CTI Billing Solutions Limited

Product specification

Analysis7 1.10 – Core Back-office

Product	Analysis7
Product version	1.10
Doc Ref	MMA7BOPS
Doc Version	1.0
Doc Status	Draft
Circulation	Commercial in confidence
Doc Size	87 pages

CTI Billing Solutions Limited

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Version	Status	Date	Author	Reason
1.0	Draft	24/07/2014	Ian Bridge	Documents Analysis 7 v1.10 release.

Preface

Document definition

The contents of this document form part of the contractual relationship between CTI and the *Service-provider* [3].

Objective

This document provides a high-level description of the Back-office functionality of *Analysis7*.

Constraints

- This document refers to CTI's *Analysis7* solution as either *Analysis7* or *A7* throughout.
- The available functionality is dependent upon the data supplied; as discussed and agreed during data configuration stage.
- All functionality described in this document relates to *A7's Core Back-office* component unless explicitly stated otherwise.
- Screenshots used in this document are for illustrative purposes only and not necessarily reflect the exact layout and functionality of the *Service-provider*'s deployed solution.

  CTI make all reasonable endeavours to ensure that any data displayed in screenshots is either test or anonymised data.

Audience

This document is aimed at:

- The *Service-provider*'s management, business and technical users to identify the range of features offered by A7;
- CTI and *Service-provider* management for use in project prioritisation, planning and control;
- CTI development, testing and writing for solution planning, design, and documentation;
- CTI marketing and sales for use in message development for marketing campaigns and sales tools.

Things you'll need before you start

Familiarise yourself with the document's *Terminology section (page ii)*.

Related documents

Document title	Reference
Analysis7 v1.10 – Data description	MMA7DD
Analysis7 v1.10 – Data limits and constraints	MMA7LIM
Analysis7 v1.10 – Help Desk user guide	MMA7HDUG
Analysis7 v1.10 - Installation Guide	MMA7INS
Analysis7 v1.10 - Operations guide	MMA7OPS
Analysis7 v1.10 - Pre-Installation Guide	MMA7PRE

[3] See *Terminology section (page iii)*

Document title	Reference
Analysis7 v1.10 – Product specification – Back-office	MMA7BOPS
Analysis7 v1.10 – Product specification – Front-office	MMA7FOPS
Analysis7 v1.10 – User Guide– Admin	MMA7AUG
Analysis7 v1.10 – User Guide– Subscriber	MMA7SUG

Documentation conventions and devices

Terminology

This document uses the following terms to indicate *A7* specific entities.

Term	Explanation
Customer	A user of the *Service-provider*'s service – via one or more *Subscribers* – who consequently has access to use *A7* to view and manage their usage.
Group	A management unit used to collect *Subscriber*s and other (subordinate) groups into meaningful units. In the case of a telecommunications solution, this may be – for example – a Department, Team, Area or Cost-centre. The lowest level group is typically the account level.
Service	The billable entity used by *Subscriber*s and for which usage charges and other costs are incurred. In the case of a telecommunications solution, this may be – for example – a Mobile Phone Voice or Data service, a broadband link or a landline.
Service-provider	The organisation – or other entity – providing the Service to their *Customers* via *Subscribers*. In the case of a telecommunications solution, this may be – for example – a Mobile Operator (MO), or a Mobile Virtual Network Operator (MVNO).
Subscriber	The device or mechanism accessing and using the *Service-provider*'s service(s) and incurring usage charges. For example: In the case of a telecommunications solution, then a *Subscriber* may be a handset, tablet, laptop, TV or landline.
Subscriber-transaction	A single instance of service use by a *Subscriber*. In the case of a telecommunications solution, this may be – for example – a call from a mobile phone or landline.
Usage detail records	Data recording the details of each Subscriber-transaction. In the case of a telecommunications solution, this may be – for example – the *Call Detail Records* (*CDR*).
User	A person registered and authorised to use *A7* without, necessarily, being associated with a specific *Subscriber*. In the case of a telecommunications solution, this may be – for example – a *Service-provider's* Customer-service agent (CSA) for example.

Typography

This document uses the following typographical conventions throughout.

Special notices

Hints and tips

Warning statements.

Supplementary information.

Contextual indicators

This text is a cross-reference.

This text refers to an object or feature.	The *Scheduled reports* tab, the *Main Menu*
`This text indicates computer input, or computer file path names.`	▪ Navigate to /`directory/path` name ▪ **Input** `This is a description` as **Data description**

This text introduces a numbered list of instructions.

1. Numbered lists are always instructions.

Text like this is the name of a screen object; something you type into, press or select.	▪ **Input** `This is a description` as **Data description** ▪ **Next** to continue ▪ **Select Data category**
[This text is a physical button to be pressed]	**[Enter}**

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Part one

A7 Essentials

Chapters in Part one ...

The chapters in Part one of the Core Back-office Product specification describe the A7 Essentials, introducing basic concepts and describing the user interface components.

1. Functionality at release 1.10

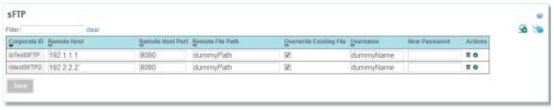
At this release Back-office functionality includes:

- Tech support
  - *Support overview*
    - *Manage users*
    - *Manage customers*
    - *Event usage*
  - Account manager
  - Registration code generator;

- Bureau
  - Data processing reports
  - Production reporting;

- Consolidated Bill View (CBV) Management – to add and manage consolidated customer details.
  - Add/Update consolidated customers
  - Add/Update associated logs and branding;

- Profile management
- Load, Invoicing and Housekeeping reports for the Analysis RT module (visible only if installed).
  - Add
  - Update;



- sFTP Management – to create and maintain sFTP host details.
  - Add
  - Test.

In addition the optional Analysis RT module includes the *Unbilled bureau overview*, which provided *Load, Invoicing* and *Housekeeping reports*.

2. Changes at release 1.10

The majority of visible changes are to *Front-office* components – as described in *Analysis 7 Core Front-office Product specification.*

2.1. Background changes

- A new report, Invoice Statement, is introduced. This is reflected in the profiles. It is not possible to deploy both the *Invoice statement* and *Invoice detail* reports together.
- The *Twelve-charge-category* model is the default model as at this release;
- New *Tax Break down* and *Total Tax* fields, provide for tax breakdowns at both invoice- and subscriber-level
- A *Tax total* field is added to the *Usage* (*CDR*) and *Charge* records.
- Supporty for *IE7* support is revoked.

Avoiding tax line duplication …

Because the tax figure is stored in both Usage (CDR) and Charge records any summaries that contain both CDR and Charge-cata display only the CDR tax figures.

2.2. Deprecated functionality

Service-providers using the *Six-charge-category* model are advised to switch to the *Twelve-charge-category* model as soon as practicable.

The *Six-charge-category* model

The *Six-charge-category* model available in previous A7 releases is replaced as the default model by the *Twelve-charge-category* model

As a result the reports and features that only support the *Six-charge-category* model are also replaced or deprecated. These include, for example, the *Subscriber Summary report* , which sums the three credit categories and presents only four charge columns (Recurring charges, One-off charges, Usage charges and 'Credits').

The following reports and components are deprecated:

- Headline summary;
- Recent charges (six category model).
- Subscriber summary report,
- Cost allocation report,
- Invoice details report,
- Monthly charge analysis report,
- Billing period/Billing period history reports.

2.3. End of life warnings

Office 2003 support is to be revoked with effect from close of business on 31 July 2015.

2.4. Revoked functionality

The *Sessions by partition report* is no longer available.

3. A7 concepts

System-wide concepts are covered in the A7 *Front-office product specification*. This chapter deals only with concepts specific to Back-office functionality.

3.1. A7 Users

Back-office users are created with a user type, which may be either:

- Tech Support,
- Customer Support,
- Customer Support (read only),
- Bureau.

Back-office users – including, but not restricted to, the above list – never receive *Data loaded notification* emails.

A User's status is always one of: *Active*; *Disabled* or *Deleted*.

3.2. User impersonation mode

In impersonation mode, the impersonating user can act exactly as the impersonated user/customer or user would – but cannot change a user's *My preferences* settings:

- They have read/write access to all portlets but any portlets unavailable to the impersonated user/customer will display a message:

  ```
  "The user/customer you are impersonating does not have this feature as part of their customer profile".
  ```

- Until bills are loaded the following message is displayed:

  ```
  "You cannot impersonate this customer because there are no loaded bills active".
  ```

- Any email reports requested are sent to the requesting user;
- Where an Account manager with read only access impersonates a user with read/write privileges the account manager's read only access takes priority and no updating is allowed.
- A message at the top of the screen shows that impersonate mode is in operation and offers the option to return to normal mode.
- Logout will exit impersonation mode.

3.3. User roles

Roles are associated with *User names* when the user is created, and the available *user roles* are as shown in *Table 1 (below)*.

Further information:

The role determines:

- The features (portlets) accessible to the user;

- How the user interacts with those features (for example, in read-only mode);
- Whether the user can create other users; and the roles they may assign to those users.

Table 1: Standard user roles

Level	Role	Description
1	Analysis User	Users with this role are only able to access Front-office functionality.
2	Service-provider admin	This role encompasses all of the *Service-provider users* and includes the first user of the system (commonly known as the *Administrator*). The ability to view CDR is configurable {Configurable: **On**; Off;}. CBV admin users have the same rights as Service-provider admin users. This user is automatically created by the system[4] when data is first loaded for a *Service-provider*, the nominated user is then sent an Authenticode/Keyword pair, which is used to Sign-in to A7.
3	Tech Support [5]	This role allows access to all the *Back-office* functionality including the *Tech support* and *Bureau* menus. Appropriate for agents of the application-host (CTI for example if they are hosting *A7* for the *Service-provider*).
4	Service-provider Support	This role is appropriate for agents of the *Service-provider's* Customer service department.
5	Bureau User	This role allows access to *Bureau* menu functions such as *Housekeeper*. Appropriate for agents of the application-host (CTI for example if they are hosting *A7* for the *Service-provider*).
6	Account Manager [6]	Users with *Account Manager* roles can access only those customers assigned to them, although the customers themselves may be visible to multiple users. {Configurable: **Write**; Read-only}.
7	SME	
8	Service-provider support (read-only)	Appropriate for customer service agents who do not need to update or amend data. Users with this role cannot download reports or data.
9	Read-only	This role takes precedence when it is used in conjunction with other roles, revoking any write functionality that would otherwise be conferred by that role.

User constraints

There are constraints on the roles that *Users* can assign to users they create; typically they are unable to create a user with more system privileges than they themselves are entitled-to.

So, for example, *Users* with a role of *Service-provider support* cannot create *Users* with a role of *Tech support.*

[4] Except for Single-sign-on deployments.

[5] In impersonation-mode this user can see any *User defined structures* or *My calls/charge reports* created by the impersonated user.

[6] Some reports allow Account Managers to view all information for all accounts and users rather than just those accounts and users to which they are assigned. Access to these reports is revoked at 1.08 and until further notice – see Appendix C *User roles* (Page V).

Table 2: Users that can be created.

Created user	Roles the created user may be assigned				
	Tech Supp	Bureau	Service provider support	Service provider (RO) support	Account Manager
Technical Support user	✓	✓	✓	✓	
Service-provider Support user			✓	✓	

3.4. User profiles

Profiles are a means of enabling the *Service-provider* to specify different functionality for individual customers or groups of customers.

See: *Ch. 13 Profile management (page 58)*.

4. Common components

This chapter documents common components within A7 Back-office only.

As with A7 Front-office, functionality is delivered through portlets, which are displayed singly or in groups on a page, or as pop-up panels.

4.1. User interface elements

The A7 Back-office user interface is consistent with that of the *Front-office* – as described in the *Analysis 7* ***Core Front-office Product specification***.

4.2. User access controls

The A7 Back-office user access controls are consistent with those of the *Front-office* – as described in the *Analysis 7* ***Core Front-office Product specification***.

4.3. Report components

Scheduled reports are not available to *Back-office users*.

The A7 Back-office report components are consistent with those of the *Front-office* – as described in the *Analysis 7 Core Front-office Product specification.* – exceptions are described in this section.

4.3.1. Report filters

Report filters work in the same way for Front– and Back–office; the filters available to Back-office users are described in *Table 3 ()*.

Table 3: A7 Back-office Report filters

Report filter name	Report filter description
Bill status	A drop-down list enabling filtering by *Bill status*: Options {**All**; Inactive or Active}.
Code usage	A drop-down list enabling filtering by *Code usage:* Options {**All codes**; Expired or Active}.
Consolidated customer	A Search filter text box enabling entry of a *Consolidated customer code*, *Company name* or *Email address.*
Consolidated customer group status	A drop-down list enabling filtering by *Consolidated customer group status*: Options {**All**; Inactive or Active}.
Corporate ID	A *Search filter text box* enabling entry of *a Corporate ID* (*customer code*).
Corporate ID or Name	A *Search filter text box* enabling entry of *a Corporate ID* (*customer code*) or *Company name*.
Date - Show all dates	A checkbox; tick to show data for all dates loaded.

Report filter name	Report filter description
Date – calendar terms	A drop-down list enabling filtering by generic calendar terms. Options {Today; Yesterday; This week; **This month** or Specified month and year}. **Constraints:** ▪ This Month – the current calendar month; from the 1st to the current day – not the preceding 30 days; ▪ This Week – the current calendar week; from the Monday – not the preceding seven days. ▪ If using the specified Year/Month filter, the report includes all jobs in the specified calendar Year/Month.
Date range	A pair of date pickers (calendars) enabling selection of the Date-from and Date-to elements of a date range.
Group status	A drop-down list enabling filtering by *Group status*: Options {**All**; Inactive or Active}.
Job status	A drop-down list enabling filtering by *Job status*: Options {**All**; Open; Failed or Complete}.
Profile name	A Search filter text box enabling entry of a *Profile* name.
User name or email	A Search filter text box enabling entry of a user name or an Email address, The filter works on either first or last names and begins to return results when you enter three, or more, characters..
User status	By default all users (excluding deleted) are shown. A drop-down list enabling filtering by *User status*: Options {**Enabled**; Disabled; Enabled/Disabled or Deleted} Enabled –includes all *Registered users* even if they have never Signed-in;

4.3.2. Report functionality

Report actions menu

As with Front-office, a *Report actions menu* button is displayed in some reports, including:

- List Customers - on data drill down;
- Profile Feature Management;
- sFTP;
- Account Manager (only on the first page);
- Housekeeper;
- Housekeeper By Customer (Analysis RT module only)
- Housekeeper by File (Analysis RT module only).

The drop-down *Report actions* menu, where present, is accessed using the **Actions** button. It presents a context-sensitive list of actions to be applied to the selected row – the available set of Back-office actions is shown in *Table 4 ().*

Table 4 Actions within the Report action menu

Name	Icon	Description
Assign		Used in Profile management to display the *Assign customer to profile* portlet – section *13.4 ()*.

Name	Icon	Description
Delete		Click to delete the selected object.
Download		Click to download the selected object.
Edit		Click to edit the selected object.
Test		Click to test the sFTP settings.
View		Click to view the selected object.

