

Confirm®

Confirm Web Interface v20.20f.AM

Information in this document is subject to change without notice and does not represent a commitment on the part of the vendor or its representatives. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, without the written permission of Confirm.

© 2020 Confirm. All rights reserved.

Products named herein may be trademarks of their respective manufacturers and are hereby recognized. Trademarked names are used editorially, to the benefit of the trademark owner, with no intent to infringe on the trademark.

Open Source Attribution Notice

The Confirm suite of products contain the following open source software:

- Feature Data Objects v 3.5.0, which is licensed under GNU Lesser General Public License, Version 2.1, February 1999 with the unRAR restriction. The license can be downloaded from: http://fdo.osgeo.org/licenceAndGovernance.html. The source code for this software is available from http://fdo.osgeo.org/content/fdo-350-downloads
- MrSID software (specifically the mrsid32.dll) is used under license and is Copyright © 1995-2002, LizardTech, Inc., 1008 Western Ave., Suite 200, Seattle, WA 98104. All rights reserved. MrSID is protected by U.S. Patent No. 5,710,835. Foreign patents are pending. Unauthorized use or duplication prohibited.

Patented technology in the Software was developed in part through a project at the Los Alamos National Laboratory, funded by the U.S. Government and managed by the University of California. The U.S. Government has reserved rights in the technology, including a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced throughout the world, for or on behalf of the United States, inventions covered by the patent, and has other rights under 35 U.S.C. § 200-212 and applicable implementing regulations.

For further information, contact Lizardtech.

- NodaTime, version number 1.3.10, which is licensed under the Apache license, version number 2.0. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0. The source code for this software is available from http://nodatime.org/.
- Chromium Embedded Framework, version 3, which is licensed under the New BSD License. The license can be downloaded from http://opensource.org/licenses/BSD-3-Clause. The source code for this software is available from http://code.google.com/p/chromiumembedded/downloads/list.
- Xilium.CefGlue, version 3, which is licensed under the MIT License (with portions licensed under the New BSD License). The licenses can be downloaded from http://opensource.org/licenses/MIT and http://opensource.org/licenses/BSD-3-Clause. The source code for this software is available from http://xilium.bitbucket.org/cefglue/.
- D3 Data Driven Documentation, version 3.4.1, which is licensed under the New BSD License. The license can be downloaded from from https://github.com/mbostock/d3/blob/master/LICENSE. The source code for this software is available from http://d3js.org/.
- OpenLayers, version 2.12, which is licensed under the Modified BSD License. The license can be downloaded from http://svn.openlayers.org/trunk/openlayers/license.txt. The source code for this software is available from http://trac.osgeo.org/openlayers/browser.
- OpenLayers, version 3, which is licensed under the BSD 2-Clause Licence. The license which can be downloaded from https://github.com/openlayers/ol3/blob/master/LICENSE.md. The source code for this software is available from https://github.com/openlayers/ol3.
- Proj4js, version 1+, which is licensed under the Apache License, Version 2, January 2004. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0.html. The source code for this software is available from http://trac.osgeo.org/proj4js/.
- requireJS, version 2.1.2, which is licensed under the MIT License or the New BSD License. The license can be downloaded from https://github.com/jrburke/requirejs/blob/master/LICENSE. The source code for this software is available from http://requirejs.org/.

- Apache Cordova, version 8.1.2, which is licensed under the Apache License, Version 2, January 2004. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0.html. The source code for this software is available from http://phonegap.com/download/.
- Xilium.CefGlue, version 75.1, which is unlicensed. The source code for this software is available from https://gitlab.com/xiliumhq/chromiumembedded/cefglue.
- Chromium Embedded Framework, version 75.0, which is licensed according to the following criteria:

Copyright (c) 2008-2014 Marshall A. Greenblatt. Portions Copyright (c) 2006-2009 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Google Inc. nor the name Chromium Embedded Framework nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The source code for this software is available from http://opensource.spotify.com/cefbuilds/in-dex.html#

August 20, 2020

Contents

Confirm Customer

33

40

Services

Screen

Confirm Job

Confirm Web Interface Confirm Map Search 41 Installing, Configuring and Upgrading the Confirm Feature Confirm web Screen 44 interface 8 **IIS Configuration** Confirm Stock Required for 32 46 Management bit Systems 13 49 Administration Other IIS Configurations 14 Confirm Web Single Sign Settings 50 On 15 Web Map Symbol Settings 50 Configuring the Web Map Layer Confirm Database 16 Settings 51 Full Text Search Checking the Confirm Settings 61 web interface Configuration Stock 19 Management 20 Settings 62 Sign-In Street Manager Confirm Strategic Asset Settings 62 Management 21 Change Password 64 Landing Page 21 Frequently Asked Model 22 Questions 65 27 Data **Analysis** 28 Confirm Dashboard 32

Confirm Web Interface

Confirm web interface enable users to access the available functionality through a web browser.

Supported Platforms:

O/S	Version	Support Status
Windows Server	2008 SP2 32-bit and 64-bit	Current
	2008 R2 SP1 64-bit	Current
	2012 64-bit	Current
	2012 R2 64-bit	Current

Note: For Windows Server 2008 SP2 (32-bit and 64-bit) an additional prerequisite *Hotfix KB-980368 - II7.0 & IIS7.5* is required.

Supported Web Browsers:

Browser Name	Version	Support Status
Google Chrome	Latest	Current
Microsoft Internet Explorer	11	Current
Mozilla Firefox	Latest	Current
Microsoft Edge	Latest	Current

Following capabilities are available through Confirm web interface:

Confirm Strategic Asset Management

Confirm Strategic Asset Management is a web based application that allows asset managers predict long term condition of their assets using current condition and applying algorithms. It also allows asset managers to assess cost of maintenance over long term to meet their service levels.

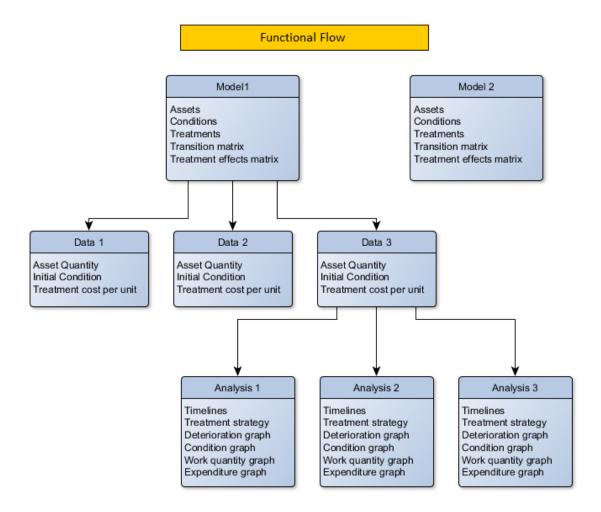
Confirm Strategic Asset Management application has three main parts: Model, Data and Analysis.

Model allows user to create asset groups and rule sets which are input to algorithms determining long term condition and cost analysis.

Data allows user to provide asset group quantity, initial condition and unit cost of treatment distribution which is used during Analysis. Application has the capability to pull asset and initial condition attribution data from Confirm.

Analysis allows user to create scenarios or treatment strategies to assess long term condition and expenditure for a scenario. Before carrying out any Analysis, a set of Model and Data is required.

The flowchart below describes the functionality of Confirm Strategic Asset Management application at high level.



Confirm Dashboard

Confirm Dashboards are now accessible in web through Chrome browser. This enables user to access dashboard anywhere, anytime. Also, The ability to switch between Dashboards is now available from the drop down on the Dashboard screen.

Confirm Customer Services

The Customer Services functionality on web allows to search for an enquiry. The user can view an enquiry from the searched list and update the assigned action officer, status or notes of the enquiry.

Confirm Stock Management

The Stock Management functionality on the web allows you to manage stock levels at multiple stock locations.

Confirm 6 of 66

In this section

Installing, Configuring and Upgrading the Confirm web interface	8
Configuring the Confirm Database	16
Checking the Confirm web interface Configuration	19
Sign-In	20
Confirm Strategic Asset Management	21
Confirm Dashboard	32
Confirm Customer Services	33
Confirm Job Screen	40
Confirm Map Search	41
Confirm Feature Screen	44
Confirm Stock Management	46
Confirm Web Settings	50
Change Password	64
Frequently Asked Questions	65

Confirm 7 of 66

Installing, Configuring and Upgrading the Confirm web interface

Introduction

The purpose of this document is to detail the installation instructions for the Confirm web interface. Confirm web interface is a multi-tenant web service which allows to connect to multiple databases.

Confirm web interface supports side by side installation to deploy two different versions of web interface on same server at a time. To support the side by side installation two separate installers are provided as 'ConfirmWeb' and 'ConfirmWeb Beta'. This will provide two independent URLs exposing functionality available for their version. This may be useful in upgrading one installer and adapting selected users to new functionality before exposing all users to upgraded version.

Confirm web interface is backward compatible from v16 onwards. This means Confirm web interface can be installed for any Confirm DB version from v16 onwards without upgrading the database.

This document describes the process of deployment of Confirm web interface. The steps of installation are common for both ConfirmWeb installers.

Note that both 'ConfirmWeb' and 'ConfirmWeb Beta' are installed in separate directories, uninstall or upgrade of one will not affect the other.

Prerequisites

Ensure that the following prerequisites are installed prior to configuring the Confirm web interface:

- If installing the Web Service on a 32 bit system please refer to the **IIS Configuration Required for** 32 bit Systems page for more details.
- Ensure that Web Server IIS role is installed.
- Visual C++ 2010 redistributable.
- .Net Framework 4.8
- The MapXtreme 9.1 Redistributable must also be installed on the machine.
- The version of the Confirm web interface must be greater than or equal to the database they are serving.

These prerequisites are available within the Prerequisites directory of the Confirm media.

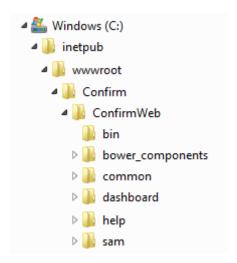
Note: It is a best practice, and highly recommended, to use HTTPS deployment for ConfirmWeb.

Installation

Run the following steps to install Confirm web interface:

• Run the ConfirmWeb.exe and specify a location to install the web service. The default location is set to C:\inetpub\wwwroot\Confirm\ConfirmWeb.

Confirm 8 of 66



• Enabling the *Confirm UEIP* checkbox will allow both Web Service and Client to send anonymous usage information to Confirm to help us improve our products and services.

Note: When the installation is completed you will to reboot the ConfirmWeb server so that the environment path is updated.

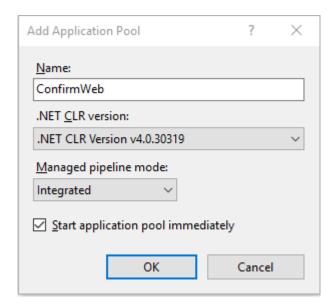
Configuring an Application Pool

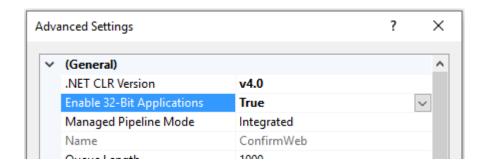
It is advisable to create a new application pool for the Confirm web interface. If setting up more than one web service, ensure that a unique application pool is created for each instance.

To create an application pool, go to the *IIS Manager* and right click on the *Application Pools* option and select *Add Application Pool*. Ensure that the following settings are applied to the new application pool.

Settings	Values
.Net Framework	Set to 'v4.0'
(Applicable for 64 bit machines only)	Set to 'True' (This is set in the 'Advanced Settings'.)
Enable 32-Bit Applications	
Managed Pipeline	Set to 'Integrated'
Identity	To view attachments on Job Tasks within Confirm-Workzone® an identity will need to be set here with the appropriate permissions to access the document store location.

