

SHORETEL PROFESSIONAL SERVICES

ShoreTel CCI Viewer

User & Installation Guide
Document Version 1.4 – 2012-10-30

ShoreTel CCI Viewer

DESCRIPTION & USAGE GUIDE

INTRODUCTION

ShoreTel Professional Services has developed a web based viewer for the CDR table which is the output of the CCIR Transform Service (after processing the ShoreTel Contact Center CCIR database). See the ShoreTel CCIR Transform Service document for a full description.

Once installed on a Windows server, the Contact Center Interaction (CCI) viewer website is accessible from any web browser. It allows the user to view Contact Center calls in a tabular form as well as filter the view so as to display only those records that are desired.

The CCI Viewer requires the CCIR Transform Service be installed and running.

INSTALLATION

The CCI Viewer is a Windows web install package consisting of CCIViewerWebSetup.exe and CCIViewerWebSetup.msi files. Copy both these files to a permanent location anywhere on the desired server and execute CCIViewerWebSetup.exe. The website can be installed on any Windows 2003 or above server running IIS 6 or above.

Important: If installing on Windows 2008 R2 (or any 64-bit Windows with IIS 7 or greater), you must **first** refer to the additional “ShoreTel CCI Viewer Installation Notes” document to verify and configure IIS. You do not need that document if installing on a 32-bit Windows server running IIS 6.

The default virtual directory is “CCIViewer” which would make the starting URL <http://<SERVER>/CCIViewer/Home.aspx>. During installation, you may specify a different virtual directory.

Note the Application Licensing Server and appropriate licenses must be installed in order to utilize the CCIR Transform Service and the CCI Viewer. See your ShoreTel partner for details or a trial license.

To uninstall, using Windows “Add or Remove Programs” control panel, find “ShoreTel CCI Viewer” then select “Remove”.

CONFIGURATION

Once installed it is important to edit the settings file, CustomAppSettings.xml, which will have been installed at C:\Inetpub\wwwroot\CCIViewer\App_Data (assuming default virtual directory of “CCIViewer”).

The settings file, CustomAppSettings.xml allows the administrator to set the location of both the CCIR database and the ShoreTel CDR database (the Director server). The CCI Viewer website will not function if these settings are not correct.

The contents below show the default settings (lines are numbered in this document for reference):

1. <?xml version="1.0" encoding="utf-8" ?>
2. <settings>

```
3. <!-- Server and MySQL port must point to CCIR DB server. Port is usually 4306. -->
4. <CCIRServer host="localhost" port="4306" />
5. <!-- Server and MySQL port must point to ShoreTel Director server -->
6. <!-- Note 3306 is default port but in ST version 10+, port should be 4309. -->
7. <CDRServer host="localhost" port="4309" />
8. <!-- Setting for GUID Link column. Can be used to link to other products (if
   associated by GUID) -->
9. <CallGUID enable="No" link="" tooltip="" />
```

The entries specifying CCIRServer (line 4) and CDRServer (line 7) must be configured properly for the website to function. Optionally, the CallGUID entry (line 9) can enable the creation of web links to other URLs based on the unique call ID value known as GUID.

The CCIRServer host and port values must reflect the location of the CCIR database server and the associated MySQL port number. The port number is normally 4306 in this case.

The CDRServer host and port values must reflect the location of the ShoreTel Director server which contains the core CDR database. The CDRServer port value should be 3306 in ShoreTel versions prior to 10 and 4309 in versions 10 and above.

The CallGUID entry (line 9) may be configured to provide a link, per call row, to an external system. The external system must be able to be referenced via the associated call GUID which is a unique value, per call. The GUID is only available for ACD type calls. To enable the links, set the value enable to “Yes”, the value of link to a URL using the string %% where the GUID should be inserted, and the tooltip value to a string that will appear when the mouse hovers over the link in the CCIViewer. For example, to create links to the ShoreTel Call Recorder Player website, the following would be the CallGUID entry (replacing localhost with the appropriate location of the player). In addition, to appear in the Viewer page, the user would also have to be sure the “GUID Link” column was added to the “Visible Columns” in the Filters page.