Action buttons

Back-office functionality is also provided by a set of action buttons. These context-sensitive actions appear on *Manage user* and *Manage customer* pages. The available set of buttons is described in *Table 5 ()*.

Table 5 Actions buttons

Button name	Description
View analysis as this user	Enter impersonation mode.
View analysis as this customer	“
Disable User	As stated on button
Enable User	“
Delete User	“
View Error Log	“
Download Error Log	“
Request Code	“
List Active	“
List Used	“

Part two

Tech support feature-set

Chapters in Part two ...

The chapters in Part two of the Core Back-office Product specification describe the Tech support feature-set, which provides easy access to portlets that enable Customer- and User-support, Account Management and Registration Management.

5. Support overview

The *Support overview* page provides easy access to portlets that manage *Users*, *Customers* and *Event usage*.

Figure 1 Support overview page

Manage users tab

The *Manage users* feature-set enables *Back-office users* to monitor user login activity, impersonate users and in certain circumstances to restrict or enable their system access.

Constraints

Manage users does not allow you to filter by customer, that can only be done in *Manage customers*.

- *Select group* drill-down on the *List customers* portlet – as described in List of users for the selected customer *()*.

Manage customers tab

The *Manage customers* feature-set enables *Back-office users* to manage customers and their associated users. It includes the ability to impersonate a customer (or user) to see and use *A7* exactly as the customer (or user) would.

Event usage tab

Event usage allows *Back-office users* to see statistics on pages visited.

5.1. Managing users

5.1.1. List users

List users displays a list of all users for all customers, sorted alphabetically by user name, including a drilldown link to *Display user details ()*

Figure 2 List users report

Table 6: List users – functional components.

<table>
<tr><td>Description:</td><td colspan="4">Lists all users visible to the Back-office user Signed-in.
Multi-level, multi-table report.</td></tr>
<tr><td>Access from</td><td colspan="4">▪ From the Support menu bar, select Manage users»List users;
▪ From the Support overview»Manage users pane, select List users;
▪ Select group from List customers;</td></tr>
<tr><td>Constraints / exceptions</td><td colspan="4">▪ The user name comprises the first letter of the first name and the second name. [7]
▪ All columns are read-only.
▪ The Corporate ID and Company name fields of Back-office are blank.</td></tr>
<tr><td>Column-set:</td><td>▪ Username,
▪ First name,</td><td>▪ Last name,
▪ Email,</td><td>▪ Corporate ID,
▪ Company name,</td><td>▪ User type
▪ User status</td></tr>
<tr><td>Example</td><td colspan="4"><table>
<tr><th>Username</th><th>First Name</th><th>Last Name</th><th>Email</th><th>Corporate ID</th><th>Company Name</th><th>User Type</th><th>User Status</th></tr>
<tr><td>auser</td><td>administrator</td><td>user</td><td>zhalim@ctigroup.com</td><td>135360026364452</td><td>Customer 135360</td><td>Customer</td><td>Enabled</td></tr>
<tr><td>gmult</td><td>group</td><td>mult</td><td>zhalim@ctigroup.com</td><td>0310121520012785</td><td>multiplay</td><td>Customer</td><td>Enabled</td></tr>
<tr><td>imultsubs</td><td>IB</td><td>Multsubs</td><td>imultsubs@email.com</td><td>Demo01</td><td>DEMO CUSTOMER</td><td>Customer</td><td>Enabled</td></tr>
</table></td></tr>
<tr><td>Sequence:</td><td colspan="4">User name – ascending alphabetic.</td></tr>
<tr><td>Filters:</td><td colspan="4">▪ User Name(s) or Email
Use List customers to view users for an individual customer.
▪ User status.
▪ Use Clear to remove any applied User name or email filter.</td></tr>
<tr><td>Drill-downs:</td><td>Select detail</td><td colspan="3">Displays the selected user's details – see Display user details ().</td></tr>
</table>

Display user details

<table>
<tr><td>Description:</td><td colspan="2">Display user details enables Back-office users to view basic user information, manage the user's access, view error information, and to impersonate the user.</td></tr>
<tr><td>Access from</td><td colspan="2">This column-set is accessed from the following routes:
▪ Manage users»List users »Select detail drill-down to Display user details;
▪ Manage customers»Select group drill-down to List users »Select detail drill-down to Display user details;</td></tr>
<tr><td>Example</td><td colspan="2"><table>
<tr><th>Username</th><th>First Name</th><th>Last Name</th><th>User Type</th><th>User Status</th><th>Language</th><th>Last Login</th><th>Structure Positions</th></tr>
<tr><td>glevel</td><td>group</td><td>level</td><td>Customer</td><td>Enabled</td><td>default</td><td></td><td>1</td></tr>
</table>
View analysis as this user | Disable User | Enable User | Delete User | View Error Log | Download Error Lo</td></tr>
<tr><td>Sequence:</td><td colspan="2">N/A</td></tr>
<tr><td>Filters:</td><td colspan="2">None selectable.
A Remove hyperlink removes the selected user filter and returns to the previous level.</td></tr>
<tr><td>Drill-downs:</td><td>Structure positions drill-down</td><td>Displays the structure details for each of the structures and nodes to which a user is assigned.
Column-set: Structure ID, Structure Name, Structure Type, Node ID, Node Name, Node Type.
<table>
<tr><th>Structure ID</th><th>Structure Name</th><th>Structure Type</th><th>Node ID</th><th>Node Name</th><th>Node Type</th></tr>
<tr><td>c37</td><td>Default</td><td>Default</td><td>n212</td><td>My Company</td><td>Group</td></tr>
<tr><td>c42</td><td>01/11/2009</td><td>Billing Defined</td><td>n222</td><td>My Company</td><td>Group</td></tr>
<tr><td>c39</td><td>01/10/2009</td><td>Billing Defined</td><td>n216</td><td>My Company</td><td>Group</td></tr>
</table>
Sequence: unsorted..
All columns are read-only and are mainly for diagnostic use.</td></tr>
</table>

[7] Additional users that generate the same user name have a sequential number 1+ appended to their user name.

Functionality:	View analysis as this user	Impersonate the selected user in a front-office capacity See: *Ch. 3.1 A7 Users ()* for more on impersonation mode. Tech /Customer Support users do not have access to the impersonated user's *My preferences* settings. The *user roles* able impersonate other users is configurable.
	Disable User	Prevent users from accessing *A7* by disabling their login details. Associated structures and node relationships are retained. This action removes associated *Subscribers* from the user, making them available for assignment to another user.
	Enable User	Allow users to access *A7* after having been previously restricted. This action is available only for users whose login details are disabled (in *Front-* or *Back-office*). Nodes and structures are re-associated with the user. If these structures no longer exist you must manually re-assign the user to an Organisational structure position or *Subscriber*.
	Delete User	Deleting a user will cause *A7* to: ▪ Rename the user record to a system-generated name. ▪ Remove all the deleted user's information, except for associated *Activity logs* and *Structure audit* information. Deleted users cannot be re-activated.
	View Error Log	Display a list of all the user's errors. This diagnostic tool is for the use of first line support staff See also *Appendix A Sample error log ()*.
	Download Error Log	Download the selected user's error log in `.csv` format.

Users with activity

The *Users with activity* portlet displays a list of all users who have accessed *A7* (for all customers).

Looking for a specific customer?

To see the *Users with activity* list for a specific customer use *Manage customers»List customers with user activity*.

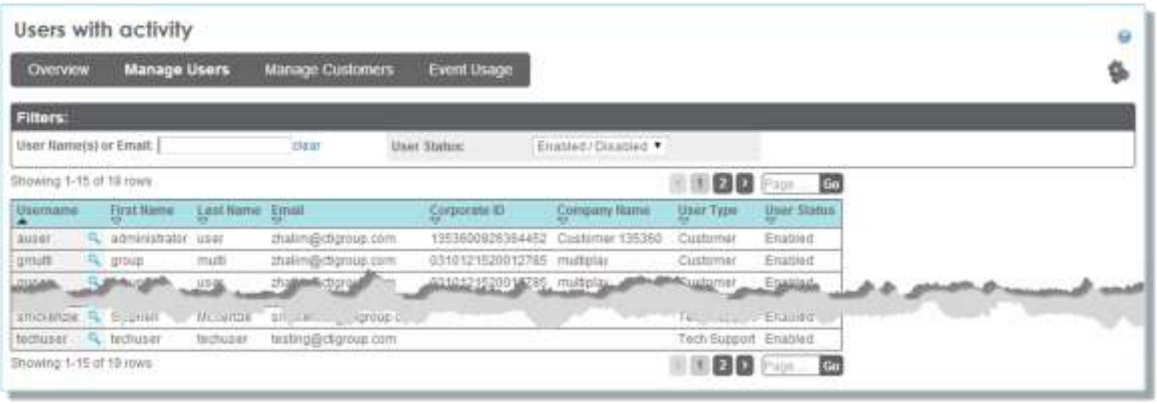
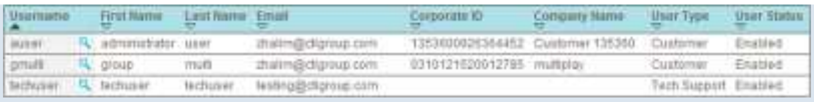
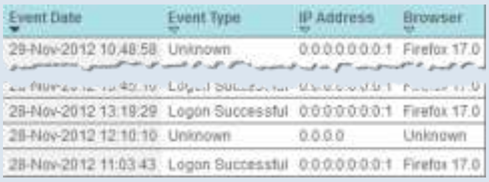


Figure 3 Users with activity portlet

Deleted users are not included in the list {default}.

Table 7: List users with activity – functional components.

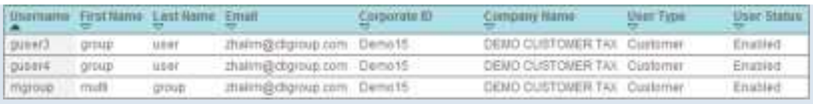
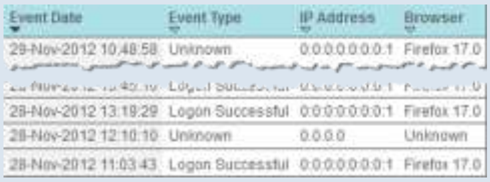
Description:	*Lists all users, from all customers, that have accessed A7.* *This is a multi-level, single-table report with a drill-down to* display a selected user's session/event information.
Access from	▪ *From the Support menu bar*, select *Manage users»***List users with activity***;* ▪ *From the Support overview»Manage users pane,* select **List users with activity***;*
Constraints / exceptions	▪ All columns are read-only. ▪ The *Corporate ID* and *Company name* fields of Back-office are blank.
Column-set:	▪ *Username,* ▪ *First name,* ▪ *Last name,* ▪ *Email,* ▪ *Corporate ID,* ▪ *Company name,* ▪ *User type* ▪ *User status*
Example	
Sequence:	User name – ascending alphabetic.
Filters:	▪ *User Name(s) or Email* Use *List customers* to view users for an individual customer. ▪ *User status.* ▪ Use **Clear** to remove any applied User name or email filter.
Drill-downs:	*Select detail* Drills down to display the selected user's session/event information.  **Available filters:** ▪ *Show all dates*; ▪ *Date range – remove Selected user* filter to return to previous level.

5.1.2. Users with no activity

The *Users with no activity* portlet displays a list of all users for all customers who have never logged onto the solution.

Figure 4 List users with no activity - data columns

Table 8: List users with no activity – functional components.

<table>
<tr><td>Description:</td><td colspan="4">Lists all users, from all customers, that have not accessed A7.
This is a multi-level, single-table report with a drill-down to display a selected user's session/event information.</td></tr>
<tr><td>Access from</td><td colspan="4">▪ From the Support menu bar, select Manage users»List users with no activity;
▪ From the Support overview»Manage users pane, select List users with no activity;</td></tr>
<tr><td>Constraints / exceptions</td><td colspan="4">▪ Corporate ID and Company name fields are blank for Back-office users;
▪ No drill-down options are available;
▪ All columns are read-only;
▪ Deleted users are not included in the list {default}.</td></tr>
<tr><td>Column-set:</td><td>▪ Username,
▪ First name,</td><td>▪ Last name,
▪ Email,</td><td>▪ Corporate ID,
▪ Company name,</td><td>▪ User type
▪ User status</td></tr>
<tr><td>Example</td><td colspan="4"></td></tr>
<tr><td>Sequence:</td><td colspan="4">User name – ascending alphabetic.</td></tr>
<tr><td>Filters:</td><td colspan="4">▪ User Name(s) or Email
Use List customers to view users for an individual customer.
▪ User status.
▪ Use Clear to remove any applied User name or email filter.</td></tr>
<tr><td>Drill-downs:</td><td>Select detail</td><td colspan="3">Drills down to display the selected user's session/event information.

Available filters:
▪ Show all dates;
▪ Date range – remove Selected user filter to return to previous level.</td></tr>
</table>

5.2. Managing customers

5.2.1. List customers

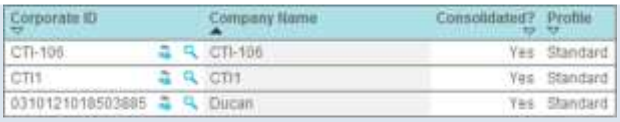
The *List customers* feature enables *Back-office users* to view basic customer information.

Figure 5 List customers functional components map

The user is also able to perform management tasks such as, applying profiles, enabling/disabling users, impersonating customers or users and viewing error logs. [8]

List of customers column-set

Table 7: List customers – functional components.

Description:	The *List (of) customers* feature displays basic information for each of the *Service-provider's* customers.
Column-set:	▪ *Corporate ID* ▪ *Company name,* ▪ *Consolidated,* ▪ *Profile.*
Example	 Corporate ID | Company Name | Consolidated? | Profile CTI-106 | CTI-106 | Yes | Standard CTI1 | CTI1 | Yes | Standard 0310121018503885 | Ducan | Yes | Standard
Sequence:	*Company name* – ascending.
Filters:	*Corporate ID or Name* text search box
Drill-downs:	*Select group*: ▪ Displays a *List of users* for the selected customer – as described in *List of users for the selected customer ()* . ▪ The nested functionality includes a drill-down to user details – as described in *Display user details ().* *Select detail*: Displays the selected *customer's* details – see *Display customer details ()* – which provides: ▪ A further drill-down to *Assign profile to customer;* ▪ Action buttons to *View as customer, View Error log* and *Download error log.*
Constraints or exceptions:	None identified.

List of users for the selected customer

Description:	The *List users for a customer* displays basic information for each of the selected customer's users.
Access from	From *Manage customers, List customers» Select group*
Column-set:	**Column-set:** *User name, First name, Last name, Email, Corporate ID, Company name, User type* and *User status.* **Summary line:** None.
Example	 Username | First Name | Last Name | Email | Corporate ID | Company Name | User Type | User Status aaa | administrator | aa | zhalim@ctigroup.com | CTI-106 | CTI-106 | Customer | Enabled uusera | user | usera | zhalim@ctigroup.com | CTI-106 | CTI-106 | Customer | Enabled
Sequence:	*User name* – ascending.
Filters:	▪ *User Name(s) or Email* ▪ *User status*.
Drill-downs:	*Select detail*: Displays the selected user's detail – as described in *Topic 5.1.1 ().*
Constraints or exceptions:	None identified.