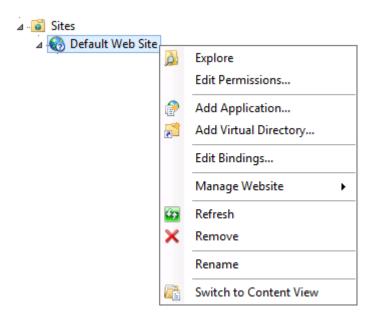
Confirm 9 of 66





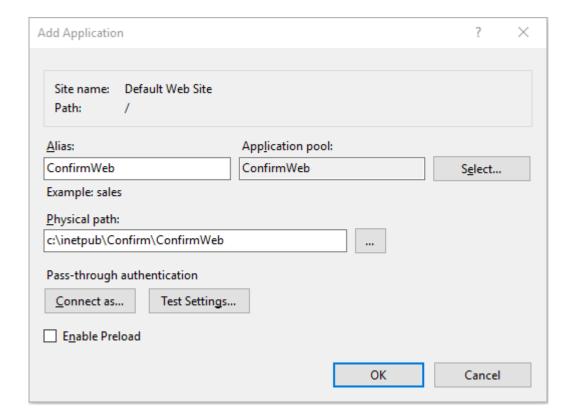
Creating the Web Service Application

Now the files have been installed the web service application can be created. To do this, open the *Internet Information Services (IIS Manager)* and navigate to *Sites*. Then right click on *Default Web Site* and select *Add Application*.



Confirm 10 of 66

The Add Application window will appear.



- Set the Alias to the name you would like for your Web Service.
- Set the *Application pool* to the application pool initially created.
- Set the *Physical Path* as the folder where the Web Service files are stored.
- Finally click on *OK* to create the application.

Side by Side Installation

Run the following steps to install ConfirmWeb Beta Interface:

- Run the ConfirmWebBeta.exe and specify a location to install the web service. The default location is set to C:\inetpub\wwwroot\Confirm\ConfirmWebBeta
- Enabling the *Confirm UEIP* checkbox will allow both Web Service and Client to send anonymous usage information to Confirm to help us improve our products and services.

Note: Please follow steps from Installation section to complete the setup. And also when the installation is completed you will have to reboot the ConfirmWeb server so that the environment path is updated.

Registry Configuration

There are some registry settings that need to be configured on the ConfirmWeb Server, as follows:

O/S Type	Registry Location
32 bit Machines	HKEY_LOCAL_MACHINE\SOFTWARE\Confirm
64 bit Machines	HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Confirm

Confirm 11 of 66

The following settings are applicable to all Confirm Components:

Registry Key	Description
CfgFile	Path to Database configuration file.
AuthProviderType	Confirm - To Use Confirm Authentication. ActiveDirectory - To Use ActiveDirectory.

The following settings are applicable to ConfirmWeb only:

O/S Type	Registry Location
32 bit Machines	HKEY_LOCAL_MACHINE\SOFTWARE\Confirm\Web
64 bit Machines	HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Confirm\Web

Registry Key	Description
LogFile	Path and Filename of the log file.
LoggingEnabled	Enable provider logging on or turn it off. (Yes/ No).

Note: It is recommended to disable RC4 ciphers as per the advisory released by Microsoft. For more information refer -https://support.microsoft.com/en-in/help/2868725/microsoft-security-advisory-update-for-disabling-rc4

Mixed Mode Authentication

Mixed mode is a combination of Active Directory(AD) and Confirm authentication i.e. AD users will be authenticated using their AD credentials and non-AD users will be authenticated using their Confirm credentials.

Confirm Configuration Service is required for configuring mixed mode authentication. Refer page Installation, Configuring and Upgrading the Confirm Configuration Service for more details.

Checking the Web Service is Configured Correctly

IIS will need to be restarted to ensure changes have been made. To do this right click on the Web Server connection in the IIS Manager and opt to *stop* and then *start*.

The Web Service can be tested by performing these actions:

- **1.** Open the *IIS Manager* and ensure that the *Content* view is enabled.
- 2. In the connections panel of the manager navigate to "Server" > Sites > Default Web Site > "ConfirmWeb"
- **3.** In the SAM / Dashboard / CustomerServices / Settings / Workzone folder(s) you will find an Index.html file. Right click on the file and select Browse.
- **4.** Ensure Cookies are enabled in your browser.
- **5.** The default web browser will start to load the page. The ID of the Confirm database you want to connect to will need to be inserted to the URL after **index.html** (**?tenant=%database ID%**) as shown in the examples below.
- **6.** Refresh the browser to connect to the web service. If successful, the login screen will appear in the browser.
- **7.** Login using a valid Confirm Username and Password.

Example URLs:

Confirm 12 of 66

Confirm Dashboard URL: https://ConfirmWebServer/ConfirmWeb/Dashboard/index.html?ten-ant=TestDB#/login

Confirm Strategic Asset Management URL: https://ConfirmWebServer/ConfirmWeb/SAM/index.html?tenant=TestDB#/login

Confirm Customer Services URL: https://ConfirmWebServer/ConfirmWeb/CustomerServices/index.html?tenant=TestDB#/login

ConfirmWeb Map Symbol System Settings URL: https://ConfirmWebServer/ConfirmWeb/app/index.html?tenant=TestDB#/settings

ConfirmWorkzone® URL: https://ConfirmWebServer/ConfirmWeb/Workzone/index.html?tenant=TestDB

Confirm Stock Management URL: https://ConfirmWebServer/ConfirmWeb/app/index.html?ten-ant=TestDB#/stockmanagement

Note: Replace TestDB with the database ID found in the database configuration file, the location of which is specified in the registry. Any spaces in the URL will be represented as %20. Some browsers make this change automatically but some do not and the URL will need to be amended manually.

Upgrading the Web Service

Follow these steps in order to upgrade the Web Service

- 1. Ensure all users are logged out of the Confirm web interface.
- 2. Stop the Web Service.
- 3. Run ConfirmWeb.exe to upgrade.
- 4. Restart the Web Service.
- 5. Clear any browser caches.
- 6. Log into the Web Service.

IIS Configuration Required for 32 bit Systems

Note: The following section is only required for 32 bit operating systems. For 64 bit systems, please ignore this section.

Set ISAPI and CGI Restrictions for ASP.NET V4



Select ISAPI and CGI Restrictions and in the screen that opens there will be two .dll files relating to ASP.NET v4.0.30319. Right-click on both .dll files and select Allow.

Confirm 13 of 66

Other IIS Configurations

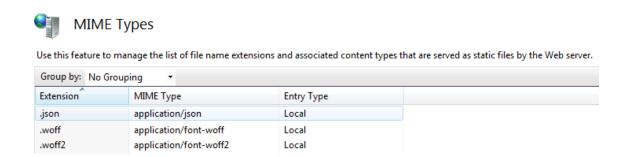
Some of the IIS Web Servers may not have File name extension ".json", ".woff" and ".woff2" added to *Mime Types* which can cause Confirm web interface to behave erratically. This section describes additional configurations required allow the application to work properly.

Set the .json, .woff and .woff2 Mime Types

Open IIS Manager, select Web Server name and ensure Features View is selected.

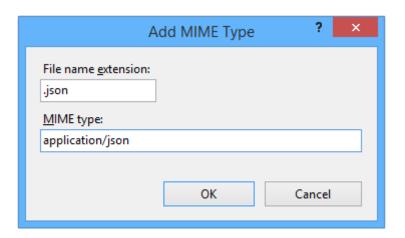


On the right hand panel double click *Mime Types* and check if there are entries for *.json*, *.woff* and *.woff*2



If there are any missing entries then add the corresponding entry on the Mime Types screen.

For example to add .json, right click on Mime Types screen and select Add. On the screen that follows set the File Name Extension to .json and the Mime Type to application/json.



Confirm 14 of 66

Single Sign On

Confirm supports Federated Single Sign-On, a common approach for an application to rely on an external identity provider. It provides one stop solution to access all the applications User want to use.

Traditionally, enterprise applications are deployed and run within the company network. To obtain information about users such as user profile and group information, many of these applications are built to integrate with corporate directories. More importantly, a user's credentials are typically stored and validated using the directory.

However, with increased collaboration and the move towards the cloud, many applications have moved beyond the boundaries of a company's domain. Federated Authentication is the solution to this problem.

Note: For SAML configuration refer page Installation, Configuring and Upgrading the Confirm Configuration Service

Confirm 15 of 66

Configuring the Confirm Database

Introduction

Once the web service has been installed and configured there are some Confirm web interface settings that need to be set in the Confirm database.

Configure the Confirm web interface Settings

The Confirm web interface system settings are provided in the Confirm Client under the screen. Any changes to the settings should be made on this screen.

Configure the Confirm Strategic Asset Management User Security

(This is applicable for Confirm Strategic Asset Management only)

The user access can be set in the Confirm Client under *user security*. There is an entry for Confirm Strategic Asset Management and update access is required for a user to be able to access Strategic Asset Management.

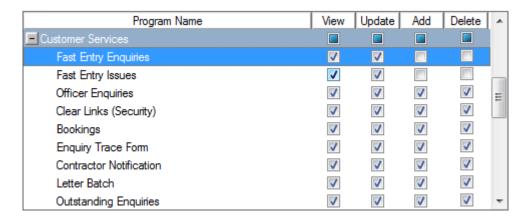


Configure the Confirm Customer Services User Security

(This is applicable for Confirm Customer Services only)

The user access can be set in the Confirm Client under *user security*. The user needs to have view (and update) access to either Fast Entry Enquiries or Fast Entry Issues (both of them are present under Customer Services) to be able to view (and create or edit) an Enquiry on web.

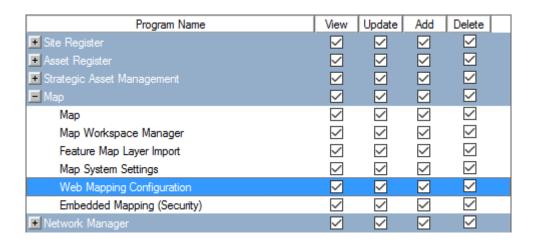
Confirm 16 of 66



Configure the Confirm Map Symbol System Settings User Security (This is applicable for Confirm Map Symbol System Settings only)

The Confirm database must be at v17.10 or later to use the Confirm Map Symbol System Settings screen.

The user access can be set in the Confirm Client under *user security*. The user needs to have update access for Web Map Symbol Settings.



Note: If this permission is not given, the Confirm Map Symbol Settings screen will simply return to the sign in page.

Configure the Confirm Stock Management User Security (This is applicable for Confirm Stock Management only)

The user access can be set in the Confirm Client under *user security*. There is an entry for Confirm Stock Management.

Confirm 17 of 66

■ Works Management	$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$	$\overline{\mathbf{V}}$
■ ConfirmWorkzone®	$\overline{\mathbf{Z}}$	$\overline{\mathbf{Z}}$	$\overline{\mathbf{Z}}$	$\overline{\checkmark}$
☐ Confirm Stock Management	\checkmark	\checkmark		\checkmark
Confirm Stock Management User Access (Security)	~	~	\checkmark	~
Confirm Stock Management Admin Access (Security	~	~	~	~
■ Performance Monitoring	$\overline{\mathbf{Z}}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{Z}}$	$\overline{\mathbf{V}}$
■ Payment Processing	$\overline{\mathbf{Z}}$	$\overline{\mathbf{v}}$	$\overline{\mathbf{v}}$	$\overline{\checkmark}$

- Confrm Stock Management User Access (security). Enables access to Stock Management.
- Confrm Stock Management Admin Access (security). Enables access to the Stock Management Settings form.

