

Tenant Billing Install / Configuration Guide v1.1

The One SightSolutions Tenant Billing module is supplied as an installable module that runs inside an installation of a Niagara 4 supervisor. It makes use of the built in web server on a Niagara station to provide an intuitive web UI from which users can configure meters, contracts and tenants using the data contained within Histories on the Niagara station.

This guide assumes that you have a fully functional, licensed Niagara 4 supervisor system with a running station and that you have full unrestricted access to both the platform & station. This guide will also assume you have access to the desktop of the system that the Supervisor is installed on.

Downloading the software

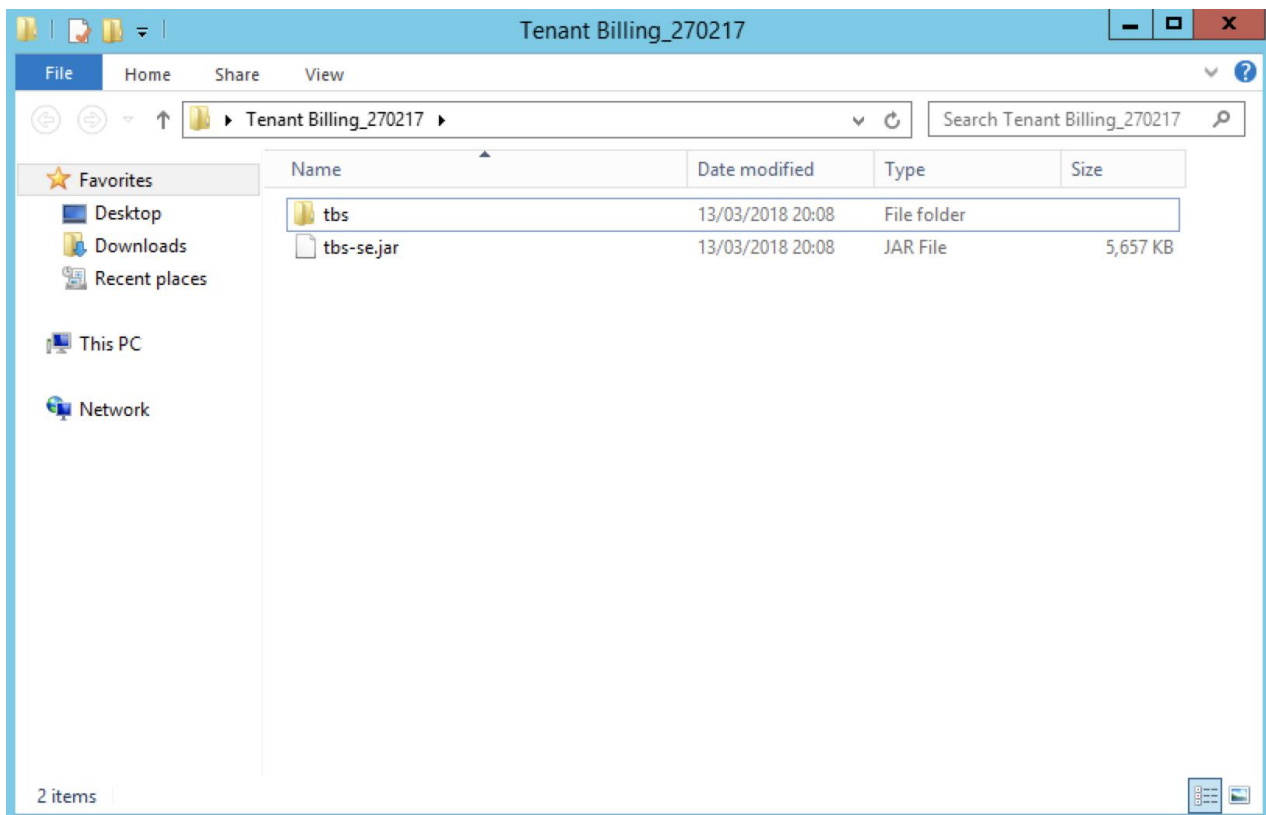
An internet connection is required somewhere for you to be able to download the software, this doesn't have to be on the supervisor system itself, you can download elsewhere and transfer the files to the system on a memory stick or similar.

The latest version of the software can be obtained via the link below:

<https://onesight.solutions/downloadslist/>

This will download a ZIP file containing the following components:

- A file named 'tbs-rt.jar'
- A folder named 'tbs'



The 'tbs-rt.jar' file is a Niagara module and contains the Tenant Billing service itself. This will need to be dropped into the 'Modules' folder of the Niagara supervisor installation.