[8] See *0 Appendices*
Sample error log *(page V)* for an example of an error log.

Display customer details

Description:	The *Display customer details* feature displays basic customer information, showing recent bills loaded. In addition it provides access to impersonation-mode and to the error-log for diagnostic purposes. It is a multi-table multi-level report with embedded functionality.			
Filters	None			
Column-set	**Table 1**	**Customer table**		
	Columns	▪ *Corporate ID,* ▪ *Company name* ,	▪ *Consolidated flag,* ▪ *Application level,*	▪ *Number of bills loaded,* ▪ *Secondary currency* ▪ *Actions.*
	Example			
	Sequence	Single-line entry.		
	Functionality :	Action icon	Select to assign a profile to the selected customer – see *Assign profile to customer ()* Related topic: *13.4 ().*	
		View analysis as this custom	Impersonate this customer on *A7*.	
		View Error Log	As labelled.	
	Table 2	**Recent bills list**		
	Description	The *Recent bills* list display the most recent bill first. It uses the *Bill date* and *Bill description* supplied with the load data.		
	Columns	▪ *Recent Bills* ▪ *Bill date,*	▪ *Bill description,* ▪ *Lines,*	▪ *Billing entities,* ▪ *Date loaded*
	Example	The *Recent bills* list display the most recent bill first. It uses the *Bill date* and *Bill description* supplied with the load data.		
	Sequence:	*Bill date* – descending		
	Functionality :	None		

Example (Table 2):

Bill Date	Bill Description	Handsets	Billing Entities	Date Loaded
01-Oct-2013	October 2013	544	2	30-Oct-2013
01-Mar-2013	November 2013	563	3	05-Nov-2013

Assign profile to customer

This feature enables *Back-office users* to assign a profile to the customer.

Figure 6 Assign profile to customer portlet

Constraints

- Only one profile may be assigned to a customer;
- All profiles are displayed;
- A search option is available to assist profile selection;
- Click a profile to view the sections and features assigned to it.

5.2.2. Customers with user activity

The *Customers with user activity* portlet displays a list of all customers with users who have Signed-in to *A7* at least once.

Figure 7 Example Customers with user activity portlet

Functional components

Table 9: Customers with user activity – functional components.

Component	Use
Corporate ID or Name filter	**Input** text string to be searched-for.
Clear (filter) hyperlink	**Clear** to remove an applied filter.
Select group drill-down	Displays a list of the *active users for the selected* customer, with a drill-down that displays all Events associated with the user in a selectable time-period.  **Available filters:** ▪ *User Name(s) or Email*, ▪ User status. **Pre-set filters:** *Selected customer*.

<table>
<tr><th>Component</th><th>Use</th></tr>
<tr><td></td><td>The nested Select detail drill-down displays a list of the selected user’s Event information.
<table>
<tr><th>Event Date</th><th>Event Type</th><th>IP Address</th><th>Browser</th></tr>
<tr><td>17-Jul-2013 12:21:35</td><td>Unknown</td><td>192.168.1.146</td><td>Firefox 10.0.1</td></tr>
<tr><td>17-Jul-2013 12:18:24</td><td>Logon Successful</td><td>192.168.1.146</td><td>Firefox 10.0.1</td></tr>
<tr><td>17-Jul-2013 12:18:01</td><td>Unknown</td><td>192.168.1.146</td><td>Firefox 10.0.1</td></tr>
<tr><td>17-Jul-2013 11:54:59</td><td>Logon Successful</td><td>192.168.1.146</td><td>Firefox 10.0.1</td></tr>
</table>
Available filters:
▪ Show all dates;
▪ Date range.
Pre-set filters:
▪ Selected User;
▪ Selected User status;
▪ Selected customer.</td></tr>
<tr><td>Select detail
drill-down</td><td>Displays a list of Events data for the selected customer.
<table>
<tr><th>Username</th><th>First Name</th><th>Last Name</th><th>Email</th><th>Corporate ID</th><th>Company Name</th><th>User Type</th><th>User Status</th></tr>
<tr><td>auser</td><td>administrator</td><td>user</td><td>zhaim@ctigroup.com</td><td>85621</td><td>Universal Exports 1</td><td>Customer</td><td>Enabled</td></tr>
<tr><td>guser3</td><td>group</td><td>user</td><td>zhaim@ctigroup.com</td><td>85621</td><td>Universal Exports 1</td><td>Customer</td><td>Enabled</td></tr>
<tr><td>uuser</td><td>user</td><td>user</td><td>zhaim@ctigroup.com</td><td>85621</td><td>Universal Exports 1</td><td>Customer</td><td>Enabled</td></tr>
</table>
Available filters:
▪ Show all dates;
▪ Date range.
Pre-set filters:
Selected customer.</td></tr>
<tr><td>Consolidated</td><td>Indicates whether the customer is Consolidated or Single-account.</td></tr>
</table>

5.2.3. Customers with no user activity

The *Customers with no user activity* report displays a list of all customers with users who have never logged onto A7.

Figure 8 Customers with no user activity column set

Table 10: List customers with no user activity – functional components.

Component	Use
Corporate ID or Name Filter	Input a *Customer name* or id to search for.
Clear hyperlink	**Clear** to remove filters.

<table>
<tr><th>Component</th><th>Use</th></tr>
<tr><td>Select group
drill-down</td><td>Displays list of users yet to Sign-in to A7 for the selected customer.
<table><tr><th>Username</th><th>First Name</th><th>Last Name</th><th>Email</th><th>Corporate ID</th><th>Company Name</th><th>User Type</th><th>User Status</th></tr>
<tr><td>glevel</td><td>group</td><td>level</td><td>zhaim@ctigroup.com</td><td>99999</td><td>Demo Customer</td><td>Customer</td><td>Enabled</td></tr></table>
Available filters:
▪ User Name(s) or Email,
▪ User status.
Pre-set filters:
Selected customer.</td></tr>
</table>

5.2.4. List profiles

The *List profiles* portlet displays a list of the profiles available and the number of customers assigned to each profile.

Figure 9 List profiles column set

Table 11: List profiles – functional components.

<table>
<tr><th>Component</th><th>Use</th></tr>
<tr><td>Profile name</td><td>Input a (partial) profile name to filter the returned list.</td></tr>
<tr><td>Clear hyperlink</td><td>Clear to remove the filter.</td></tr>
<tr><td>Returned list</td><td>A list of profiles meeting the filter criteria (if set).</td></tr>
<tr><td>Select group
drill-down</td><td>Select to display a list of customers using the profile.
<table><tr><th>Corporate ID</th><th>Company Name</th></tr>
<tr><td>CTI1</td><td>CTI1</td></tr>
<tr><td>0812090926354452</td><td>Customer 81209</td></tr>
<tr><td>0310121018503885</td><td>Ducan</td></tr>
<tr><td>0310121520012785</td><td>multiplay</td></tr>
<tr><td>Ok</td><td></td></tr></table>
Filter available: Company ID or Name.
Clear to remove the active filter.
Remove (Customer Profile Name) to return to previous level.</td></tr>
</table>

Component	Use
Select detail drill-down	**Select** to display a list of the features associated with the profile.  Features are in alphabetical order within a profile section. Page browsing is available depending upon the number of profiles. Available filters: *Profile feature*. The search operates on the feature not the section name. **Clear** to remove any active *Profile feature* filter(s). **Remove** (*Customer profile name*) to return to previous level.

5.2.5. Registered users

The *Registered users'* portlet displays all *Authenticode-Keyword* credentials issued to customers.

Available only to *Tech Support*, *Service-provider support* and *Service-provider support (read only)* users.

Figure 10 Registered users portlet

All customers are included unless a filter (*Corporate ID or Name*) is applied.

Functional components

Table 12 Registered users' portlet - functional components

Component	Use
Show all dates checkbox	**Select** to include all loaded data in the search. If deselected the Date range pickers are displayed to allow selection of a From/To date range.
Corporate ID or Name	**Input** a (partial) *Corporate ID* or Name to filter the returned list.
Clear hyperlink	**Clear** to remove the *Corporate ID or Name* filter.

Component	Use
Code usage drop-down list	**Select** required code usage: ▪ Expired – includes all used codes; ▪ Active – an issued code, which has yet to be used; ▪ All `{default}`.
Returned list	A list of profiles meeting the filter criteria (if set). Standard Download and email options are available. Neither scheduling nor graphs are available.
Page browse controls	Page browse controls are displayed if the returned list exceeds the number of lines that can be accommodated on a page `{default=15}`.

5.3. Event usage reporting

The *Event usage* reports display details on which A7 portlets have been used.

Related information:

Appendix B List of events logged .... page: III.

Three *Event usage* reports are available:

- *Event usage summary*

  This report summarises the portlets and reports visited by all users, for all customers within a user-defined date-range;
- *Event usage by user*

  This report summarises the number of visits to portlets and reports by a selected *User name*;
- *Event usage by customer*

  This report displays a summary of the number of visits to portlets, and reports, by the active user base of the selected customer.

5.3.1. Event usage summary report

Figure 11 Event usage summary – example report

Description:	This report summarises the portlets and reports visited by all users, for all customers within a user-defined date-range.	
Constraints / Exceptions	▪ No charts available; ▪ No drill-downs available.	
Column-set Access path:	*Direct*	▪ From the *Reports menu bar,* select *Event usage» Event usage* **summary** ▪ From the *Support overview portlet,* select *Event usage* **summary**

Indirect
- From the *Event usage by user* report, **Select detail drill-down**
- From the *Event usage by customer* report, **Select detail drill-down**

Column-set:

Totals	42
Description	Visits

Example

Totals	531
Description	Visits
VPN Report	6
Usage Tagging Report For Handset	5
Scheduled Report Run Once	5

Figure 12 Example Event usage summary report

Sequence: Description – descending.

Filters:
- *Show all dates*;
- *Date range*.

5.3.2. Event usage by user report

Description: This report lists all available users and provides a drill-down, which displays a summary of the number of visits to portlets, and reports, by a selected *User name* within a user-defined date-range.

Access path:
- From the *Reports menu bar,* select *Event usage» Event usage* **by user**
- From the *Support overview portlet,* select *Event usage* **by user**.

Constraints / exceptions
- No charts available;
- No *Select group* drill-down available.

Column-set:

Username	First Name	Last Name	Email	Corporate ID	Company Name	User Type	User Status

Example

Username	First Name	Last Name	Email	Corporate ID	Company Name	User Type	User Status
auser	administrator	user	zhalim@ctigroup.com	1353600929364452	Customer 135360	Customer	Enabled
gmulti	group	multi	zhalim@ctigroup.com	0310121520012785	multiplay	Customer	Enabled
igrp	IB	Grp	ibridge@ctigroup.com	Demo01	DEMO CUSTOMER	Customer	Enabled

Sequence: *User name*– ascending.

Filters:

Available filters:
- *User Name(s) or Email*,
- User status.

Drill-downs:

Select detail — Displays the *Event usage summary* report (*Figure 12 – p24*) for the selected *user.*

Sequence:

Description – descending.

Available filters:
- *Show all dates;*
- *Date-range.*

Pre-set filters:

Selected User name.

5.3.3. Event usage by customer report

Description: This report lists the available customers and provides a drill-down for each, which displays a summary of the number of visits to portlets, and reports, by the active user base of the selected customer within a user-defined date-range.

Access from

Direct
- From the *Reports menu bar,* select *Event usage» Event usage* **by customer**
- From the *Support overview portlet,* select *Event usage* **by customer**

Indirect N/A

<table>
<tr><td>Constraints / exceptions</td><td colspan="2">▪ No charts available;
▪ No Select group drill-down available.</td></tr>
<tr><td>Column-set:</td><td colspan="2">▪ Corporate ID ▪ Company name ▪ Consolidated?</td></tr>
<tr><td>Example</td><td colspan="2"><table><tr><th>Corporate ID</th><th>Company Name</th><th>Consolidated?</th></tr><tr><td>99999</td><td>Demo Customer</td><td>Yes</td></tr><tr><td>85621</td><td>Universal Exports 1</td><td>Yes</td></tr><tr><td>95621</td><td>Universal Exports 2</td><td>Yes</td></tr></table></td></tr>
<tr><td>Sequence:</td><td colspan="2">Company name – ascending.</td></tr>
<tr><td>Filters:</td><td colspan="2">Available filters:
Corporate ID or Name.</td></tr>
<tr><td>Drill-downs:</td><td>Select detail drill-down</td><td>Displays the Event usage summary report (Figure 12–p24) for the selected Customer.
Sequence:
Descending Description.
Available filters:
▪ Show all dates;
▪ Date-range.
Pre-set filters:
Selected Customer name.</td></tr>
</table>

6. Account manager

The *Account manager* portlet allows you to create account groups and to assign users to manage them.

Figure 13 Account manager portlet

Once a group is created, any *Account managers* assigned to it will have access only to that group's accounts.

Accounts may belong to multiple groups and may be seen by multiple account managers.

Component	Use
Customer Group Description search text box	**Input** a (partial) *Customer Group Description* to filter the returned list of *Customer groups*.
Clear search filter hyperlink	**Clear** to remove the *Customer Group Description* filter.
Add new hyperlink	**Add new** to create a new customer grouping.
Customer groups Returned list	The list of *Customer groups* that meet the filter criteria (if set).
Edit customer group icon	Select **Edit customer group** to change the details of an existing group.

6.1. Creating and editing groups

Figure 14 Account manager – Maintain group details

Table 13Account manager – Maintain group details

Component	Use
Group description text box	Input a description (name) for this *Customer group*.
Save group details button	Select to save the named group, together with any allocated Account Managers and Accounts/Customers.

Component	Use
Delete group details button	Delete the selected group.
Allocated accounts / customers list	List of any Accounts/Customers allocated to this group.
Edit Accounts/ Customers hyperlink	Select **Edit** to change the allocated Accounts/Customers list – as described in section *6.2 Adding and removing accounts ()*.
Allocated account managers list	List of *Account managers* allocated to this group.
Edit Account managers hyperlink	Select **Edit** link to change the allocated *Account managers* list – as described in section *6.3 Adding and removing users ()*.