Confirm 18 of 66

Checking the Confirm web interface Configuration

Once Confirm web interface has been installed and setup it is recommended that the following actions are carried out to ensure that the system has been setup correctly.

1. Check that you can get to the login screen via the configured URL

Using one of the supported browsers you should be able to view the login screen. If there is a problem check the following:

- Check the Tenant ID name is correct in the URL and matches a database connection name in the Confirm web interface configuration file.
- Ensure any spaces in the URL are represented as %20. Some browsers convert spaces automatically but some do not.
- Ensure that the browser version you are using is supported.
- Check that the Web Service is started and functioning. Try restarting the Web Service.

If the login screen appears then the Confirm Web Service is working. If there are still issues viewing the login screen refer to the Web Service Install guide.

2. Check you can log onto Confirm web interface successfully with a valid Confirm user

If you are unable to login into Confirm web interface with your chosen Confirm user check the following:

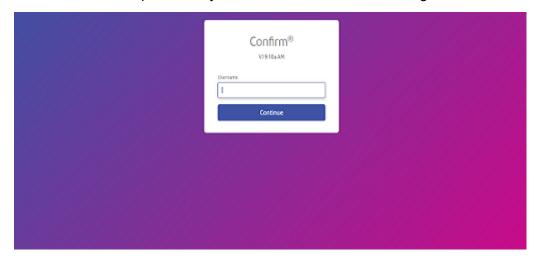
- Error messages will appear on the screen if an invalid Confirm User Login Name or password is used. Check the user login details within the Confirm Client to clarify details.
- Check that the URL has the correct database connection name.
- Check that the user is not locked out in the Confirm Client.

Confirm 19 of 66

Sign-In

The User Guide section will help users to get started with using Confirm web Interface.

Browse to the URL provided by the Confirm Administrator. A login screen like below will be displayed:



Enter a valid Username and hit Continue, this will display the password field. Enter the password to login to Confirm web Interface.

Note: In case of Single Sign-On, password field will not be displayed on Confirm web Interface' instead user will be redirected to configured Identity Provider of the organisation for authentication.

Please refer to Single Sign-on page for more information on Federated Security.

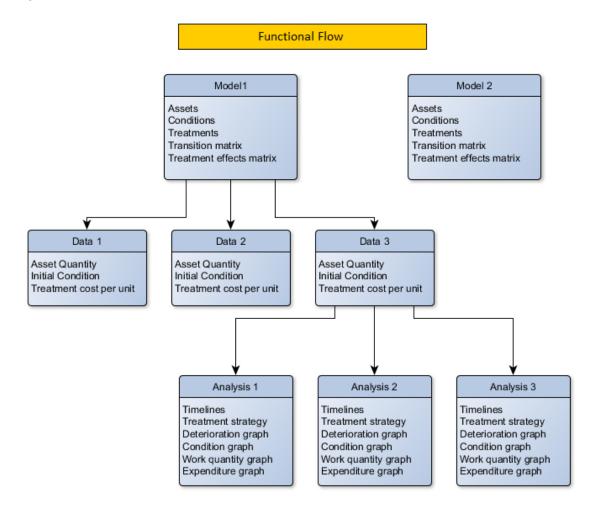
Note: Password change will be required whenever a user's password is edited by System Administrator in Confirm user security screen or password expires.

Confirm 20 of 66

Confirm Strategic Asset Management

Confirm Strategic Asset Management allows asset managers to predict long term condition of their assets using current condition and applying algorithms. It also allows asset managers to assess cost of maintenance over long term to meet their service levels.

The flowchart below describes the functionality of Confirm Strategic Asset Management application at high level.



Confirm Strategic Asset Management application has three main parts:

Model

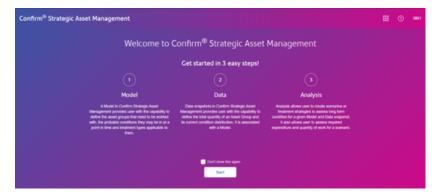
Data

Analysis

Landing Page

On successful sign in, user will be redirected to the landing page of Confirm Strategic Asset Management, like below:

Confirm 21 of 66



Start button will take user to the main application.

Note: Do not show this again: ticking will skip the landing page for user on all subsequent login.

Model

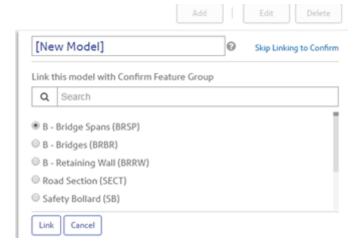
Creating Model is the first step in using Confirm Strategic Asset Management. A Model in Confirm Strategic Asset Management provides user with the capability to define the asset groups that need to be worked with, the probable conditions they may be in and treatment types applicable to them. This enables the application with the asset groups and rule sets which are input to algorithms determining long term condition and cost analysis.

Click Add button to start creating a Model.



Linked Model or Independent Model

A Model can either be linked to Confirm feature group or created independently. Model Name can be specified in [New Model] placeholder.



A linked Model is one which can refer to a Feature Group in Confirm to get all the asset and condition information. To create a Confirm Linked Model, user needs to choose a Confirm Feature Group from a list of Feature Group displayed.

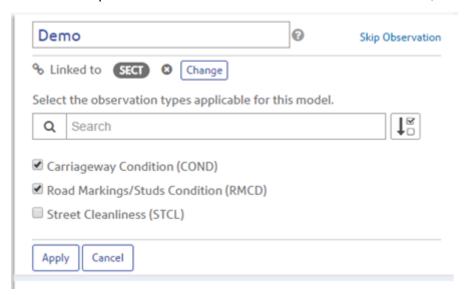
Confirm 22 of 66

Link Button: Links the selected Feature Group to the Model and proceeds to selecting the Observation Types (which have been enabled for Condition Assessment in Confirm) to be selected, for the linked Confirm Feature Group.

Skip Linking to Confirm: Use this option to create an independent Model which is not linked to Confirm Data. This option will take user to Model creation.

Select Observations

This page is available only for linked Model. The observation types associated with selected Feature Group and marked for Condition Assessment in Confirm, are available for selection.

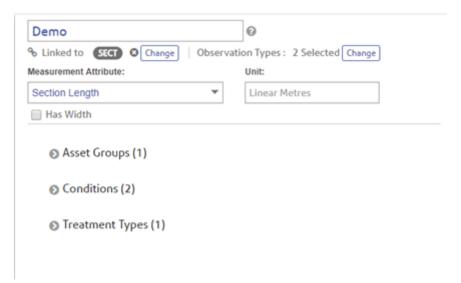


Apply: links the selected observation type to the Model being created

Skip Observation: Use this option to not link any observation type to the Model being created

Model Creation

Model creation requires Asset Groups, Conditions and Treatment Types to be defined:



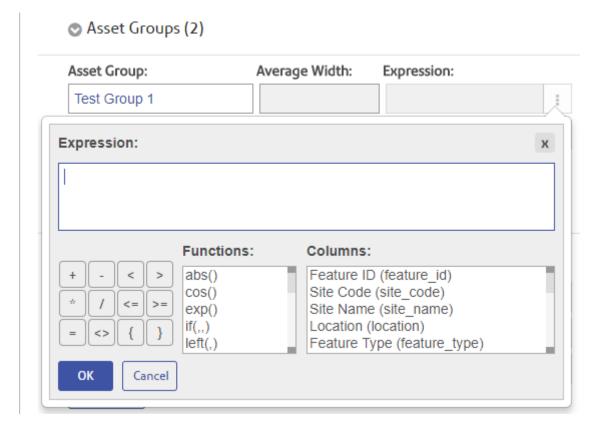
Measurement Attribute: Available only for Confirm Linked Model. Allows to select a measurement attribute that will be used to fetch asset quantity for the asset groups defined. We should also

Confirm 23 of 66

discuss about Units. This is automatically populated for Linked Model but is a selectable dropdown for Independent Model.

Has Width: Checking will consider Asset Groups as having width and user can specify width against each asset group. We should mention that for linked model this will be enabled only for linear assets.

Expression builder: Expression builder is available for Asset Groups and Conditions for Confirm Linked Models. It allows user to define an expression which is used to bring data from Confirm and assign corresponding Asset Quantity and Condition distribution value (in Data tab) for the Model.



Following columns are available and in that order in the expression builder to create expressions:

Feature ID, Site Code, Site Name, Location, Feature Type, Area Code, Contract Area, Classification.

Except Feature ID, Site Name and Location, all other columns use their value code as defined in Confirm lookups for expression evaluation. All Measurement Attributes and Primary Measurement of Feature Group can also be used to create expressions. Condition Observations selected while creating Model can also be used to create expression. Additionally, all user defined pick list attributes are also available to create expression.

The measurement attributes, observations and user defined pick list attributes are evaluated for the value stored in them.

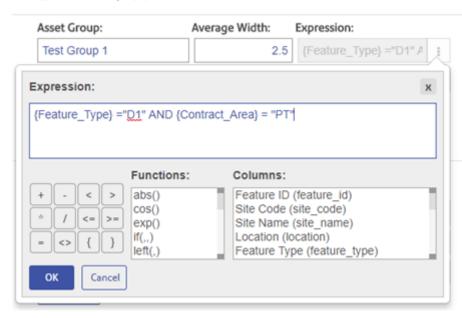
The operations and functions as available in expression builder can used to create expressions. The column value for a non-numeric field need to be specified within double quotes "" for a valid expression.

Asset Groups: The asset categorization according to which they need to be analyzed over a period of time.

Asset Group: Name of the Asset group being created.

Confirm 24 of 66

Asset Groups (2)

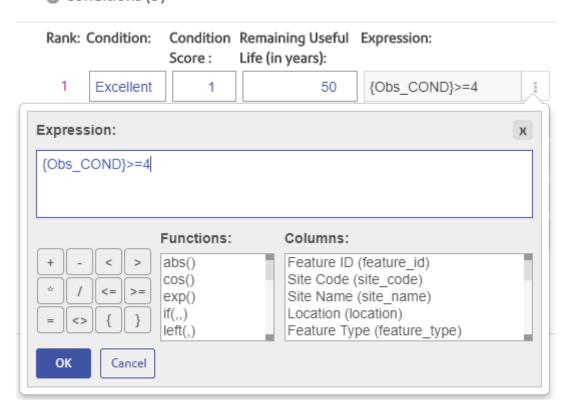


Average Width: Enabled only if 'Has Width' has been checked. It will be used in treatment costing while doing analysis by multiplying the quantity with the width. It is useful in linear assets like roads that are measure in length but treatment costs are in square units.

Expression: Enabled only for Confirm linked Model. It is used to define expression which will be evaluated against feature group assets and put the quantity against each asset group as per expression. Like in the image above, all assets with Feature Type 'D1' and within Contract area 'PT' will be put under Test Group 1 and a quantity as per sum of their primary measurement will be assigned to Test Group 1 in Data tab if data is pulled from Confirm.

Conditions: the probable condition bands in which an asset class can be in.

Conditions (5)



Confirm 25 of 66

Rank: Rank of the Condition. It is ranked from best to lowest, with 1 being the best and is read only.

Condition Score: It is the numerical score assigned for each condition.

Remaining Useful life: Expected Remaining Useful Life of asset defined in years.

Expression: Enabled only for Confirm Linked Model. It is used to define expression which will be evaluated against feature group asset condition. The resulting features' quantity will be aggregated and put in the Initial Condition against each condition defined. Like in the image above, all assets with Feature Condition having 'Carriageway Condition' Observation of value greater than 4, will be considered under Excellent condition within Test Group 1. And a quantity as per sum of their primary measurement will be assigned to Test Group 1 in Data tab if data is pulled from Confirm. The language in this para seems to be cryptic and difficult to understand. This document should be given to a new user in confirm and asked to follow these steps.

