



redware

Telecoms Billing

Manual

www.telecoms-billing.com

Author: Stamati Crook
Email: stamati.crook@redware.com
Date: 19 November 2020
Doc: telecoms-billing-manual-3.21.doc

www.redware.com

Contents

Contents	3
Redware Research Limited	5
Introduction	6
Telecoms Billing Overview	7
Preparation	8
Suspense	9
Fraud.....	10
Reconciliation.....	10
Billing	11
Software Overview	12
Fast Setup.....	15
Traditional Setup	15
Technical.....	16
Fraud.....	17
Suspense	17
Reconciliation.....	17
Billing	18
Customer Service Website	19
Home	19
Search.....	19
Customer.....	20
Services.....	22
Service Report.....	22
CLI - Originating Number	23
Number Translation	24
Product.....	25
Portal User	26
Pricelists	26
Suspense	28
Reports	29

Downloads	30
Telecoms-Billing Client	31
Installation.....	32
Settings.....	33
Sage Setup.....	33
Data Synchronisation	35
Data Export	35
Data Import.....	36
Billing Cycle	38
CDR Call Details.....	39
Suspense	40
Create Bills	43
Create Invoices.....	44
Fulfilment	45
Reconciliation.....	46
Suspense Tools	47
Pricelist Editor	47
CLI Suspense Tool.....	48
Tariff Suspense Tool.....	49
CDR Designer Tool.....	51
Glossary.....	52

Redware Research Limited

Redware Research Limited is a software house specialising in solutions for Microsoft CRM and Sage Accounting. We are both a Microsoft Registered Partner and a Sage Developer. We are based on the south coast of England and welcome telephone enquiries on 0845 3010 444 or +44(203) 1799 444.



We specialise in **accounting** and **billing** solutions and have add-on software for Microsoft CRM to integrate your accounting system with CRM. We currently have a packaged solution for Sage 50 accounting and we offer a consultancy package to adapt our software to integrate with any accounting package.

Our 100-page Microsoft CRM User Handbook is available [online](#) to help you get started and explore all the features of Microsoft CRM including the sales, marketing, and service areas. You can read and print out chapters online or buy the book. Please take a look and give us some feedback.

Redware has developed a range of software add-ons for Microsoft CRM covering a broad range of functionality including:

- VAT and Tax Calculation Workflow Activity.
- SMS text messaging to mobile phones.
- Fully integrated Business Credit Checking for UK and European Companies.

We sell software to help handle billing requirements for users of the Sage 50 accounting system which including:

- Our intranet website application which makes your sales history available in a browser to your Customer Service team.
- Mass invoicing by uploading invoices into Sage from a spreadsheet.

Our non-commercial focus is to get young children and teenagers programming with the **Scratch** programming language available free from the Lifelong Learning Group at MIT and we have resources for parents and teachers available on our [website](#). We encourage you to empower your children with programming skills using our training videos and lesson plans.

Please contact us with any enquiries on any of our products or for a discussion on how our consultancy service might help integrate your business systems and processes.

Stamati Crook

Redware Research Limited

32 Welbeck Avenue, Hove, BN3 4JL, England.

Telephone: +44 203 1799 444 or 0845 3010 444

<http://www.redware.com>

stamati.crook@redware.com

Introduction

Thank you for purchasing or evaluating our Telecoms Billing software. This document describes the software and we are very happy to demonstrate it to you on request. Please call Stamati Crook on 0845 3010 444.

The **Telecoms Billing Overview** describes the business processes required to produce bills from raw call detail records and introduces some billing terminology used throughout the document (and noted in the **glossary**). Please start here if you are new to telecoms billing.

This is followed by a **software overview** which explains how our software is used to perform billing. We typically charge a setup fee which comprises our time to make sure you have the knowledge to complete the first two billing months successfully and you need to appoint a **billing manager** within your organisation to understand the processes described here.

Our software is **hosted** and comprises a website for you to enter customer information and some **client software** (running on Windows) to manage the billing process and match and rate your call detail files.

The client software is used to determine any problems with rating the call detail records which must be fixed (or the call details written off) before proceeding with the monthly billing.

Monthly product rentals and other charges are added to the call costs and the corresponding bills created after performing checking at least a portion of the proposed bills.

Bills can be downloaded into Sage 50 to create invoices which are then uploaded back to the website to be available in the customer portal.

The customer is able to view a summary report and a call details file as well as the uploaded Invoice from Sage. You can email these files to each customer and/or give them access to the files on the customer portal.

Telecoms Billing Overview

Telecoms Billing Systems process files of call data by **matching** each call against a customer record and **rating** it against a pricelist to produce a price for each call.

The data often arrives from a third-party provider as a daily or monthly data file known as a Call Details Records (CDR) file (see the glossary for more terms). This file usually contains one record for each call containing the following minimum level of information:

- Number Dialed.
- Originating Number (CLI) used to identify the Customer.
- Duration in seconds or tenths of a second.
- Date and Time of the Call.

Note that CDR files are often received from your own telecommunications provider who has already put the Call Detail Records through their own billing process and they may helpfully have added the account number and the retail and cost price to the Call Details. If you just want to mark up the prices you can avoid some of the complexities of billing by using this data but you lose the flexibility to set your own destination tariff.

The billing process takes each call and first matches the originating number against the customer database to discover the **customer** and **pricelist** to apply to this call. Each call is then rated against the pricelist to produce a retail price for the call. The pricelist contains the following information:

- A retail price per minute for the call.
- The retail price may differ for standard, economy and weekend time zones.
- Some Destinations may have a minimum price per call.
- A setup charge is added to some types of call (some calls will have only a setup charge and no price per second).
- A rating interval usually set to one second but sometimes rounding up the duration to the nearest minute so the customer is billed 120 seconds duration for an 85 second call for example.

There may be issues that prevent the matching and rating of an individual call. These problem call records are placed in a **suspense** file for the billing manager to look at. Each call in the suspense file is flagged with a suspense code that illustrates the problem encountered. For example, there may be issues matching the originating number for a new telephone line against a customer record because the number has not yet been entered into the customer database (part of a process known as **provisioning**).

Call Detail Records (CDR) may come from different sources depending on the technical options employed by the reseller who may provide VOIP services with one supplier and traditional telecoms services through another. An additional consideration in the UK for some vendors is the processing of call details for

customers using BT lines which arrive in a special **DEDS** call details file which needs processing alongside other CDR data.

Some telecoms resellers provide **non-geographic numbers** which allow customers to make a call to the company at local call rates. In the UK these are 08 numbers but you may also have **international access numbers** that allow people to call your customers from abroad at local rates.

Telecoms vendors are increasingly providing **mobile calls** to their customers which can be handled in the exact same manner as a conventional call using the handset number as the originating number. Often the mobile provider will rate these calls for you as there are many **bundled** options which make calculation of call costs difficult. In this case you may want to accept the provider price and import the calls without rerating (or perhaps apply a mark-up).

Monthly bills also typically contain invoice items for handset rental or monthly broadband and other monthly or occasional charges and perhaps annual support charges.

Part of the job of a billing manager is to look at the suspense regularly and then make sure the customer services are able to resolve any issues and reprocess the suspense files. Billing often takes place on a particular day each month and bills are produced for each customer only once all the calls in the suspense file have been re-rated or written off. Part of the billing process is to perform a **reconciliation** where a number of bills are checked for accuracy and the totals for the month are checked against the telecoms provider invoice and validated against previous months to look out for any problems.

The actual billing run often involves the creation of an invoice and a spreadsheet file containing the monthly call data for each customer. Individual invoices or a summary may also be imported into the accounting system.

One final thing to note about billing is that it is often a monthly process that uses a call detail file created from a telecoms provider which itself has put the call details through their billing process. The provider may also provide a daily file or one may be available from local equipment (from an asterisk box or a local telecoms switch). It is important to monitor the daily files for **fraud** in case a customer's system has been compromised.

Preparation

A good deal of preparation is required before a monthly billing run can be completed successfully. It is possible to simply run a call details file through the billing system and watch all the call records drop into the suspense file which will provide a list of every action that needs to be performed to resolve billing issues for each call. A more efficient process is to prepare the following data for provisioning into the billing database:

- Customers need to be entered into the database together with details of any Originating Numbers to be used to match against the call detail records.

- Monthly items need to be billed each month for example the rental of handsets or monthly broadband fees or a maintenance fee or other system costs.
- Pricelist information needs to be maintained for each destination called by the customer. The rating process places calls to any destinations that do not have a valid retail price into the suspense file.
- Many telecoms providers will include the cost information for each call in their call details record which can be used to double check that each call is being billed at a profit. An alternative is to create a pricelist for call costs and to rate each call for both retail and cost prices as part to aid the reconciliation process.
- Call details may originate from different sources each of which may have a different format. The pre-processing of each data file into a format that can be processed by the billing system is called **mediation** and may need to be set up by the technical team before billing can commence.
- Mediation may also require the identification of additional information for a call such as whether it was a data or voice call or a number translation or operator assisted call.
- Vendors may bundle calls together for a monthly fee especially for mobile customers and **bundled** calls need to be identified from the CDR file or calculated during billing as a discount against the call.

Suspense

A large part of the responsibility of a Billing Manager is to eliminate calls from suspense. Each suspense record represents a call that cannot be billed to a customer and therefore a potential loss of revenue. Some of these calls may be due to an error by the telecoms provider and a mechanism might be required to claw this money back from the provider if the call cannot be billed.

A variety of reasons can prevent a call being matched and rated successfully. Here are some of the typical suspense reasons that might be encountered each month:

- Missing CLI (Originating Number) where no match is found in the customer database.
- Retail price of the call is less than the cost obtained using the cost pricelist or from the provider's cost data.
- Invalid destination number.
- Retail price for the destination not found in the database.

Each of these issues needs to be resolved and the suspense calls re-rated ready for billing. The Billing Manager needs to clear all the suspense or write off the call records prior to completing the billing process each month.

Fraud

Fraud can occur, for example, over a bank holiday where a phone system is compromised and used to set up a call shop over a weekend which can result in thousands of pounds of fraudulent calls being made.

Many telecoms providers have their own sophisticated fraud monitoring or allow you to set a daily maximum for each line to prevent exposure to expensive fraud. This is highly recommended as a daily CDR file is not the best mechanism to deal with fraud detection.

If no other process is available, the billing system can be used for monitoring fraud by processing daily files and looking at patterns of usage compared with previous months (for example flagging a 20% daily increase in calls from a particular line).

Reconciliation

The reconciliation process is usually performed by the Billing Manager, maybe together with the Accounts department, and involves a series of cross-checks to make sure that there have been no errors during this month's billing process.

Each company devises their own checks some of which might be taken from the list below:

- A justification is required for each call written off in the suspense file and occasionally revenue needs to be reclaimed from the provider.
- Each individual call might be checked against the actual cost charged by the provider or against a cost pricelist.
- A percentage of the monthly bills for each customer should to be checked manually.
- The monthly totals for each customer (minutes and value) should be checked against historical spending patterns to look for any discrepancy (or fraud).
- Total duration and number of calls per destination can be checked against historical trends.
- The total duration and number of calls can be checked against the provider's invoice and often broken down by destination.
- Totals for items other than calls need to be checked against supplier invoices and historical trends both by customer and as totals by product type.

Reconciliation is critical to the billing process in order to protect revenue and any errors need to be identified and corrected before the bills are sent out to the customers. Sometimes the monthly billing run may need to be repeated (using a backup of the database) if a major error is encountered.

Billing

The final stage in the billing process once reconciliation is complete is the creation of the customer bills and their fulfilment by sending out emails or importing data into the accounting system.

This final stage typically involves some or all of the following:

- Creation and emailing of a spreadsheet and maybe a summary sheet containing a call summary for each customer.
- Importing of billing information into the accounting system for the production of invoices.
- Interfacing with a payment system (such as direct debit in the UK) for payment processing.

Billing is an endless cycle and processing of daily call details and suspense may continue during the billing process or immediately once billing is complete in preparation for the next month of bills. Larger companies may need to stagger billing into a weekly process for different groups of customers to regulate the Billing Manager's workload or level out the cashflow.

Software Overview

This document describes the process of implementing and running the Telecoms Billing System from Redware Research Limited. Our dedicated website is at <http://www.telecoms-billing.com>.

Please read our Overview on Telecoms Billing if you need a refresher on the meaning of some of the terms used in this document – mediation, provisioning, matching and rating, suspense, fraud and billing.

Our software is a hosted system so you do not need to invest in servers or database infrastructure to run your billing.

Billing is usually a monthly process which creates two files that can be emailed automatically to each customer along with an invoice from your accounting system:

- A document showing a summary of call charges together with a list of any monthly charges such as line or equipment rental and internet hosting charges.
- A data file in CSV format containing a list of all the calls made during the month together with the destination and prices.

A summary data file of all the items billed for all customers is also produced for you to import into your accounting systems and we provide the facility to import invoices directly into your accounting package. Currently we support:

- Sage 50 (UK, ROI, NZ, SA, AUS)
- Sage 200
- Quickbooks Online
- Xero
- Microsoft Dynamics 365 Sales CRM.

We also sell utility software and consultancy to help you send accounting data on to your payment provider to process direct debits or credit card payments for example.

The billing process begins each month with the uploading of Call Details Records (CDR) into the database. Our client software allows you to specify the exact format for the upload and set up advanced features to detect non-geographic and bundled calls for example. We help you setup the configuration for each type of CDR as part of the setup process and you can add additional sources of Call Details at any time.

