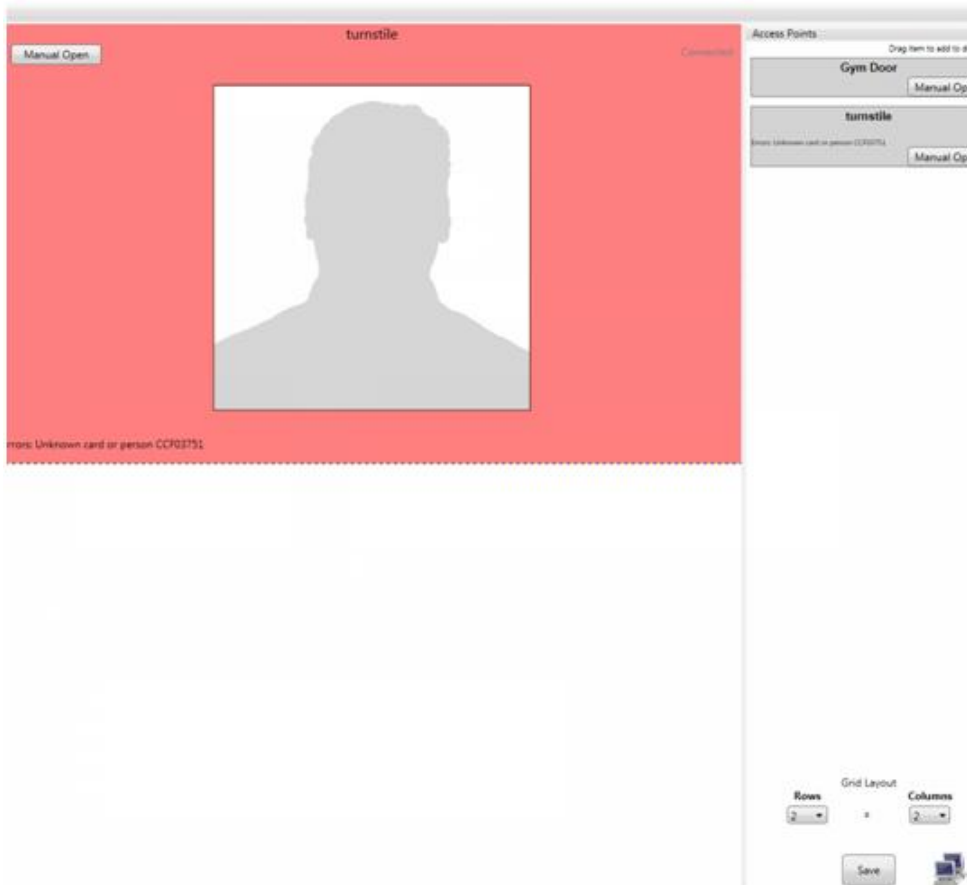
Simulate Entry This screen is used to identify if there is a database connection. Enter a customer number and it should return display the customer's name on the monitor screen if the connection is valid. Please note that this method doesn't perform a validation of the Customer's status.

Settings

1. Tick the box to display messages
2. Tick for a sound to play when an access visitation occurs (not functional as at July 2013)
3. Set the number of seconds for the visitation response to be cleared



Monitor Display



Access Points Listed on the right hand side of the monitor. The rectangle displays the access point name, a Manual Open button and access visitation response.

Grid Layout Set the grid layout rows and columns to suit the number of access point windows to be displayed. Maximum of 10 X10

Drag and drop an access point name into the access window on the grid. The access point name will now be inserted into the designated window.

The Manual Open button is displayed in the top left hand side of the window

The connection status of the access point is displayed in the top right hand side of the window.