The 'tbs' folder contains an index.html file that is used for pointing a NAV file. The whole 'tbs' folder will need to be copied under the station Files directory.

We will cover installing the above components in the next steps.

Installing the software

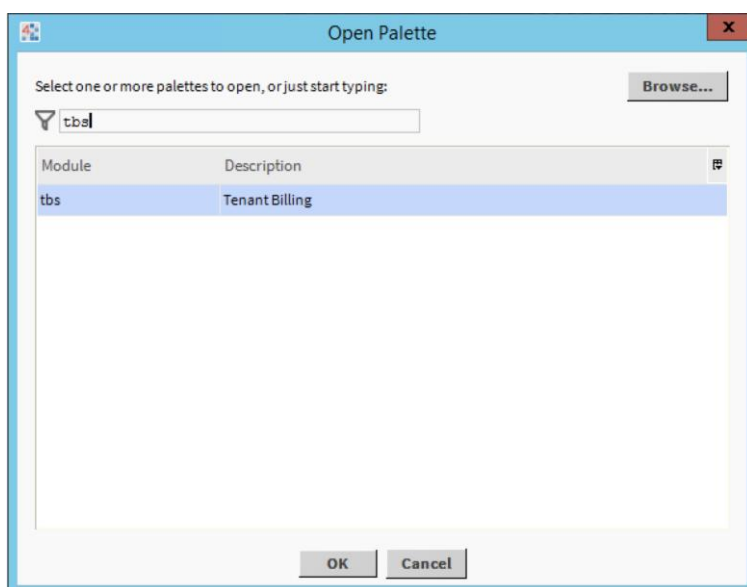
First we will install the 'tbs-rt.jar' file into the Niagara supervisor modules directory. On a Windows system this is typically located at '**C:\Niagara\Niagara-4.x.x.x\Modules**'. Make sure you have extracted the files from the ZIP file you downloaded and copy '**tbs-rt.jar**' into the Niagara modules directory.

If you had Workbench open whilst copying the file, you will need to close it and reopen it in order for the new module to be visible when we get to that step.

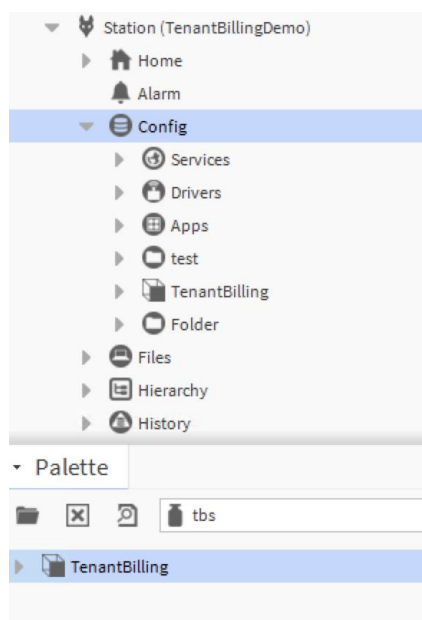
The next step is to copy the '**tbs**' folder into your stations shared file directory. This is typically located at '**C:\Niagara\Niagara-4.x.x.x\Daemon User Home\stations\yourStationName\shared**'. Copy the whole 'tbs' folder into this location. This can also be done within Workbench itself by locating the 'tbs' folder in the nav pane and dragging it into your station files directory. Either method will work.

Adding the service into your station

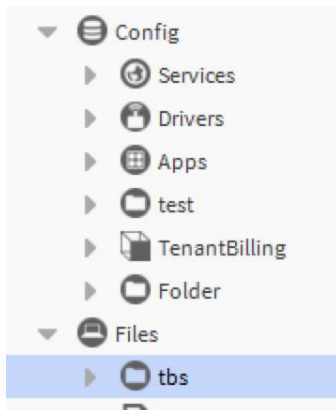
Before we can use the software, we need to add the Tenant billing service into the station that is running on the system. In order to do this, open a station connection using workbench if one is not already open and make your Palette visible. Search the palette for the '**tbs**' module, select it and click OK to view the available components within the module.



Once you have the Tenant Billing palette open, drag the 'TenantBilling' component onto the 'Config' node under your station.



When you drag the component onto the config node, leave it with the default name and click 'OK'. The service is now installed. We must now verify that the 'tbs' folder that we copied earlier exists under the 'Files' node within the station.