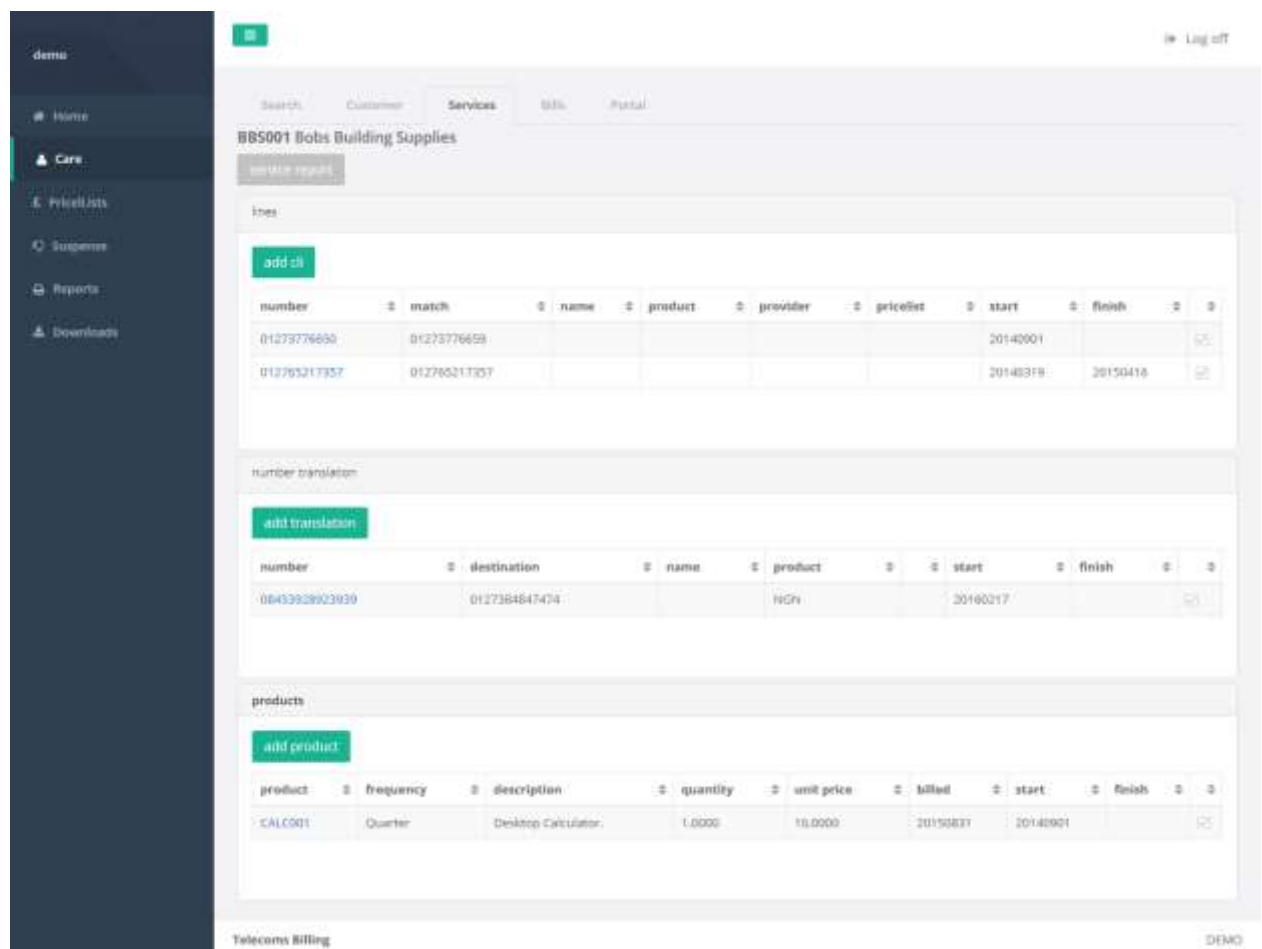
Calls are processed and matched against a customer and rated against a pricelist tariff for each destination as it is uploaded for the first time. Problem calls that have data missing from the billing database are passed into a suspense file for the person appointed as your Billing Manager to view and fix or pass on to the Customer Services team. Typical issues encountered on a daily basis might be the need to add an Originating Number against a customer record once a new

line has become active or the need to enter a retail and cost price for a new destination that has not been encountered before.

Customer information is maintained using the website application or by uploading data from spreadsheets (or programmatically using the API). Typically you will use the website to add new customers and then maintain a list of services against them. Services include:

- Landline or VOIP – typically a single number or a range of numbers.
- Mobiles usually have a separate pricelist perhaps also with a bundle.
- Non-Geographic numbers or international access codes.
- Products – these can be one off or more typically regular payments for line and equipment rentals, broadband, support activities and so forth on a monthly, quarterly, or annual basis.

A sample screenshot from the website is shown below. Customer care staff can change customer details and add service details (Originating Numbers) or monthly costs to each customer as well as view past billing history. This is the method of specifying provisioning data for customers after the initial preparation phase.



Suspense reports are also available as spreadsheet files and have a different format according to the suspense code. An example is shown below where calls

have a retail price which is less than the cost price. The options for this category of suspense is to change either the retail price or the cost price and rerate the calls or to accept the calls as they are for billing. Sometimes the calls need to be written off and perhaps the telecoms provider contacted for a refund if these calls cannot be billed.

Suspense Report

Summary

suspenseid	csuspense	cduration	ncount	nduration	cfirstdate	clastdate	ncdrcost	nprice
0	OK - Ready to Bill	519:53:10	8749	1,871,590.00	20140831	20140930	1,023.28	1,223.99
21	Match - CLI not found.	19:01:18	202	68,478.00	20140903	20140929	22.42	0.00
31	Band - no match for B number	01:14:24	21	4,464.00	20140901	20140930	5.86	0.00
34	B Number match (prefixed)	32:42:10	30	117,730.00	20140831	20140930	0.00	0.00
43	Rating - No Retail Tariff	02:49:25	19	10,165.00	20140901	20140924	15.19	0.00

0 OK - Ready to Bill

These are ready to bill.

caccount	cisocurrency	billid	cduration	ncount	nduration	price	ncdrcost	cfirstdate	clastdate	suspenseid
ABC001	GBP	61	46:45:52	2164	168,352.00	47.23	95.81	20140903	20140930	0
BRO001	GBP	63	04:34:59	311	16,499.00	4.22	5.28	20140831	20140929	0
FRED09	GBP	62	313:21:26	5093	1,128,086.00	657.55	603.41	20140901	20140930	0
REDWARE01	GBP	11	155:10:53	1181	558,653.00	514.99	318.77	20140831	20140930	0
		197		8,749	1,871,590.00	1,223.99	1,023.28			

21 Match - CLI not found.

SERVICE - Enter a new CLI/NT service against the appropriate Customer or check if you need to reactivate an existing service.

Our approach to the preparation phase involves the following tasks and processes:

- Customers and products can be uploaded from the accounting system or spreadsheet uploads as well as date entry using the website.
- Addition of originating numbers (CLI) for each customer by uploading a spreadsheet or website data entry. Note that this can be done at a later stage when processing suspense after the first CDR is processed.
- Pricelists need to be created for both cost and retail pricing by destination unless you are simply marking up the provider charges. For the UK, you need to decide on the access charge for non-geographic numbers (typically between 6 and 12 pence).
- Customer Products need to be specified for additional monthly charges according to your business model.
- We may need to take a look at your call details files (you may have several sources of call data) and setup the mediation process for each format so that you can upload the call data successfully into the billing database. We might need to deal with call bundles in this way.

- Advanced mediation settings such as number translation or other features may need to be built into the processing of your call details. We have special processing for the DEDS file received by BT Openreach customers.

At this point, you are in a position to process call details through the system. Any problems with individual calls will result in them being placed in a suspense file which you can view and rerate with the client software.

- Reconciliation reports are available that summarise the billing activity for the current month so you can cross-check against provider invoices and historical trends before completing the monthly billing. Most Billing Managers also physically check a number of customer bills for accuracy.
- The final billing process results in an email going out to each customer and integration with your accounting and payment systems.
- Billing is a monthly process and you also need to consider daily monitoring of call data to monitor and anticipate issues with fraud.

Fast Setup

Fast setup is possible if you are making up the cost or retail price already contained in the CDR received from your telecoms provider. In this case only the access charge needs to be specified to be in a position to rate all calls.

If you are connected to an accounting package then customer and product information can be imported automatically.

The simplified onboarding process follows these lines and can be self-managed:

- Email us the CDR file so we can configure for you.
- Download the Billing software and connect to your accounting package.
- Import the customers and products from the accounting database into the telecoms billing database.
- Process your CDR and look at the suspense. You will need to add the CLI records for all incoming lines against the customer using the website or our suspense tools and then rerate the calls.
- Add any monthly billing items for each customer.
- You are now ready to perform the first billing run and create invoices to push into your accounting system.

Traditional Setup

The traditional setup adds the creation of a pricelist with tariffs for each destination to the fast setup above.

We offer a setup phase to help configure the software and also train you in using the system with experience of some of the issues that might occur in a typical billing cycle. Often, we might process a couple of months of historic data with

you as part of the setup either with a day onsite or remote consultancy with a remote session of an hour a day over a week.

We start by configuring the CDR data format for you so you can upload CDR into the system. The suspense data gives you an idea of the progress you are making with the provisioning process.

We usually help you with the initial provisioning of the system by asking you to prepare spreadsheets containing the data we require to bill the call details. We provide you with sample spreadsheets which you complete and we upload into the database:

- A spreadsheet of all customers is required each with an account number (or you can upload accounts directly from the accounting database).
- We provide you with a spreadsheet of all the possible destinations and you enter as many of the cost or retail prices as you can. We can sometimes massage the data from your provider if you have pricing data in a suitable format for us to process automatically.
- You can create a retail price tariff directly from a cost tariff by copying the cost tariff and applying a 20% mark up for example. You can then add specific retail pricing for any important destinations such as UK national and mobile calls and you can create as many pricelists as you like.
- You can upload the originating numbers for each customer from a spreadsheet or use the website to enter this information alongside any monthly billing costs for the customer. You can also specify the pricelist against the customer for a particular originating number so that you apply different pricelist for traditional telephony and VOIP calls for example.
- Add monthly or annual charges such as handset or equipment rental and maintenance contracts.

Technical

- You may need to give us details of your call details file format (and sample files) so we can implement the mediation layer necessary for successful importing of call data into the billing database. Special features may need to be implemented for number translation and operator assisted calls and for the bundling of calls.
- We also need your logo and simple design information such as the font you would like to use so we can design the format of the billing summary to be emailed to the customer.

Fraud

Our software allows matching and rating of a parallel CDR database if required although we recommend you ask your provider for information on their fraud control systems.

Typically your telecom vendor supplies daily files for fraud control and will send a different set of data at month end for the billing process. You can use a parallel fraud database here just for fraud monitoring and process the CDR again when the monthly file is received. This can also help you prepare suspense more easily.

Suspense

Call Details files are provided daily or monthly by most providers and you may also be creating calls from your own switch or asterisk system. Our client software must be configured for each source of data and you place the call details files into the appropriate folders for processing.

The Billing Manager can view a suspense report after every upload and begin to resolve any issues using the web interface to add or alter information in the database. The re-rating process processes the calls again resulting in a new set of suspense data.

You may need to run the re-rating process more than once per day as you get close to your monthly billing date. The Billing manager must resolve or write off any suspense before monthly billing can take place.

Reconciliation

A number of reports are available that monitor the current state of monthly billing and produce a comparison against the previous months data. You must define your own reconciliation procedure often involving reports (spreadsheets) containing the following data:

- Summary per customer for this month and the previous month.
- Summary per destination for this month and the previous month.
- Summary per telecoms provider for this month and the previous month.
- Individual details of the monthly and call costs to be invoiced for each customer.

Summary data usually includes the number and total duration of all calls together with the retail price and cost price and also the CDR cost price from the telecoms provider if supplied in the call details file.

Billing

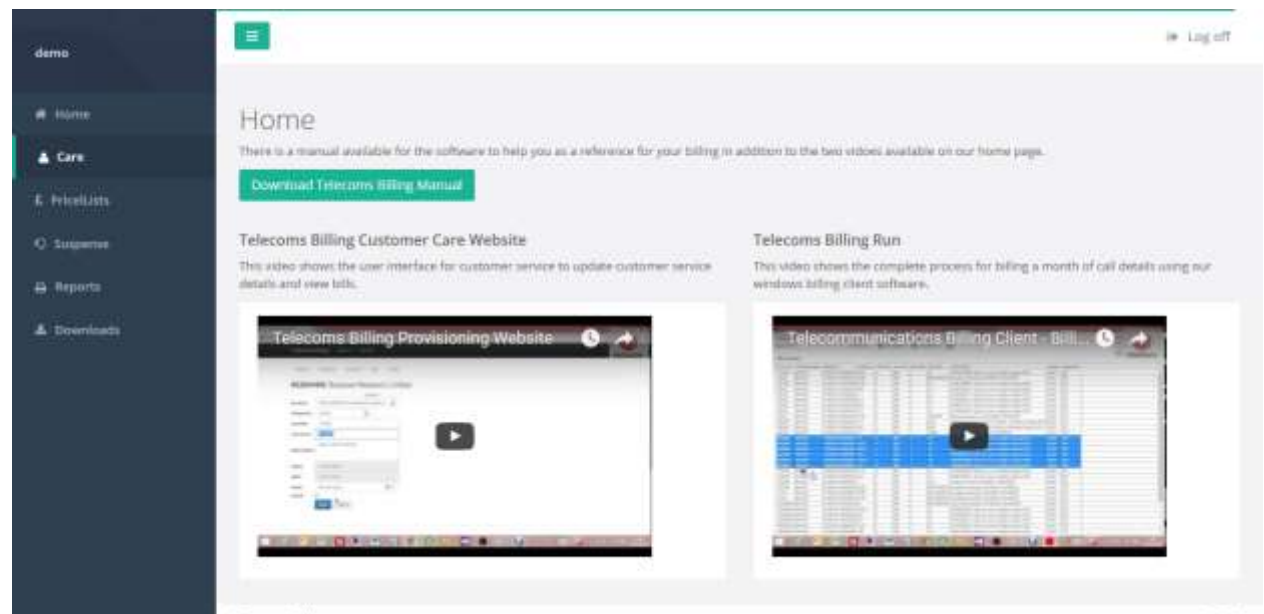
The billing process can take place once reconciliation is complete and results in an email being sent to the customer with a document containing the billing summary of call costs and monthly costs together with a spreadsheet format data file of all call details.

The invoices can be imported directly into your accounting package as product invoices or transaction files integrated with your own systems and third party payment providers. The bills and spreadsheet files are available for download by the customer if you create a portal user against the account using the customer service website.

Customer Service Website

Home

The Home page is available as soon as you log on and contains links to this manual and the client software as well as some product videos.