Treatment Types: The interventions that can be done with the asset groups while creating Analysis.



Save & Update Matrix will create a Model definition and take user to Matrix page.

Transition Matrix: Transition Matrix within a model is a transition probability matrix in 'As-is' state. Transition Matrix determines the probability with which an Asset Group in a Model will remain in current condition if no treatment is applied to it, in one year. It also determines the probability of Asset Group to deteriorate to worse condition(s) in a year if no treatment is applied. The matrix values need to be provided by users.



Treatment Effect Matrix: Treatment Effects Matrix Treatment Effects Matrix determines the effect on condition of an Asset Group when a particular treatment type is applied to it. A treatment type can only keep the condition of Asset Group same or make it better.

Confirm 26 of 66



Clicking Save on top of the Model page will save metrices and Model creation is now complete.

Data

Data in Confirm Strategic Asset Management provides user with the capability to define the total quantity of an Asset Group and its current condition distribution. It is associated with a Model.



New Data: Placeholder to define Data Name strategy.

Model: Allows to select a Model, for which Data needs to be created.

Preview will create the Data definition and will navigate page to define Data metrices



Get Data: The link is available only for Confirm Linked Model and its associated Data. It will activate the Data fetch from Confirm as per expressions defined in Model for Asset Group and Conditions.

The Data fetch may take some time during which



that process is in progress. User may click on

C Reload View to check if the process has complete. Once the Data fetch is com-

plete, Refresh Data mar

be used to refresh the data from Confirm database. Any errors during data fetch are reported as Get Data Errors.

Quantity

Will be populated with the Data fetched from Confirm using Get Data. Contains the asset quantity, aggregated by the primary measurement, as per expression of the Asset group in the associated

Confirm 27 of 66

Model. It can also be populated/updated manually, which will always be the case for independent Model based Data.

Initial Condition

Will be populated with the Data fetched from Confirm using Get Data. Contains the asset quantity, aggregated by the primary measurement, as per expression of the Conditions in the associated Model. It can also be populated/updated manually, which will always be the case for independent Model based Data.

If the total condition distribution is not 100% of Asset Quantity, the deviation will be notified. Any distribution more that 100% is not allowed to be saved. Any distribution of less than 100% will be removed from quantity while creating Analysis so as to allow Analysis creation only on condition data available.

Get Data Errors

Get Data Errors are encountered if the expressions in the corresponding model are not calculating the data correctly. This may require re-visiting the expressions and correct them. Following three types of Get Data Errors may come:-

- 1. Quantity is zero for all asset groups.
- 2. Some Asset(s) have been counted multiple times for calculating Quantity.
- 3. Some Asset(s) have been counted in multiple Initial Conditions.

To verify which asset quantity and/or conditions are causing the problem, check the latest output file generated after Get Data or Refresh Data operation. The file ConfirmToSAM_Data-Sync_[timestamp].csv is generated at the Export File Path specified within ConfirmWeb Settings screen.

Reading the output file:

IsQuantityOverlapped column in file refers to an asset where quantity is being calculated multiple times. IsConditionOverlapped column refers to an asset where the condition is being calculated multiple times. Any TRUE value in these columns will cause the Get Data errors.

Treatment Costs Matrix

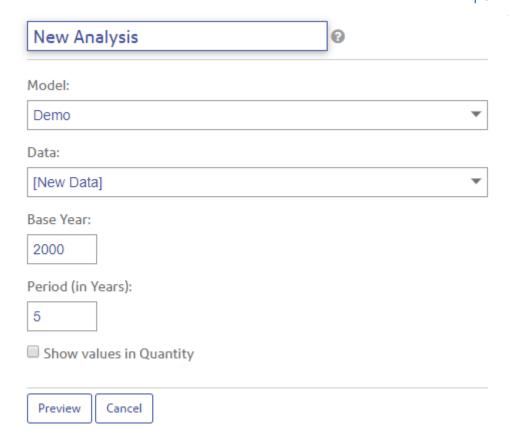
Treatment costs matrix defines the unit cost per treatment type per condition for each Asset Group. This unit cost is used in Analysis while projecting expenditure for a treatment strategy.



Analysis

Analysis allows user to create scenarios or treatment strategies to assess long term condition for a given Model and Data set.

Confirm 28 of 66



New Analysis: Placeholder to define Analysis Name.

Model: Allows to select a Model, based on which Data will be populated, for which Analysis is to be created.

Data: Allows to Select a Data for the Model selected, for which Analysis is to be created.

Base Year: Start year of the Analysis.

Period: No. of years for which analysis output is to be generated.

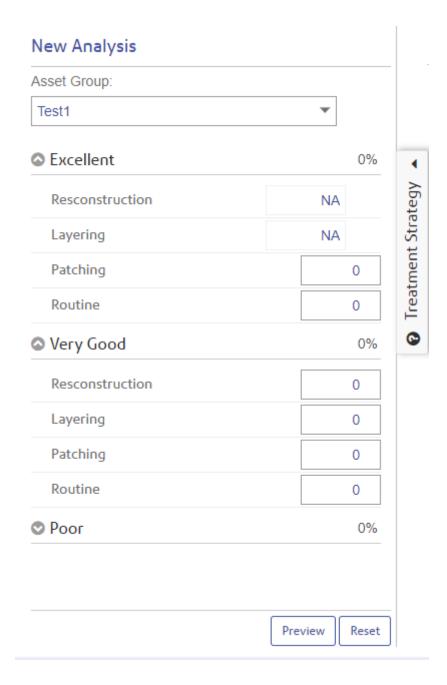
Show values in Quantity: If checked, the analysis graphs will show value in quantity, else percentage.

Preview will create a blank analysis and allow user to define a Treatment Strategy.

Treatment Strategy

Treatment Strategy allows user to create scenario(s) wherein user decides the treatment types that are to be done on an Asset Group, in a given condition. It also allows users to specify the percentage of total quantity of Asset Group that should be covered with a treatment type, in a given condition. Treatment Strategy is formulated per Asset Group.

Confirm 29 of 66



Asset Group: Allows to select the Asset Group within the Model/Data of the Analysis to create a treatment Strategy.

All the conditions for each Asset Group are available to define a treatment strategy.

Preview: Generates following output graphs, for each Asset Group, based on treatment strategy created for each Asset Group.

Individual Distribution

Condition - Do Nothing: It displays the long term condition profile of an Asset Group in case of no treatment strategy in place.

Condition - Treatment Strategy Applied : It displays the long term condition profile of an Asset Group with treatment strategy applied.

Work Quantity Graph: It displays the work done per Asset Group per Treatment Type for the strategy formulated. In case of no strategy, the graph displays no data

Confirm 30 of 66

Expenditure by Treatment Graph: Expenditure by Treatment graph displays the expenditure per Asset Group per Treatment Type for the strategy formulated. In case of no strategy, the graph displays no data.

Expenditure by Condition Graph: It displays the expenditure per Asset Group per Condition for the strategy formulated. In case of no strategy, the graph displays no data.

Overall values

Set of graphs for each Asset Group with Average Remaining Useful Life of the asset group and corresponding expenditure based on Treatment Strategy.

Average Remaining Useful Life: Takes the average of individual condition distribution and generates an overall condition of the Asset Group for each year based on the remaining useful life defined for each condition.

Average Condition Score: Takes the average of individual condition distribution and generates an overall condition of the Asset Group for each year based on the condition score defined for each condition

Total Expenditure: Aggregates the expenditure for each year for the Asset Group.

Aggregate: Switching Aggregate ON will generate the aggregated view of all the Asset Groups within the Analysis. All the individual graphs and the overall value graphs are aggregated. For independent Model if Asset Groups are measured in different units then only Expenditure Graph is aggregated.

Compare: Allows two or more analysis sharing the same Model, Data and Base Year to be compared with each other for overall values.

Confirm 31 of 66

Confirm Dashboard

Introduction

The Dashboard provides a graphical display of information from Confirm. That information is derived from Data Sources and transmitted to the Dashboard, using the Scheduled Reports functionality and the Task Processor, at user-defined intervals. The Dashboard is automatically refreshed at an interval specified in Dashboard User Settings.

The Dashboard has Fit In View option, which allows viewing all widgets without scrolling the page.

Switching

The active Dashboard can be changed by selecting a different Dashboard from the drop down list. All the Dashboards which the logged in user have access to, are displayed in the drop down list. Typing search criteria in the drop down will filter the Dashboards displayed in the list.

Changing the active Dashboard in web interface will also change it in Confirm Client.

Drill-Down

The information of the data being displayed on the Dashboard can be viewed by clicking on the Category Text, or on the chart. The underlying information is displayed in a tabular form, in a new tab of the web browser. The table can be sorted by clicking on the column title.

Further details about Jobs, Enquiries, Defects and Features can be viewed from the Drill-down screen by clicking on the required item, provided the corresponding database table (Job, Enquiry/Central Enquiry, Defect, or Feature) is configured as a Linked Table.

Search

All the records in the Drill-down can be searched by entering the criteria. Records having the exact phrase entered will be filtered and displayed in the table. Clearing the search criteria by clicking 'x' icon will display all records in the table.

Export

All the records in the Drill-down can be exported to a CSV file by clicking Export. A file will be downloaded to the browser's default download location. File name will be same as widget name.

Confirm 32 of 66

: Customers

Confirm Customer Services

Intro

The Customer Services functionality on the web allows you to create, view, and edit an Enquiry.

Search Enquiry

You can search for an Enquiry to view/edit its details.

You can perform search in the search box. You need to enter one or more of the following search criteria: Enquiry number, Enquiry location, Enquiry description, Customer name, Customer reference, Customer email Address, Subject name, Service type, Site name, Feature Type, Town or External System reference number.

If you want to search using multiple criteria, include a <space> between the criteria.

If you want to search for an exact match, enter the search criteria in quotes <"">.

The list of enquiries matching the search criteria will be displayed below the search box. The list displays up to latest 100 edited/updated Enquiries that match the search criteria. The list includes Customer as well as Officer Enquiries.



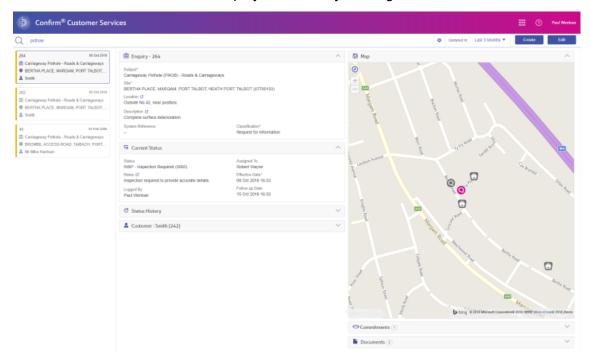
An enquiry in the list has following information:

linked to the Enquiry.

Confirm 33 of 66

View Enquiry

You can view the details of an Enquiry in the list by clicking it.

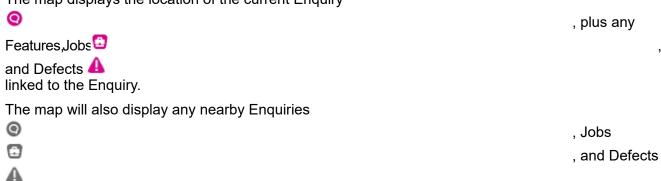


Anyfieldwiththe 2

icon can be displayed in a pop-up with a bigger text area, allowing you to view longer text without having to scroll within the field. Click on the icon to see the pop-up.

Map

The map displays the location of the current Enquiry



- Nearby Enquiries will be shown if they have the same Subject as the current Enquiry.
- Nearby Jobs will be displayed if any activity was performed on them in the last 30 days or they are scheduled to start in next 30 days. For Contractor users, the Job must also be at a Job Status with the 'Available to Contractor' flag ticked.
- Nearby Defects will be displayed if they are not superseded, and are not set to 'No Action Required'.