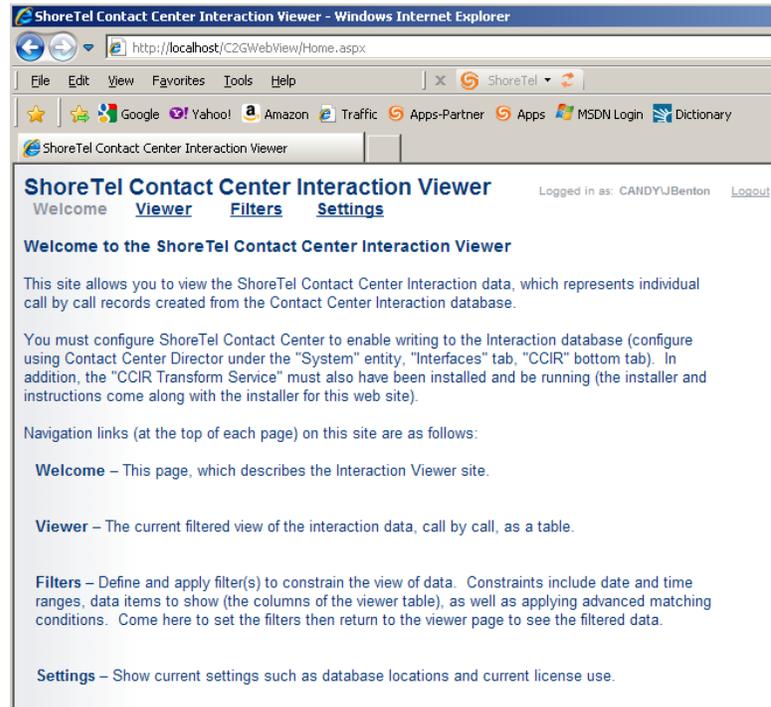
```
<CallGUID enable="Yes" link="http://localhost/stpscallrecorderplayer?File=%%" tooltip="Click to
open in Call Recorder Player" />
```

Once this file has been saved with the proper settings, the website is ready for use.

WEBSITE

As mentioned the default starting URL for the website is <http://<SERVER>/CCIViewer/Home.aspx> where <SERVER> is the name or IP address of the server where installed. In the screen examples, “localhost” is shown. The website uses Windows Authentication and will automatically log the user in if that user is logged into their machine using domain credentials. If the user comes from outside the domain, they will be prompted for a valid user and password by their Internet Explorer.

The Home page simply shows the list of pages and their description:



The website consists of 4 pages, with links just under the title:

- **Welcome** – This shown description page.
- **Viewer** – The current filtered view of the CCIR data, call by call, as a table.
- **Filters** – Define and apply filter(s) to constrain the view of data. Constraints include date and time ranges, data items to show (the columns of the viewer table), as well as applying advanced matching conditions. Come here to set the filters then return to the viewer page to see the filtered data.
- **Settings** – Show current settings such as database locations and current license use.

The main pages are the Viewer and the Filters. The Viewer page shows the set of CCIR data as it has been transformed by the CCIR Transform Service. In addition, it applies whatever filters are enabled as shown and configured in the Filters page.

Viewer Page

Example of a Viewer page is below (calling numbers obscured in this document). At the top is the list of currently applied filters, in this case the data is from a single work week, May 24 through May 28, with time range of the entire day. The user defined expression "HasAgent" is applied (see Filters page description following). The columns displayed can also be changed using the Filters page.

ShoreTel Contact Center Interaction Viewer - Windows Internet Explorer

http://localhost/CCIVIEWER/Viewer.aspx

File Edit View Favorites Tools Help

Links Google Bing Yahoo! Amazon Dictionary Director LogMeIn HelpDesk Traffic Customize Links

ShoreTel Contact Center Interaction Viewer

ShoreTel Contact Center Interaction Viewer Logged in as: Admin [Logout](#)

[Welcome](#) [Viewer](#) [Filters](#) [Settings](#)

Current filter settings:

Date Range: Monday, May 24, 2010 – Friday, May 28, 2010
Time Range: 00:00:00 – 23:59:59
Current Expression: HasAgent
Displayed Columns: Call ID ACD Call? Start Duration Calling Called Agent Nr Agent Nm Aban?