Search

The default page for the CARE menu is the search page allows you to search the different areas of the billing database. Select the appropriate entity in the mode selection box and type some text to make your search:

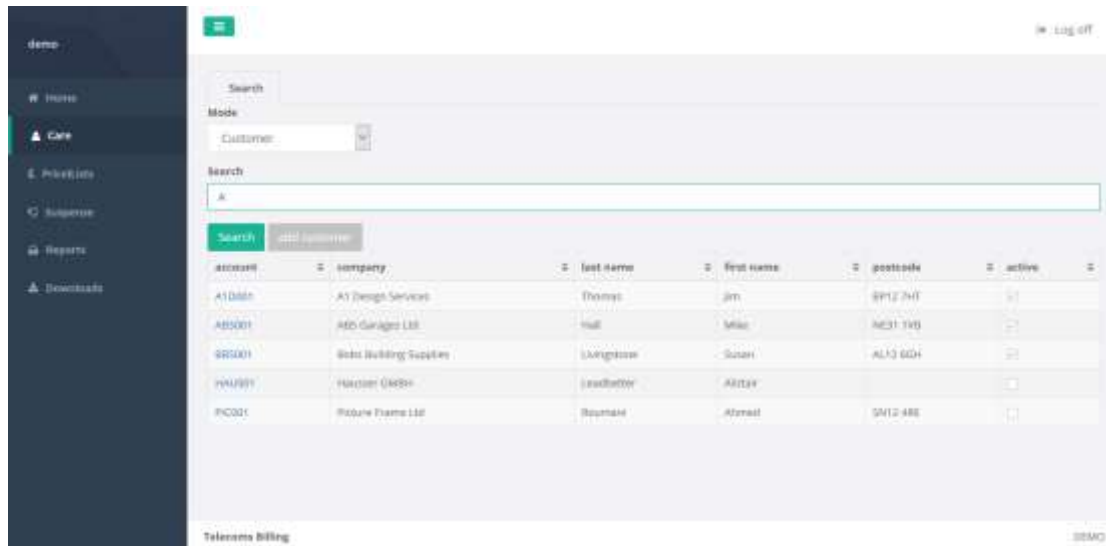
- Customer.
- CLI - Originating Number.
- NGN - Number Translation.
- Customer Products.
- Bills.
- Pricelists.
- Products.

A single search field is provided which searches several different fields in the target database and pressing the SEARCH button produces a table of the required data.

Clicking on the link in the first column will take you to the page for the required entity. You can also add a new customer with the ADD CUSTOMER button. You can sort the table by clicking on the column header.

Note that we have % as a wildcard – so you can search for all companies with the word BUILD in the name with the search term **%BUILD%**.

This example below shows you a search for customers. Clicking on the customer link will take you to the page for managing that particular customer.



Customer

The Customer page gives you access to all the options for maintaining information and services for a customer. The menu along the top of the page gives access to the following options:

- Return to the search page (you can also add a new customer from here).
- View the services for a customer. Services include Originating Numbers (CLI) for processing call details and monthly products and packages as well as non-geographic numbers provisioned against that account (see the services section).
- Bills allow access to previous billing information for the customer.
- Portal allows you to create a user to give customers read-only access to their bills and calls.
- There are options with some of the accounting packages we support to upload PDF copies of the invoices to the telecoms billing portal.

An edit and save button allows you to change the details held against a customer. Note that the address information relates only to the billing contacts and you may need to update information in your accounting database separately.

The account is not initially active once the data is entered (or uploaded) and must be activated by customer service staff pressing the ACTIVATE button on this page.

Note that sometimes we disable the edit functionality on customers and products within the website so that all data is synchronised from the accounting database or from Microsoft Dynamic s365 CRM Sales.

demo

Home

Care

Pricelists

Support

Reports

Downloads

Search Customer Services Bills Portal

BB5001 Bobs Building Supplies

account BB5001

company Bobs Building Supplies

pricelist Standard

currency GBP

owner

title

first Susan

last Livingstone

address Timber Yard
123 Prescott Way
Alnwick
Northumberland

postcode AL12 6GH

country UNITED KINGDOM

telephone 01983 367 123

fax 01983 334 567

email newbusinessadvice@sage.com

start 18/09/2014

finish Finish Date

active

Edit Cancel

Telecoms Billing

DEMO

Log off

The following fields are important from a billing point of view:

- The account number needs to match your accounting records.
- The email address is sometimes used to email bills and call details.
- Start and End date and the active flag are used to control when an account is active.

Services

The services webpage provides access to most of the provisioning functionality of the system. You can control the following services from this webpage:

- CLI/Originating numbers which allow a match against your call details records.
- Number Translation for 0845 and other non-geographic numbers assigned to the account.
- Products which may be billed once only or monthly or annually.

The screenshot displays the 'Services' page for account 'BB5001 Bobs Building Supplies'. The page is divided into three main sections, each with an 'add' button and a table of data.

lines

number	match	name	product	provider	pricelist	start	finish
01273776650	01273776650					20140001	
012765217357	012765217357					20140318	20150416

number translation

number	destination	name	product	start	finish
08433028023930	0127384647474		NCH	20160217	

products

product	frequency	description	quantity	unit price	billed	start	finish
CALC001	Quarter	Desktop Calculator	1,000	10,000		20150331	20142001

Service Report

The service report is a simple webpage that can be printed out or emailed to the customer as a summary of the active services provisioned against that account.

Services

Business Exhibitions
44 Keswick Way
Penrith
Cumbria
CA97 9RT



Calling Lines

012734567700
01273774538

Number Translation

0845301919

Products

None

Packages

None

CLI - Originating Number

The Originating Number (CLI) can be a single number or a continuous range of numbers depending on the requirements of your system. Sometimes a different identifier that is not a valid phone number may need to be specified for VOIP Switches or mobile handsets.

The screenshot shows a web application interface with a dark sidebar on the left containing navigation links: Home, Cars, Pricelists, Suspense, Reports, and Downloads. The main content area has a header with 'Search', 'Customer', 'Services', 'Bills', and 'Postal'. Below the header, the customer name 'BBS001 Bobs Building Supplies' is displayed. The form for adding a CLI is visible, with the following fields and values:

Type	Number Range
start	01273776650
end	01273776659
name	
postcode	
product	
connection	
provider	
pricelist	Standard
currency	GBP
start	01/09/2014
finish	Finish Date
active	

At the bottom of the form, there are 'Save' and 'Cancel' buttons.

You can enter a SINGLE NUMBER to enter a CLI. Choose the HANDSET option to enter a character based identifier that is not a phone number. You may also

want to enter a RANGE of numbers for example 012647172500 to 012647172599 if you need to pick up a range of extensions in the call details.

The **product** is important for driving accounting information and will default to CLI. You can change the product specified if you have special requirements for accounting against a different general ledger (nominal) for example.

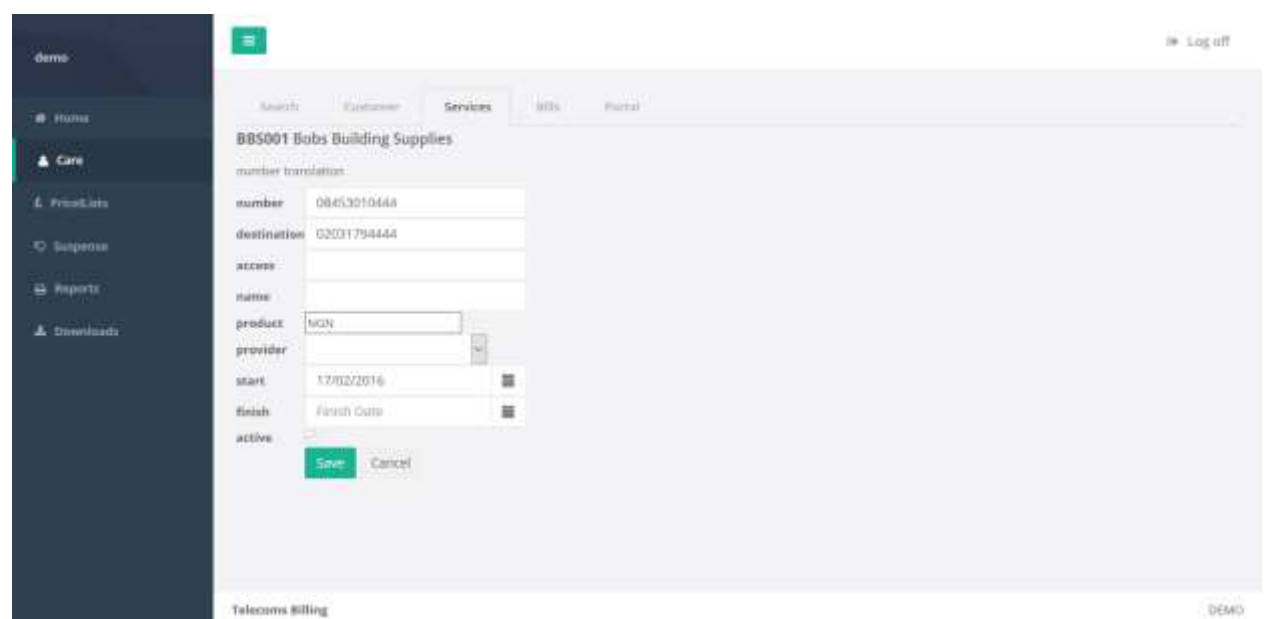
The **postcode**, **connection**, and **provider** fields are not required for billing and are for information only. If you use BT Openreach services you will need your own interface to the WLR3 system as we do not support provisioning through BT (although we do support billing with the DEDS CDR received daily from BT).

Note that the **pricelist** is inherited from the customer record but you can specify a different pricelist for individual services. This is useful if you want to provide one pricelist for traditional telephony and a different pricelist for VOIP services.

The **start** and **finish** dates and **active** flag are important for controlling the processing of CDR. Any call details that fall outside of these dates will go into suspense so you can make sure that your telecoms provider has ceased providing a service on your customer equipment. You need to use the start and finish dates if you want to switch a service between customers.

Number Translation

Number Translation can be set up easily in the billing system and will need also to be provisioned with your provider or on your equipment. We need technical information on how these calls are represented in your call details files when we set up your system so we can make the relevant adjustments in the mediation process that loads your call details files into the billing system.



The screenshot shows a web application interface for configuring a service. On the left is a dark sidebar with navigation links: Home, Care, Firms/Lists, Subscribes, Reports, and Downloads. The main content area has a header with 'demo' and 'Log off'. Below the header are tabs for 'Search', 'Customer', 'Services', 'BBS', and 'Portal'. The 'Services' tab is active, showing a form for 'BBS001 Bobs Building Supplies'. The form is titled 'number translation' and contains the following fields:

- number: 0843010444
- destination: 02031794444
- access: (empty)
- name: (empty)
- product: NGN
- provider: (empty)
- start: 17/02/2016
- finish: Finish Date
- active: (checkbox)

At the bottom of the form are 'Save' and 'Cancel' buttons. The footer of the page reads 'Telecoms Billing' and 'DEMO'.

The non-geographic number is specified in the **number** field and the number it maps on to is specified in the **destination** field. The destination field can be a

mobile number or a national number and the system uses the default pricelist of the customer to calculate costs.

We can cope with the special case of international toll free numbers but need to set up special processing in the mediation layer. International toll free numbers are specified in the **access** field and also mapped onto a **number** that may be used in the call details file and a **destination** for calculating the price (in this case an international number).

The **product** is always NGN (for non-geographic number translation) and the **provider** is for information only. The **active**, **start**, and **end** dates should match your provisioning so you can check if your provider is still passing calls through when you have de-provisioned the number.

Pricing is a little complicated for non-geographic calls because there are two parts to the calculation. The first applies a price per second to the incoming leg of the call which in some cases is a negative amount if the customer receives a payment for each incoming call (as on 0845 and premium rate numbers in the UK). The second leg is the outgoing part of the call normally to a line installed at the customer premises and charged as a national call. The combination of the two prices is the amount charged. This allows you to specify and charge for any number as the recipient of a non-geographic call.

Product

The available products are predefined in your system often by uploading from the products defined in your accounting database.

The screenshot displays a web application interface for managing products. The main content area shows a form for editing a product named "BBS001 Bobs Building Supplies". The form includes the following fields and values:

- product: BROADBAND (Broadband Monthly R)
- frequency: Month
- quantity: 1.0000
- unit price: 24.9900
- currency: (empty)
- description: Monthly Broadband Rental - Liverpool Office.
- billed: 31/06/2015
- reference: (empty)
- sequence: (empty)
- start: 01/09/2014
- finish: Finish Date
- active:

At the bottom of the form, there are "Save" and "Cancel" buttons. The interface also features a sidebar with navigation options (Home, Care, Price Lists, Suspense, Reports, Downloads) and a top right corner with a "Log off" link. The bottom left corner displays "Telecoms Billing" and the bottom right corner displays "DEMO".

The **frequency**, **quantity** and **unit price** are used for billing together with the **active** flag, **start** and **end** dates. The **description** field is for information and is copied into the invoice and billing summary each month and the **billed** date

shows you the date that the customer has been billed to. Occasionally you will need to use the billed date to calculate the amount required for a credit note if a customer cancels the product after they have already paid for the time.

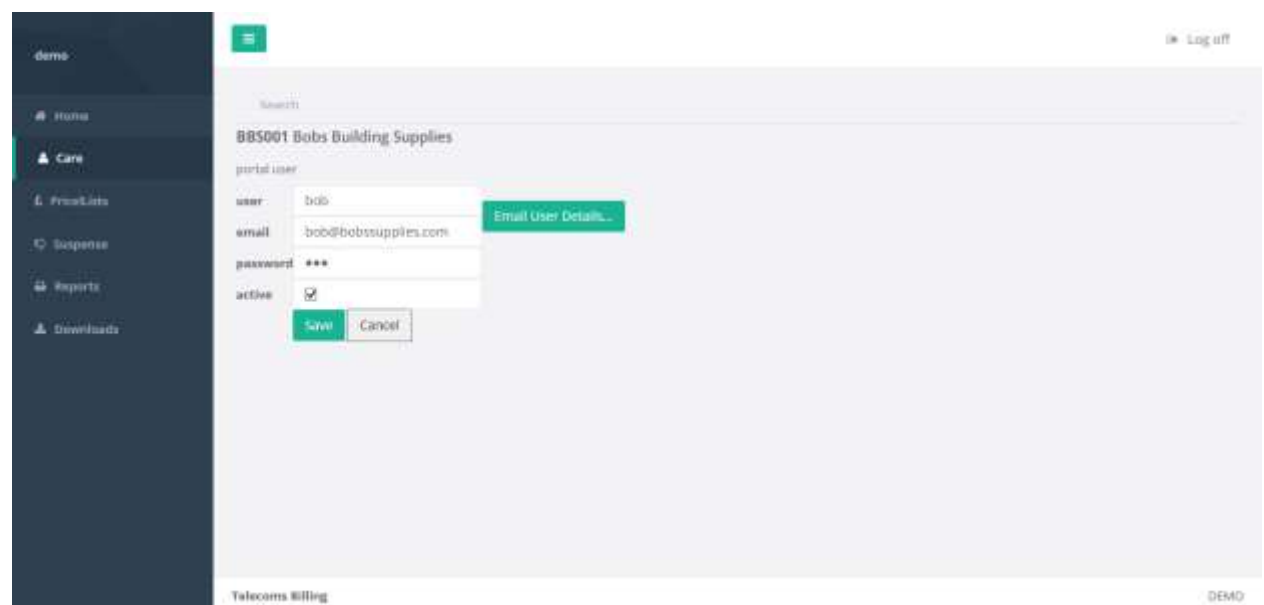
The following values for frequency are permitted:

- **Once** only appears only once on the next bill.
- **Monthly** appear each month.
- **Quarterly** appear each quarter using the start date as the date reference.
- **Annual** appear once a year on the anniversary of the start date.