To hide/show nearby Enquires, Jobs, or Defects, click the layer control button on the map.

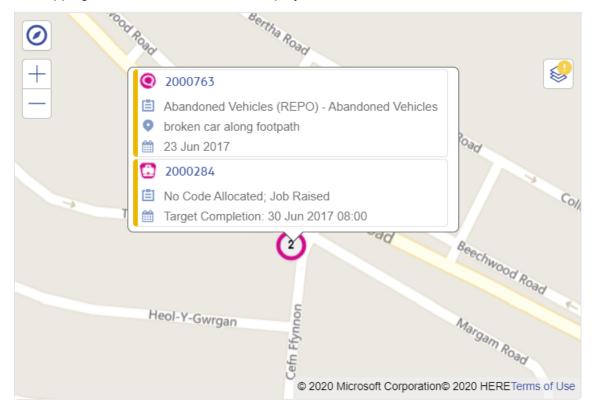


Clicking on any item on the map will display an info popup.

Confirm 34 of 66

The info popup displays the following details for Enquiry: Enquiry number, status, description (or subject if description not available), location (or site if location not available), logged date. For Jobs, the info popup displays the Job number, Job Type, current status, target/actual completion date. For Defects, the info popup display the Defect number, Defect Type, and the Defect creation date.

If more than one entity is at same location, a cluster is displayed in that location, with the count of overlapping entities. If the cluster has Enquiry in it, its border will have the same colour as that of Enquiry.



Map - Create Enquiry

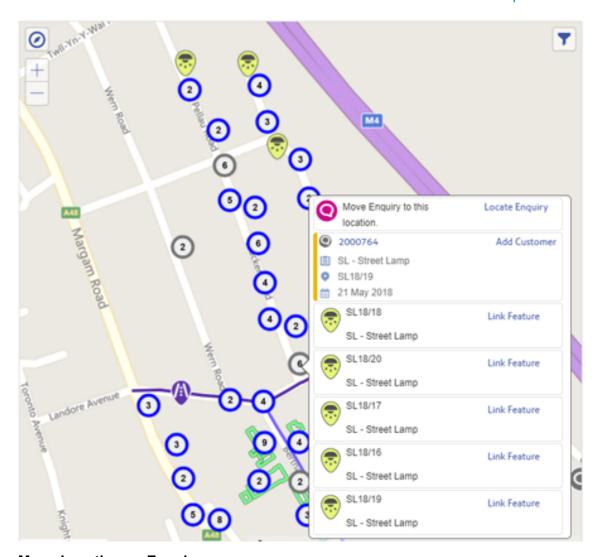
When creating an Enquiry, the Map allows an Enquiry to be located. Selecting a Site will focus the map on the location of Site and all eligible features near the location of Site will be displayed. The symbols of features will be displayed as defined in Web Map Settings screen.

If Subject and Site are selected, any nearby Enquires created or updated in last six months and with the same Subject as selected will be displayed as



If more than one entity is at same location, a cluster is displayed in that location, with the count of overlapping entities. The cluster border will have the same colour as that of nearby Enquiry.

Confirm 35 of 66



Map - Locating an Enquiry

The Enquiry can be located using the map. Click the location of the Enquiry and select 'Locate Enquiry' from the popup.



Alternatively, the Enquiry can be linked to a Feature. Click the Feature's icon on the map and select 'Link Feature' from the popup.



Before saving the Enquiry, the Feature can be unlinked, the Enquiry relocated or the Enquiry linked to a different Feature. To unlink, click the Feature's icon on the map and select 'Unlink Feature' from the popup.



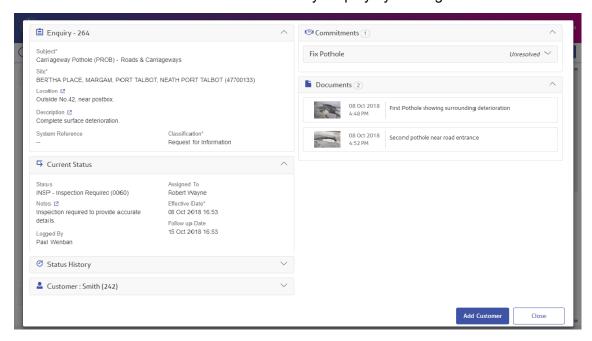
Confirm 36 of 66

Map - Adding a Customer to an existing Enquiry

When creating an Enquiry, you can view the details of a nearby Enquiry by clicking it on the map. An info bubble is displayed with information of the nearby Enquiry: Enquiry number, status, description (or subject if description not available), location (or site if the location is not available), logged date and 'Add Customer' link.

You can add a Customer to this nearby Enquiry by clicking the 'Add Customer' link in the info bubble. You will be redirected to that Enquiry, with a Customer section added.

You can view more details of nearby Enquiry in a pop-up by clicking the Enquiry number in the info bubble. You can add a Customer to this nearby enquiry by clicking the 'Add Customer' button.



Documents

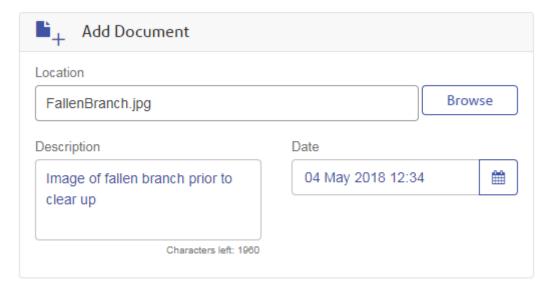
This panel displays the Documents attached to an Enquiry. Clicking on a Document link opens the full view of the attachment in a new pop-up window. The opened Document can be downloaded to browser's default download location or to a specific path by clicking on download button.



Add Document

When creating or editing an Enquiry, it is possible to add a Document to an Enquiry to record any additional information coming via attachments. Use the Browse button to browse to any accessible location.

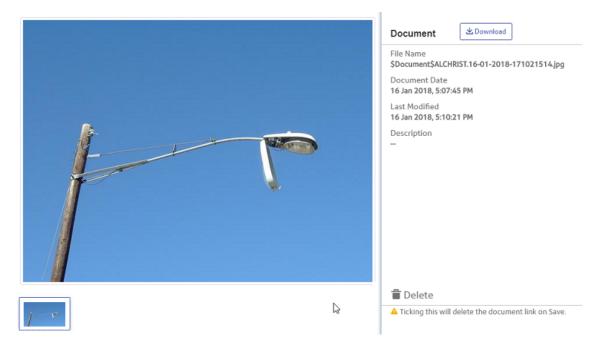
Confirm 37 of 66



Delete Document

When editing an Enquiry, it is possible to delete an existing Document from an Enquiry, through the Document review pop-up.

The actual Document will be deleted if Document Store is set to 'Folder'.



Deleting Customer details

To delete a Customer's details from an Enquiry, Edit the Enquiry and click on the 'Make Anonymous' button in the Customer section.

Clicking on 'Make Anonymous' button will clear all details of a customer or contact in an existing Enquiry. It will replace the customer surname or the contact name with the date the details were cleared and the user who cleared them.

Confirm 38 of 66



Confirm 39 of 66

Confirm Job Screen

Priority

The Priority field in the Details section of the Job screen is editable for Jobs which are not on an Order.

Updating a Job's Priority will automatically cause the Price Factor, Estimated Completion Date & Target Completion Date values to be updated when appropriate.

Changing the Priority may affect the Current Status, in which case the Status History will be updated.

NB: This functionality is only available to users with the necessary User Security.

Workstream

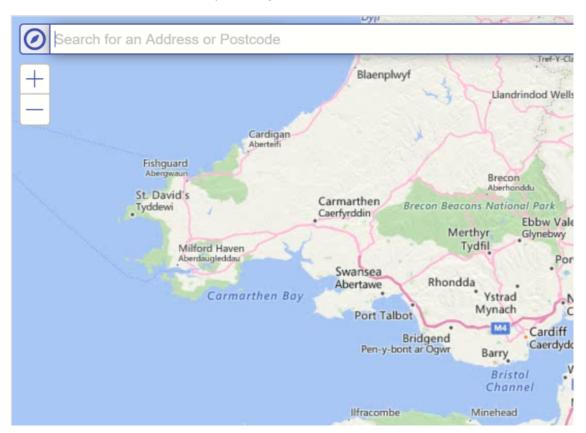
The Workstream field allows Jobs to be placed onto a Workstream, which allows for the grouping of Jobs when scheduling in ConfirmWorkzone.

The Workstream field is only visible when at least one Workstream lookup has been defined.

Confirm 40 of 66

Confirm Map Search

The Map Search enables text and spatial searching across Enquiries, Jobs, Defects and Features. Locations can be searched for by clicking the compass icon at the top left corner of the map.



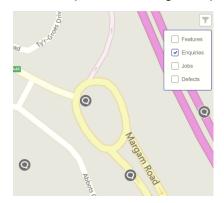
What's Going On Here

When zoomed in to a location What's Going On Here entities can be shown by clicking



at the top right

of the map and selecting the options from the list. The entities will refresh as the map is moved.



Entities are included according to the following rules:

Features

Confirm 41 of 66

• Features are restricted by Device Data Key Security on the Feature Group (see the Feature Group lookup in the Confirm desktop client).

Enquiries

• Enquires will be displayed that have been created or updated in last six months.

Jobs 🖼

- The Job is scheduled to start in the next thirty days.
- Or the Job has been completed within the last year.
- Or the Job has not been completed but some activity has been performed on it within the last year and the Job has not been archived.
- For Contractor users, the Job must also be at a Job Status with the 'Available to Contractor' flag ticked.

Defects A

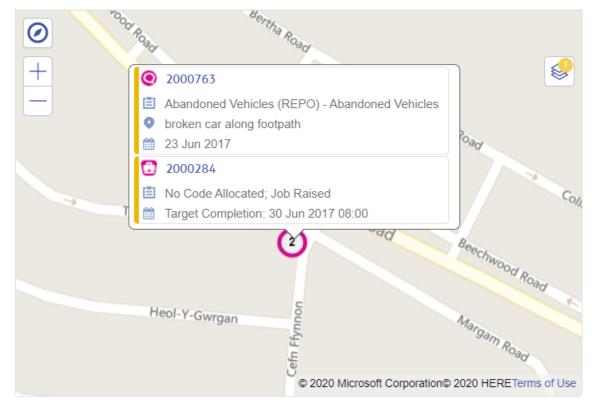
• Defects will be displayed if they are not superseded, and are not set to 'No Action Required'.

Entity Information

Clicking on any item on the map will display an info popup.

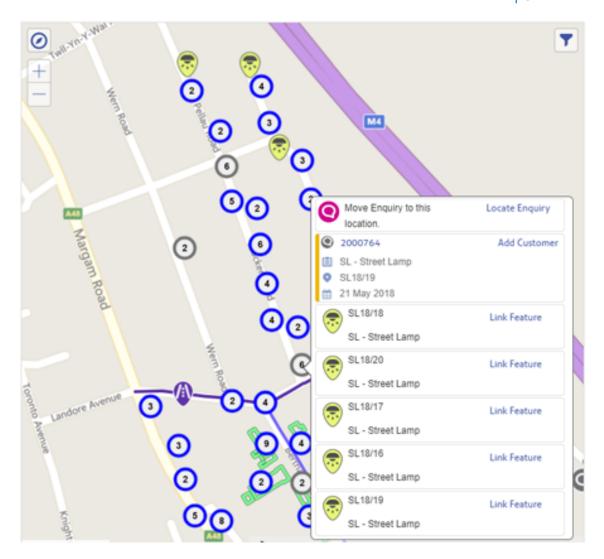
The info popup displays the following details for Enquiry: Enquiry number, status, description (or subject if description not available), location (or site if location not available), logged date. For Jobs, the info popup displays the Job number, Job Type, current status, target/actual completion date. For Defects, the info popup display the Defect number, Defect Type, and the Defect creation date.