‘

6.2. Adding and removing accounts

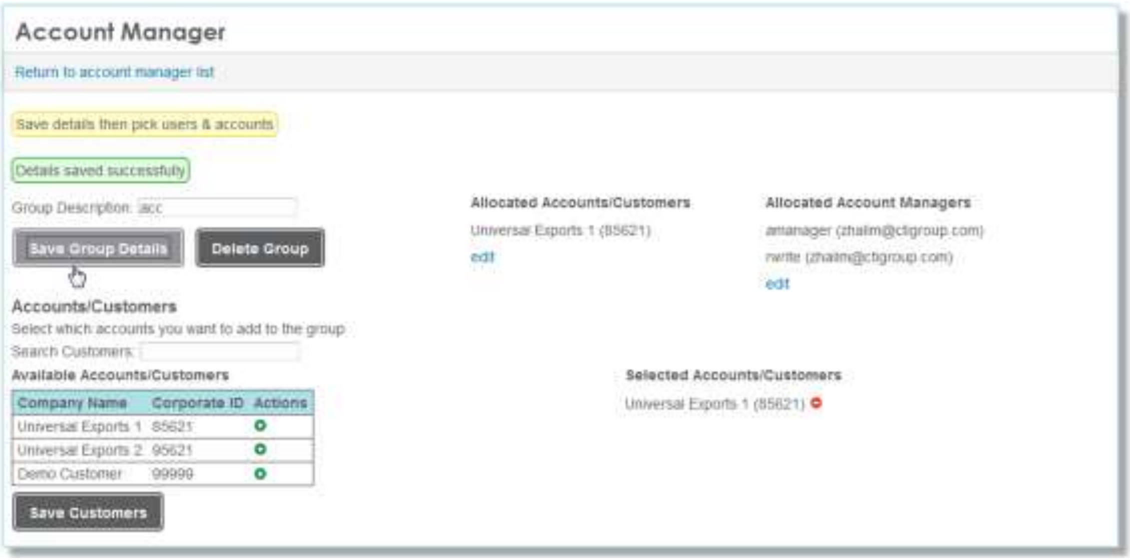


Figure 15 Account manager – Add or remove account customers

The additional fields displayed when editing the Allocated Accounts/Customer list are given in the table below.

Table 14 Account manager – Adding/Editing Accounts/Customers

Component	Use
Search customers search text box	Input text to filter the list of available customers.
Returned list	A list of *Accounts/Customers* meeting the filter criteria (if set).
Add icon	Add to allocate the *Account/Customer* to your *Customer group*.
Selected Accounts /Customers list	A list of the *Accounts/customers* selected in this session for adding to the *Customer group.* Items in this list will only be included in the group if you save the changes using the **Save customers** button.
Delete icon	Remove the selected *Account/Customer* from the group. Items will be removed from the group only if you save the changes using the **Save customers** button.

Component	Use
Save customers button	**Save customers** to save any changes you have made to the allocated *Accounts/Customer* list.

6.3. Adding and removing users

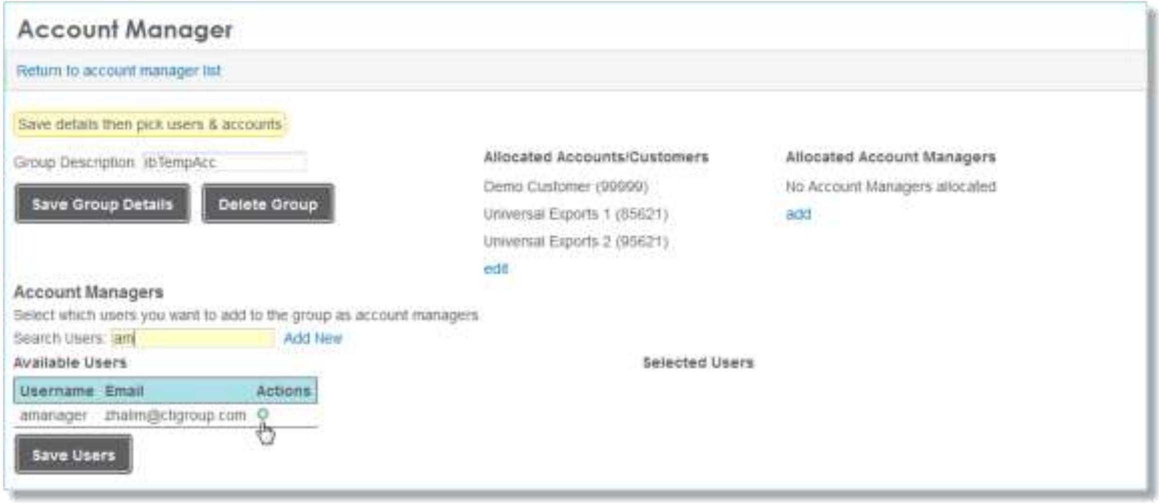


Figure 16 Account manager - Add or remove account managers

Users allocated to a group as *Account managers* have access to only those *Accounts/Customers* also allocated to the group.

An account may be visible to multiple account managers.

Table 15: Account manager – adding and removing users.

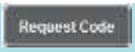
Component	Use
Search Users search text box	Input text to filter the list of *Available Users*.
Add new hyperlink	**Add new** to create a new *Account manager* user.
Available users returned list	A list of *Available Users* meeting the filter criteria (if set).
Add icon	Select **Add** to allocate the *User* to your *Customer group* as an *Account manager*.
Selected Users list	A list of the *Users* allocated to the *Customer group.* Items in this list are included in the group only if you save the changes using the **Save Users** button.
Delete icon	Remove the selected *User* from the *Customer group*. The deletion is finalised only when you save the changes using the **Save Users** button.
Save Users button	**Save Users** to save any changes you have made to the allocated *User* list.

7. Registration code generator

The registration code generator allows the user to create the Keyword/Reg code pair required for new user registrations.

Figure 17 Registration code generator portlet

Table 16 Registration code generator - functional components

Component	Use
Registration type drop-down list	**Select** the required *registration type* from the drop-down list options: ▪ Top level *Service-provider* user; ▪ Tech support user; ▪ Service-provider service user; ▪ Bureau user. Mandatory selection
Corporate ID text box	**Input** the required *Corporate ID* Required only for Top lever *Service-provider* users.
	**Select** *Request Code* button to generate the *Registration code pair*.  The *registration code generator* displays: ▪ The *keyword* – a unique six digit keyword (containing lower and upper case letters and numbers) ▪ The *registration code* –a six digit numerical code. The *Corporate ID* is blank for *tech support*, *Service-provider customer service* and *Bureau users*. It is possible to configure *A7* to email a Registration code pair to the Email address contained within the data the first time a new customer is loaded (for Top Level Customer users).
	**Select** *List active* button to see all generated, but unused, code pairs. 

Component	Use
	**Select** *List used* button to see all generated code pairs that have been used. 

Corporate ID	Keyword	Reg Code	Date Used	Username
0310121520012785	JMudTF	631949	05-Feb-2013 13:30:04	dtopuser1
0812090926364452	CJHByc	391772	22-Nov-2012 13:55:50	auser
0812090926364452	JnnYn	129015	27-Nov-2012 11:47:51	adobbs
0812090926364452	zMGIIM	344421	16-Jan-2013 13:55:20	dtopuser
CTI-106	qAWwb	475055	22-Nov-2012 13:56:51	aaa

Part three

Bureau feature-set

Chapters in Part three ...

The chapters in Part three of the Core Back-office Product specification describe the Bureau feature-set, which provides a set of job monitoring and performance tools aimed at the application host.

8. Bureau reports overview

These reports provide the standard functionality described in *Ch. I4.3 Report components* (*page 8*); they can be printed, emailed or downloaded.

Figure 18 Bureau reports overview portlet

- Data processing

  Data processing reports enable *Back-office users* to monitor the data load process.

- Production reporting

  Bureau and Tech support users only

  Production reporting functionality enables *Service-providers* and/or *application hosts* to see how *A7* is performing. Configurable{**On**; Off}.

Contractual documents

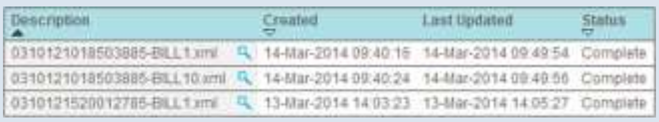
If CTI is the *application host* these reports form part of the SLA (Service Level Agreement) between CTI and the *service-provider*.

9. Data processing reports

9.1. View jobs

Figure 19 View jobs report portlet

Table 17 View jobs report definition

<table>
<tr><td rowspan="3">Description:</td><td colspan="3">The View jobs report displays a list of Data Load jobs in a specified date range.</td></tr>
<tr><td colspan="3">This can be a useful diagnostic aid in identifying why a Data Load has failed.</td></tr>
<tr><td colspan="3">Multi-level, multi-table report.</td></tr>
<tr><td rowspan="2">Access path:</td><td colspan="3">Bureau reports menu bar»Data processing»View jobs</td></tr>
<tr><td colspan="3">Bureau reports overview portlet»Data processing pane, select View jobs</td></tr>
<tr><td>Constraints</td><td colspan="3">None specified.</td></tr>
<tr><td>Exceptions</td><td colspan="3">Common report elements not available include:
▪ Summary;
▪ Charts;
▪ Select group drill-down.</td></tr>
<tr><td rowspan="7">Column-set @ Top-level</td><td>Columns</td><td colspan="2">▪ Description,
▪ Created,
▪ Last updated
▪ Status</td></tr>
<tr><td>Summary</td><td colspan="2">Not available.</td></tr>
<tr><td>Example</td><td colspan="2"></td></tr>
<tr><td>Sequence</td><td colspan="2">(Job) Description – ascending.</td></tr>
<tr><td rowspan="3">Filters</td><td>Available:</td><td>▪ Job status drop-down list;
▪ Show all dates;
▪ Date range picker.</td></tr>
<tr><td>Applied:</td><td>Date range shows the previous seven days on initial display.</td></tr>
<tr><td>Removal:</td><td>Remove Report filter by selecting Show all dates.</td></tr>
</table>

	Functionality	*Common reporting elements* only.
	Select detail drill down	*Select detail* icon drills down to show *Job details.*
	Select group drill down	Not available.
Column-set @ Level one – Select detail	**Attributes**	**All tables**
	Filters	Available: *None.*
		Applied: *Job status, Date range* and *Job* (applied by the drill-down action).
		Removal: Use *Remove* hyperlink – to remove the selected *Job* filter and return to the top-level.
	Drill-downs.	Not available.
	Summary	Not available.
	Table 1	**Job details portlet**
	Column	▪ *Description,* ▪ *Created,* ▪ *Last updated* ▪ *Status* ▪ *Data partition.*
	Example	Description | Created | Last Updated | Status | Data Partition 0310121520012785-BILL2.xml | 05-Feb-2013 14:02:13 | 05-Feb-2013 14:03:54 | Complete | 0
	Sequence	Single-line display.
	Table 2	**Job statistics**
	Columns	▪ *Description* ▪ *Value.*
	Rows	The statistics displayed include: ▪ File size, ▪ Usage count, ▪ Charge count, ▪ Invoice count ▪ Line count, ▪ Multiplay service count, ▪ Terminating number count, ▪ Location count, ▪ Member location count ▪ Structure group count, ▪ Elapsed load, ▪ Load size, ▪ Load row count, ▪ Load file count, ▪ Elapsed prepare ▪ Elapsed active.
	Example	Description | Value File Size | 20.02 MB Usage Count | 25,000 Elapsed Prepare | 00:00:34 Elapsed Activate | 00:00:02
	Sequence	Fixed format.
	Functionality	*Download Job Data Processing Audit* hyperlink This link saves a local copy of the *Job Data Processing Audit* file.
	Table 3	**Chargeable items**
	Columns	*Corporate ID, Charge code, Charge-cate* and *Total.*

	Example	Corporate Identifier | Charge Code | Charge Date | Total 0310121520012785 | n-bill | 05-Feb-2013 14:03:52 | 1 0310121520012785 | n-cdr | 05-Feb-2013 14:03:52 | 25,000 0310121520012785 | n-chg | 05-Feb-2013 14:03:52 | 27,500 0310121520012785 | n-inv | 05-Feb-2013 14:03:52 | 10 0310121520012785 | n-hset | 05-Feb-2013 14:03:52 | 964
	Sequence	*Corporate ID* – ascending.

9.2. Job status summary

Figure 20 Job status summary report portlet

Table 18 Job status summary report definition

Description	The *Job status summary* report displays a one-line per *Job status* summary of the number of jobs loaded within a specified date range.		
Access path:	From the *Bureau reports* menu bar, select *Data processing»* **Job status summary**		
	From the *Bureau reports overview* portlet, select **Job status summary**		
Constraints	None specified.		
Exceptions	These Common report elements are not available: ▪ *Select group* drill-down; ▪ *Select detail* drill-down.		
Column-set @ Top-level	Columns	*Charge code, Charge code total*	
	Summary	Displays a total row, showing totals for all numeric columns.	
	Example	Totals 8,857 Status | Total Open | 3 Failed | 2 Complete | 8,852	
	Sequence	As show in example.	
	Filters	Available:	▪ *Show all dates;* ▪ *Date range* picker.
		Applied:	*Date range* shows the previous seven days on initial display.
		Removal:	Remove by selecting *Show all dates.*
	Functionality	*Common reporting elements* only.	
	Drill-downs	None available.	

9.3. Job charges summary

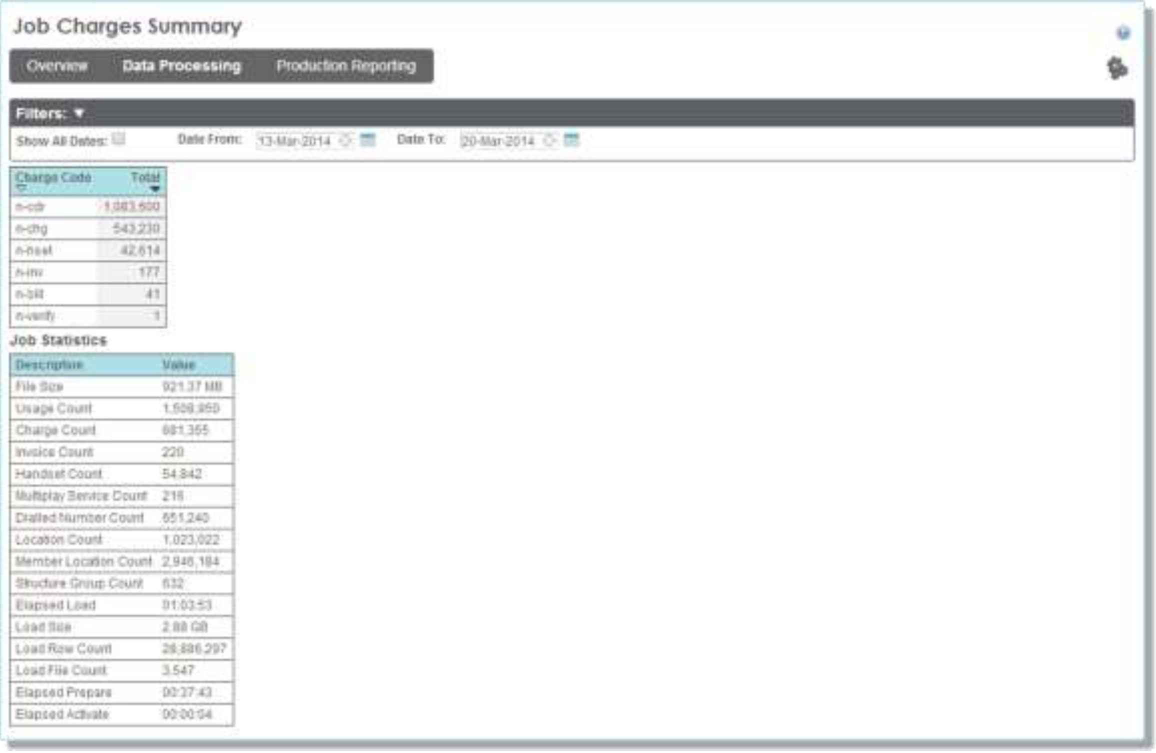


Figure 21 Job charges summary report portlet

Description:	The *Job charges summary report* shows a one-line total for each *Charge code* loaded during a specified date range.		
Access path:	From the *Main menu*, **Bureau»Data processing»Job charges summary**		
	From the *Data Processing* pane of the *Bureau Reports Overview* portlet, select **Job charges summary**.		
Constraints	None specified.		
Exceptions	These Common report elements are not available: ▪ *Select group* drill-down; ▪ *Select detail* drill-down.		
Column-set @ Top-level	**Attributes**	**All tables**	
	Filters	Available:	▪ *Show all dates;* ▪ *Date range* picker. Shows the previous seven days on initial display.
		Removal:	**Show all dates**.to remove the *Date range* filter.
	Functionality	*Common reporting elements* only.	
	Drill-downs	None available.	
	Table 1	**Charge code summary**	
	Columns	*Charge code, Charge code total*	
	Summary	None	
	Example	(see table below)	

Charge Code	Total
n-chg	55,000
n-cdr	50,000
n-hsat	1,978
n-inv	20
n-bill	2

	Sequence	*Charge code total – descending.*
	Table 2	**Job statistics**
	Columns	*Description, Value*
	Summary	None
	Example	
	Sequence	Logical description

9.4. Payment summary

Only available to Bureau users or application-hosts.