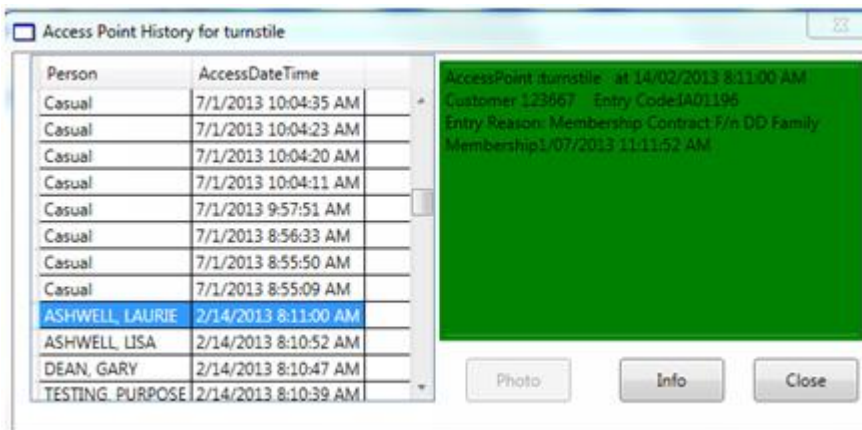
The background colour represents Green for 'allowed entry' or Red for 'rejected entry'.

Access Window

Customer photo is displayed. A silhouette is shown if the customer doesn't have a photo attached to their customer record.

The access response is displayed in the bottom left hand side of the window. It is also duplicated in the access point button.

It is possible to view previous visit history records for the access point by right mouse clicking on the window. A Show History Menu is presented. Select this menu item to display the following screen



Trouble Shooting Guide

The following is a basic troubleshooting guide to assess the reasons a customer may have 'Access Denied' when attempting to use centre Access Points.

Error Messages

<p>Could Not Find a Valid Reason for Visit (No reason found for entrance)</p>	<p>There are several reason why this message is displayed</p> <ul style="list-style-type: none"> • The card is not allocated to a person • There is no current membership or visit pass contract or class booking attached to customer • The customer could also have a 'future' contract but access will be denied until the contract commences • Student may be early for the class booking
<p>Entry Point Not A Centre Access Point</p>	<p>Customer has bypassed a designated centre access point and is trying to enter an internal access point.</p>
<p>Entry Is Not Permitted at this Location</p>	<p>Customer is attempting to use an access point that their contract does not allow.</p>
<p>Unknown Card or Person 00XX0XX0</p>	<p>Customer has a card, band or fob that has not been allocated to them.</p>
<p>The Customer Has Amount \$xx.xx</p>	<p>Customer currently owes money against their contract.</p>
<p>Double Swipe Within xx Seconds</p>	<p>Customer has swiped their card, band or fob at multiple access points within a defined time period. This parameter can be edited in Admin Module> Site> New Access Parameters.</p>
<p>Visit Pass Has No Remaining Visits</p>	<p>Customer has used all available visits on current Visit Pass.</p>
<p>Member Visit Out of hours</p>	<p>Customer has an off peak membership and is attempting to visit outside defined off times.</p>
<p>Bad Read</p>	<p>Customer is attempting to scan the card, band or fob cannot be read by a scanner.</p>
<p>Owes Money For Classes</p>	<p>Student has an outstanding balance.</p>

Links Configuration

By default, the New Access module is not activated in Links as part of a standard installation. Once purchased, the module can be activated by a Links staff member.

Once activated, an additional menu item will appear under the site menu in Administration Module. (The module must be restarted in order for this to take effect)

To see if the module is activated, go to Admin> Site> New Access Parameters.