If more than one entity is at same location, a cluster is displayed in that location, with the count of overlapping entities. If the cluster has Enquiry in it, its border will have the same colour as that of Enquiry.



If more than one entity is at same location, a cluster is displayed in that location, with the count of overlapping entities.

Confirm 42 of 66



Feature Filter

Features can be further filtered by Id, Group or Type by clicking the filter button at the top right of the map.



Confirm 43 of 66

Confirm Feature Screen

Introduction

The Feature screen can be accessed by drilling down from either the Dashboard or from the Map Search.

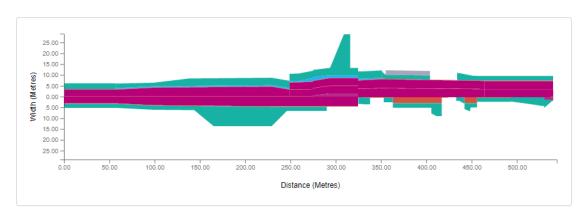


The page displays standard Feature details as well as Straight Line Diagrams for Linear class Features.

Sensor History

If the Feature is an IoT device or is fitted with one the Sensor History component will appear. To identify a Feature as having sensor readings it must have been provisioned by ConfirmConnect or have an Attribute with the Attribute Type Code defined in the IOT_ATTRIB_TYPE_CODE System Setting set. This component will display the device sensor readings for a specified date range. This component is initially collapsed and will show data from the last 7 days when expanded by default.

Straight Line Diagrams: The Inventory Schematic (For Linear class Features)



This diagram uses the configured Cross Sectional Positions ordering, the selected Linear feature's own child Linear Feature Inventory (currently Discrete Features are not plotted), their Start and End Widths and their Start and End Distance to build a representation of the Feature as a straight line. Each Inventory item is coloured according to their Feature Type.

Inventory items are grouped by their Cross Sectional Position and then by their Feature Type. The separated Inventory groups are then stacked on top of each other going out from the centre.

When hovering over the Inventory with the mouse a tool-tip displays the the Feature's Type and Cross Sectional Position.

Confirm 44 of 66

Straight Line Diagrams: The Survey Browser (For Linear class Features)



This component lists Surveys for the current Linear Feature which have a Start Date. If there are Observations available they are grouped by their Cross Sectional Position and plotted on a chart along the length of the Feature.

When the component initialises it will display the full extent of the Observation Type based on its configured Observation Parameter (from the Minimum to the Maximum of the Parameter Options). To toggle between the full extent of the Observation Parameter and the extent of the Observations you can click the chart or the arrow button above the Y-axis.

Cross Sectional Position visibility can be toggled by clicking on the Cross Sectional Position in the chart legend.

When hovering over the data points in the chart with the mouse a tool-tip displays the distance along the Feature and the Observation value.

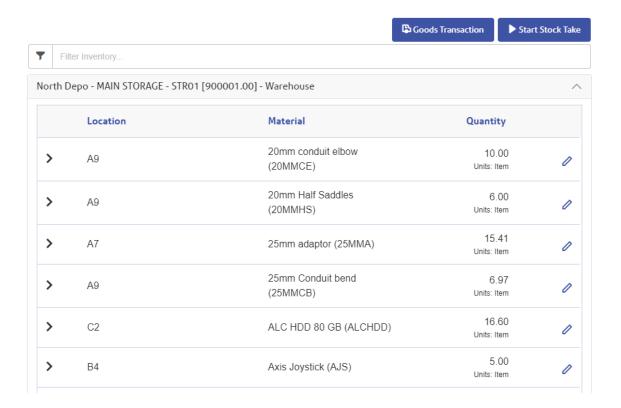
Confirm 45 of 66

Confirm Stock Management

Stock Management provides an easy to use web interface to manage stock levels aimed for use by tablet devices. The main page shows the Goods Transaction and Start Stock Take buttons (more on these later) and a list of all Stock Locations (Confirm Features) for which the user has Contract Area access. The search bar can be used to filter this list via location or inventory details.

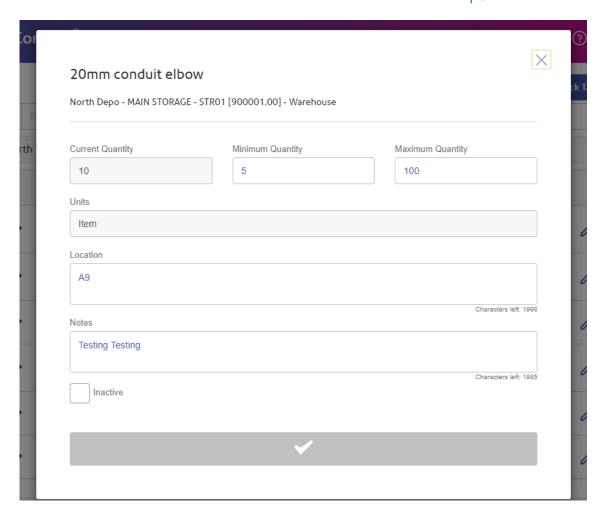


Selecting a Location shows the Inventory of Materials at the chosen Location, including quantities.



By using the Pencil icon, it is possible to edit the Minimmum and Maximum Quantities, Location, Notes and Inactive details of existing Stock. Minimum Quantity can be used to indicate when an order must be placed. Whereas the Maximum Quantity can be used to indicate when not to place an order, or, this is the Maximum quantity that can be stored at said Location. Location and Notes fields can be used to further descirbe the inventory. The Inactive flag, when enabled, will grey out (disable) this Inventory item, this will not clear any existing details and prevents further changes until it is marked as active again.

Confirm 46 of 66



Stock Take

A Stock Take can be initialised by tapping the 'Start Stock Take' button.

Once a Stock Take has been initialized then Inventory can be added to the Location by using the + button.



This also allows the current quantity of Inventories to be updated by value in the list. When a value is updated in the list and the user taps away from that text box the value will be automatically saved.

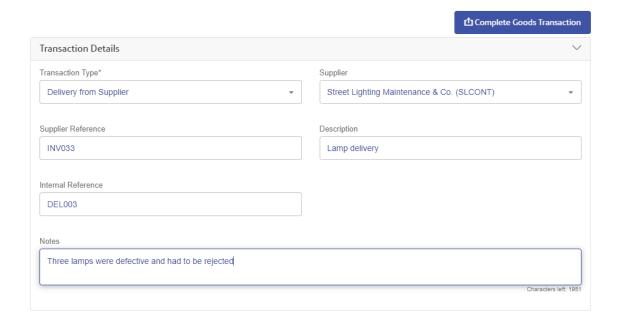
Once the Stock Take is completed then you can tap the 'Stop Stock Take' to highlight that the batch of updates is finished.

Goods Transactions

A Goods Transaction can be initialised by tapping the 'Goods Transaction' button. This allows the recording of when Inventory items are either taken out or brought in.

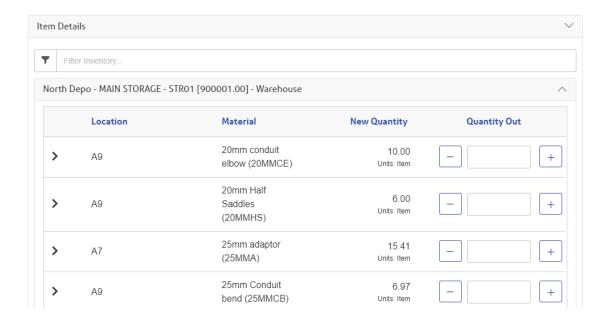
Confirm 47 of 66

Once a Goods Transaction has been initialised the Transaction type needs to be selected before the specific fields for that type and the list of Locations will be shown. For example: "Return from Gang" would be used when Inventory is returned by the gang, at the end of the day, who had previously taken Inventory out. Whereas Delivery from Supplier would indicate Inventory is being entered as the result of a delivery.



Once you expand the chosen Location, it will then be possible to enter the amount of each item involved in the transaction by entering that value into the item details panel.

For any transaction type a positive number is entered and the software will calculate whether this value is added to or removed from the total. Note: the + and - buttons can be used to add or deduct one from the currently entered value. It is not possible to enter a negative number. The New Quantity field shows the new value once the Quantity In/Out value has been added/deducted from current Quantity.



Once the information required has been entered the 'Complete Goods Transaction' button would be used to save a record of the transaction in Confirm.

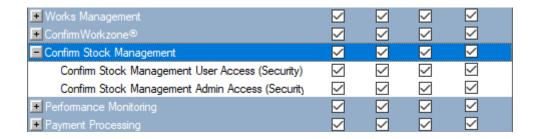
If you no longer need to record a Goods Transaction then the back button on the browser can be used to return to the Stock Inventory screen.

Confirm 48 of 66

Administration

Configure the Confirm Stock Management User Security (This is applicable for Confirm Stock Management only)

The user access can be set in the Confirm Client under *user security*. There is an entry for Confirm Stock Management.



- Confrm Stock Management User Access (security). Enables access to Stock Management.
- Confrm Stock Management Admin Access (security). Enables access to the Stock Management Settings form.
- In Confirm web interface, sign in as an Admin user and launch the Web Settings > Stock Management Settings form. Set the Location Feature Group to the required Feature Group.
- Locations (Features) appear in the list of Locations if the following is met:
 - Users Work Group has Contract Area access to the required Features.

Confirm 49 of 66

Confirm Web Settings

Web Map Symbol Settings

Gives the ability to set custom symbols for Features displayed in the What's Going on Here functionality in ConfirmConnect®. This allows the user to set a symbol and background colour of the icon. The foreground or symbol colour will be automatically set to provide the best contrast for the chosen background colour.



Note: A default symbol has been pre-selected for all Feature Types, should there be a need to reset to this default symbol, filter for location_flag-diagonal-33 in the Nucleo Mini font and the default colour is hex number #ffff66.

Search

Text based filter for the Feature Type list.

Fonts

Select from a list of available font types.

Search Symbols

Text based filter for the grid of symbols available for the selected Font.

For Example: Entering the text 'tree' will limit the symbols to those containing 'tree' in their name.

Note: Hovering the cursor over a symbol will display a tooltip containing its name.

Confirm 50 of 66

Colour Picker

Select the desired colour. The text field beneath the colour picker allows the entry of a hex number should a specific colour be required.

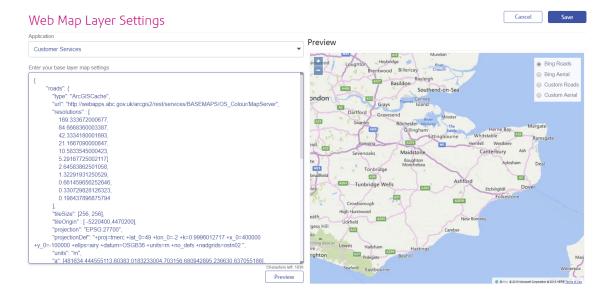
Preview:

Displays the chosen Symbol for the currently selected Feature Type.

Web Map Layer Settings

This page provides the ability to configure background map layers for Confirm Customer Services, ConfirmConnect® and ConfirmWorkzone® which can be used to replace the default Bing maps, along with the preview of the map layer.

The map preview displays Bing layer, if the extents of the custom layer cannot be determined, with an option to switch to custom and aerial views (if available).



Note: The page removes the need to request SQL from Confirm to apply these settings. It will ensure that the entered text is within the database limit of 4000 characters and will use simple parsing to validate JSON text.

This will apply to all users of ConfirmConnect® who do not currently have a settings.js file loaded on their device.