A complete installation should look like the above. The 'TenantBilling' component sitting under the Config node and the 'tbs' folder sitting under the Files node. We can now move on the next step, licensing.

Licensing the Software

The software is licensed independently of the Niagara licensing mechanism and is activated by means of a key that must be generated by ourselves (One Sightsolutions) based upon the host ID of the Niagara system.

Locate the host ID of your system, either by usual means such as Platform Administrator or by viewing the Property Sheet of the TenantBilling module and expanding the License menu.

TenantBilling

Display Name	Value
Tenants	Folder
Meters	Folder
Contracts	Folder
License	License
Product Code	Win-EEE0-855C-4E08-9EF6
Key	
Meters	25
Start Date	null
Actual Meters	10
License	Unlicensed
Currency	pounds
Daily	6:00 AM {Sun Mon Tue Wed Thu Fri Sat}

Provide us with the host ID and we will send back a key which you will need to paste into the 'Key' field, at which point the software will be licensed for the resources you have purchased. The key will look something like this:

5269hhac84938cab434b8jsg52f46d5d_e7b1a5c82772e0e05528jt08cb9883ef_25_1495928522172

Checking Web Server settings

Now that the Tenant billing module is installed and licensed, you are nearly ready to open a web browser and view the user interface for the first time. However we suggest first checking to see what the station web service settings are, so that you know whether to browse using HTTP or HTTPS and on what port the web server is running on (if not default).

You can see here that in my test station, I am using standard HTTP on the default port 80.

WebService (Web Service)	
Status	{ok}
Fault Cause	
Enabled	<input checked="" type="radio"/> true
Http Port	80 tcp
Http Enabled	<input checked="" type="radio"/> true
Https Port	443 tcp
Https Enabled	<input type="radio"/> false
Https Only	<input type="radio"/> false
Https Min Protocol	TLSv1.0+

Therefore, based on the above, I know that the URL to browse to my station in a web browser will be <http://myipaddress/>

Yours may be <https://myipaddress> if using HTTPS which is the default on Niagara 4 systems. Or <https://myipaddress:1234> if you are using a non-standard port for the web service.

Either way, the web service property sheet in your station will be able to tell you what settings the web server is configured with.

Creating a new Station user & NAV file

It is good practice to create a new, separate user that will be used to access the Tenant Billing UI, this is so that we can set the default web profile & include a NAV file to ensure the correct page is loaded when the user logs on.

Nav File	file:^home.nav
Prototype Name	
Network User	<input type="radio"/> false
Cell Phone Number	
Authentication Scheme Name	DigestScheme
Roles	<input checked="" type="checkbox"/> admin
Allow Concurrent Sessions	<input checked="" type="radio"/> true
Default Web Profile	<div> Type: Default Wb Web Profile </div> <div> Auto Logoff Enabled: <input checked="" type="radio"/> true Auto Logoff Period: 00000h 15m [5mins - +inf] Workbench Theme: Zebra Show Web Start Address Bar: <input checked="" type="radio"/> true Show Web Start Status Bar: <input checked="" type="radio"/> true </div>

Our demo user here has the admin role and the Default Web Profile set to 'Default Wb Web Profile'. There is also a nav file set that points this user to /tbs/index.html.