Portal User

You can setup user details for a customer account using the portal users page available from the bottom of the Customer webpage to allow access to the website for customers to view their bills and CDR.

Add a portal user against a customer account using the **Add Portal User** button or edit the details by pressing the link. Once on the portal user webpage you can email a forgotten password to the user by pressing the **Email User Details** button.



The screenshot displays a web application interface for managing portal users. On the left is a dark sidebar with navigation links: Home, Care, PriceLists, Suspense, Reports, and Downloads. The main content area shows a search bar with the text 'BB5001 Bobs Building Supplies'. Below this, a form titled 'portal user' contains the following fields: 'user' with the value 'bob', 'email' with 'bob@bobssupplies.com', 'password' with '***', and 'active' with a checked checkbox. A green button labeled 'Email User Details...' is positioned to the right of the email field. At the bottom of the form are 'Save' and 'Cancel' buttons. The footer of the page includes 'Telecoms Billing' on the left and 'DEMO' on the right.

Pricelists

Pricelists are maintained using the client software but you can view them from the website.

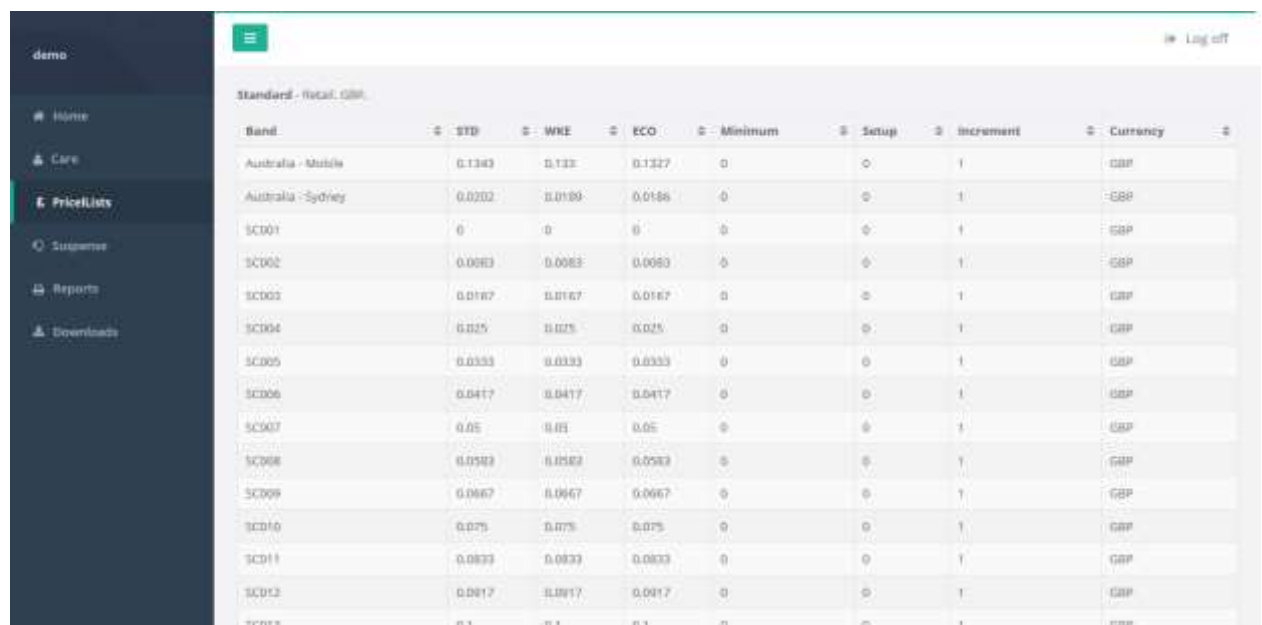
A base pricelist is often created and other pricelists inherit from their parent pricelist so you can take all the prices from a cost tariff for example and multiply by 1.25 to create a retail tariff with a 25% mark-up. You can also inherit from a

pricelist and just change a couple of entries there to change the prices to a couple of destinations.

Note that many telecoms providers will rate the calls in the CDR and provide you with a cost or retail price which you can mark up. This means that you can implement simple billing. In the UK you still need to inherit from our special pricelist and provide an access charge (usually between 6 and 12 pence per minute) so that we can re-rate calls to special non-geographic numbers as required by OfTel (or alternatively you can note the access rate charged by your provider with the mark up in case you need to respond to any customer enquiries).

A **tariff** is the price for a call to a particular destination and a pricelist is a collection of tariffs. Each tariff has the following information:

- A band name
- Standard, Weekend, Economy tariff per minute 1 to four decimal places. A band costing 27 pence a minute would have the value 0.2700.
- The minimum price for a call – the call has to have a duration.
- A setup fee for a call – the call has to have a direction.
- The increment for billing is usually 1 second but you can round up to 15 seconds for example by entering 15 for the increment.
- Currency – it is possible to have multiple currencies but each customer can use just one currency.



Band	STD	WKE	ECO	Minimum	Setup	Increment	Currency
Australia - Mobile	0.1343	0.133	0.1327	0	0	1	GBP
Australia - Sydney	0.0202	0.0189	0.0186	0	0	1	GBP
SC001	0	0	0	0	0	1	GBP
SC002	0.0083	0.0083	0.0083	0	0	1	GBP
SC003	0.0167	0.0167	0.0167	0	0	1	GBP
SC004	0.025	0.025	0.025	0	0	1	GBP
SC005	0.0333	0.0333	0.0333	0	0	1	GBP
SC006	0.0417	0.0417	0.0417	0	0	1	GBP
SC007	0.05	0.05	0.05	0	0	1	GBP
SC008	0.0583	0.0583	0.0583	0	0	1	GBP
SC009	0.0667	0.0667	0.0667	0	0	1	GBP
SC010	0.075	0.075	0.075	0	0	1	GBP
SC011	0.0833	0.0833	0.0833	0	0	1	GBP
SC012	0.0917	0.0917	0.0917	0	0	1	GBP
SC013	0.1	0.1	0.1	0	0	1	GBP

Suspense

Suspense call detail records cannot be billed because there is some information missing. This topic is covered in detail in later section of this document discussing the billing process with the client software.

The screenshot displays a web interface for a 'Suspense' report. On the left is a dark sidebar with navigation options: Home, Care, Pricelists, Suspense (highlighted), Reports, and Downloads. The main content area is titled 'Suspense Summary' and contains a table with the following data:

suspenseid	suspense	cduration	ncount	nduration	cfirstdate	clastdate	ncdurant	nprice
21	Match - CLI not found.	00:00:00	4202	0.00	20140731	20140830	260.34	0.00
27	CDR - A number and B number identical	00:00:00	1	0.00	20140826	20140826	0.00	0.00
43	Rating - No Retail Tariff	00:00:00	3043	0.00	20140731	20140830	606.20	0.00
47		00:00:00	365	0.00	20140801	20140830	151.50	0.00

Below the summary, there is a section titled '21 Match - CLI not found.' with a 'SERVICE' instruction: 'Enter a new CLIENT service against the appropriate Customer or check if you need to reactivate an existing service.' This is followed by a detailed table of call records:

znumber	sourswid	cduration	ecount	nduration	price	netcost	cfirstdate	clastdate	suspenseid
01245237000	42	00:00:00	158	0.00	0.00	13.47	20140803	20140829	21
01348239000	43	00:00:00	1783	0.00	0.00	84.23	20140801	20140829	21
01248252414	42	00:00:00	1351	0.00	0.00	112.58	20140731	20140830	21
01245280652	42	00:00:00	1	0.00	0.00	0.04	20140826	20140826	21

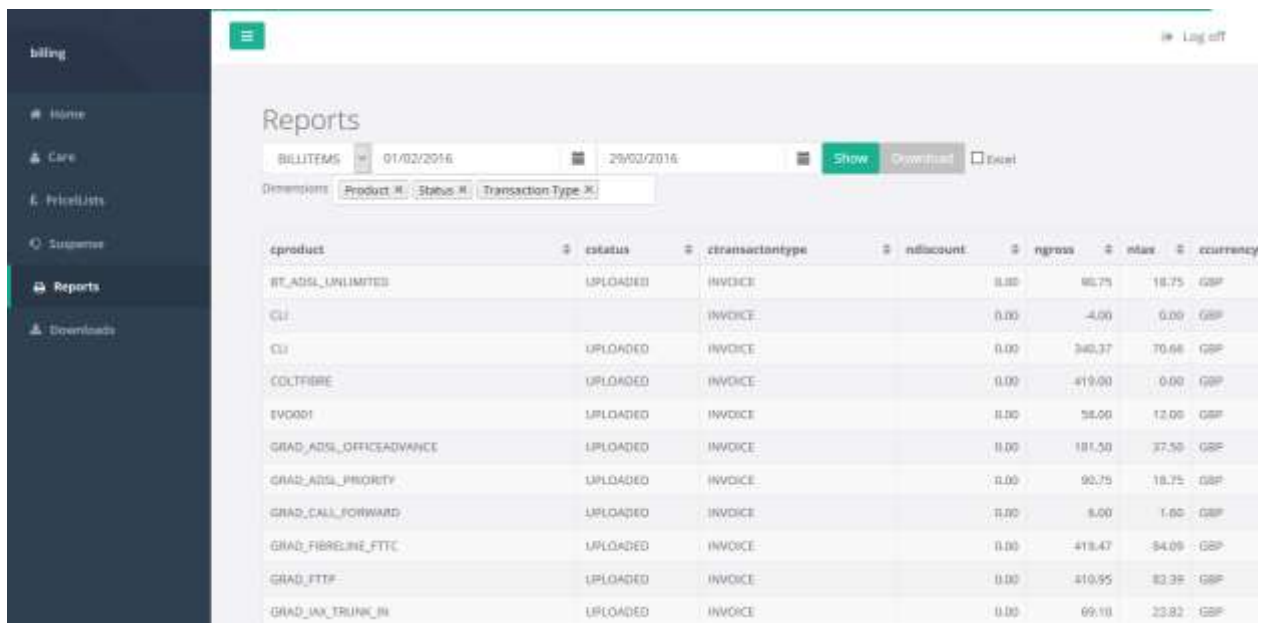
Web users can view the suspense report from the website to help resolve any issues and help with the billing.

Reports

Reports are available on the Bills and Bill Items and Call Details.

Select a date range and the required report and press **SHOW** to view the data in the browser or **DOWNLOAD** to download locally to a file as a CSV file. Check the **EXCEL** checkbox to download to Excel.

The **DIMENSIONS** allow you to select the columns of the report to produce different summaries for analysis. The report below shows the **BILLITEMS** report breaking down the figures to show a summary for each product. You may select any combination of dimensions to produce different reports. An alternative is to leave the dimensions clear and download as an Excel spreadsheet and use the pivot table function there.



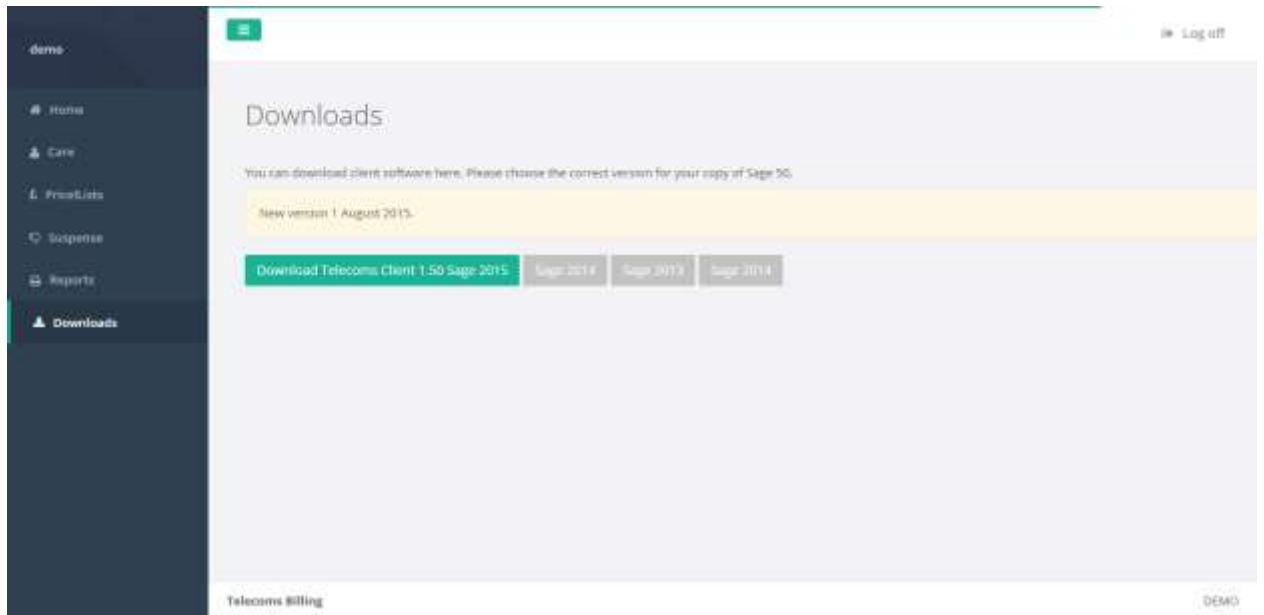
cproduct	status	ctransactantype	ndiscount	ngross	ntax	ccurrency
BT_ADSL_UNLIMITED	UPLOADED	INVOICE	0.00	90.75	18.75	GBP
CU		INVOICE	0.00	-4.00	0.00	GBP
CU	UPLOADED	INVOICE	0.00	340.37	70.68	GBP
COLTFIBRE	UPLOADED	INVOICE	0.00	419.00	0.00	GBP
EVO001	UPLOADED	INVOICE	0.00	35.00	12.00	GBP
GRAD_ADSL_OFFICEADVANCE	UPLOADED	INVOICE	0.00	181.50	37.50	GBP
GRAD_ADSL_PRIORITY	UPLOADED	INVOICE	0.00	90.75	18.75	GBP
GRAD_CALL_FORWARD	UPLOADED	INVOICE	0.00	8.00	1.00	GBP
GRAD_FIBRELINE_FTTC	UPLOADED	INVOICE	0.00	418.47	84.09	GBP
GRAD_FTTF	UPLOADED	INVOICE	0.00	410.95	83.38	GBP
GRAD_IAX_TRUNK_IN	UPLOADED	INVOICE	0.00	69.10	23.82	GBP

These reports are useful for reconciliation and might be used in conjunction with the data output at various stages of the billing process to help check and validate the totals.