Figure 22 Payment summary report portlet

Table 19 Payment summary report portlet

Description:	The *Payment summary* report displays a one-line per *Corporate ID* summary of the data loaded.		
Access path:	From the *Main menu,* select *Bureau»Data processing»***Payment summary**		
	From *Bureau Reports Overview* portlet's *Data Processing* pane, select **Payment summary**.		
Constraints	Only available to Bureau users or to application-hosts.		
Exceptions	These Common report elements are not available: ▪ Charts; ▪ *Select group* drill-down; ▪ *Select detail* drill-down.		
Column-set @ Top-level	**All tables**	**Report comprises two tables at this level**	
	Filters	Available:	▪ *Show all dates* checkbox*;* ▪ *Date range* pickers*;* ▪ *Corporate ID or Name* text search box.
		Applied:	*Date range* filter shows the previous seven days on initial display.
		Removal:	▪ Remove date filter by selecting **Show all dates**; ▪ **Clear** to remove *Corporate ID or Name* filter.

Functionality	Common reporting elements only.
Drill-downs	None available.
Table 1	**Payment summary**
Columns	▪ *Corporate ID,* ▪ *Corporate name,* ▪ *Billing entities loaded,* ▪ *Lines loaded,* ▪ *CDR loaded,* ▪ *Bills loaded,* ▪ *Unique logins,* ▪ *Total logins.*
Summary	Displays a total row, showing totals for all numeric columns.
Example	(see table below)

Corporate ID	Corporate Name	Billing Entities Loaded	Lines Loaded	CDR's Loaded	Bills Loaded	Unique Logins	Total Logins
Totals		0	989	50,000	2	5	11
03101215200012785	multiplay	0	989	50,000	2	2	5
08120909263644452	Customer 81209	0	0	0	0	2	4
CTI1	CTI1	0	0	0	0	1	2

Sequence	*Corporate ID* – ascending.
Table 2	**Job statistics**
Columns	▪ Description, ▪ Value
Rows	▪ Back-office users; ▪ Customer profiles; ▪ Customer users; ▪ Subscribers assigned to user.
Summary	None available.
Example	(see table below)

Description	Value
Back Office Users (active only)	3
Customer Profiles	3
Customer Users (active only)	14
Handsets Assigned To User (active only)	2

Sequence	Logical description.

9.5. Housekeeper

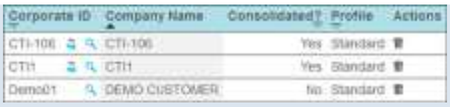
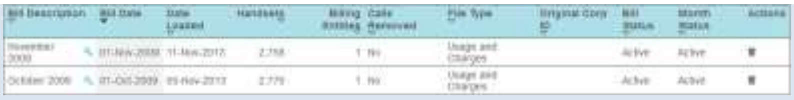
Housekeeper comprises this report and a background batch service; both are described in this section.

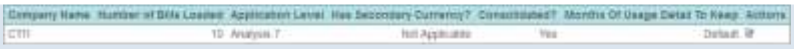
9.5.1. Housekeeper report

Figure 23 Housekeeper portlet

Table 20Housekeeper report definition

Description:	The housekeeper report displays a list of the customers loaded, providing options to:

<table>
<tr><td></td><td colspan="3">▪ Delete an individual bill customer;
▪ Delete, the complete month;
▪ Edit the number of months/bills retained for a selected customer.</td></tr>
<tr><td rowspan="2">Access path:</td><td colspan="3">From the Main menu, Bureau»Data processing»Housekeeper</td></tr>
<tr><td colspan="3">From the Data Processing pane of the Bureau Reports Overview portlet, select Housekeeper.</td></tr>
<tr><td>Constraints</td><td colspan="3">Some features only available for Consolidated Customers.</td></tr>
<tr><td>Exceptions</td><td colspan="3">Common report elements not available include:
▪ Summary;
▪ Charts;
▪ Select group drill-down;
▪ Select detail drill-down.</td></tr>
<tr><td rowspan="10">Column-set @ Top-level</td><td>Columns</td><td colspan="2">▪ Corporate ID,
▪ Company name,
▪ Consolidated?,
▪ Profile
▪ Actions.</td></tr>
<tr><td>Summary</td><td colspan="2">Not available.</td></tr>
<tr><td>Example</td><td colspan="2">
</td></tr>
<tr><td>Sequence</td><td colspan="2">Company name – ascending.</td></tr>
<tr><td rowspan="3">Filters</td><td>Available:</td><td>Corporate ID or Name.</td></tr>
<tr><td>Applied:</td><td>None.</td></tr>
<tr><td>Removal:</td><td>Clear– to redisplay the unfiltered list.</td></tr>
<tr><td>Functionality</td><td colspan="2">Deleting a Customer deletes all associated users including their logon activity data.
Actions column icon provides an option to delete a customer; select and confirm to schedule the deletion by Housekeeper job.</td></tr>
<tr><td>Select detail drill down</td><td colspan="2">Select detail to show a two-table report:
▪ Table 1 – A list of bills that have been loaded;
▪ Table 2 – Customer details.</td></tr>
<tr><td>Select group drill down</td><td colspan="2">Select group to show a list of Corporate IDs for the selected Customer.</td></tr>
<tr><td rowspan="9">Column-set @ level one – Select detail</td><td colspan="3">Listing of bills loaded – two- table display</td></tr>
<tr><td rowspan="3">Filters</td><td>Available:</td><td>Billing period – by using Select detail drill down.</td></tr>
<tr><td>Applied:</td><td>Selected Customer.</td></tr>
<tr><td>Removal:</td><td>Remove –removes the Selected Customer filter and return you to the top-level.</td></tr>
<tr><td>Table 1</td><td colspan="2">Bills loaded (by month) per billing period for the selected customer.</td></tr>
<tr><td>Columns</td><td colspan="2">▪ Bill description,
▪ Bill date,
▪ Date loaded,
▪ Lines,
▪ Billing entities,
▪ Calls remove,
▪ File type,
▪ Original Corp ID,
▪ Bill status,
▪ Month status,
▪ Actions.</td></tr>
<tr><td>Summary</td><td colspan="2">Not available.</td></tr>
<tr><td>Example</td><td colspan="2">
</td></tr>
<tr><td>Sequence</td><td colspan="2">Bill date - descending</td></tr>
</table>

	Functionality	*Actions* column icon – to delete all bills in the selected *billing-period*; select and confirm to schedule the deletion by *Housekeeper* job. Removes the bills but retains any associated Organisational structures. If you delete **all** bills for a month then you return to the customer list.
	Select detail drill down	**Select detail** to display a list of *Bills* in the selected *Billing-period* (*sub bills*).
	Select group drill down	Not available.
	Table 2	**Customer details table**
	Columns [9]	▪ *Corporate ID*, ▪ *Number of Bills Loaded*, ▪ *Application level*, ▪ *Has secondary currency?*, ▪ *Consolidated?*, ▪ *Months of usage detail to keep*, ▪ *Actions.*
	Summary	Not available.
	Example	

Company Name	Number of Bills Loaded	Application Level	Has Secondary Currency?	Consolidated?	Months Of Usage Detail To Keep	Actions
CTI1	10	Analysis 7	Not Applicable	Yes	Default	

	Sequence	Single-line entry
	Functionality	*Actions* column icon Edit the *number of months of usage details to keep*. [10]
	Drill-downs	Not available.
Column-set @ level two – Select detail	**Individual bill details – single table**	
	Columns	▪ *Bill description*, ▪ *Bill date*, ▪ *Date loaded*, ▪ *Lines*, ▪ *Billing entities*, ▪ *Calls remove*, ▪ *File type*, ▪ *Original Corp ID*, ▪ *Bill status*, ▪ *Month status*, ▪ *Actions.*
	Summary	Not available.
	Example	

Bill Description	Bill Date	Date Loaded	Handsets	Billing Entities	Calls Removed	File Type	Original Corp ID	Bill Status	Month Status	Actions
01/11/2009 [illegible]	01-Nov-2009	11-Nov-2013	552	0	No	Usage and Charges	[illegible]	Active	Active	
01/11/2009 [illegible]	01-Nov-2009	11-Nov-2013	548	0	No	Usage and Charges	[illegible]	Active	Active	
01/11/2009 [illegible]	01-Nov-2009	11-Nov-2013	545	0	No	Usage and Charges	[illegible]	Active	Active	
01/11/2009 [illegible]	01-Nov-2009	11-Nov-2013	561	0	No	Usage and Charges	[illegible]	Active	Active	
01/11/2009 [illegible]	01-Nov-2009	11-Nov-2013	552	0	No	Usage and Charges	[illegible]	Active	Active	

	Sequence	*Bill date* - descending

	Filters	Available: None
		Applied: *Customer* and *Billing period*.
		▪ Use *Remove* hyperlink:
		  ▪ to remove the *Billing period* filter and return to level one;
		  ▪ to remove the *Customer* filter and return to the top-level.

	Functionality	Actions column icon – to delete the selected bill; select and confirm to schedule the deletion by *Housekeeper* job. Removes the bill but retains any associated Organisational structures. If you delete all bills for a month then you return to the customer list.
	Drill downs	Not available.

[9] Not all columns are required – for example *Consolidated?* may be hidden at system setup time.

[10] This allows a number of selected customers to have their call records kept for longer than the three months. However, this is a chargeable extra and not standard functionality.

Column-set @ level one – Select group	List of Corporate IDs for the selected Customer – single table		
	Columns	*Corporate ID* and *Actions*.	
	Summary	Not available.	
	Example	Corporate ID / Actions 0812090913059918 0812090909414411 0812090902317159 0812090904181160 0812090906445451	
	Sequence	*Corporate ID* – ascending.	
	Filters	Available	None
		Applied	Selected customer
		Removal	Use *Remove* hyperlink to return to top-level;
	Functionality	Action column icon – to delete the *Corporate ID* and associated details.	
	Drill-downs	Not available.	

9.5.2. Housekeeper batch service

The Housekeeper batch service removes data that is either manually marked for deletion or is automatically selected in accordance with configurable rules, as described in *Table 21: Housekeeper's automated data removal rules*.

Housekeeper

By default all Customers are Period-based (not Stored). This allows A7 to remove customers no longer with the service-provider, or with no bills.

HOWEVER … if the system date of the PC running Housekeeper is a future date A7 will remove ALL bills, the customer and all users from the system.

CTI accept no responsibility for a future system date being set, nor for the impact it may have.

Auto deletion rules

Table 21: Housekeeper's automated data removal rules

Data type	Description of deletion	Configurable options
Usage detail records	Deletes aged *Usage detail* and *Summary* records in accordance with the *Auto-deletion* setting – but see also *0 Exceptions list option (below)*.	▪ `Auto_deletion = PERIOD` After a specified number of months {default} ▪ `Auto_deletion = STORED` After a specified number of billing periods.
User records	Removes the residual user data retained following deletion of a user: ▪ *User record* – *A7* changes the user name to allow it to be reused, for example: `username[Del02-09-13 12:16:45]` ▪ User Activity Log, ▪ *Structure audit*.	▪ `Zero` – without delay; ▪ `Positive` – after the specified number of days {default 30}; ▪ `Negative` – never;
Customer bills / months	Removes customer bills/months which have been manually marked for deletion. If automated Housekeeper (not the manual version) removes the last bill for a customer it also deletes that customer (if the `PERIOD` option is used).	This is a manual task; once selected and confirmed the full data set is deleted;
Customer data set	Removes whole Customer data sets.	This is a manual task; once selected and confirmed the full data set is deleted;

Data type	Description of deletion	Configurable options
Subscriber data	Deletes *Subscribers* that do not belong to a currently loaded *Bill, which happens because* deleting a *Bill* or *Account* does not automatically delete its *Subscribers*.	
API audit data	Deletes aged API data from the *API audit table*.	Configurable number of months.
Billing data	Deletes inactive billing data. When using the option to over-write billing data *A7* retains any overwritten data marking it `inactive`.	▪ `Zero` – without delay; ▪ `Positive` – after the specified number of days {default 30}; ▪ `Negative` – never;

Multiple bill loads

The option to reload the same bill multiple times is available manually via a flag-setting.

- `Yes`= the same bill can be loaded multiple times – for example, to cater for an incorrect bill being loaded.

  This de-activates the old bill but does not remove it.

- `No`=the same bill cannot be loaded multiple times.

Exceptions list option

It is possible to over-ride the `Auto_deletion = PERIOD` setting – see Table 21 – for specified customers. This is useful if it is necessary to retain specific customers' bills for a longer period of time than the default, as might be the case for a *Demo* customer.

Housekeeper treats *Customers* on the *exceptions list* as if they had the `STORED` *data retention* setting, even if the main *data retention* setting is in fact `PERIOD`.

Using the `PERIOD` setting in conjunction with the *Exceptions list* allows *service-providers* to maintain certain *Customers/Bills* for a longer period, whilst retaining a compact database.

Batch job attributes

Housekeeper starts resubmitted delete requests from the point at which the previous customer/account/bill deletion failed.

Housekeeper can run in one of two modes – automated or manual – the jobs from each mode use separate job queues, which:

- Allows for differing configurations in each mode;
- Ensures that the two types of jobs do not impact each other (for example, urgent manual jobs sitting behind a long queue of less urgent automated jobs).