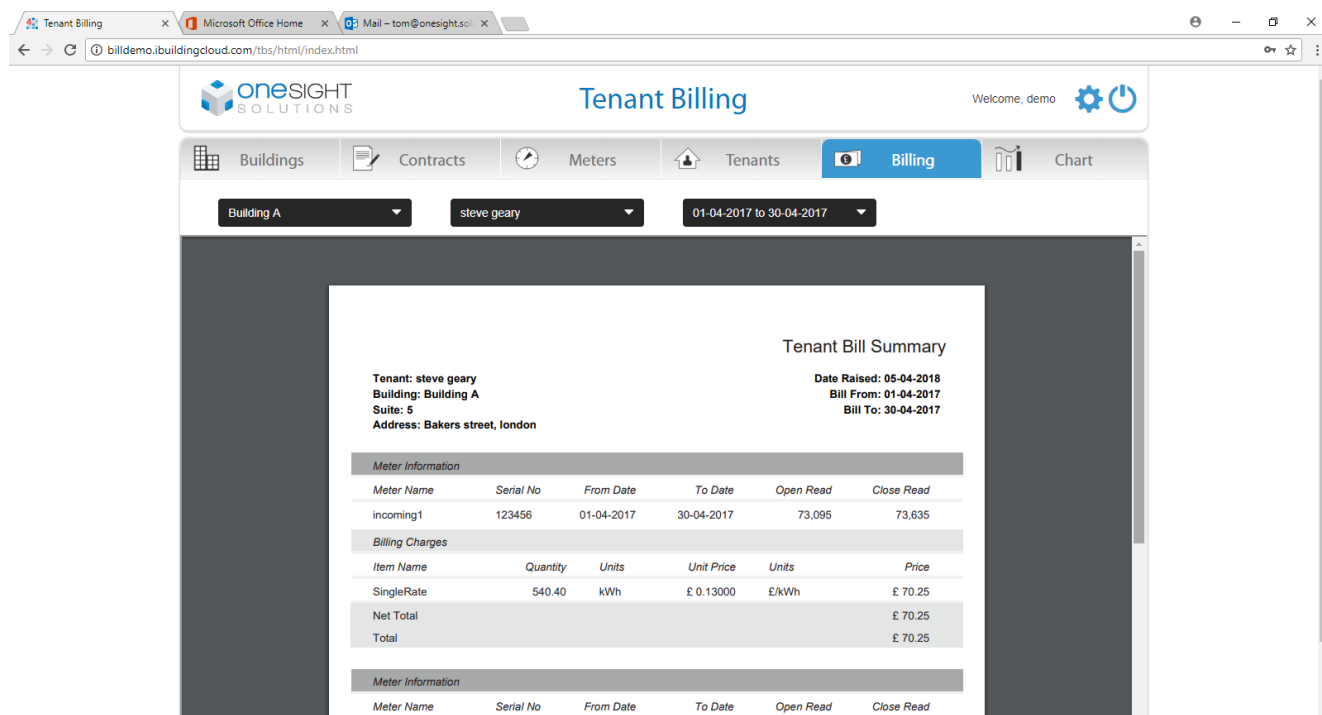
Display Name	Target Ord
Home	file:^tbs/index.html

Please consult the Niagara 4 documentation for details on how to create users & nav files if you do not know already. This is considered standard practice for all Niagara engineers.

Accessing the web interface

You are now ready to access the Tenant Billing web interface for the first time. Browse to your station URL using a web browser either on a PC with network access to the Niagara system, or on the Niagara system itself.

If you created a new user with a NAV file as shown in previous steps, then log in with those credentials. You should now see the following:



If you did not set a NAV file on a user earlier, then you will need to manually specify the exact URL when you log on.

To do this you will need to take the URL needed in order to access your station and prepend the following onto the end of it since we are using custom HTML web pages:

file/tbs/index.html

So in the case of my test station here, the full URL will be as follows:

<http://myipaddress/file/tbs/index.html>

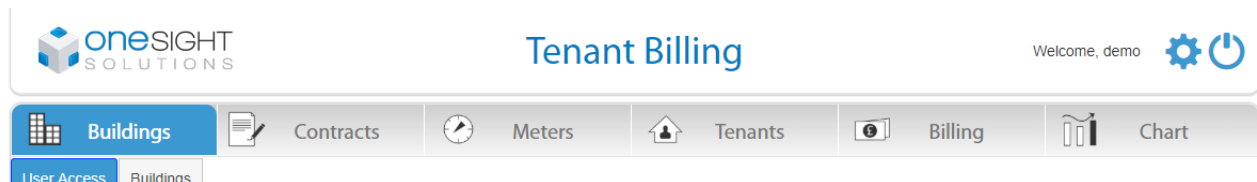
Put this URL into the address bar of a web browser of a PC on a network that can reach this Niagara system, or do it from the Niagara system itself.

**** A note on Browser compatibility**

We have tested the User interface on all Major web browser including Google Chrome, Mozilla Firefox, Internet Explorer and Apple Safari. Although we have worked to resolve any bugs present in certain versions of certain web browsers, if you happen to notice something wrong, please contact us.