Matched 139 records (6 pages) Show rows/page

Call ID	ACD Call?	Start	Duration	Calling	Called	Agent Nr	Agent Nm	Aban?	
485137463	Y	05/28 16:03:43	00:02:22	17	258	6000	9009	ARobertson	N
619148237	Y	05/28 13:37:25	00:11:40	16:	460	2606	2606	LLu	N
565362755	Y	05/28 12:24:59	00:00:55	14	520	6000	3682	GHall	N
3429978628	Y	05/28 12:04:46	00:00:39	17	385	6000	9009	ARobertson	N
3514116947	Y	05/28 12:04:13	00:01:37	13	333	6000	3682	GHall	N
3766531904	Y	05/28 12:01:41	00:00:42	17	778	6000	9009	ARobertson	N
2057453413	Y	05/28 11:32:02	00:04:25	17	778	6000	3682	GHall	N
75204530	Y	05/28 09:54:42	00:59:15	14	300	2606	2606	LLu	N
2851769057	Y	05/28 09:45:42	00:03:51	14	723	2606	2606	LLu	N
2500544092	Y	05/28 09:29:38	00:01:26	18:	185	6000	3682	GHall	N
2688820730	Y	05/28 09:04:16	00:01:43	19:	297	6000	3682	GHall	N
1823524513	Y	05/28 08:59:45	00:03:16	12:	381	6000	3682	GHall	N
1991801151	Y	05/28 08:48:09	00:02:40	15	345	6000	3682	GHall	N
2129852651	Y	05/28 08:26:29	00:01:08	16	300	6000	9009	ARobertson	N
2634682565	Y	05/28 08:11:38	00:00:21	19	793	6000	9009	ARobertson	N
3882975249	Y	05/28 06:16:11	00:03:32	14	300	6000	3682	GHall	N
3311226197	Y	05/27 16:58:56	00:01:20	19:	596	6000	9009	ARobertson	N
1900439909	Y	05/27 14:50:28	00:04:59	14	202	6000	9003	EAlexanian	N
3708200846	Y	05/27 14:31:23	00:01:15	13	125	6000	2728	DMahr	N
3792339165	Y	05/27 14:30:12	00:08:38	16:	331	6000	9003	EAlexanian	N
170478421	Y	05/27 14:09:46	00:01:59	18	365	6000	9003	EAlexanian	N
3454076398	Y	05/27 14:00:31	00:01:44	13	384	6000	9009	ARobertson	N
260913259	Y	05/27 13:47:28	00:02:23	19	391	6000	9003	EAlexanian	N
4585275	Y	05/27 13:25:01	00:01:42	13	333	6000	2728	DMahr	N
88723594	Y	05/27 13:23:47	00:02:00	17	537	6000	9003	EAlexanian	N

1 2 3 4 5 6

One may get further details on a call by clicking the “Call ID” entry which will pop up another page displaying the details of the call as found in the ShoreTel CDR database. An example is shown below. The first section shows the entry from the CDR “call table”. The second section shows the entry from the CDR “connection table”. The call record is a single entry concerning the call in general while the connection record shows the calling party, then each subsequent party to which the calling party was connected.

These values are directly from the ShoreTel CDR database. The call and connection tables are further defined in the ShoreTel System Administration Guide in the appendix concerning CDR.

ShoreTel Contact Center Interaction Viewer - Detail for call 4221410892 - Windows Internet Explorer

ShoreTel CDR Call Entry

Call table record as logged by the ShoreTel system for CallID = 4221410892

Table ID	Start	End	Duration	Type	Dialed	Caller ID
7968828	08:46:20	08:51:10	00:04:49	Inbound	14083313300+1f	'44

ShoreTel CDR Connection Entries

Entries in the Connect table represent all connections on this call, as logged by the ShoreTel system. The highlighted first entry is the originating party on the call. Other entries represent the originator's subsequent connections on the call.