Activities

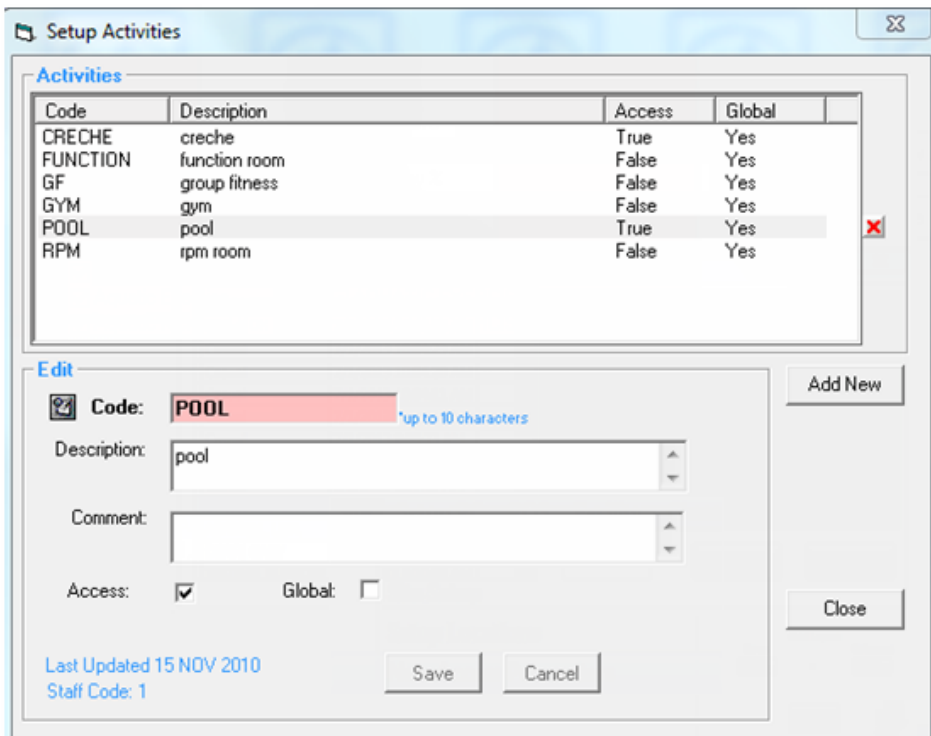
New Access 2.0 utilises Activities as a method of determining whether a Membership type, Visit Pass, Class Type or Service is allowed to proceed through an Access Point or points. As a result the Activities Screen includes the ability select an activity for use in access control as well as being traditionally used in the "Activity Survey" process. Through this combination, activity usage will be automatically recorded as part of the customer's movement through Access Points.

With sites that have minimal Access Points, the number of activities are considerably reduced. For example, small sites such as a 24-hour gym with only a single Access Point and limited number of Membership types, a single activity is required.

Those sites with multiple Access Points, Membership types and access times will require additional activities to cater for pool only entry or gym only entry or combinations.

Creating Activities

The Activities screen can be found in Admin> Memberships/VP> Activities.



The screenshot shows the 'Setup Activities' window. At the top, there is a table listing activities. Below the table is an 'Edit' form for the selected 'POOL' activity. The 'Edit' form includes fields for Code, Description, Comment, Access, and Global, along with 'Save', 'Cancel', 'Add New', and 'Close' buttons. The 'Last Updated' and 'Staff Code' information is also visible at the bottom left of the form.

Code	Description	Access	Global
CRECHE	creche	True	Yes
FUNCTION	function room	False	Yes
GF	group fitness	False	Yes
GYM	gym	False	Yes
POOL	pool	True	Yes
RPM	rpm room	False	Yes

Edit

Code: **POOL** *up to 10 characters

Description: pool

Comment:

Access: Global:

Last Updated 15 NOV 2010
Staff Code: 1

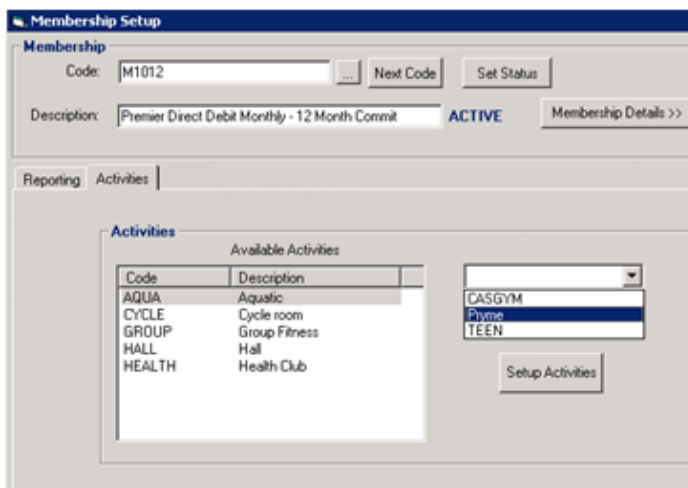
Buttons: Add New, Close, Save, Cancel

Code	Type in a unique code which will to be used to identify the activity and for referencing in setting up Access Point permissions.
Description	User reference for the activity. This cannot be seen within the Access Service setup.
Access	This flag will nominate that the activity can be used for access entry.
Global	This will indicate that the activity will allow access at other participating locations.