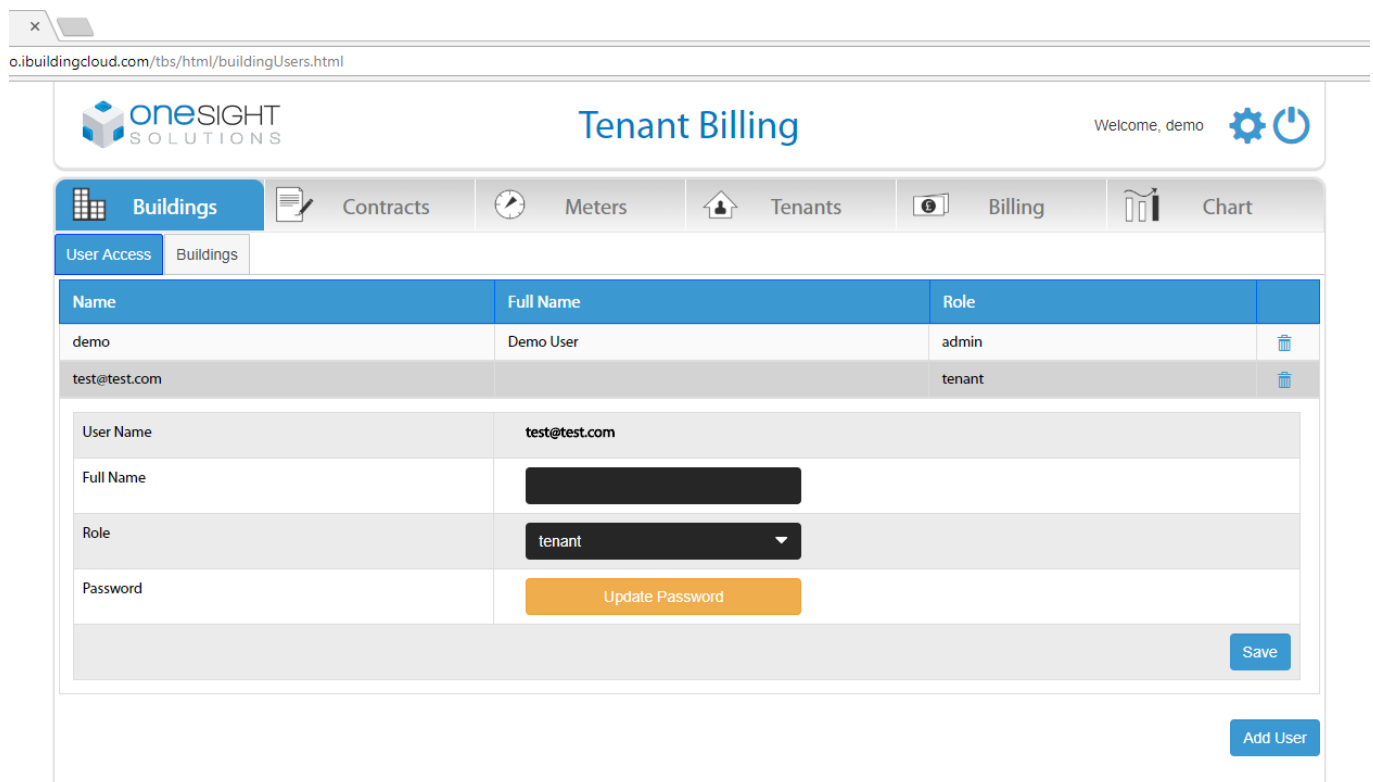
Configuring the Tenant Billing System

Now that the service is installed and running, we can proceed to configuring it for use as a Tenant Billing system. We will assume that you have history present in your Niagara station already as this is a requirement.



The software has been designed in such a way as to be simple and intuitive. The main tabs along the top work from left to right, the order in which you must configure the system. The idea behind this is to provide a solution that is easy to configure and won't require intensive training for both initial set up and ongoing system growth.

Step 1: Create Buildings & Users



The first step is to create top level buildings to which tenants/meters/contracts will be assigned, as well as any additional user credentials should you wish individual tenants be able to view their own data, or building managers be able to see all the Tenants associated with a building.

At this point you do not need to fill out anything in the User Access tab. If you already know who requires access then feel free to add them now, or revisit this tab later on. Now move onto the Buildings tab.

Buildings

Contracts

Meters

Tenants

Billing

Chart

User Access Buildings

Name	Address	
Building A	Bakers street, london	
Building B	Camomile Street, london	
test123	sdfsdf	

Building Name

Building Managers

No User Selected

Building Address

Add

Add Building

Buildings must be set up on the system as they are used as 'containers' for Tenants that we will set up shortly. Create a new building and give it a name & fill out the address. A building manager does not have to be selected at this point but this ties in with the users you may have just created, or might create later on. The building manager role allows a single person to view all Tenant meter data associated with that Building and is ideal for a facilities manager type person.