For example, you may be billed line rental from a provider and you could specify different products for each different product billed by the provider. A bill items report by product for the month in question could help cross checking against the invoice received from the provider.

Downloads

The downloads area allows you to download the latest client for windows. You should only need this if you are the billing manager or an administrator.



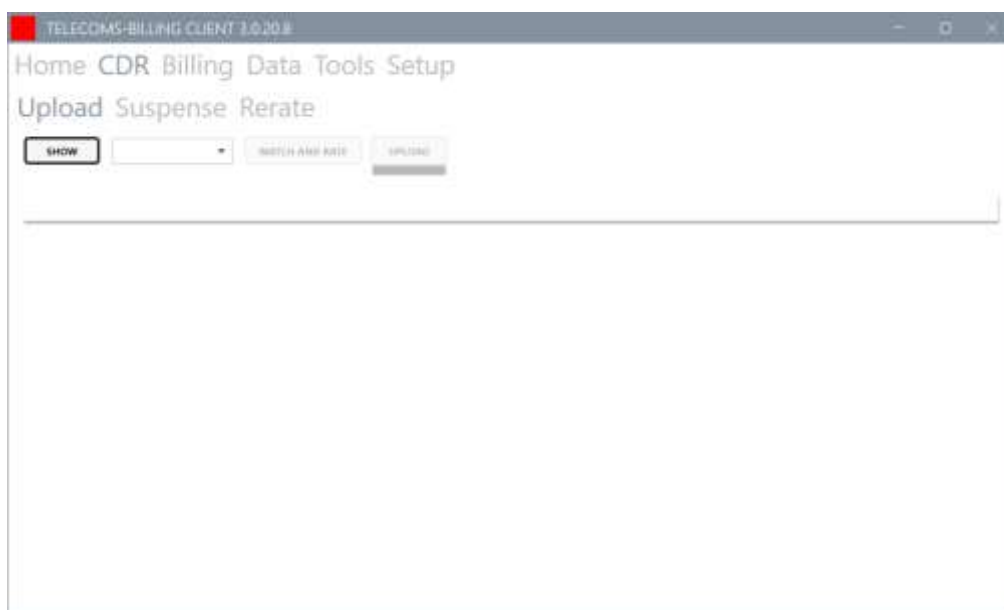
Telecoms-Billing Client

The Telecoms-Billing Client is designed to help manage the integration of your billing data with your existing systems. You can upload information directly from the Sage 50 accounting package into the customer service database or export tab-delimited text files for integration with your own systems.

The client software communicates with the server using a SOAP API so you can write your own programs for automated integration with your existing systems.

The following functionality is available:

- Import customers and products from the accounting package.
- Import services and pricelists from a text file.
- Export customers, customer products, services, and pricelists to a tab-delimited text file or an excel spreadsheet.
- Upload and match and rate Call Details.
- View and re-process Suspense.
- View the Suspense Report.
- Re-rate or write off suspense records.
- Create Bills from Call Details and Monthly Product items.
- Create Invoices in the accounting package.
- Upload invoices from the accounting package together with bills and associated files to the customer portal.
- Change settings.



There are also some tools available to help process suspense quickly and to specify the configuration of the CDR file.

Installation

You can also install the client directly from the website as a “Click Once” application which installs automatically on your machine. The Click Once installation will automatically ask you to update the software periodically and is the recommended installation procedure if your security allows (the application is not signed with a trusted source and so can cause problems with some PCs).

Click on the appropriate link in the Downloads area and negotiate the security prompts to allow the application to install. On Windows you may need to click the ‘More Info’ button and then ‘Run Anyway’ to install.

The application is available from the Windows button at the bottom left of the screen and also creates a shortcut for you. If you need to find the program location of the ClickOnce program – run the program and open the PROGRAM FOLDER from the front page of the application.

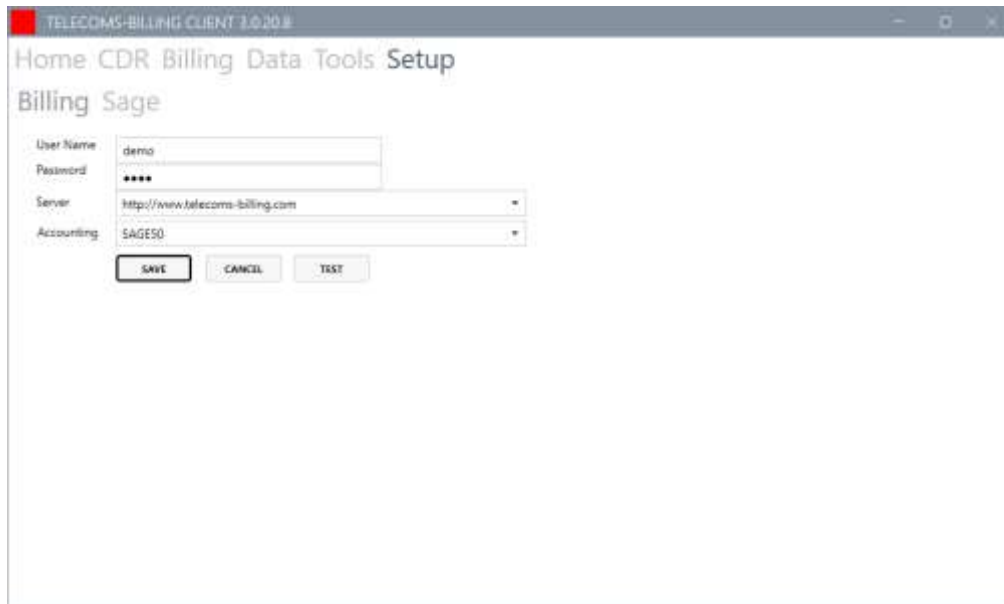


Alternatively, we may send you a link to a zip file from the server to extract to a folder of your choice. This is the usual scenario for a server installation (or Azure) or if you have Sage 50 which requires a different version for each version of Sage. Double click on **telecoms-billing-client.exe** to run the software.

Settings

Once you are running the software, enter your username and password and click Test and Save. The program will remember this from now on.

You also choose which accounting package (if any) you wish to integrate with. Note that the accounting setup page will only appear when you close and open the software.



TELECOMS-BILLING CLIENT 3.0.20.8

Home CDR Billing Data Tools Setup

Billing Sage

User Name: demo

Password: ****

Server: http://www.telecoms-billing.com

Accounting: SAGESO

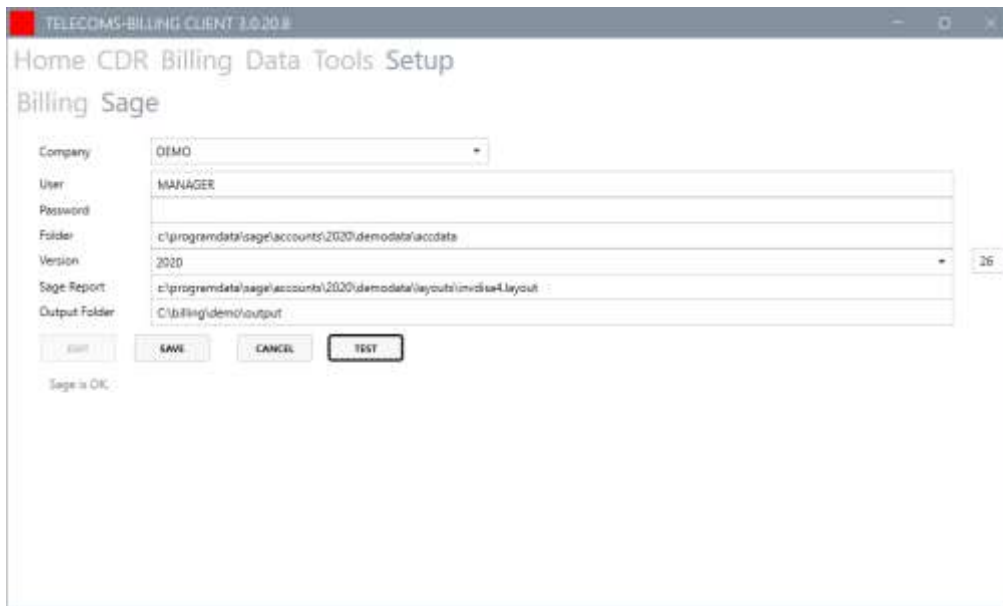
SAVE CANCEL TEST

Sage Setup

Log in to your Sage under HELP-ABOUT to see the DATA DIRECTORY which always ends in ACCDATA and copy the folder location to the FOLDER on the Sage Setup page.

We advise you to create a new user in Sage with full access as you cannot be logged in to Sage and run our software at the same time.

The Sage Report is the file used to generate the PDF Invoice documents from Sage.

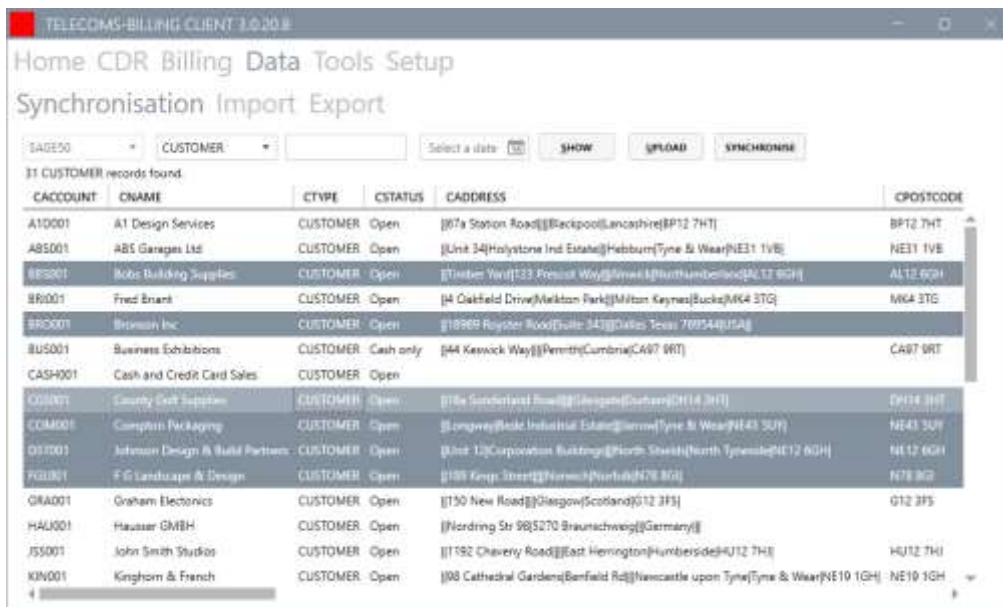


Enter the output folder as all the bills and PDF documents are output to this folder. The Sage Report is the LAYOUT file used to generate invoices for the customer portal if required.

Data Synchronisation

Data integration with the accounting package or Dynamics 365 CRM Sage is straightforward allowing you to load **customers** and **products** into the telecoms customer service database. You need to have configured the appropriate connection using the SETU.

Simply select the CUSTOMER or PRODUCT entity from the SETUP DATA tab and press SHOW to display the available data. You can filter the records displayed by typing the first few letters of the account number in the search textbox or select the most recently modified records by typing the modification date into the date textbox.

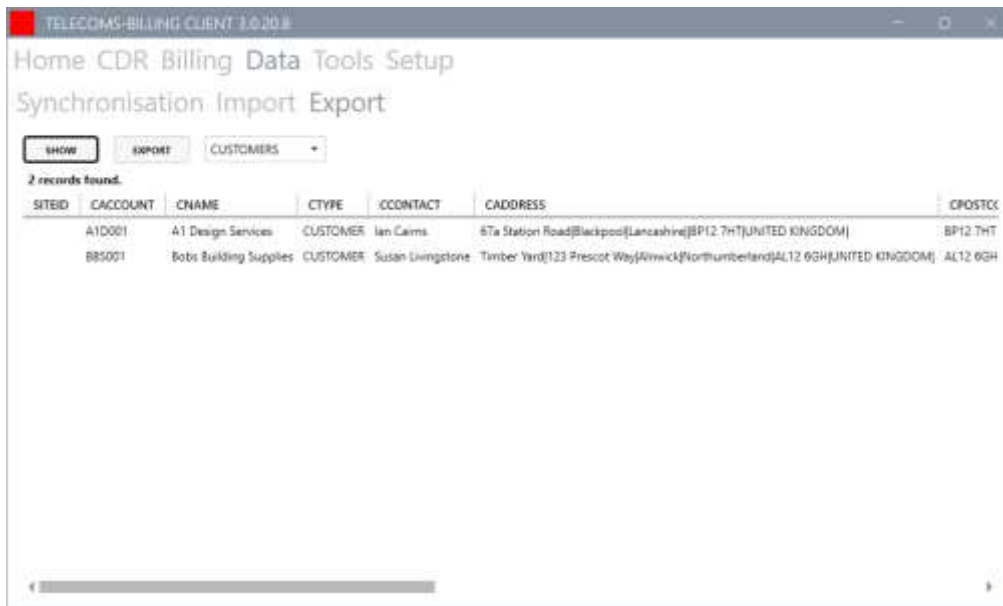


Select the data required with CTRL-A, CTRL-CLICK or SHIFT-CLICK using the record selector at the left of each record or select all by clicking to the left of the first field (this is the default if you make no selection).

Click the UPLOAD button to load into the customer service database. Existing records will be ignored or overwritten depending on the settings.

Data Export

A good way to understand the format of the import files is add a few records into the system and then export the data. You can open the files up in a spreadsheet package or in notepad and see the structure.



You can export all Customers, Services, Customer Products, and Pricelists in tab delimited or excel format. You can edit the data and reimport with changes using the import module (but only using the tab-delimited format).