Bing[™] Maps

Web Mapping uses Bing maps by default, the only requirement is to have an active connection to the Internet.

If there is no Internet connection, the maps will not be displayed.

Confirm 51 of 66

Caching Bing maps (ConfirmConnect® only)

Bing maps can be cached on ConfirmConnect® for a 24 hour period, after which ConfirmConnect® must have an active connection to the Internet in order to update the cached mapping data.

Note: Map Caching only occurs when ConfirmConnect® has a wireless network connection due to the quantity of data downloaded.

Note: Map Caching is disabled for the Win32 version of ConfirmConnect®. This has been done as there is currently no method to identify if the Win32 client has a Wireless or 3G/GPRS connection.

Tile Services

Overview of a Tile Server

Tile services provide a grid of uniformly sized images (typically 256x256 pixels) with a different set of images for each zoom level / resolution.

Each tile is uniquely identified by the combination of row (y) and column (x) of that tile in the grid for the zoom level (z).

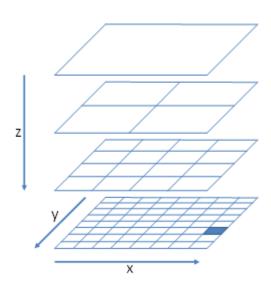
The URL for a tile is found by taking these values and substituting them into a placeholder in the "url" parameter provided in the map layer setting. For example, if the url in the setting is set to:

"http://stratus.ondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=\${z}&row=\${y}&col=\${x}&output=image/gif"

Then the URL generated for zoom level 3, row 5 and column 7 would be:

"http://stratus.ondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=3&row=5&col=7&output=image/gif"

Note: For tile services the row starts at the top (north) and increases going south, which is the opposite from the way that coordinates typically go. This is depicted in the following diagram:



In order to work out the column, row and zoom of the tile that need to be specified for a particular map coordinate (x,y) it goes through the following process:

- The zoom is set to the zoom level. Zero is the most zoomed out level.
- The resolution is determined from the zoom level.

Confirm 52 of 66

- The distance of the x and y from the tile origin is determined (top left corner of the maximum extent of the map).
- These distances are converted to pixels by dividing them by the resolution
- The distances in pixels are then divided by the tile size and rounded down to determine the row and column.

For example, if a Tile server had an origin of 0,1000000 a tile size of 256x256 pixels and resolutions 1000,500,250,125 then the row and column for point 400000,300000 at the second most detailed zoom level would be calculated as follows:

- Zoom is 1 (as the least detailed zoom level is zero).
- The resolution is 500 (second item in the list of resolutions).
- Distance from origin is 400000 for x and 700000 for y (1000000 300000).
- These distances in pixels are 800 for x and 1400 for y.
- The column is therefore 3 (800 / 256, is 3.125 rounded down) and the row is 5.

In the above example, this would generate the following URL:

"http://stratus.pbondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=1&row=5&col=3&output=image/gif"

ArcGIS Tile Cache

The below is an example setting for using an ArcGIS Tile Cache.

```
"roads":{
 "type": "ArcGISCache",
 "url": "Server Name/ArcGIS/rest/services/Map Name/MapServer",
 "resolutions":[
 92.6043518753704.
 26.4583862501058.
 13.2291931250529,
 6.61459656252646,
 5.29167725002117,
 3.96875793751588,
 2.64583862501058,
 1.32291931250529,
 0.661459656252646,
 0.264583862501058],
 "tileSize": [512, 512],
"tileOrigin" : [-5220400, 4470200],
"projection": "EPSG:27700",
"projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-
100000 +ellps=airy +datum=OSGB36 +units=m +no_defs ",
 "units": "m"
 "restrictedExtent": [230000,629267,320000,704092],
 "maxExtent": [230000,629267,320000,704092]
}
```

How do I obtain the settings required for the above?

Most of the required settings can be determined by querying the map layer to get its properties, by appending "?f=json&pretty=true" to the end of the url in a browser, e.g.:

http://server name/ArcGIS/rest/services/map name/mapserver?f=json&pretty=true

This will return a JSON description of the map from which the settings can be obtained:

Confirm 53 of 66

"type": this value must be set to "ArcGISCache"

"url": This is the base URL for the ArcGIS Tile Cache.

"resolutions": Enter a list of all the resolutions required.

Find the section that begins with "lods" under "tileInfo" and list the resolution

values separated by commas.

e.g. "resolutions" : [42.3334180001693, 21.1667090000847,

10.5833545000423],

"tileSize": This is in the "tileInfo" section. List the values for "rows" and "columns" sep-

arated by a comma.

e.g. [256, 256] or [512, 512].

"tileOrigin": List the "x" and "y" found under "tileInfo" > "origin"

"projection": Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"restrictedExtent": List the xmin, ymin, xmax, ymax values. These are shown under the "fullEx-

tent".

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"maxExtent": Set to the same as the "fullExtent" entered in the "restrictedExtent" entry.

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

Spatial Server

The below is an example setting for configuring a Web Map Service.

```
{
    "roads":{
        "type": "Tile Service Layer",
        "url": "Server name/rest/EnterpriseMapping/MapTilingService",
        "mapName": "Map Folder/Map Name",
        "maxResolution": Maximum resolution,
        "projection": "Projection Code",
        "projectionDef": "Projection Definition",
        "units": "m",
        "maxExtent", [Maximum extent]
    }
}
```

"type": this value must be set to "TileServiceLayer"

"url": This is the base URL for the Spatial Server named tile service.

"mapName": Map Folder/Map Name - as configured in your mapping service.

"maxResolution": Maximum resolution - as configured in your mapping service.

"projection": Refer to **Projections** page for details.

Confirm 54 of 66

"projectionDef": Refer to Projections page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

Stratus

The below is an example setting for configuring a Stratus service containing a Base and Business layer.

```
"roads":{
     "type": "Group".
     "projection": "EPSG:27700",
    "projectionDef":"+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-
100000 +ellps=airy +datum=OSGB36 +units=m +no defs +nadgrids=ostn02 ".
     "attribution":"(c) Crown Copyright",
     "maxResolution": 390.625,
     "maxExtent": [531000.0, 161000.0, 631000.0, 261000.0],
     "layers": {
       "Base": {
          "tvpe":"StratusLaver".
          "url": "Servername/folder/controller/tiling/gettile? mapcfg=Configura-
tion%20Name&name=Map%20Name &level=${z}&row=${y}&col=${x}&output=image/gif",
       },
"Business": {
          "order": 1,
"type": "StratusLayer"
          "url": "Servername/folder/controller/mapping/getmap?layers=/foldername1/folder-
name2/Lay-
er%20Name&width=${tw}&height=${th}&x=${bx}&y=${by}&zoom=${bw}&srs=EPSG:27700&out-
put=image/png"
  }
}
```

"type": this value must be set to "StratusLayer"

"url": This is the base URL for the Stratus service.

"maxResolution": Maximum resolution - as configured for your map service.

"projection": Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

The following settings are only required for Stratus Business layers:

Confirm 55 of 66

"tw" and "th": These are the tile Width and Height.

"bx" and "by": These are the coordinates of the tile bounds.

"bw": The width of the tile bounds in Map units.

Generic Tile Server

There are various different Tile Services options available, if you are using one which is not mentioned previously then you can configure the map using the details here.

```
{
"roads":{
  "type": "xyz",
  "url": "URL with placeholders for ${z}, ${y}, and ${z}",
  "resolutions" : [Resolution list],
  "tileSize": [Tile Size],
  "tileOrigin" : [Tile Origin],
  "projection": "Projection Code",
  "projectionDef": "Projection Definition",
  "units": "m",
  "restrictedExtent": [Restricted extent],
  "maxExtent": [Maximum Extent]
}
}
```

"type": Set this value which is applicable to your Tile Service.

Note: If your tile service is one based, rather than zero based (i.e. the most zoomed out zoom level is 1 and the first row and column is 1 rather than 0), then use a "type" of "StratusLayer" rather than "XYZ".

"url": This is the full URL for an individual tile. Use the placeholders \${z}, \${y} and

\${x} to specify the relevant zoom, row and column in the URL.

"resolutions": Enter a list of all the resolutions required.

e.g. "resolutions" : [42.3334180001693, 21.1667090000847,

10.58335450004231,

"tileSize": This is the width and height of an individual tile, in pixels.

e.g. [256, 256] or [512, 512].

"tileOrigin": This is the coordinates of the top left hand corner of the tile at row zero, column

zero. This is only needed if it is different from the maxExtent

"projection": Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"restrictedExtent": This is the maximum extent of the map that a user would be allowed to see.

Does not need to be supplied if this is the same as the maxEtent below.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

Confirm 56 of 66

Web Map Service (WMS)

The below is an example setting for configuring a Web Map Service.

```
{
  "roads":{
    "type": "WMS",
    "url": "Service URL",
    "projection": "Projection Code",
    "projectionDef": "Projection Definition",
    "units": "m",
    "maxExtent": [Maximum extent],
    "parameters": {
        "layers": ["Layer name"]
    }
}
```

"type": this value must be set to "WMS"

"url": This is the base URL for the WMS service. e.g. "http://www.os-

mgb.org.uk/ogc/wms":

To test this in a browser, enter the base URL followed by "?Service=WMS&RE-

QUEST=GetCapabilities", e.g. if the base URL was "http://www.os-

mgb.org.uk/ogc/wms" then enter: -http://www.osmgb.org.uk/ogc/wms?RE-

QUEST=GetCapabilities

This should return an XML document describing the capabilities of the service.

Note: Do not include anything after the "?" in the Service URL setting.

"projection": Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.

It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"parameters": You can add other parameters to this list in the format "name":"Value". These

will be added to the end of the URL that is sent to the WMS service in the

format "&NAME=Value".

The following parameters are currently supported (all in lower case):

"format":

"transparent":

• "login":

• "password":

· "country":

"key":

• "product":

• "url":

"tiled":

• "resolutions":

"tileOrigin":

Confirm 57 of 66

- "maxExtent":
- "layers":

Note: "layers": - You may specify a single layer in this list. Multiple layers are currently not supported.

Note: All parameters are passed in plain text, so be aware of this when passing passwords and other secure information over the network.

Cached WMS

Some WMS services, such as Geoserver, pre-cache data on the assumption that the client will always ask for discrete ranges of data. If this is the case then you may also need to provide other tile-related parameters in the settings, such as the list of "resolutions" and the "tileOrigin" or "maxExtent". Most vendors provide OpenLayers examples of how to access their services, so you can obtain most of the settings you need from these examples.

Multiple Map Layers

The "Roads" layer can only be defined when customising map settings. However, it is possible to overlay data from multiple sources on top of each other using a "Group" layer. This is useful where background data is stored in a Tile Service but additional layers are only available in a separate WMS service.

Group Layers are also likely to be needed when working with local vector or raster data as one would typically not want to show all layers at all zoom levels (in fact, ConfirmConnect® will automatically limit the number of features displayed from any one SpatiaLite layer to 2000).