9.6. Load report

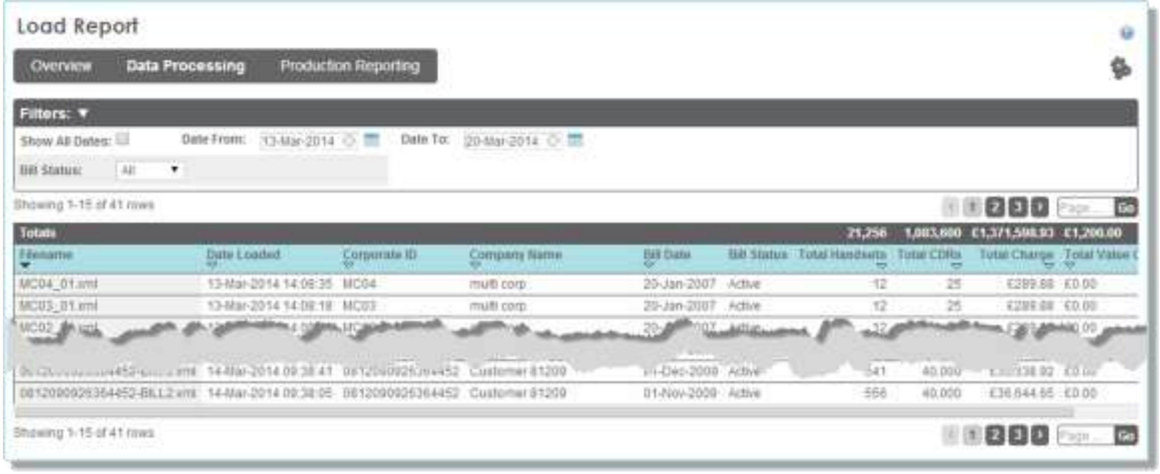
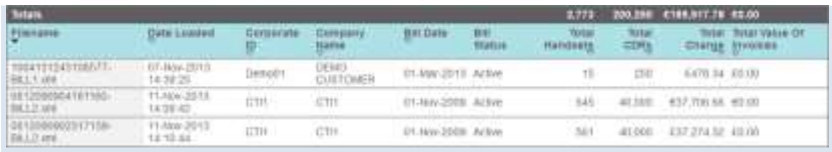


Figure 24 Load report portlet

Table 22 Load report definition

Description:	The *Load* report displays a one-line summary for each file loaded. ✪ This report has no interaction with the Housekeeper batch service, except that changes made to the data using that service may impact the figures in this report.	
Access path:	*Main menu»Bureau»Data processing»***Load report** *Bureau Reports Overview* portlet»*Data Processing* pane, select **Load report**.	
Constraints	✪ Only available to Bureau and Tech Support users. ▪ Excludes jobs with a `Pending` or `Failed` status; ▪ On initial load the report shows only the last seven days month; ▪ By default all customers are shown; ▪ Report includes instances Configurable{**On**; Off};	

Exceptions	▪ The sum of Active and Inactive *Bill status* totals may not equal the sum of the All figure, which includes *Housekeeper* jobs;
	▪ Select *Bill status* = `Active` filter to avoid reloaded data being double-counted;
	▪ These Common report elements are not available:
	  ▪ Charts;
	  ▪ *Select group* drill-down;
	  ▪ *Select detail* drill-down.	

Column-set @ top-level	Columns	▪ Filename, ▪ Date loaded, ▪ Corporate ID ▪ Company name, ▪ Bill date, ▪ Bill status ▪ Total subscribers, ▪ Total CDRs, ▪ Total charge, ▪ Total Value of Invoices.
	Summary	Displays total row for all numeric columns.
	Example	
	Sequence	*Filename* – descending.

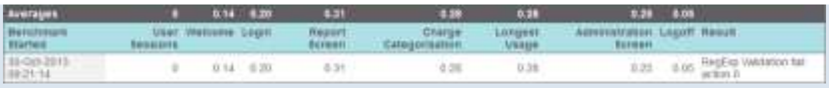
	Filters	Available:	▪ *Show all dates* checkbox*;* ▪ *Date range* picker; ▪ *Bill status* drop-down list.
		Applied:	*Date range* shows the previous seven days on initial display.
		Removal:	Remove Report filter by selecting *Show all dates.*
	Functionality	*Common reporting elements* only.	
	Drill-downs	None available.	

10. Production reporting

10.1. Performance statistics

Figure 25 Performance statistics report portlet

Table 23 Performance statistics report definition

Description:		The *Performance statistics report* summarises current response times and active session numbers over a specified period for all customers loaded. A single-table, single-level report.
Access path:		*Main menu bar» Bureau, select Production reporting»***Performance statistics** *Bureau reports overview* portlet» *Production Reporting* pane»**Performance statistics.**
Constraints		Only available to Bureau and Tech Support Users Performance data is collected at specified intervals configurable{default=15 minutes}.
Exceptions		▪ These Common report elements are not available: ▪ *Pie-charts;* ▪ *Select group* drill-down; ▪ *Select detail* drill-down.
Column-set @ top-level	Columns	▪ *Benchmark started,* ▪ *User sessions,* ▪ *Welcome,* ▪ *Login,* ▪ *Report screen,* ▪ *Charge-categorisation ,* ▪ *Longest usage,* ▪ *Administration screen,* ▪ *Logoff,* ▪ *Result.*
	Summary	Displays an Average row for all numeric columns.
	Example	
	Sequence	*Benchmark started timestamp* – descending.
	Filters	Available: ▪ *Show all dates;* ▪ *Date range* picker. Applied: *Date range* shows the previous seven days on initial display. Removal: Remove by selecting *Show all dates.*
	Functionality	*Common reporting elements* only.
	Drill-downs	None available.

10.2. Login attempts

Figure 26 Login attempts report portlet

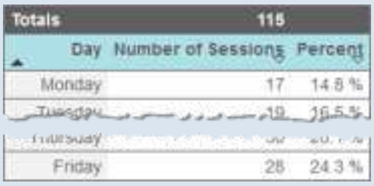
Table 24 Login attempts report definition

Description:		Shows total login attempts per day for the selected period. The *Login attempts report* displays a daily summary of the number of successful and unsuccessful login attempts in a specified date-range. Both *Front--* and *Back-office* login attempts are shown in this single-table, single-level report.
Access path:		*Production reporting* menu bar»**Login attempts**
		Bureau reports overview portlet» *Production Reporting* pane»**Login attempts.**
Constraints		Only available to Bureau and Tech Support Users
Exceptions		These Common report elements are not available: ▪ *Pie-charts;* ▪ *Select group* drill-down; ▪ *Select detail* drill-down.
Column-set @ top-level	Columns	▪ *Date,* ▪ *Successful logins,* ▪ *Failed logins,* ▪ *Total logins*
	Summary	Displays total row for all numeric columns.
	Example	
	Sequence	*Date* – ascending.
	Filters	Available: ▪ *Show all dates;* ▪ *Date range* picker.
		Applied: *Date range* shows the previous seven days on initial display.
		Removal: Remove by selecting *Show all dates.*
	Functionality	*Common reporting elements* only.
	Drill-downs	None available.

10.3. Sessions by day of week

Figure 27 Sessions by day of week report portlet

Table 25 Sessions by day of week report definition

Description:	The *Sessions by day-of-the-week* report summarises the number of *A7* sessions in a specified period, showing total sessions per day and that total as a percentage of the total sessions in the period. A single-table, single-level report.		
Access path:	*Production reporting* menu bar»**Sessions by day of week**		
	Bureau reports overview portlet» *Production Reporting* pane»**Sessions by day of week.**		
Constraints	Only available to Bureau and Tech Support Users		
	▪ Includes *Front-* and *Back-office* sessions; ▪ Displays up to seven rows (one per week day); ▪ Displays only non-zero rows.		
Exceptions	These Common report elements are not available: ▪ *Pie-charts;* ▪ *Select group* drill-down; ▪ *Select detail* drill-down.		
Column-set @ top-level	Columns	*Day, Number of sessions* and *Percent*	
	Summary	The totals row displays the *Total number of sessions* in the selected period.	
	Example		
	Sequence	Day of the Week – logical order (Sunday through Saturday).	
	Filters	Available:	▪ *Show all dates;* ▪ *Date range* picker.
		Applied:	*Date range* shows the previous seven days on initial display.
		Removal:	Remove by selecting *Show all dates.*
	Functionality	*Common reporting elements* only.	
	Drill-downs	None available.	

10.4. Sessions by hour of day

Figure 28 Sessions by hour of day report portlet

Table 26 Sessions by hour of day report definition

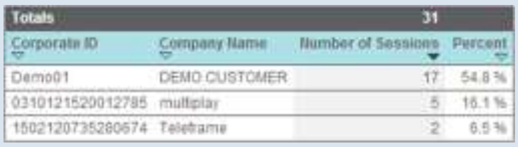
<table>
<tr><td>Description:</td><td colspan="3">The Sessions by hour-of-the-day report summarises the number of A7 sessions in a specified period, showing:
▪ The Total number of sessions for each hour of the day;
▪ The Total number of sessions for each hour expressed as a percentage of the Total number of sessions in the period.
A single-table, single-level report.</td></tr>
<tr><td rowspan="2">Access path:</td><td colspan="3">Production reporting menu bar»Sessions by day of hour of day</td></tr>
<tr><td colspan="3">Bureau reports overview portlet» Production Reporting pane»Sessions by hour of day</td></tr>
<tr><td>Constraints</td><td colspan="3">Only available to Bureau and Tech Support Users
▪ Includes Front- and Back-office sessions;
▪ Displays up to 24 rows (one per hour);
▪ Displays only non-zero rows.</td></tr>
<tr><td>Exceptions</td><td colspan="3">These Common report elements are not available:
▪ Pie-charts;
▪ Select group drill-down;
▪ Select detail drill-down.</td></tr>
<tr><td rowspan="7">Column-set @ top-level</td><td>Columns</td><td colspan="2">▪ Hour,
▪ Number of sessions
▪ Percent</td></tr>
<tr><td>Summary</td><td colspan="2">The totals row displays the Total number of sessions in the selected period.</td></tr>
<tr><td>Example</td><td colspan="2"><table><tr><td>Totals</td><td>79</td><td></td></tr><tr><td>Hour</td><td>Number of Sessions</td><td>Percent</td></tr><tr><td>09:00 - 09:59</td><td>4</td><td>5.1 %</td></tr><tr><td>10:00 - 10:59</td><td>14</td><td>17.7 %</td></tr><tr><td>16:00 - 16:59</td><td>1</td><td>1.3 %</td></tr></table></td></tr>
<tr><td>Sequence</td><td colspan="2">Hour of the Day – ascending order (00:00 through 23:59).</td></tr>
<tr><td rowspan="3">Filters</td><td>Available:</td><td>▪ Show all dates;
▪ Date range picker.</td></tr>
<tr><td>Applied:</td><td>Date range shows the previous seven days on initial display.</td></tr>
<tr><td>Removal:</td><td>Remove by selecting Show all dates.</td></tr>
</table>

	Functionality	*Common reporting elements* only.
	Drill-downs	None available.

10.5. Sessions by customer

Figure 29 Sessions by customer report portlet

Table 27 Sessions by customer report definition

Description:	The *Sessions by customer report* summarises the number of *A7* sessions in a specified period, showing: ▪ *Total sessions per customer*; ▪ *Total sessions per customer* as a percentage of the *Total sessions in the period*. *Single-table single-level report*	
Access path:	*Production reporting* menu bar»**Sessions by day of customer**	
	Bureau reports overview portlet» *Production Reporting* pane»**Sessions by customer**	
Constraints	Only available to Bureau and Tech Support Users	
	▪ Includes *Front-* and *Back-office* sessions; ▪ Displays one row per *Customer*; ▪ Displays only non-zero rows.	
Exceptions	These Common report elements are not available: ▪ *Pie-charts;* ▪ *Select group* drill-down; ▪ *Select detail* drill-down.	
Column-set @ top-level	Columns	▪ *Corporate ID,* ▪ *Company name,* ▪ *Number of sessions* ▪ *Percent*
	Summary	The totals row displays the *Total number of sessions* in the selected period.
	Example	
	Sequence	Number of sessions – descending.

Totals		31	
Corporate ID	Company Name	Number of Sessions	Percent
Demo01	DEMO CUSTOMER	17	54.8 %
0310121520012785	multiplay	5	16.1 %
1502120735280674	Teleframe	2	6.5 %

	Filters	Available:	▪ *Corporate ID or name,* ▪ *Code usage,* ▪ *Show all dates;* ▪ *Date range* picker.
		Applied:	*Date range* shows the previous seven days on initial display.
		Removal:	Remove by selecting **Show all dates**. **Clear** to remove *Corporate ID or name* filter.
	Functionality	*Common reporting elements* only.	
	Drill-downs	None available.	

10.6. Sessions by user

Figure 30 Sessions by user report portlet

Table 28 Sessions by user report definition

Description:	The *Sessions by user report* summarises the number of *A7* sessions in a specified period, showing: ▪ *Total sessions per user*; ▪ *Total sessions per user* as a percentage of the *Total sessions in the period*. *Single-table single-level report*			
Access path:	*Production reporting* menu bar»**Sessions by day of user**			
	Bureau reports overview portlet» *Production Reporting* pane»**Sessions by user**			
Constraints	Only available to Bureau and Tech Support Users ▪ Includes *Front-* and *Back-office* sessions; ▪ Displays one row per *User*; ▪ Displays only non-zero rows.			
Exceptions	These Common report elements are not available: ▪ *Pie-charts;* ▪ *Select group* drill-down; ▪ *Select detail* drill-down.			
Column-set @ top-level	Columns	▪ *Username,* ▪ *Corporate ID,*	▪ *Company name,* ▪ *User status,*	▪ *Number of sessions* ▪ *Percent*
	Summary	The totals row displays the *Total number of sessions* in the selected period.		

<table>
<tr><td rowspan="7"></td><td>Example</td><td colspan="2">
<table>
<tr><th>Totals</th><th></th><th></th><th></th><th>72</th><th></th></tr>
<tr><th>Username</th><th>Corporate ID</th><th>Company Name</th><th>User Status</th><th>Number of Sessions</th><th>Percent</th></tr>
<tr><td>tsupport1</td><td></td><td></td><td>Active</td><td>60</td><td>83.3 %</td></tr>
<tr><td>tsupport</td><td></td><td></td><td>Active</td><td>10</td><td>13.9 %</td></tr>
<tr><td>techuser</td><td></td><td></td><td>Active</td><td>2</td><td>2.8 %</td></tr>
</table>
</td></tr>
<tr><td>Sequence</td><td colspan="2">Number of sessions – descending.</td></tr>
<tr><td rowspan="3">Filters</td><td>Available:</td><td>▪ Show all dates checkbox;
▪ Date range pickers;
▪ User Name(s) or Email.</td></tr>
<tr><td>Applied:</td><td>The Date range is set to show the previous seven days;</td></tr>
<tr><td>Removal:</td><td>▪ Select all dates to remove the applied date range filter.
▪ Clear to remove the User Name(s) or Email filter.</td></tr>
<tr><td>Functionality</td><td colspan="2">Common reporting elements only.</td></tr>
<tr><td>Drill-downs</td><td colspan="2">None available.</td></tr>
</table>

Part four

Other Back-office feature-sets

Chapters in Part four ...

The chapters in Part four of the Core Back-office Product specification describe the Other Back-office feature-sets, which provide for the management of SFTP, Consolidated customers and Profiles.

11. Unbilled feature set

See: *Analysis RT 1.0 Core Back-office PSD* for details of the back-office functionality available with the Analysis RT solution.

12. CBV management feature

The CBV Management feature-set enables Back-office users to create consolidated customers and to adjust applied branding.