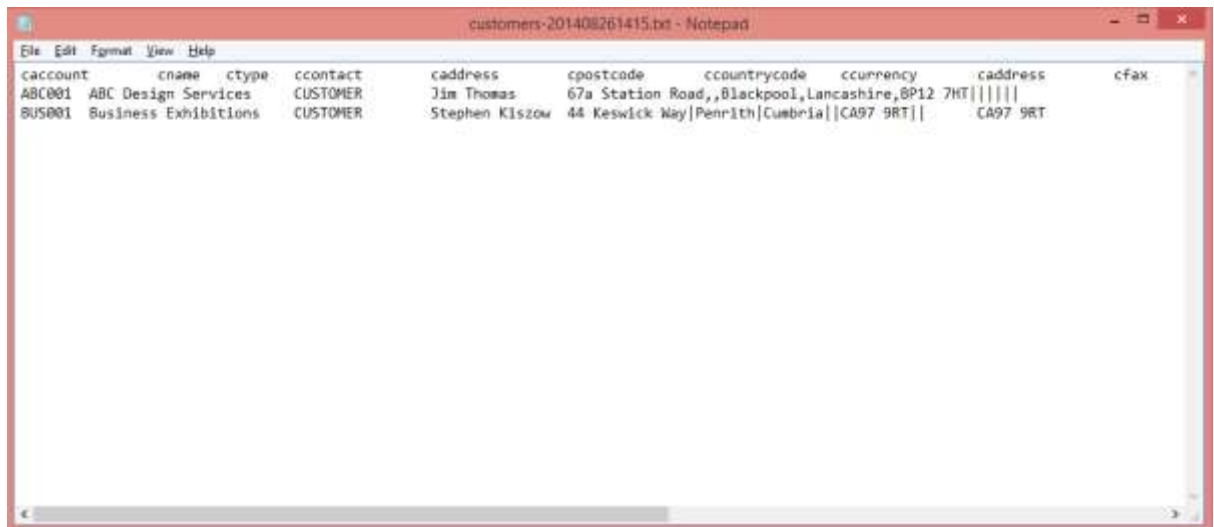
Data Import

The import function is used to populate the customer service database from tab-delimited text files. The following data can be synchronised:

- Customers
- Customer Products
- Customer Services (CLI and NGN)
- Pricelist Tariffs

The best way to understand the format of the files is to add a record or two using the customer service website and then export the data. You do not need to provide all the fields in order to bill and you can edit the data using the website.

The export/import files are tab-delimited text files which can be edited and created easily with any spreadsheet package. The first line contains tab-delimited field names that must match the columns in the relevant data entity. The example below has field names caccount, cname, ctype, ccontact and so on to match the corresponding field names in the customer entity of the customer service database.



```
customers-201408261415.txt - Notepad
File Edit Format View Help
caccount      cname      ctype      ccontact    caddress    cpostcode  ccountrycode  ccurrency    caddress    cfax
ABC001      ABC Design Services  CUSTOMER    Jim Thomas  67a Station Road, Blackpool, Lancashire, BP12 7HT  |||||
BUS001      Business Exhibitions  CUSTOMER    Stephen Kiszow  44 Keswick Way|Penn1th|Cumbria||CA97 9RT||  CA97 9RT
```

Use the IMPORT button to show the data from the tab-delimited text file and then CHECK for any invalid data before pressing the UPLOAD button to push the data into the database.

Please be careful when using Excel to edit files because it will often chop the leading zero off any phone numbers.

Billing Cycle

The Billing Cycle is performed each month to push CDR into the system, resolve any data issues, perform reconciliation and then invoice the customers.

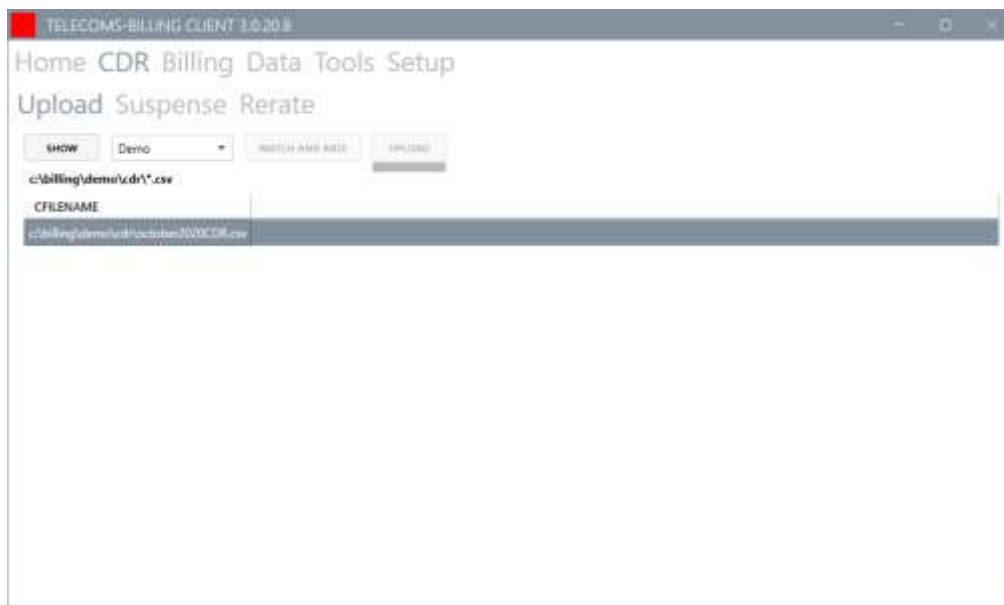
Our recommended procedure involves keeping a tally of both the number of CDR records and the value all the way through the billing process. Storing spreadsheets and recording totals each month and keeping a best practise document is also recommended.

The process is as follows:

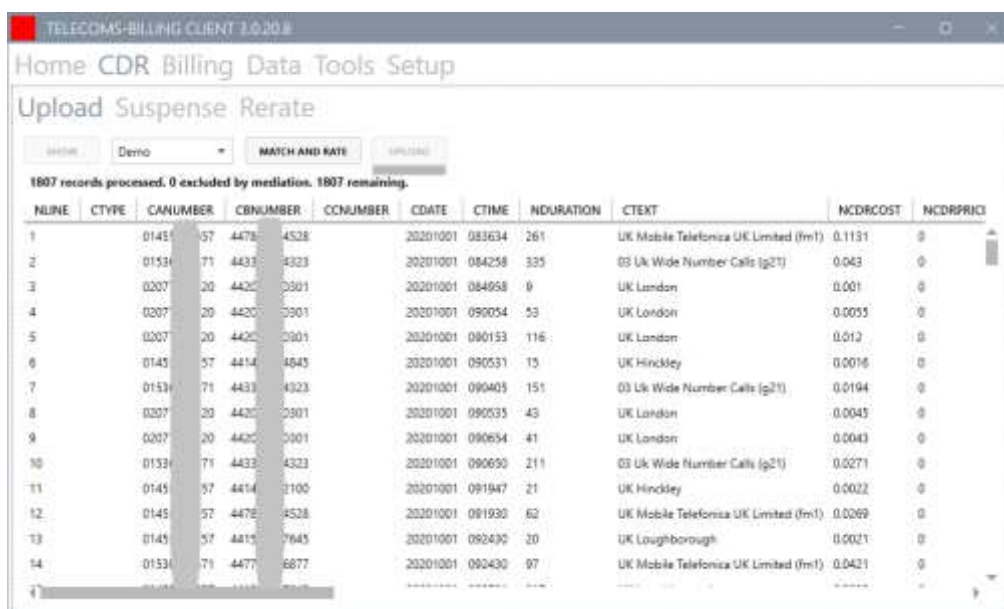
- Place the CDR in the appropriate folder and load into the database keeping a record of the total number of records and the cost (there may be multiple sources).
- Resolve any suspense and write off any records making sure the total number of records and cost price tallies.
- Decide on the BILLING and the BILL UP TO DATE and export the BILLS and double check the call value and especially the additional products which you can check against incoming supplier invoices or last month's totals.
- Create the Bills once they have been checked.
- Create the Invoices in the accounting package if appropriate and check the totals match the Bills and the tax is correctly calculated.
- Output all the required files (and invoices) to the output folder for checking and email a link to the customer portal with each invoice.

CDR Call Details

Your application is configured with a number of folders for you to place your Call Details (CDR) files. Each folder defines files of a particular format so it is very important to place the correct CDR file in the appropriate folder.



Select the appropriate folder with the dropdown on the top right of the window and any corresponding files will show in the grid. You can select the file and press **SHOW** to see the contents of the file.



NLIN	CTYP	CANUMBER	CBNUMBER	CCNUMBER	CDATE	CTIME	NDURATION	CTEXT	NCDRCOST	NCDRPRICE
1		01451	57 4478	4528	20201001	083634	261	UK Mobile Telefonica UK Limited (fm1)	0.1131	0
2		01531	71 4433	4323	20201001	084258	335	03 Uk Wide Number Calls (g21)	0.043	0
3		0207	20 4420	0301	20201001	084958	9	UK London	0.001	0
4		0207	20 4420	0301	20201001	090054	53	UK London	0.0033	0
5		0207	20 4420	0301	20201001	090153	116	UK London	0.012	0
6		0145	57 4414	4643	20201001	090531	15	UK Hinckley	0.0016	0
7		01531	71 4433	4323	20201001	090405	151	03 Uk Wide Number Calls (g21)	0.0194	0
8		0207	20 4420	0301	20201001	090535	43	UK London	0.0043	0
9		0207	20 4420	0301	20201001	090634	41	UK London	0.0043	0
10		01531	71 4433	4323	20201001	090650	211	03 Uk Wide Number Calls (g21)	0.0271	0
11		0145	57 4414	4700	20201001	091947	21	UK Hinckley	0.0022	0
12		0145	57 4478	4528	20201001	091930	62	UK Mobile Telefonica UK Limited (fm1)	0.0269	0
13		0145	57 4415	7643	20201001	092430	20	UK Loughborough	0.0021	0
14		01531	71 4477	6877	20201001	092430	97	UK Mobile Telefonica UK Limited (fm1)	0.0421	0

Check the data before uploading. If the data in a CDR file looks very wrong – best not to upload and contact support.

At a minimum the file should have the following information:

- A Number (originating number)

- B Number (number dialled)
- Date and Time
- Duration

Additional information is often specified. The Text and CDR Price and Cost are useful for double checking problem calls and, depending on the tariff, the cost and price fields from the CDR might be used for billing.

Press the match and rate button to match and rate without uploading into the database. The CTYPE field shows non-geographic numbers (NG) usually identified by something in the accompanying text field. Some calls may also be flagged as bundled calls (BD) and not rated with the remaining national (NA) and international calls (IN) and mobile (MB) calls identified.

Successfully matched calls will have the account number specified and successfully rated calls will have a price specified and a SUSPENSE ID of zero. Calls that cannot be matched and rated will have a SUSPENSE ID specified and can be processed later by rerating suspense.

Pressing UPLOAD will match and rate and push the records into the database. The extension of the file is changed to TXT (usually) to prevent you loading the same data again and you need to be careful and submit all the required Call Details once only.

If the data is incorrect with the fields in the wrong places then you need to reconfigure the CDR configuration (see the Tools section) or email support@telecoms-billing.com with a copy of the file and details of the changed configuration. We can then alter the configuration for you.

Suspense

One of the biggest jobs for a Billing Manager is to clear the suspense from the call details. The suspense records represent an issue with the underlying data that needs resolution.

You can press the SUSPENSE REPORT button at any time to view the suspense report and save and email on to the people in your team who need to resolve the issues by changing the data using the website.

Suspense Report

Summary

suspenseid	csuspense	cduration	ncount	nduration	cfirstdate	clastdate	ncdrcost	nprice
0	OK - Ready to Bill	519:53:10	8749	1,871,590.00	20140831	20140930	1,023.28	1,223.99
21	Match - CLI not found.	19:01:18	202	68,478.00	20140903	20140929	22.42	0.00
31	Band - no match for B number	01:14:24	21	4,464.00	20140901	20140930	5.86	0.00
34	B Number match (prefixed)	32:42:10	30	117,730.00	20140831	20140930	0.00	0.00
43	Rating - No Retail Tariff	02:49:25	19	10,165.00	20140901	20140924	15.19	0.00

0 OK - Ready to Bill

These are ready to bill.

caccount	cisocurrency	billid	cduration	ncount	nduration	price	ncdrcost	cfirstdate	clastdate	suspenseid
ABC001	GBP	61	46:45:52	2164	168,352.00	47.23	95.81	20140903	20140930	0
BRO001	GBP	63	04:34:59	311	16,499.00	4.22	5.28	20140831	20140929	0
FRED09	GBP	62	313:21:26	5093	1,128,086.00	657.55	603.41	20140901	20140930	0
REDWARE01	GBP	11	155:10:53	1181	558,653.00	514.99	318.77	20140831	20140930	0
		197		8,749	1,871,590.00	1,223.99	1,023.28			

21 Match - CLI not found.

SERVICE - Enter a new CLI/NT service against the appropriate Customer or check if you need to reactivate an existing service.

Alternatively you can view the suspense from the suspense form. There are 30 or so different suspense codes although you will usually encounter only four or five in any one month of billing.

TELECOMS-BILLING CLIENT 1.0.20.8

Home CDR Billing Data Tools Setup

Upload Suspense Rerate

SHOW

Summary

suspenseid	suspense	duration	count	duration	price	cdrcost	firstdate	lastdate
21	Match - CLI not found.	736:56:30	59681	2,652,990.000	0.000	319.878	20180428	20201031

21 Match - CLI not found.

SERVICE - Enter a new CU/NT service against the appropriate Customer or check if you need to reactivate an existing service.

anumber	sourceid	duration	count	duration	price	cdrcost	firstdate	lastdate	suspenseid
01273676439	42	00:02:06	2	126.000	0.000	0.012	20180523	20180523	21
01273737404	42	06:50:10	158	24,610.000	0.000	2.188	20180501	20180531	21
01322311265	42	06:43:32	164	24,212.000	0.000	3.040	20180502	20180530	21
01323379250	42	00:09:20	4	560.000	0.000	0.000	20180430	20180530	21
01323379251	42	00:41:26	8	2,486.000	0.000	0.000	20180430	20180520	21
01323379252	42	02:06:30	76	7,580.000	0.000	0.000	20180501	20180530	21

Select the required suspense code from the drop down to view more information. Information relevant to each suspense code is shown so the following example shows the **ANUMBER** together with a little note on the action

required. You can see number of calls and the price and the cost as well as the first and last date that calls appear.