The group layer sets overall properties that are shared between layers within that group and also determines the zoom levels at which different layers are displayed. A typical configuration for a Group layer might look like this:

```
"roads":{
     "type": "Group"
     "projection": "EPSG:27700",
    "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-
100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02 ",
     "attribution": "(c) Crown Copyright",
    "maxExtent": [290000,190000,510000,410000],
     "resolutions" : [
       33.866734.
       16.933367,
       8.466684,
       4.233342,
       2.11667,
       1.058335
       0.5291675,
       0.264584.
       0.132292.
       0.066146
    ],
"layers": {
       "Overview" : {
          "minimumResolution": 2.11667,
          "order": 1,
```

Confirm 58 of 66

```
"type": "RasterLite",
            "url": "raster.sqlite",
            "table": "overview"
         },
"Place Labels" : {
            "maximumResolution": 0.264584,
            "order": 3,
            "type": "SpatiaLite",
            "url": "labels.sqlite"
            "table": "CartographicText",
            "column": "geometry",
            "style": {
               "label": "${textstring}",
              "labelAlign": "cm"
           }
         "Features" : {
            "maximumResolution": 1.058335,
            "order": 2,
            "type": "SpatiaLite",
            "url": "areas.sqlite",
            "table": "TopographicArea",
            "column": "geometry",
            "style": {
               "fillColor": "orange",
              "fillOpacity": 0.5,
              "strokeOpacity": 0.2,
              "strokeWidth": 1
           },
"styleBy": "featurecode",
            "styles": {
              "10021": {"fillColor": "red"},
              "10053": {"fillColor": "brown"},
              "10172": {"fillColor": "grey"},
"10111": {"fillColor": "green"}
            },
"info": "Feature Type: ${featurecode}"
        }
     }
  }
}
```

"type": This value must be set to "Group"

"projection": The projection for all of the layers in the Group. Note that all layers must share

the same projection. Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"maxExtent" These settings are determined by the layers that are contained within the

"resolutions" group and must be consistent for all layers in the Group. Typically, if the group contains a Tile Service then the settings from the tile service should be used.

"maxResolution" If only local SQLite maps are being used then it is possible to simply specify

the "maxExtent" and "numZoomLevels".

"numZoom-Levels":

"layers": This contains the list of layers that are contained within the group, enclosed

in curly brackets {}. Each layer should be given a unique name, followed by

a colon and then the specific settings for that layer.

In addition, the following settings can also be specified for each layer:

Confirm 59 of 66

tion"

"minimumResolu- These determine when the layer is switched on and off as the user zooms in and out.

tion":

"maximumResolu- Values represent the number of metres to show per pixel on the current zoom scale. In other words the more detailed map you have the lower the setting you should use. For example:

> "minimumResolution": 0.0 will never turn off the layer no matter how far in you zoom.

> "maximumResoltuion": 5.0 would show items until the user zooms out beyond 5 metres per pixel. This equates to an approximate scale of 1:20000 (1 metre screen size = 20000 distance to the ground) on a 96dpi device.

"order":

Use the "order" to control which layers appear on top if more than one can be displayed at a time (e.g. draw labels on top of areas). The layer with the highest order appears on top.

Projections

ConfirmConnect®, ConfirmWorkzone®, and Confirm web are capable to transform all data coming from Confirm into your specified coordinate system, so that it can be displayed properly on the map. The popular visualisation system (EPSG:3785) used by Google and Bing is included as a standard. But for other coordinate systems, the definition needs to be provided, which is required for all map service types.

The definition for a coordinate system should be provided on Web Map Settings as follows:

"projection": This is the EPSG code of the coordinate system that you want to use. E.g.

"EPSG:27700" is the EPSG code for British National Grid.

"projectionDef": ConfirmConnect® uses the Proj4 format for coordinate system definitions.

You can find the Proj4 definition for your coordinate system here: http://spa-

tialreference.org/.

For example, http://spatialreference.org/ref/epsg/27700/proj4/ gives:

+proj=tmerc +lat 0=49 +lon 0=-2 +k=0.9996012717 +x 0=400000 +v 0=-

100000 +ellps=airy +datum=OSGB36 +units=m +no defs

Note: Enter this on a single line in the projectionDef parameter.

Grid Shift

Some countries apply a grid shift in order to provide high accuracy coordinate conversions from default GPS coordinate systems into their own native coordinate systems. For example, in the UK the Ordnance Survey base maps use the OSTN02 grid. See the section entitled The National Grid transformation OSTN02 on the Ordnance Survey website for details.

In order for ConfirmConnect®, ConfirmWorkzone®, and Confirm web to accurately plot entities on map where this type of conversion is required, Confirm needs to be notified of the grid used so the grid shift file can be included. These files have not all been included by default due to their initial size and potential performance implications.

The OSTN02 grid shift file has been included with ConfirmConnect®, ConfirmWorkzone®, and Confirm web, if you use OS background maps, you will need to include an additional projectionDef value. Append '+nadgrids=ostn02' onto the end of the current line. For example:

Confirm 60 of 66 +proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no defs +nadgrids=ostn02

GDA2020

Confirm supports the new GDA2020 coordinate reference system.

A GDA94 projection can be converted to a GDA2020 projection by adding another projectionDef value which is "+towgs84=-0.06155,0.01087,0.04019,-0.0394924,-0.0327221,-0.03289790,0.009994".

For example:

The projection definition for MGA zone 55 from spatialreference.org is:

"+proj=utm +zone=55 +south +ellps=GRS80 +towgs84=0,0,0,0,0,0,0 +units=m +no defs"

Which can be converted to GDA2020 as follows:

"+proj=utm +zone=55 +south +ellps=GRS80 +towgs84=-0.06155,0.01087,0.04019,-0.0394924,-0.0327221,-0.03289790,0.009994 +units=m +no_defs"

Note: Note: Enter this in a single line in the projectionDef parameter.

Full Text Search Settings

Confirm web interface supports full text search for customer address. This enables faster search of customer address in the web interface.

Before enabling the full text search, Confirm Database need to be configured

Configuring SQL Server for enabling full text search

The instructions mentioned here must be followed, to enable full text index feature in SQL server.

Note: Ensure the windows service 'SQL Full-text Filter Daemon Launcher' is running and it's startup type is set to Automatic.

Configuring Oracle Server for enabling full text search

The instructions mentioned **here** must be followed, to enable full text index feature in Oracle database.

In Oracle, for every schema user (that needs to use full text search) in the asset_type table, following things are needed:

- **1.** The database user needs to be given the role of CTXAPP (to allow them to create/manage full text preferences/indexes.
- 2. Execute permissions need to be given for the oracle text packages CTXSYS.CTX_CLS, CTX-SYS.CTX_DDL, CTXSYS.CTX_DOC, CTXSYS.CTX_OUTPUT, CTXSYS.CTX_QUERY, CTXSYS.CTX_REPORT, CTXSYS.CTX_THES, CTXSYS.CTX_ULEXER.

Once the database configuration has been done, the 'Address' checkbox needs to be selected to enable full text search on customer address in the web interface. This will add the Full Text Index agent in the Scheduled Tasks. The Full Text index agent creates and maintains the full text index on customer address.

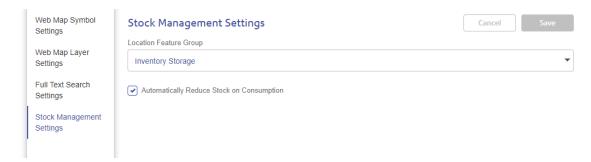
After the index has been created, full text search functionality will be used in the web interface for searching customer address.

If the 'Address' checkbox is deselected, the full text search is disabled and the corresponding index will be deleted.

Confirm 61 of 66

Stock Management Settings

This page is used to configure Stock Management.



Location Feature Group

Set which Confirm Feature Group will be used for Stock Management. This allows any Features, of a Feature Type within this group, to be available as locations.

Automatically Reduce Stock on Consumption

Set whether Inventory levels should be decreased when Jobs are completed in ConfirmConnect.

Street Manager Settings

This page is used to configure Street Manager agent.



Street Manager URL

Set API URL of Street Manager. This URL is used by Street Manager agent to export or import notice to and from Confirm. Click the pencil to add/edit the URL and tick or cross to update or cancel it. (Ex. https://api.sandbox.stwrks-dev.net/)

Confirm 62 of 66

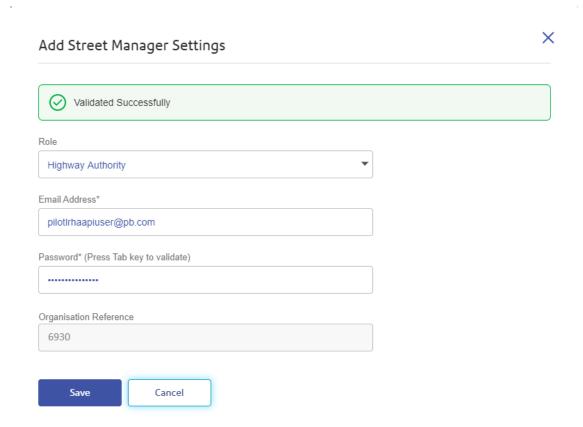
Document Proxy URL

Set the URL to use when launching the Street Manager documents from Confirm. It uses the Street Manager API credentials and launches the document(s) in web browser. Click the pencil to add/edit the URL and tick or cross to update or cancel it.

Street Manager API credentials

Set the API credentials for Promoter and Authority. For adding API credentials, click the (+) in the header of the table. It will open a new pop-up window to select role, add email address and password. Tabbing out of the password field will validate the Street Manager API credentials. On successful validation, the Organisation Reference fields is populated and Save button is enabled. To Edit or Delete, click the appropriate icon.

This page is used to add/edit/delete API credentials.



Confirm 63 of 66

Change Password

Change password allows a user to change their password. They may do this because they wish to, or their password has expired.

Change password screen can be opened from the user menu displayed on the top right corner of the application.



Note: If Active Directory authentication is used, User Password will use the Current and New Password values to change the Active Directory password of the user.

Confirm 64 of 66

Frequently Asked Questions

Does ConfirmWeb Use Cookies?

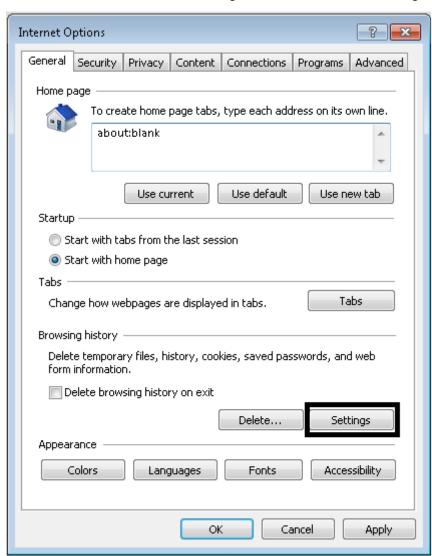
Yes, some features of the ConfirmWeb need cookies to be enabled. We recommend enabling cookies on the browser for this application.

• I use Internet Explorer 11.0 to connect to ConfirmWeb. The application does not reflect the changes that I make to the page.

Internet Explorer 11.0 maintains an old version of the rendered data as Temporary file. Though this feature improves the application performance but causes the browser to retain the old data.

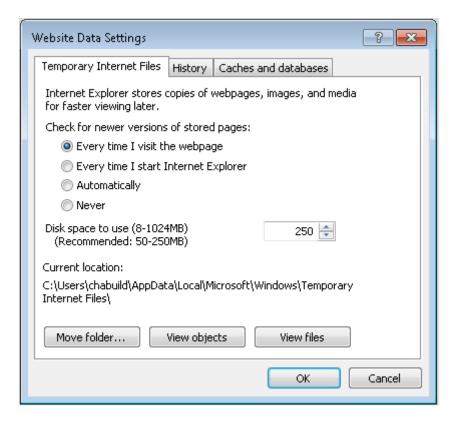
To prevent this caching of data, Internet Explorer should be configured as directed

- 1. Open Internet Options from Tools menu
- 2. Go to General Tab and click Settings button under the Browsing History section



3. On Website Data settings dialog, go to Temporary Internet Files tab. For *Check for newer versions* of stored pages select the first option that is *Every time I visit the webpage*.

Confirm 65 of 66



- 4. Close the dialog and refresh the page. The changes would start appearing correctly.
- · I am not able to see contextual help.

Sometimes you may not be able to see contextual help in Firefox or Chrome. Try one of the following:

- 1. Refresh your browser (Press [Ctrl+R] or F5).
- 2. If Refresh does not work, clear cache in your browser and try again.