Figure 31 Consolidated customers portlet

Table 29 Consolidated customers portlet functional components

Component	Use
Search filter text box	Inputting a search string will filter the returned list of *Consolidated customers* to those containing the input string.
Clear (filter) hyperlink	Selecting the *Clear* hyperlink removes any applied filters.
Add new consolidated customer hyperlink	Selecting the *Add new consolidated customer* hyperlink displays the *New consolidated customer* portlet – section *12.1 ()*.
Group status drop-down list	Selecting a *Group status* from the drop-down list filters the returned list of customers to those with that group status.
Returned list	List of *Consolidated customers* matching the applied filters (if any). Selecting the *Consolidated customer code* hyperlink displays the *Update consolidated customer* panel – section *12.2 ()*.
Page browser tools	The page browse tools are displayed only when the list of customers exceeds the default maximum page size of 15.

12.1. New consolidated customer

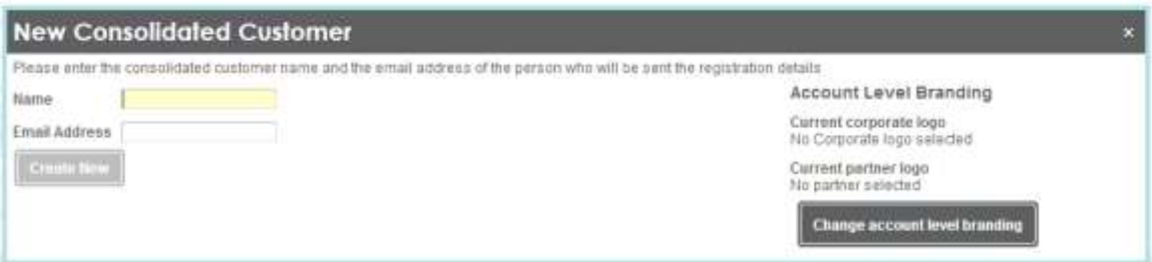


Figure 32 New consolidated customer portlet

Table 30 New consolidated customer – functional components

Component	Use
Name text box	Input a name for the consolidated customer. {mandatory}
Email address text box	Input an Email address for the consolidated customer. {optional}

Component	Use
Create New	Select to save details..
Change account level branding	Selecting *Change account level branding* displays the *Change account level branding* portlet – section *12.3 ().*
Close dialogue button ×	Select to exit the portlet and return to CBV Management portlet. Data not saved is lost.

12.2. Update consolidated customer

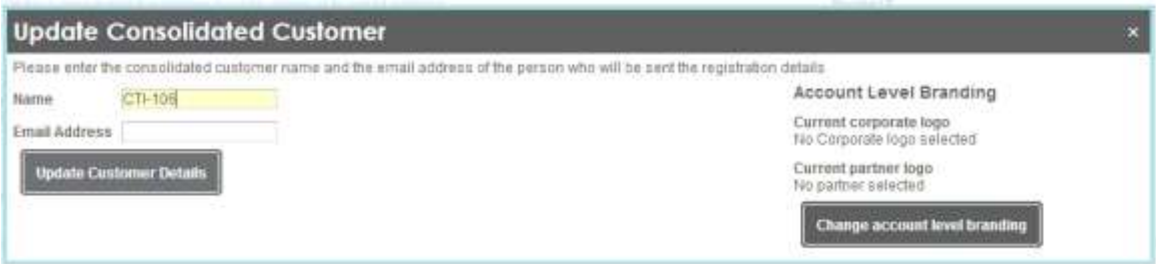


Figure 33 Update consolidated customer portlet

Table 31 Update consolidated customer – functional components..

Component	Use
Name text box	Input a name for the consolidated customer. {mandatory}
Email address text box	Input an Email address for the consolidated customer. {optional}
Update Customer Details	Select to save details.
Change account level branding	Selecting *Change account level branding* displays the *Change account level branding* portlet – section *12.3 ().*
Close dialogue button ×	Select to exit the portlet and return to CBV Management portlet. Data not saved is lost.

12.3. Change account level branding

Figure 34 Change account level branding pane

Table 32 Change account level branding – functional components.

Component	Use
Upload corporate logo Radio selector	**Select** *Use none* if no logo is required. **Select** *Upload* to browse-to and select a logo.
File path text box	Displayed only when the *Upload* option is selected.. **Input** the file path and name if known.
Browse...	**Select** to open Windows file explorer portlet and navigate to the required file..
Update Account Branding	**Select** *Update account level branding* to save the details and return to the CBV Management portlet.
Close dialogue button ×	**Select** to exit the portlet and return to CBV Management portlet. Data not saved is lost.

13. Profile management

The Profile management feature-set enables Back-office users *to create and manage* A7 *profiles.*

Profiles allow *Service-providers* to group features and assign a specific set of functionality to different types of customers depending upon their needs.

Figure 35 Profile feature manager

Why use profiles …?

Service-providers may choose to allow certain customers to see all functionality, whilst restricting others to a sub-set of the available reports and still others to only the *Home*, *Trends* and *Downloads* features.

A7 creates a *Standard profile* at system set up time, which is marked as the default profile and contains all the functionality agreed with the *Service-provider* for their deployment.

The *Data Loader* automatically allocates new *customers* to whichever profile is set as the current default.

Table 33: Profile management – functional components.

Component	Use
Default radio-checkbox	Select to set the associated profile as the Default profile.
Search filter text box	Filters the returned list of *Profiles* by the value entered into this *Search filter* text box.
Clear (filter) hyperlink	Clear to empty the *Search filter text box* and redisplay the complete list of profiles.
Add new hyperlink	Selecting *Add new* hyperlink displays the *Add new profile* portlet.
Report action menu	The *Report action menu* is context sensitive; the actions apply to the selected row – section *4.3.2 ()*
	Selecting the *Assign customers* icon displays the *Assign customer to profile* portlet – section *13.4 ()*.
	Selecting the *View profile features* icon displays the *View profile* portlet – section *13.3 ()*.
	Selecting the *Edit profile features* icon displays the *Edit profile* portlet – section *13.2 ()*. Removing certain features will permanently delete their associated settings and these cannot be re-instated if a mistake is made. It is the user's responsibility to ensure that features are removed only if they are no longer required
	Selecting the *Delete profile* icon displays the *Delete profile* portlet – section *13.5 ()*.

Constraints

Core customer profile functionality utilises CTI LDAP and Liferay.
If the *Service-provider* is using their own LDAP or Portal then bespoke work is required to implement Customer Profiles.

You can neither delete nor amend the Default profile
However the *Service-provider* can choose which profile is to be the default.

- Available only to *Tech Support* and *Service-provider support* users;
  Service-provider support read-only users do not have access to *customer profiles;*
- An unlimited number of customer profiles may be created;
- Displays a maximum of ten profiles per page;
- The profile list is sorted alphabetically, which means that your default profile may not appear on the first page.

13.1. Add new profile

The Add new profile feature enables the *Service-provider* to build a new profile from a list of available features – see *Appendix B List of events logged ()* for details.

The portlet displays *Available features* alphabetically, grouped into logical categories such as Main reports and Usage tagging reports. They retain their alphabetical grouping when they are added-to – or removed-from – the Selected features list.

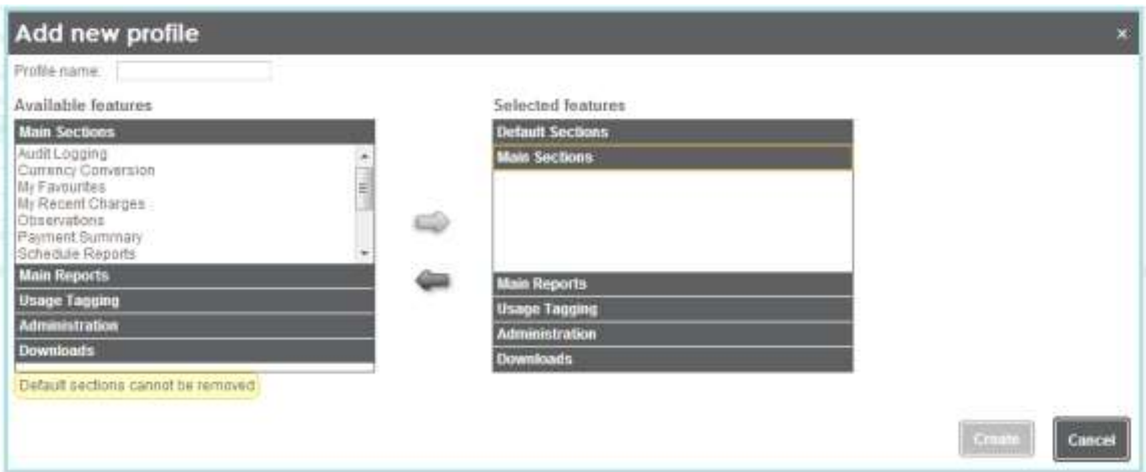


Figure 36 Add new profile portlet

Table 34: Profile management; Add profile – functional components.

Component	Use
Profile name text box	Input a name for the profile Maximum: Fifty characters

Component	Use
Available features selection list	The *Available features* list displays the features available for selection. **Select a category to expand it.** ▪ Displays a specified number configurable{; default=seven} of features when a category is expanded; ▪ Displays a scroll bar there are more features. **Double-click a feature to add it to the selected features** list**.**
Selected features list	**The Selected features list displays the features included in the profile.** **Select a category to expand it.** ▪ Displays a specified number configurable{; default=seven} of features when a category is expanded; ▪ Displays a scroll bar there are more features. **Double-click a feature to remove it from the selected features list.**
Add feature icon	**Select a feature and to add it to the selected features** list**.**
Remove feature icon	**Select a feature and to remove it from the selected features** list**.** It is the user's responsibility to ensure that features are removed only if they are no longer required
Create button	**Click** to create the profile based-on the Selected features list. ▪ The button is active only if a valid *profile name* is input. ▪ Displays an error message if the *profile name* is not unique.
Cancel button	**Click** to abandon the creation process; all changes are lost.

Constraints

Users Signed-in to a customer during the reassignment of that customer from one profile to another will not see the change until they logout and back in again.

- Some default features must be included in every *customer profile*. These cannot be removed and will always be displayed in the *Selected features* list;
- Users cannot make their own read-only groups/features.
- If a report is removed from a profile the selection criteria linked to that report will not be displayed in the usage/charge report wizard.

13.2. Edit profile

The Edit profile feature enables authorised *Back-office users* to maintain existing profiles.

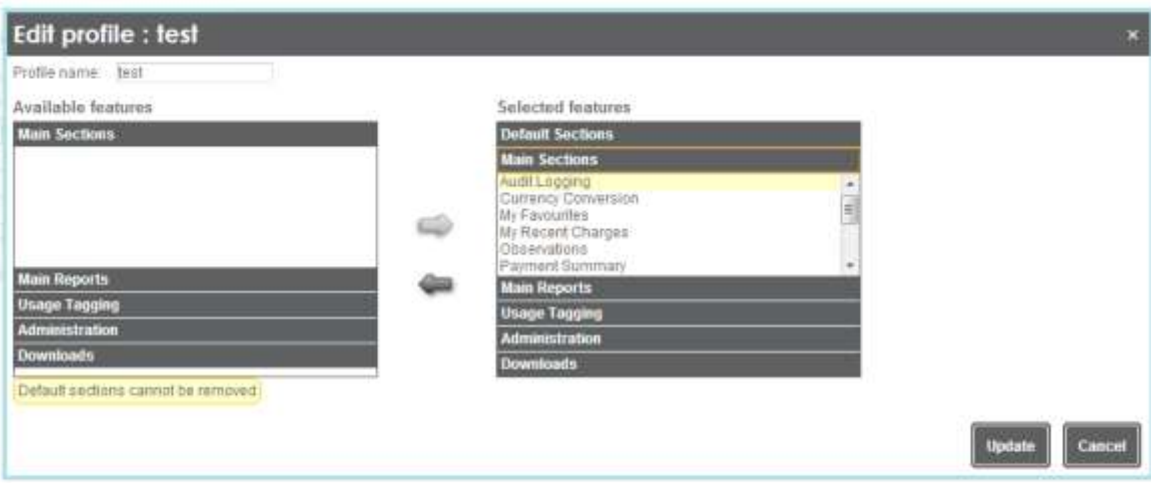


Figure 37 Edit profile page

Functional components

As described in *13.1 Add new profile (page 59)* with the exception of the following items:

Table 35: Profile management; Edit profile – functional components.

Component	Use
Profile name text box	Input a new name for the profile (if required). Maximum: Fifty characters
Update button	**Click** to update the profile using the assembled Selected features list.

Constraints

See also: *13.1 Add new profile ()*.

Removal of certain features from an active profile irrevocably deletes crucial functionality and settings. Remove these features only when they are no longer required:

- Advanced Usage Tagging – deletes all rules;
- Scheduled reports – deletes all scheduled reports;
- Manage Ad Hoc Structures – deletes all ad hoc/user defined structures.

13.3. View profile

The *Edit profile* option is unavailable for the read-only Standard profile and this View profile feature replaces it.

Functional components

Table 36: Profile management; View profile – functional components.

Component	Use
(Feature) Category header	Click to expand the selected section.
Scroll bar	Scroll through the features available within the category.
Close button	Click to exit the View portlet.

13.4. Assign customers to a profile

This feature enables *Service-providers* to assign multiple customers to a profile. [11]

The split-screen displays adjacent lists of Available Customers and Selected Customers, each with their own filter functionality (on *Corporate ID* or *Company name*).

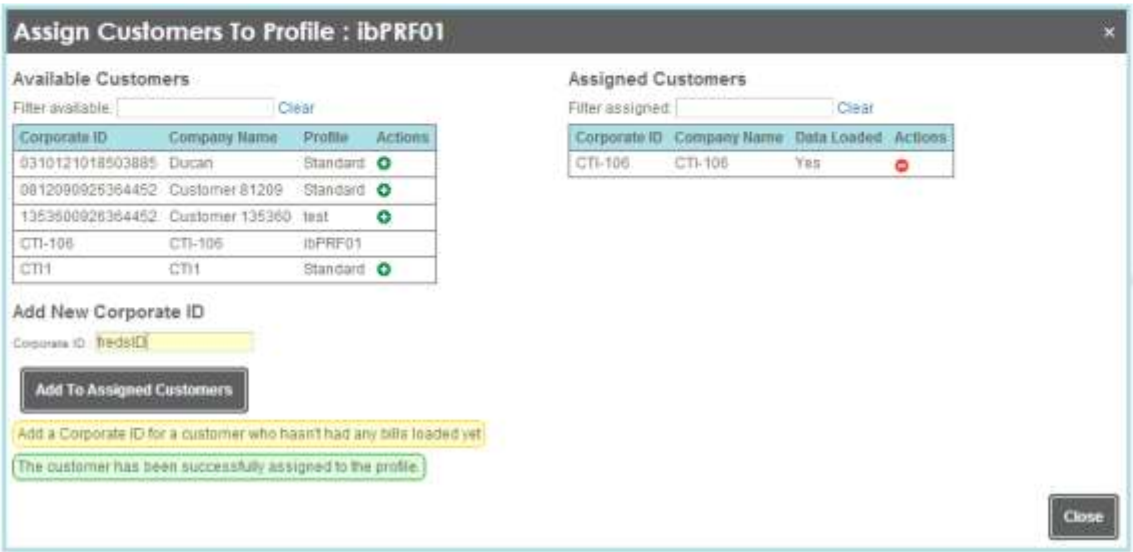


Figure 38 Profile management; Assign customers portlet

Table 37: Profile management; Assign customers – functional components.