ANUMBER	SOURCEID	CDURATION	NCOUNT	NDURATION	NPRICE	NCDRCOST	CFIRSTDATE	CLASTDATE	SUSPENSEID	
012	3439	42	00:02:00	2	128.0000	0.000	0.012	20180523	20180523	21
012	3404	42	06:50:10	158	34610.0000	0.000	2.188	20180501	20180531	21
013	285	42	06:43:32	164	24212.0000	0.000	3.040	20180502	20180530	21
013	0250	42	00:09:20	4	560.0000	0.000	0.000	20180430	20180530	21
013	0251	42	00:41:26	8	2486.0000	0.000	0.000	20180430	20180520	21
013	0352	42	02:06:20	76	7580.0000	0.000	0.000	20180501	20180530	21
013	0325	42	01:10:32	26	4332.0000	0.000	0.000	20180506	20180529	21
013	0326	42	10:20:14	132	37214.0000	0.000	0.060	20180501	20180531	21
013	0327	42	23:07:32	416	83252.0000	0.000	1.690	20180430	20180531	21
013	0329	42	01:04:56	16	3896.0000	0.000	0.000	20180506	20180531	21
013	0330	42	04:10:20	132	15000.0000	0.000	1.258	20180501	20180530	21
013	042	42	00:46:48	4	2808.0000	0.000	0.234	20180501	20180502	21
013	0415	42	05:10:06	140	18606.0000	0.000	2.194	20180501	20180531	21
013	0416	42	37:28:46	766	134926.0000	0.000	17.122	20180501	20180531	21
013	0417	42	23:01:46	632	82606.0000	0.000	9.044	20180501	20180531	21

In this case you must identify the customer for each ANUMBER and enter a SERVICE using the web application. Press **RERATE** once you have fixed some or all of the data and the Call Details will be rerated until finally they all have suspense code **0 – READY TO BILL**. Note that the rerating process can take a while if there are many records to process.

You are able to **WRITE OFF** calls that are not required and do not need to be seen by the customer but if you write off calls with a cost against them, it will cost you money. If you find you are regularly writing off calls then there may be a problem with your records or you may be receiving call details that are mistakenly allocated to you and you can think about challenging your bill.

If the calls seem to have been priced correctly you can **ACCEPT** them and then will be billed to the customer with the currently calculated price. This is the recommended option if the PRICE is less than the COST and is required before these calls can be billed.

You should clear all suspense from the system each billing period by resolving the data problems and rerating or with the accept or write off options so call details do not lurk about from month to month. Keep records of any written off records and you may like to export them each month for revenue assurance reasons.

Create Bills

You can create the bills once all the Call Details have been rated successfully for the month.

CTRANSACTIONTYPE	CSTATUS	CACCOUNT	CACCOUNTNAME	DTAXPOINT	CREFERENCE	CSEQUENCE	CPRODUCT	CUNITS	NQUANTITY
INVOICE		A1D001		09/10/2020 00:00:00			CU	1	6-
INVOICE		A1D001		09/10/2020 00:00:00			CU	1	21
INVOICE		A1D001		09/10/2020 00:00:00			CU	1	21
INVOICE		A1D001		09/10/2020 00:00:00			CU	1	0-
INVOICE		A1D001		09/10/2020 00:00:00			CU	1	21
INVOICE		BB5001		09/10/2020 00:00:00			CU	1	11
INVOICE		BB5001		09/10/2020 00:00:00			CU	1	20
INVOICE		BB5001		09/10/2020 00:00:00			CU	1	31
INVOICE		BB5001		09/10/2020 00:00:00			CU	1	2-
INVOICE		BB5001		09/10/2020 00:00:00			CU	1	11

Use this window to create the bills for the month. Enter the text you want to describe the month as the CALL DETAILS TEXT. This appears to the right of the description in the invoice and is usually of the form **OCT 2020** or **2020/10/01-2020/10/31**.

Enter the INVOICE DATE which is the invoice date fed into the accounting system. Be sure to note the total amounts being billed for Calls and other items for reconciliation checks.

The LAST BILL DATE is used to work out the date for the end of the billing period for monthlt items. For example – you may have some monthly broadband on a customer who is being billed on 9/11/2020 for October CDR. If you set the LAST BILL DATE to 31/10/2020 they will be billed in arrears to end of October. If you set the LAST BILL DATE to 31/11/2020 – they will be billed in advance to end of November. The system will create multiple line items if more than one month is billed.

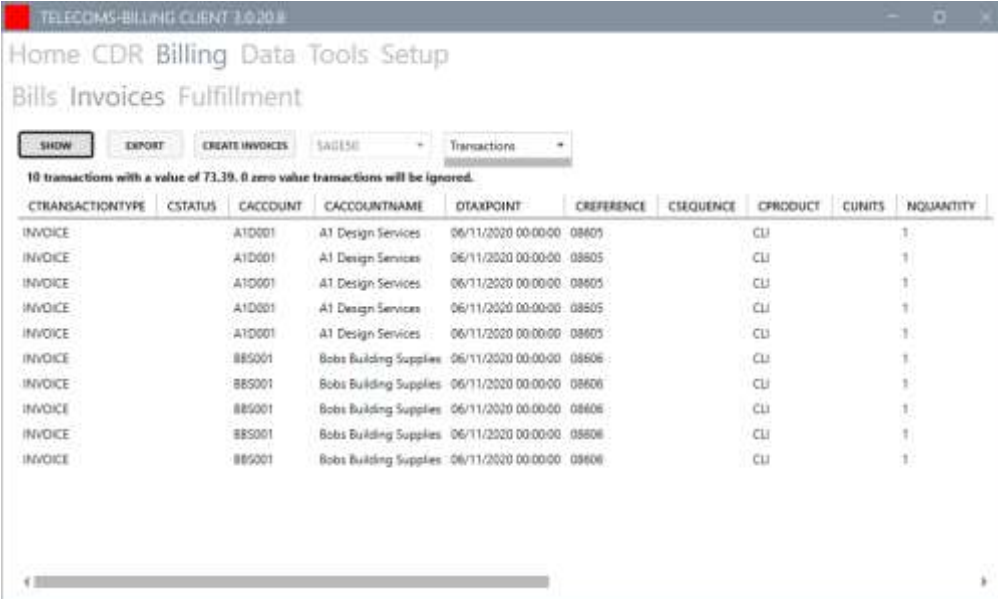
The BILL TO LAST DATE option will pro-rata billing for monthly items so the end dates all match the LAST BILL DATE. If the LAST BILL DATE is 31/10/2020 and the billing period for an item ends of 10/10/2020 – then the extra days will be added.

Press SHOW BILLS and EXPORT BILLS to view and reconcile the items before proceeding to the next stage. You should be checking product descriptions and be running pivot tables in Excel to reality check the totals for each customer and the totals for each product against last months data.

You can now press CREATE BILLS to create the bill items but only once you are sure the items and descriptions are correct. This will close off the bills and change the billed date on the monthly product items so that subsequent call details are held against a new bill for each customer.

Create Invoices

The Billing process creates transactions for each service with calls to bill this month and also for each customer product. The Invoicing process takes these transactions and pushes them into Sage.



The screenshot shows the 'TELECOMS-BILLING CLIENT 3.0.20.8' window. The main menu includes 'Home', 'CDR', 'Billing', 'Data', 'Tools', and 'Setup'. Below the menu, there are buttons for 'SHOW', 'EXPORT', 'CREATE INVOICES', and 'SAGE50', along with a 'Transactions' dropdown menu. A message states: '10 transactions with a value of 73.39. If zero value transactions will be ignored.' Below this is a table with the following columns: CTRANSACTIONTYPE, CSTATUS, CACCOUNT, CACCOUNTNAME, DTAXPOINT, CREFERENCE, CSEQUENCE, CPRODUCT, CUNITS, and NQUANTITY.

CTRANSACTIONTYPE	CSTATUS	CACCOUNT	CACCOUNTNAME	DTAXPOINT	CREFERENCE	CSEQUENCE	CPRODUCT	CUNITS	NQUANTITY
INVOICE		A1D001	A1 Design Services	06/11/2020 00:00:00	08605		CLI		1
INVOICE		A1D001	A1 Design Services	06/11/2020 00:00:00	08605		CLI		1
INVOICE		A1D001	A1 Design Services	06/11/2020 00:00:00	08605		CLI		1
INVOICE		A1D001	A1 Design Services	06/11/2020 00:00:00	08605		CLI		1
INVOICE		A1D001	A1 Design Services	06/11/2020 00:00:00	08605		CLI		1
INVOICE		885001	Bobs Building Supplies	06/11/2020 00:00:00	08606		CLI		1
INVOICE		885001	Bobs Building Supplies	06/11/2020 00:00:00	08606		CLI		1
INVOICE		885001	Bobs Building Supplies	06/11/2020 00:00:00	08606		CLI		1
INVOICE		885001	Bobs Building Supplies	06/11/2020 00:00:00	08606		CLI		1
INVOICE		885001	Bobs Building Supplies	06/11/2020 00:00:00	08606		CLI		1

Use the SHOW and **EXPORT** buttons to check that you have the same number and value of **transactions** as you created in the BILLING window.

Now you are ready to create the invoices in the accounting package but first make a backup of your accounting system if possible. Now you can CREATE INVOICES to create the invoices in your accounting package.

If you do not have an accounting package specified – you may see the greyed out option specified VAT. This will set a tax rate of 20% on all items.

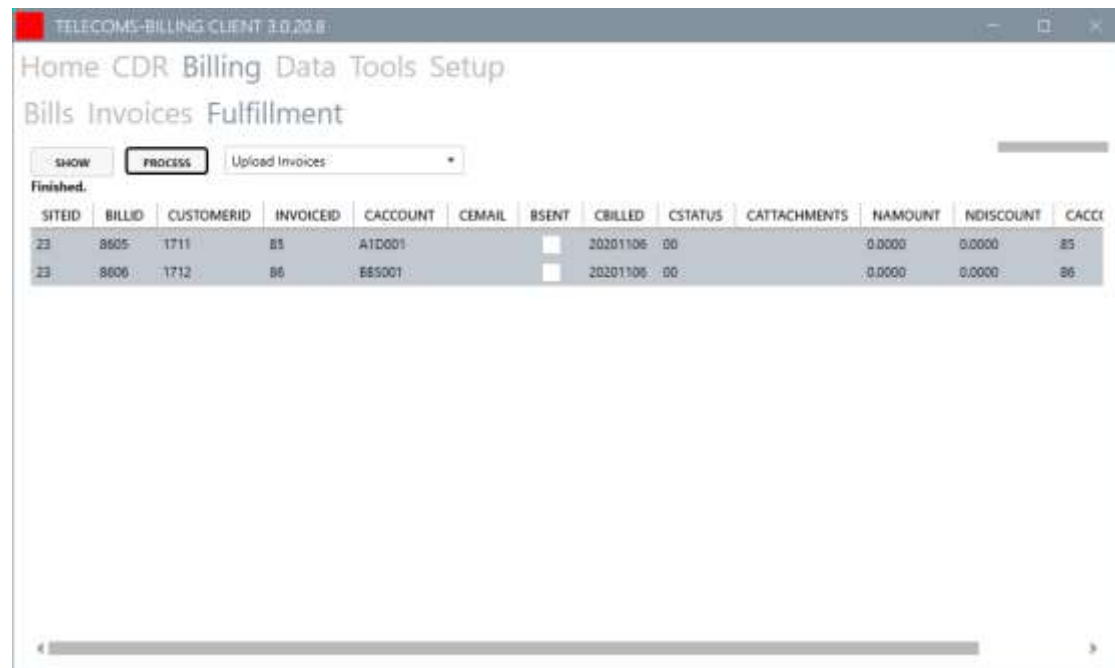
You can see the invoices being created on the underlying windows and can consult the log file in the program folder in case of any errors.

Now you can reconcile the totals in Sage against the amount you expected to be exported from the spreadsheet to check if anything is missing. Sage 50 will let you export the highlighted invoices from the Invoice List so you can compare.

Fulfilment

The final stage allows you to download files and invoices and set the status so you can begin all over again.

You may UPLOAD INVOICES from the accounting package on to the website for the Customer to retrieve directly. You may need to make sure the invoices are approved within the accounting package – then highlight the accounts and PROCESS to create a copy of each invoice, direct from the accounting package. The PDF is copied locally into the output folder and also up in to the Cloud so the end customer can access from the portal.



SITEID	BILLID	CUSTOMERID	INVOICEID	CACCOUNT	CEMAIL	BSENT	CBILLED	CSTATUS	CATTACHMENTS	NAMOUNT	NDISCOUNT	CACCE
23	8605	1711	85	A1D001		<input type="checkbox"/>	20201106	00		0.0000	0.0000	85
23	8606	1712	86	E65001		<input type="checkbox"/>	20201106	00		0.0000	0.0000	86

Selectiing the DOWNLOAD BILLS AND SUMMARY option copies the HTML and CSV and XLSX files down to the billing folder for each customer. The documents comprise:

- CSV file containing all the Call Details with customer descriptions.
- XSLX spreadsheet file also containing all the Call Details with customer descriptions (note that Excel removes zeros from the beginning of the string representing a phone number).
- HTML statement showing the amount and tax billed broken down by SERVICE and then also by DESTINATION.
- PDF Copy of the HTML Statement.

Reconciliation

Every billing manager needs to create a reconciliation spreadsheet and check a proportion of the invoices before sending out to the customer.

This should be done at every stage but also particularly before sending out invoices to the customers. You can reconcile the call details by noting the number of calls and the total direction at each stage in the process so you can account for any discrepancies and losses along the way.

An example checklist follows:

- Note the number of calls and the total duration and cost (from the provider invoice if costs not present in the call details) for each source of data.
- Note the number and value of calls written off from suspense.
- Check the calls in the READY TO BILL section of the suspense report against your running totals for the call details.
- Export the bills before creating them and reality check the totals by customer and by product against your figures for the previous month.
- Reality check against the costs of the provider invoices for call details against the retail total for the relevant products.
- Check the totals and the detail lines for each product against the provider invoice.
- Check the total amount invoiced in Sage against the total amount created in the billing items.
- Check a proportion of bills and export files periodically.

Suspense Tools

Suspense is normally dealt with by the customer service staff entering data into the website. One common suspense record is 21 CLI NOT FOUND which requires a new service against a customer to be entered so that the A NUMBER gets a match or perhaps the start date needs to be changed against an existing record.

The standard procedure is for the persons responsible to view the suspense report from the website and attempt to fix any errors in provisioning. Any call details where the underlying problem has been fixed will be processed successfully the next time the billing manager re-rates.