Applying Activities

Activities are applied to Membership, Visit Passes, Services and Class Types, by use of the activity tab attached to each respective setup screen in administration module.

The example below shows the membership setup.



Note that it can have multiple Activities for both access and activity survey reason needs.

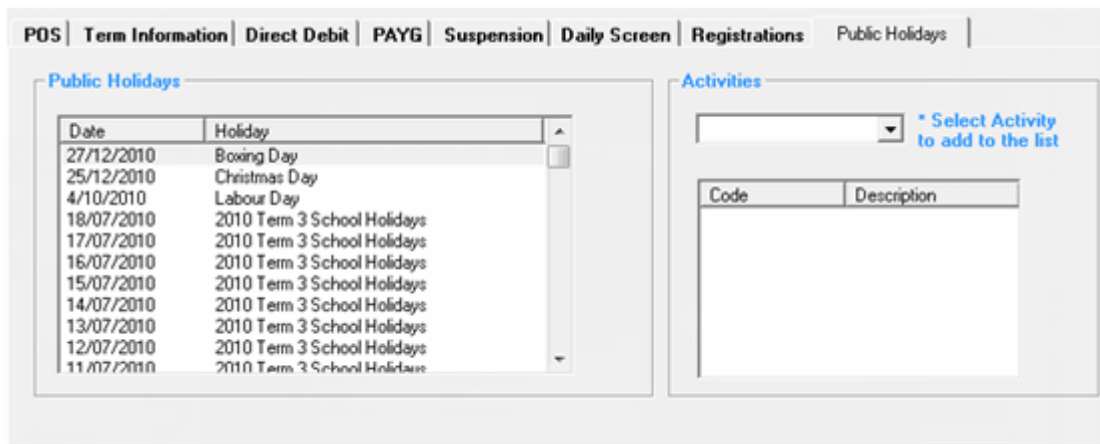
Available Activities displays Activities assigned to the Membership.

To add a new Activity use the drop down arrow on the right hand side of the screen and a drop down list will display Activities.

Use the 'Setup Activities' button to create new Activities.

Activities can be added or removed through both the above method or in bulk by utilising the Activity Assignment function in the Access Setup.