2. Set Up Contracts

Move over to the Contracts tab and click the "+" button to add a new contract. Assign it to a specific building or make it available to all buildings then give it a name. At this point you can then add any number of Fixed Charges or Taxes before clicking on the "New Season" tab.

oneSIGHT SOLUTIONS

Tenant Billing

Welcome, demo

Buildings

Contracts +

Meters

Tenants

Billing

Chart

Name	Seasons	
ElectricApportioned	AllYear	

General

AllYear

Add Season

Buildings

Building A

Contract Name

ElectricApportioned

Split Utility Bill

☒

Fixed Charges

+

Taxes

+

A contract may be split into multiple Seasons, each of which may have multiple rates set on individual schedules. Whilst this allows for maximum flexibility, it is extremely easy to set up and the process to do so has been designed to be intuitive as possible.

General
All Year
Add Season

Season Name: All Year

Start Date: 1 January

End Date: 31 December

Event Schedule Rate

Add Event

Day	<input checked="" type="radio"/>	Set as Default	Delete Event
Night	<input type="radio"/>	Set as Default	Delete Event

Give your first Season a name, in this example I am going to cover the whole year in a single season and break that season down into two events, day and night. You may add many events, they do not have to correspond with day or night as shown in my example.

Now we must set up the schedule on a per week basis that applies the events we have just created. Move onto the Schedule tab.

Event Schedule Rate

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
12am	08:00 - 13:00 Day	08:00 - 13:00 Day					
1am							
2am							
3am							
4am							
5am							
6am							
7am							
8am							
9am							
10am							
11am							
12pm	13:00 - 0:00 Night	13:00 - 0:00 Night					
1pm							
2pm							
3pm							
4pm							
5pm							
6pm							
7pm							
8pm							
9pm							
10pm							
11pm							

Click & Drag over a period of time, one day at a time and you are able to apply any event you just created to that time slot. Select your event and click Add. Do this for every day or the week.

Event Summary

Select Event Type: Night

Start Time: 00 00

End Time: 09 00

Add Cancel

Now we must set a rate for each of our events, this is done on the rate tab as shown below:

Event	Schedule	Rate
Variable Charges		
Day		0.13
Night		0.07

After setting the rates we must save the new contract. In the bottom right there is an “Add” button. Click this, you will be prompted to confirm, and then your new contract is added onto the system.

2.1 Apportionment Billing

The software is capable of performing apportionment billing. This provides the ability to split the utility bill from a supplier fairly across a selection of Tenants based upon their individual consumption. For example if you as a landlord received an electricity bill for £1000.00, this figure can be apportioned out across Tenants A, B and C as a percentage based on the sum of their individual meter readings. So if the sum of their consumption was 1000Kwh, Tenant A being 200Kwh, B being 500Kwh and C being 300Kwh, then the software would bill this as £200, £500 and £300 respectively.

When creating a contract for Apportionment billing, select the ‘Split Utility Bill’ option under Contract > General. Now create a single event and assign schedule as follows.

Event	Schedule	Rate																																																																																																																																																																																																								
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Ensure you enter the total utility bill into the variable charge field for this contract as follows:

Event	Schedule	Rate
Variable Charges		
Single		1000.0

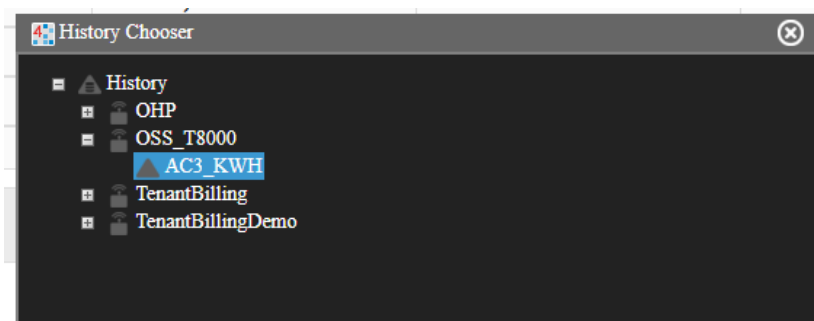
You may now add/save the contract. Each tenant that has this Contract assigned to their individual meter in the Tenants set up stage later will now be billed based on this apportionment contract.

3. Adding Meters & Linking Histories

Moving onto the Meters tab, click the add “+” button to add a new meter. Assign your meter to the relevant building and fill out the other details as shown below. Note the Serial No. may be a real meter serial number, or part of a numbering scheme created by yourself. Once filled out, click the folder icon next to the History box. At this point, you may navigate to the history in the Niagara station and select the required history that will feed this meter with data.