Suspense Summary

suspenseid	suspense	duration	amount	nduration	cfirstdate	clastdate	ndbcast	nprice
21	Match - CLI not found.	00:00:00	7611	0.00	20140731	20140830	1,020.04	0.00

21 Match - CLI not found.
SERVICE - Enter a new CLINT service against the appropriate Customer or check if you need to reactivate an existing service.

cnumber	sourcoid	duration	amount	nduration	price	ndbcast	cfirstdate	clastdate	suspenseid
01245237800	42	00:00:00	158	0.00	0.00	13.47	20140805	20140829	21
01245239000	42	00:00:00	1782	0.00	0.00	84.23	20140801	20140829	21
01245252414	42	00:00:00	1351	0.00	0.00	112.58	20140731	20140830	21
01245200632	42	00:00:00	1	0.00	0.00	0.04	20140828	20140828	21
01245283043	42	00:00:00	2	0.00	0.00	0.45	20140805	20140829	21
01245300188	42	00:00:00	254	0.00	0.00	23.23	20140801	20140829	21
01245493517	42	00:00:00	1	0.00	0.00	0.45	20140815	20140815	21
01245491812	42	00:00:00	1	0.00	0.00	0.01	20140805	20140805	21

There are some tools to aid productivity and allow the billing manager to deal quickly with some common suspense scenarios.

Pricelist Editor

The pricelist editor lets you change prices in a tariff.

Be careful to make sure the DATE UPDATED is set to the beginning of the period you want to bill from so the correct history of price changes is maintained in the database. The old price will apply from before the date specified if any Call Details are rated or related.

Standard Date Updated: 01/10/2020

CBRAND	CURRENCY	NTARIFF01	NTARIFF02	NTARIFF03	NMINIMUM	NSETUP	NINCREMENT	BACTIVE
Argentina - Buenos Aires	GBP	0.0748	0.0733	0.073	0	0	1	True
Argentina - Mobile	GBP	0.2691	0.2678	0.2675	0	0	1	True
Australia - Mobile	GBP	0.1343	0.133	0.1327	0	0	1	True
Australia - Perth	GBP	0.202	0.202	0.202	0	0	1	True
Australia - Sydney	GBP	0.0202	0.0189	0.0186	0	0	1	True
Austria	GBP	0.09	0.09	0.09	0	0	1	True
Austria - Mobile	GBP	0.2004	0.2011	0.2008	0	0	1	True
Austria - Vienna	GBP	0.09	0.09	0.09	0	0	1	True
Belgium - Brussels	GBP	0.0249	0.0236	0.0233	0	0	1	True
Brazil - Sao Paulo	GBP	0.0437	0.0424	0.0421	0	0	1	True
Bulgaria - Mobile	GBP	0.2677	0.2664	0.2661	0	0	1	True
Cambodia - Mobile	GBP	0.4291	0.4278	0.4275	0	0	1	True
Canada - British Columbia	GBP	0.0168	0.0168	0.0168	0	0	1	True
Canada - New Brunswick	GBP	0.0168	0.0168	0.0168	0	0	1	True
Canada - Ontario	GBP	0.0168	0.0168	0.0168	0	0	1	True
Canada - Saskatchewan	GBP	0.0168	0.0168	0.0168	0	0	1	True
Chile - Santiago	GBP	0.0746	0.0733	0.073	0	0	1	True
Denmark	GBP	0.03	0.03	0.03	0	0	1	True
Denmark - Copenhagen	GBP	0	0	0	0	0	1	True
Denmark - Mobile	GBP	0.1384	0.1371	0.1368	0	0	1	True
Finland - Helsinki	GBP	0.0298	0.0285	0.0282	0	0	1	True
France	GBP	0.0183	0.017	0.0167	0	0	1	True
France - Lille	GBP	0.0183	0.017	0.0167	0	0	1	True
France - Mobile	GBP	0.3024	0.3011	0.3008	0	0	1	True
France - Paris	GBP	0.0183	0.017	0.0167	0	0	1	True
Germany	GBP	0.019	0.0177	0.0174	0	0	1	True
Germany - Berlin	GBP	0.019	0.0177	0.0174	0	0	1	True

CLI Suspense Tool

The CLI SUSPENSE TOOL for example allows A NUMBERS to be quickly allocated against a customer. Simply select the customer from the dropdown on the right (and a tariff if required) and specify a start date to create the appropriate service records against the customer. Note if you want to specify a range of number then use the website to enter the appropriate range of numbers.

Suspense Tools

Customer CLI/NGN 43 Tariff

Found 103 suspense items.

21 CLI Suspense ▾

CANUMBER	SOURCEID	CDURATION	NCOUNT	NDURATION
01273676439	42	00:02:06	2	126.0000
01273737404	42	06:50:10	158	24610.0000
01322311265	42	06:43:32	164	24212.0000
01323379250	42	00:09:20	4	560.0000
01323379251	42	00:41:26	8	2486.0000
01323379252	42	02:06:20	76	7580.0000
01323379325	42	01:10:32	26	4232.0000
01323379326	42	10:20:14	132	37214.0000
01323379327	42	23:07:32	416	83252.0000
01323379329	42	01:04:56	16	3896.0000
01323379330	42	04:10:20	132	15020.0000
01323403842	42	00:46:48	4	2808.0000

A1D001 ▾
 Demo 20% Mark ▾
 01/10/2020
 Active

Tariff Suspense Tool

The tariff suspense tool is an easy way to enter tariffs into the system often employed the first time you set up billing. Press SHOW to view all the Error 43 suspense records which shows you the destination with a missing tariff.

Press DEFAULTS to extract a best guess for the required tariff. This might be taken from the cost or retail figures in the call details or from the standard BT Tariff. You can edit the numeric figures here and so set your required prices for each destination for standard, weekend and economy rates. You can see the pricelist on the leftmost column so please ensure that you enter data against the parent pricelist if you have a pricelist hierarchy.

Selecting the rows and then pressing UPLOAD will create the appropriate tariff record in the database. You should then re-rate and repeat until all the tariffs have been entered. You can view the tariff in the website.

Suspense Tools

Customer: 21 CLI Suspense 43 Tariff Suspense

Finished - numeric fields are editable.

Show Defaults Upload

Set Values

cprielist	cband	ccurrency	ntariff01	ntariff02	ntariff03	nincrement	nminimum
Standard	Argentina - Buenos Aires	GBP	0.0746	0.0733	0.073	1	0
Standard	Argentina - Mobile	GBP	0.2691	0.2678	0.2675	1	0
Standard	Australia - Mobile	GBP	0.1343	0.133	0.1327	1	0
Standard	Australia - Perth	GBP	0.12	0.12	0.12	0	0
Standard	Australia - Sydney	GBP	0.0202	0.0189	0.0186	1	0
Standard	Austria	GBP	0.09	0.09	0.09	1	0
Standard	Austria - Mobile	GBP	0.2024	0.2011	0.2008	1	0
Standard	Austria - Vienna	GBP	0.09	0.09	0.09	1	0
Standard	Canada - New Brunswick	GBP	0.0168	0.0168	0.0168	1	0
Standard	Canada - Ontario	GBP	0.0168	0.0168	0.0168	1	0
Standard	Chile - Santiago	GBP	0.0746	0.0733	0.073	1	0
Standard	Denmark - Copenhagen	GBP	0	0	0	0	0
Standard	Denmark - Mobile	GBP	0.1384	0.1371	0.1368	1	0
Standard	France	GBP	0.0183	0.017	0.0167	1	0
Standard	France - Mobile	GBP	0.3024	0.3011	0.3008	1	0
Standard	France - Paris	GBP	0.0183	0.017	0.0167	1	0
Standard	Germany	GBP	0.019	0.0177	0.0174	1	0

There are some manipulations you can do using the drop down and the numeric textbox on the form. For example you can choose FACTOR and then enter perhaps 1.5 to uplift the selected rows by 50%. You can also set the INCREMENT, MINIMUM and SETUP amount with this technique.

Suspense Tools

Customer: 21 CLI Suspense 43 Tariff Suspense

Finished - numeric fields are editable.

Show Defaults Upload

FACTOR 1.5 Set Values

cprielist	cband	ccurrency	ntariff01	ntariff02	ntariff03	nincrement	nminimum
Standard	Argentina - Buenos Aires	GBP	0.11190	0.10995	0.1095	1	0
Standard	Argentina - Mobile	GBP	0.40365	0.40170	0.40125	1	0
Standard	Australia - Mobile	GBP	0.20145	0.1995	0.19905	1	0
Standard	Australia - Perth	GBP	0.180	0.180	0.180	0	0
Standard	Australia - Sydney	GBP	0.03030	0.02835	0.02790	1	0
Standard	Austria	GBP	0.135	0.135	0.135	1	0
Standard	Austria - Mobile	GBP	0.30360	0.30165	0.30120	1	0
Standard	Austria - Vienna	GBP	0.135	0.135	0.135	1	0
Standard	Canada - New Brunswick	GBP	0.02520	0.02520	0.02520	1	0
Standard	Canada - Ontario	GBP	0.02520	0.02520	0.02520	1	0
Standard	Chile - Santiago	GBP	0.11190	0.10995	0.1095	1	0
Standard	Denmark - Copenhagen	GBP	0.0	0.0	0.0	0	0
Standard	Denmark - Mobile	GBP	0.20760	0.20565	0.20520	1	0
Standard	France	GBP	0.02745	0.0255	0.02505	1	0
Standard	France - Mobile	GBP	0.45360	0.45165	0.45120	1	0
Standard	France - Paris	GBP	0.02745	0.0255	0.02505	1	0
Standard	Germany	GBP	0.0285	0.02655	0.02610	1	0

Remember to select and upload the changed records into the database and rerate. Changes are not made until you upload so you can close the form without uploading if you make a mistake.

CDR Designer Tool

The CDR Designer tool is an advanced facility available if you need to test or add a CDR source to the system. Usually we will set up and configure the CDR for you or populate with a pre-existing template.

Select a file and view the raw data by checking the RAW checkbox so you can decide upon and specify the format of the file. Check the HEADER checkbox if there is a header line on the file with field names (there usually is) and then select the format of the file – COMMA, TAB, or COLUMNS for comma-delimited, tab-delimited or column-delimited files.

The configuration is complex at the moment and we recommend you let us perform the initial configuration and we expect the usability of this form to improve over time.

The ATTRIBUTES below indicate that column 2 is the ANUMBER, column 3 the BNUMBER and so forth. In this case only the CDR COST is specified and the figure is in pence. The actual column headings are ignored.

2,0,anumber,c|3,0,bnumber,c|4,0,date,c|5,0,time,c|6,0,duration,n,seconds|8,0,ctext,c|10,0,cost,n,pence

The screenshot shows the Cdr Designer Tool window. At the top, it displays '7611 call details records found. 7611 mediation.' Below this are several controls: a 'Show' button, checkboxes for 'Raw Data' and 'Header', a dropdown menu set to 'COMMA', and a text box containing 'Daisy Calls'. A file path 'c:\temp\demo\cdr\daisycdr\AUGW14_XXX_Calls.csv' is entered in a text field. Below these are fields for 'Attributes' (containing the attribute string), 'Mediation', and 'Columns'. At the bottom, a table displays the raw data with columns: nline, ctype, canumber, cbnumber, cdate, ctime, nduration, ctext, ncdrcost, ncdprice, cmediation, ctag, sourceid, and ba.

nline	ctype	canumber	cbnumber	cddate	ctime	nduration	ctext	ncdrcost	ncdprice	cmediation	ctag	sourceid	ba
1		01245237800	02031310305	20140805	101553	0	London	0.0003	0			42	0
2		01245237800	02031310387	20140805	101621	0	London	0.0005	0			42	0
3		01245237800	07763801271	20140805	101636	0	Mobile - O2	0.0052	0			42	0
4		01245237800	02031310305	20140805	103259	0	London	0.0189	0			42	0
5		01245237800	07763801271	20140805	103811	0	Mobile - O2	0.0011	0			42	0
6		01245237800	02031310305	20140805	104838	0	London	0.0038	0			42	0
7		01245237800	07957426422	20140805	112047	0	Mobile - T-Mobile	0.0031	0			42	0
8		01245237800	01245360813	20140805	113746	0	Chelmsford	0.0008	0			42	0
9		01245237800	01245360813	20140805	114026	0	Chelmsford	0.0102	0			42	0
10		01245237800	03332407590	20140805	114354	0	UK Wide	0.0020	0			42	0
11		01245237800	02031310305	20140805	115751	0	London	0.0002	0			42	0
12		01245237800	02031310305	20140805	122347	0	London	0.0004	0			42	0
13		01245237800	03001000607	20140805	122509	0	UK Wide	0.0489	0			42	0

Glossary

Billing Manager	The person responsible for the billing process, particularly the elimination of suspense call detail records before the monthly billing run.
Billing Run	A monthly (usually) process to complete billing by eliminating suspense records and actually creating the bills for the customer.
Bundle	Mobiles are often provided with a monthly fee which includes a certain number of calls to a number of destinations. This is the bundle of free calls which might be identified in mediation (perhaps the cost is zero) or afterwards as a customer discount.
CDR	Billing data for each call is received as part of a file containing CDR - Call Detail Records.
DEDS	The DEDS file is received from BT and contains call details for reverse charges, operator assisted calls and so forth. Some providers will include these in your CDR otherwise you need to process this file as CDR separately.
Mediation	The raw CDR file is often massaged to pre-process the data ready for matching and rating. This usually involves formatting the number dialled field and recording additional information such as whether the call was over an ISDN line and so on.
Match	Each call record is matched against a customer record usually with the CLI field.
Non-Geo	A non-geographic number is typically an 08 number and maps on to a normal landline number. Our system bills this in two phases and so you can forward to an international or mobile number and have the billing done accurately.
Provisioning	The process of setting up a new line with the telecoms provider and entering the information into the billing database.
Rate	Each call record is rated against a pricelist to product a price for the call.
Reconciliation	The process undertaken by the billing manager where the monthly CDR is checked thoroughly before completing the billing run and sending out the bills to customers.
Suspense	There may be issues when processing a call record that prevent the matching and rating process from completing. These call details records are held in a suspense file and the Billing Manager needs to identify the issues and then re-rate these records prior to the monthly billing run.

Tariff	A cost or retail price for a particular destination grouped together as a pricelist and applied to a customer or a service.
WLR3	This is the protocol used by BT OpenReach to provision new lines and numbers. It is not supported by our system but you may find that your provider will manage this process for you. Otherwise you need to find a system or portal to manage this relationship with BT OpenReach.