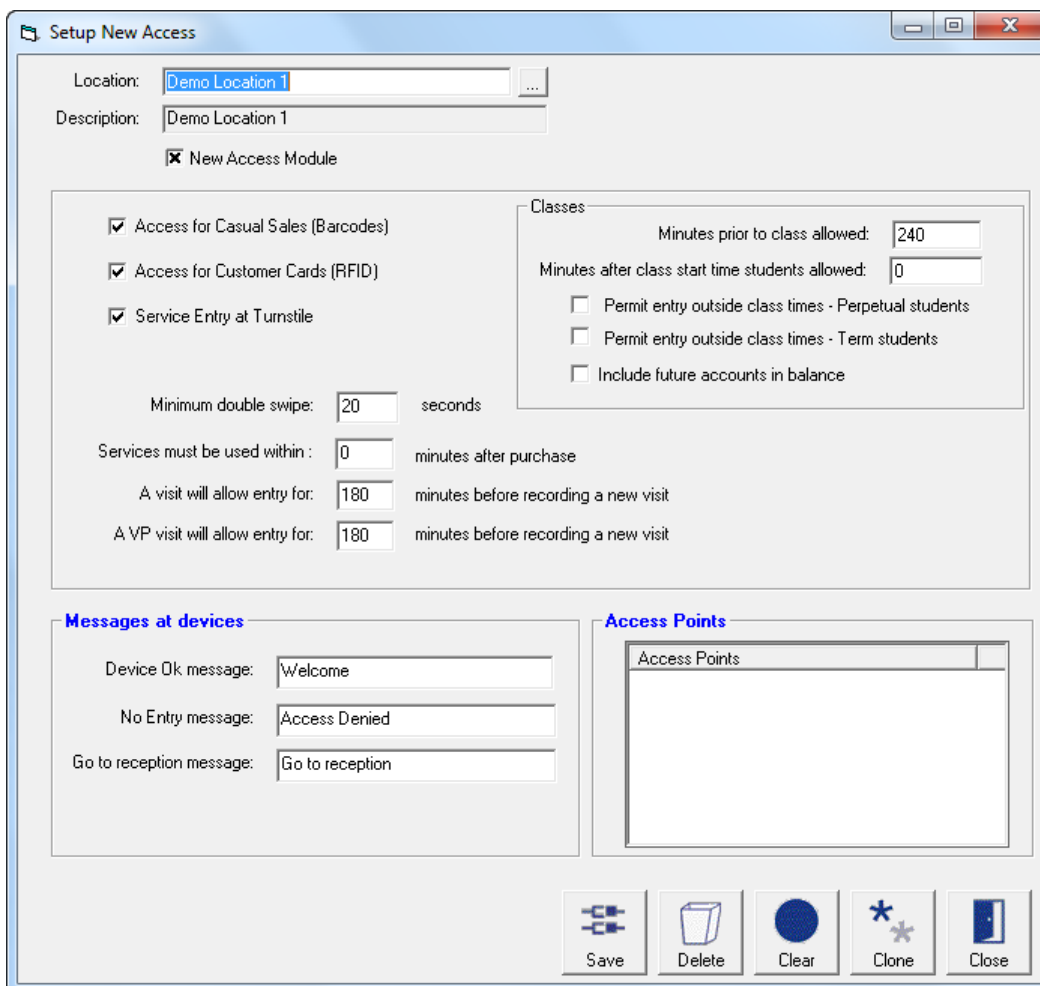
The Class type activity can be added under the 'Public Holiday' Tab in the Class Types setup screen of the Class Menu in the Admin module.



New Access Parameters

Admin> Site> New Access Parameters

This screen is a duplicate but has one additional setting and a section that displays new Access Points names.



New Access Module	This flag is used to set Access 2.0 at a location level
Service Entry at Turnstile	Activates the casual receipts process in Links.
Access For Customer Cards:	Will display a specialised screen at reception when purchasing a casual service. This screen can be used to enter a card number and the card can then be used to enter through an Access Point.
Access For Casual Sales	Will allow the validation of a barcode at an Access Point that is produced when a casual service is purchased.
Service Must Be Used Within	Specifies the amount of time allowed before a barcode generated from the sale of a service must be used before it will expire.
Minimum Double Swipe	Specifies the amount of time (seconds) before a customer card can be re-presented at the same Access Point before accepting another visit registration.
A visit will allow entry for	Specifies the amount of time (minutes) before a new visit will be registered at an access point against a membership.
A VP visit will allow entry for	Specifies the amount of time (minutes) before an additional visit will be removed from a visit pass after registering at an Access Point.
Minutes prior to class allowed	Specifies the amount of time (minutes) before a class commences that a student is able to gain entry through an Access Point.
Minutes after class allowed	Specifies the amount of time (minutes) after a class commences that a student is able to gain entry through an Access Point.
Permit Entry Outside of Class Times – Perpetual Students	Allows unconditional access for students but they must have a current booking and are booked in as reoccurring (perpetual) students.
Permit Entry Outside of Class Times – Term Students	Allows unconditional access for students but they must have a current booking and booked in for a fixed number of weeks.



Include Future
Account in
Balance

Access validation will look for any outstanding future class fee balances and prevent entry if there is an outstanding balance.

Messages at
Devices

Insert the message that will be displayed for Device OK (successful validation), No Entry (unsuccessful validation) and Go to Reception. These are only relevant if using Gantner devices.

Access Points

Displays the Access Points that have been created in the New Access Client Tools.