Name	Building	Meter Type	Serial No	Contract	
MainIncomer	Building A	Electricity	123456		
Main elec	Building A	Power	12345		
incoming1	Building A	Electricity	123456		
SG Meter	Building A	Electricity	12345	2-Rate contract	
15th Floor	PNR-SSV	Chilled Water	12345678	SSE_Standard	

Building	<input type="text" value="Building A"/>
Type of Meter	<input type="text" value="Electricity"/>
Meter Unit	<input type="text" value="kWh"/>
Meter Name	<input type="text" value="TestMeter1"/>
Serial No.	<input type="text" value="123456"/>
History	<input type="text" value=""/>



Once the history has been linked to the meter, click the ‘add’ button and your meter will be added to the system.

4. Creating Tenants & Assigning Meters/Contracts

Move onto the Tenants tab and click the add “+” button once again. You will now see the add Tenant form, fill out as required. Note the “auto email” check box, this controls whether or not the system will email the PDF bill automatically to the specific tenant email address each billing cycle.

Buildings		Contracts		Meters		Tenants +		Billing		Chart	
Name	Building	Suite	Start Date	End Date							
Joe Bloggs	PNR-SSV	Penthouse	01/04/2017	01/05/2018							
steve geary	Building A	5	01/04/2017	23/06/2019							
<div>General Meter</div>											
Building		Building A									
Name		Joe Bloggs									
Suite		23									
Area		3									
Phone No.		07722894736									
Email		test@test.com								<input checked="" type="checkbox"/> Auto Email	
Users		No User Selected									
Start Date		01/05/2018				31/05/2019					
Billing Frequency		Calendar Month									
<div>Add Cancel</div>											

Now click on the small “Meter” tab next to General. This is where we assign contracts to meters, and then said meters to our tenant.

General Meter			
Meter List			
Name	Sr.No.	Meter Type	Contract
MainIncomer	123456	Electricity	test12345
Meters			
<input checked="" type="checkbox"/>	MainIncomer	test12345	
<input type="checkbox"/>	Main elec	Assign Contract	
<input type="checkbox"/>	incoming1	Assign Contract	
<input type="checkbox"/>	TestMeter1	Assign Contract	

On the right you see all available meters on the system. Use the dropdown next to the appropriate meter and select the contract you wish to assign. Now you may tick the box next to that meter and this meter/contract combination will be assigned to the tenant. **Now click the “Add” button in the bottom right to save your new tenant.**

5. Viewing / Generating Bills

The billing tab provides an easy way to view/download the PDF bills for each Tenant, organized by billing period. If your history assigned the meter has data going back in time, and you set your tenant start date back in time as well, the system will have generated all bills up until the current period.

The screenshot displays the 'Billing' tab in the oneSIGHT interface. At the top, there is a navigation bar with tabs for Buildings, Contracts, Meters, Tenants, Billing (selected), and Chart. Below the navigation bar, there are filters for 'Building A', 'steve geary', and the date range '01-04-2017 to 30-04-2017'. The main content area shows a 'Tenant Bill Summary' for 'steve geary' in 'Building A', Suite 5, located at 'Bakers street, london'. The bill was raised on '05-04-2018' and covers the period from '01-04-2017' to '30-04-2017'. The summary includes a table for 'Meter Information' and a table for 'Billing Charges'.

Meter Information					
Meter Name	Serial No	From Date	To Date	Open Read	Close Read
incoming1	123456	01-04-2017	30-04-2017	73,095	73,635