Component	Use
Company ID or Name filter	Input a text string to filter *Available customers* by *Corporate ID*/*Company name* (if required).
Clear (filter) hyperlink	Click to remove the currently applied Available customers list filter.
Company ID or Name filter	Input a text string to filter *Assigned customers* by *Corporate ID*/*Company name* (if required).
Clear (filter) hyperlink	Click to remove the currently applied Assigned customers' list filter.
Available customers returned list	The Available Customers list shows the customers' current profile. A maximum of five customers is shown.
Add to profile icon	Click to assign this customer to the profile. Adds the customer to the selected profile. The customer remains in the Available list but displays the newly assigned profile name.
Page browsing controls	As per standard functionality.
Assigned customers returned list	The List of customers you can assign to the profile. A maximum of five customers are shown.

[11] Assign individual customers to a profile in the *List customers* portlet – as described in .

Component	Use
Remove from profile icon	**Click** to remove this customer from the profile. Removes the customer from the profile and assigns them to the default profile. Customers do not revert to their previous profile (if any).
Corporate ID text box	Used to (optionally) assign the profile to a customer who hasn't had any bills loaded yet. Input a *Corporate ID*.
Add to assigned customers button	Add to assigned customers to add the *Corporate ID* to the Assigned customers list. When the customer is loaded they will automatically get this profile.
Close button	Click to close the Assign customers to profile portlet.

Constraints

Users Signed-in to a customer during the reassignment of that customer from one profile to another will not see the change until they logout and back in again.

- A7 page browsing controls are displayed when more than five customers are in the returned list.
- Moving a *Customer* to a *Profile* that does not have corresponding features will permanently delete the affected features and their associated settings.

  Displays no warning message.

13.5. Delete a profile

This feature enables *Service-providers* to delete profiles no longer required.

Figure 39 Profile management Delete profile portlet

Housekeeper' profile service automatically cleans-up the data following each profile change.

Table 38: Profile management; Delete profile – functional components.

Component	Use
Yes button	Yes to confirm the deletion of the profile. ▪ Immediately deletes the profile; ▪ Assigns any associated customers to the default profile.
No button	No to cancel deletion of the profile.

Constraints

- You cannot delete Standard or Default profiles.

14. sFTP feature-set

The *sFTP* feature-set enables *Service-provider*s to configure *sFTP* servers to handle file downloads.

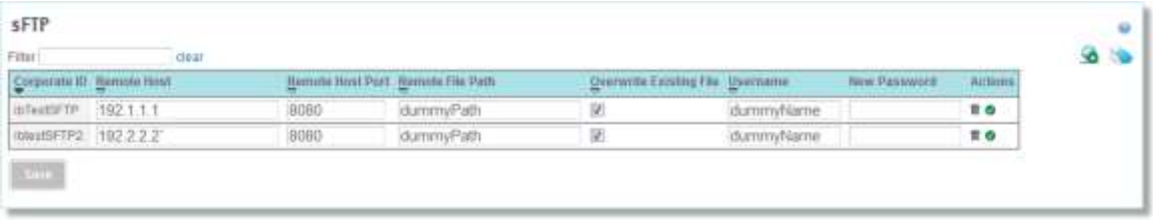


Figure 40 sFTP management

Table 39: sFTP management – functional components.

Component	Use
Corporate ID filter	Input a text string to filter the returned list by *Corporate ID* (if required).
Clear (filter) hyperlink	**Click** to remove the currently applied filter.
 Add new profile.	Select to add a new sFTP profile Displays a blank input form (*Figure 41* – below). See *chapter 14.1 Add sFTP details (page: 65)*.
	**Print** current sFTP list. Displays a printable page.
Returned list	An editable list of the current sFTP profiles.
	**Select** to delete the sFTP details. Yes/no confirmation required.
	Test the sFTP connection Displays a portlet monitoring the connect request (*Figure 42 – below*). See *chapter 14.2 Test an sFTP connection (page 66).*
Save	**Save** to save changed details. Button activated only when displayed details are changed.

14.1. Add sFTP details

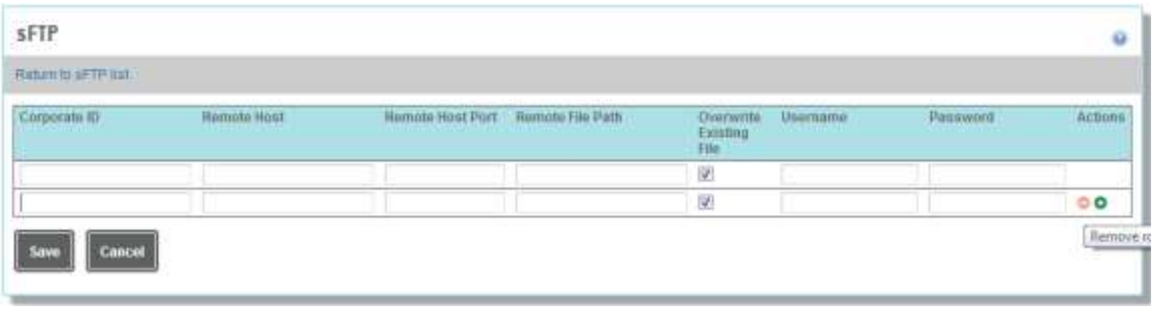


Figure 41 sFTP management add new details portlet

Table 40: sFTP management; add new details – functional components.

Component	Use
Return to sFTP list hyperlink	**Return to sFTP list** to exit the data entry form.
sFTP field text boxes	Input required sFTP details.
Add new profile.	Select to add another new sFTP profile. Displays a blank row.
Delete new profile details.	**Select** to remove a detail row. Displayed only when using the *Add new profile* dialogue to add multiple rows.
Save	**Save** the new sFTP details.
Cancel	**Cancel** and return without saving details.

14.2. Test an sFTP connection

Figure 42 Example test of sFTP connection

Appendices

Appendix A Sample error log

Appendix B List of events logged

- Interaction with Usage Summary;
- Interaction with Observations;
- Interaction with Invoice Summary;
- Interaction with Trends;
- Clicking on any report from the *Report overview*;
- Creation / amendment / deletion of a *Scheduled report*;
- Creation / deletion of a *Subscriber-transaction report* via the wizard;
- Creation / deletion of a *Charge report* via the wizard;
- Manually running a *Scheduled report*;
- Automatic running of a *Scheduled report*;
- Creation / amendment / deletion of a *Currency list*;
- Tagging Overview;
- Tagging Overview for individual *Subscriber* (this allows the user to tag their usage);
- Tagging state;
- Tagging usage;
- Phone users list;
- Send email reminders;
- Unlock completed users;
- Lock/unlock users not completed;
- Full tagging usage.

Each of these counts as one event, that is:

- User creates a *Subscriber-transaction report,* and the count equals 1;
- User then deletes that report and the count equals 2.

Administration features and *Usage tagging management* features not included.

Appendix C User roles

C.1 Role capabilities

Table 41: Role capability matrix

Roles	Role capabilities							
	W	IU	IC	SME	BI	VC [12]	RO	MALB
Analysis User	✔				✔	✔		
Customer Admin	✔				✔	✔		
Tech Support	✔	✔	✔			✔		✔
Service-provider Support	✔	✔	✔			✔		✔
Bureau User	✔				✔	✔		
Account Manager	✔		✔			✔		✔
SME				✔		✔		
Service-provider Support Read-only		✔	✔			✔	✔	
Read-only					✔	✔	✔	

Key:

- W Write;
- SME ;
- IU Impersonate users;
- IC Impersonate customers;
- BI Can be impersonated;
- VC Call detail records viewable;
- RO Read-only;
- MALB Manage account-level branding.

C.2 Portlets each role can access

Portlets available			Roles				
Level 1	Level 2	Level 3	Tech Sup	Bureau	Svc Prov.	Svc Prov	Account Manager
Support overview	*Manage users*	List Users	✔		✔	✔	✔
		Users with activity	✔		✔	✔	— [15]
		Users with no activity	✔		✔	✔	—
	Manage customers	*List customers*	✔		✔	✔	✔
		Customers with no user activity					— [13]

[12] This option is configurable for all roles; default is viewable.

[13] Access temporarily revoked – as described in Standard *A7 user roles* table – this report may allow Account Managers to view all information for all accounts and users rather than just those accounts and users to which they are assigned.

Portlets available			Roles				
		Customers with user activity					—
		List profiles	✓			✓	
		Registered users					
	Event usage	*Event usage* by Customer	✓		✓	✓	✓
		Event usage by User	✓		✓	✓	✓
		Event usage Summary	✓		✓	✓	—
Account manager			✓		✓		
Registration code generator			✓		✓		
Bureau reports overview	Data Processing	View Jobs		✓			
		Job Status Summary		✓			
		Invoice report		✓			
		Payment summary		✓			
		Job Charges Summary		✓			
		Housekeeper		✓			
		Load report		✓			
	Production reporting	Performance statistics					
		Login attempts					
		Sessions/Weekday					
		Sessions/Hour					
		Sessions by Customer					
		Sessions by User					
		Sessions by Partition					
Profile feature manager	Assign Profile		✓		✓		
	Add new profile		✓		✓		
	Edit profile		✓		✓		
	Delete profile		✓		✓		

Table 42: Portlet availability by role.

C.3 What each role can do

Portlets available	Roles				
	Tech Supp	Bureau	Service provider Support	Service provider Support (RO)	Account Manager
Account Manager	X		X		
Bureau	X				
Customers with no user activity					—
Customers with user activity					—
Data Processing		X			
Delete user	X				
Disable user	X				
Download error log	X				
Enable user	X				

Portlets available	Roles				
Event usage	X		X	X	X
Event usage by Customer	X		X	X	X
Event usage by User	X		X	X	X
Event usage Summary	X		X	X	—
Housekeeper		X			
Invoice report		X			
Job Charges Summary		X			
Job Status Summary		X			
List profiles	X			X	
Assign Profiles	X		X		
List customers	X		X	X	X
List Users	X		X	X	X
Manage customers	X		X	X	X
Manage users	X		X	X	X
Profile Feature Manager	X		X		
Profile Management	X		X		
Registration Code Generator	X		X		
Support Overview	X		X	X	
Users with activity	X		X	X	—
Users with no activity	X		X	X	—
View Analysis as this Customer	X		X	X	
View Analysis as this user	X		X	X	X
View error log	X				
View Jobs		X			

Appendix D Profile sections available

A list of the sections available for a core deployment.

Sections	Contents		
Default Sections	▪ Forgotten My Password ▪ My Account	▪ *My preferences* ▪ My Company	▪ User Context ▪ Your are Here
Main Sections	▪ Audit Logging (structure) ▪ Currency Conversion ▪ Invoice Summary	▪ Observations ▪ Scheduled Reports (this will apply to both reports and usage tagging) ▪ Support	▪ Trends ▪ Usage Summary ▪ Watchpoints
Main Reports	The reports available depend on the Charge-categories used and the data available.		
	▪ Billing Period History ▪ Billing Period Report ▪ Bundle Usage ▪ Charge-categorisation ▪ Cost Allocation ▪ Cost Range ▪ Custom Charge Report ▪ Custom Usage Report ▪ Daily Distribution ▪ Destinations ▪ Duration Range ▪ Fixed Cost	▪ Frequently Dialled ▪ Subscriber Summary ▪ Inclusive Usage By Phone* ▪ Internal ▪ Invoice Back Up* ▪ Invoice Details* ▪ Longest ▪ Monthly Charge Analysis ▪ Monthly Trend Analysis	▪ Most Expensive ▪ Peak/Off Peak ▪ Roamed ▪ Service Summary ▪ Summary of Inclusive Usage* ▪ Tax Exempt Report* ▪ Transmission Type ▪ Usage ▪ Usage by Direction ▪ VPN
	Reports are grouped into *Costs, When, Where* and *How.* A7 does not display a group if the user's profile does not contain at least one report from it.		
Usage Tagging Reports	▪ Custom Usage Tagging Reporting ▪ Subscriber Users List ▪ Lock/Unlock Users Not Completed ▪ Send Email Reminders ▪ Tagging Overview	▪ Tagging State Tagging Usage This has a dependency on the Tagging Overview report; both must be selected; ▪ Unlock Completed Users ▪ Call Reports - Usage Tagging	▪ Usage Tagging - Subscriber Users Must be included in the user profile to make *Usage tagging* features available to: ▪ Users assigned to a *Subscriber*; ▪ Users created via *Add User* or the Subscriber users bulk upload

Sections	Contents

Administration	▪ Organisational structure Control
	Drives the Organisational structure view in the context and wizard. Organisational structure groups are on displayed if this is selected the. This is to caters for service-providers who want to show a list of Subscribers without the Organisational structure group feature;
	▪ Manage Ad-hoc Structures (Either Advanced or Normal);
	▪ Manage Organisational structure (Departments, Subscribers and Tiers)
	  ▪ To manage ad-hoc structure the profile must contain the 'Manage Ad-Hoc structure' feature;
	▪ Manage Subscribers – Move
	If the profile contains this, but not the manage structure features, then neither the *Create* nor *Upload structures* options is available.
	▪ Manage Subscribers – Rename
	Allows the user to rename phones, search for a phone and tick/untick the 'phones in current live bill' checkbox. No further Organisational structure functionality is available. By default the
	  ▪ ‘Reporting Structure’ is re-named ‘Phone Summary’,
	  ▪ Organisational structure control shows only one Organisational structure,
	  ▪ ‘Select structure…’, ‘main structures’ and ‘User defined structures’ headings and associated functionality is removed,
	  ▪ ‘Current selection’ heading is renamed ‘Phone Summary’,
	  ▪ Clicking on the ‘My Company Link’ shows a list of the Subscribers associated with the account.
	  This is repeated in the ‘Who’ tab in the Call and Charge report creation, however the ’Phones in My Company/My Company and below’ will not be available, and the user will select a particular phone via the search icon. In this scenario the ‘Organisational structure Control’ feature should NOT be selected.
	▪ Manage Charges
	  ▪ Only available if the Service-provider has the 'Manage Charges' Module,
	  ▪ Once selected the 'Manage Charges Audit Log is also applied to the customer profile, you cannot choose the Manage Charges Audit log independently of the Manage Charges portlet.
	▪ *Manage users*

Downloads	▪ Calls - Raw Data Download ▪ Data Downloads - Full Call Usage Download ▪ Data Downloads - Long Phone Summary ▪ Data Downloads - Short Phone Summary ▪ Invoices ▪ DR Downloads* (Not currently available in Core) ▪ Bill Download* This allows a Service-provider to send a further zipped file or PDF of data which can be hosted and stored on Downloads feature. ▪ Any feature with an asterisk * indicates a bespoke report that may not be applicable to all Service-provider's

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