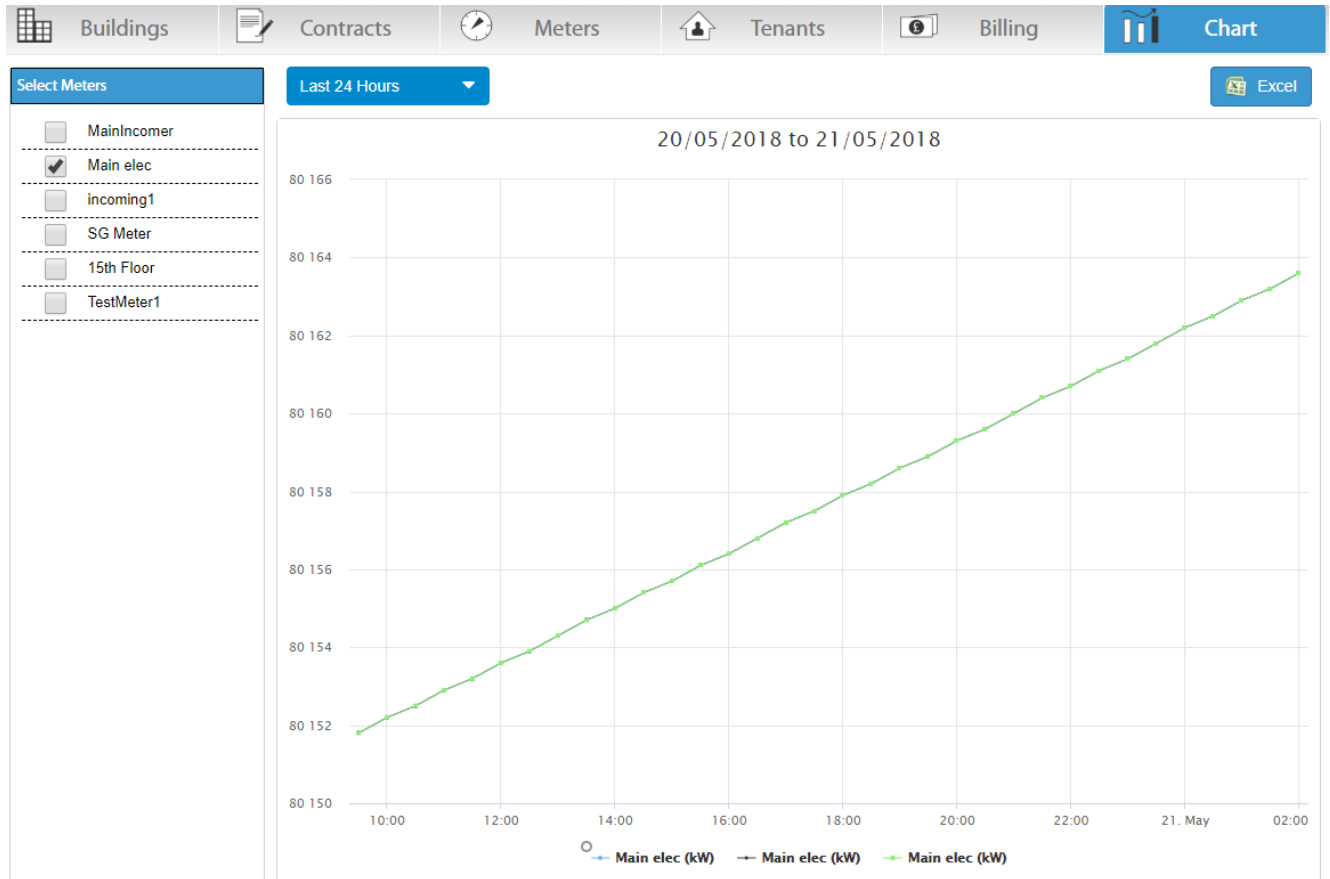
Billing Charges					
Item Name	Quantity	Units	Unit Price	Units	Price
SingleRate	540.40	kWh	£ 0.13000	£/kWh	£ 70.25
Net Total					£ 70.25
Total					£ 70.25

Bills will also be automatically emailed to Tenants in PDF format if the option was set. The raw PDF files may be found under a folder within the Niagara station as well if required.

Should you make a change on the system that effects the bills and makes existing bills incorrect or invalid, you may regenerate the bills from the Tenant area by clicking the regenerate bills button in the bottom left of each tenants set up page.

6. Charts

Intended as a quick reference for checking if data exists, there is a charting tab that allows you to view data for each meter in chart form or via CSV export. This is useful for quickly checking if data is present over a selected timeframe without having to go into the Niagara station and look. The charting functionality is basic, but is only intended to be so and is not designed to replace a fully featured interactive dashboard type product.



7. Settings / Customization

In the top right, you will find the settings (cog) icon, from here you are able to change the system currency, define an email SMTP server for relaying emails and also upload custom logos for the whole system & each defined building.

Email Settings	
Host Name	smtp.gmail.com
Port	465
Account	steve@onesight.solutions Update Password
Use SSL	true
Use Authentication	true
Use Start Tls	false
Transport	Smtlp
Submit	

Above you may specify SMTP server details that the system will use for sending out automatic bills. It is important you correctly specify this information as otherwise the mail this system sends will fail most anti-spam checks and reverse lookups, resulting in mail denied or landing in junk mail.

Buildings	Contracts	Meters	Tenants	Billing	Chart																		
Currency																							
Email																							
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Logo's may be set system wide or on a per building basis as above.

Note**

This software is under active development and as such new features will be implemented in subsequent versions and this guide will be updated accordingly. Please periodically keep up to date via our website to ensure you have the latest version of this document & accompanying software.