Start	Reason	Device	Group	Number	Name	Xfering Nr	Xfering Nm	Mailbox	Talk	Hold	Ring	Duration	LD	Disconnect
08:46:20	Originate	Trunk	Sunnyvale AT&T Local	+14083313300	'44				00:02:51	00:00:00	00:00:17	00:04:31	0	Normal
08:46:20	Called	AutoAttendant	Voice Mail Notification	1003	VM Auto-Attendant				00:00:28	00:00:00	00:00:00	00:00:29	0	Normal
08:46:50	Transfer	RoutePoint	Sunnyvale NAS	6000	NAS MainEntry Script	1003	VM-AutoAttendant		00:00:00	00:00:00	00:00:00	00:00:00	0	Normal
08:46:50	Transfer	Virtual	Sunnyvale NAS	2615	Patricia	6000	NAS MainEntry Script		00:01:10	00:00:00	00:00:14	00:01:11	0	Normal
08:48:15	Transfer	Station	Sunnyvale	2734	Nicholas	2615	Patricia		00:02:51	00:00:00	00:00:03	00:02:51	0	Normal

Filters Page

The Filters page allows you to constrain or expand the data that is shown in the Viewer page. There are 3 sections: Date/Time, Expression, and Visible Columns. Any changes to the filters must be applied (there is an “Apply” button on the page) before they take effect. The settings will be “remembered” for each validated user.

The Date/Time filter allows the setting of the range of dates and range of time within days that is displayed in the Viewer page. The default, when first logging into the CCI Viewer website is to display the current full day's calls.

Date/Time Filter

Use the controls below to select the date range and time range (within each day) for data displayed in the Viewer page. Only phone calls that began within these ranges will be shown in the Viewer. For changes to take effect, you must "Apply".

Select Start Time : Select End Time :

[Date Quick Picks](#)

Today
 Yesterday
 This Week
 Last Week
 This Month
 Last Month

Select Start Date

May 2010						
Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Select End Date

May 2010						
Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

The Expression filter allows you to define expression terms that consist of conditional equations based on the data in the Viewer table. You can define equations such as “Duration > 01:00:00” and “ACD Call? = Y”, then combine them to make an expression term which you might name “LongACD”. You can create multiple terms and combine up to 3 of them to apply to the current Viewer data being displayed. The defined terms, as well as your currently applied expression, will be saved and will be remembered when you login again.

An example with various terms defined is shown below.

Current Expression

Using the selectors below, choose up to 3 defined expression terms to apply to the current view. The filter will take effect only when you "Apply" any changes made.

Defined Expression Terms

Existing expression terms are shown below. You may add new terms or delete existing ones. The terms may be used to apply a filter to the current view. Use the selector(s) above to actually apply up to 3 of these defined terms. For any additions or deletions to take effect you must "Apply".

	Name	Expression
Delete	ACDCall	ACD Call? Y
Delete	CallingNotNull	Calling Not NULL
Delete	CallingNull	Calling NULL
Delete	HasAgent	Agent Nr Not NULL
Delete	LongWait	In Q > 60
Delete	NotACD	ACD Call? N
Delete	SJCalls	Calling Starts With 408 OR Calling Starts With 1408 OR Calling Starts With 91408
Delete	SJOut	Called Starts With 408 OR Called Starts With 1408 OR Called Starts With 91408
Delete	ZeroDuration	Duration = 00:00:00

To add a term, enter a name and select one or more equations from the selectors below, then "Add Term". You still have to "Apply" for any changes to persist.

Term Name:

	Field	Condition	Value
	<input type="text" value="Not set..."/>	<input type="text" value="Not set..."/>	<input type="text"/>
<input type="button" value="AND"/>	<input type="text" value="Not set..."/>	<input type="text" value="Not set..."/>	<input type="text"/>
<input type="button" value="AND"/>	<input type="text" value="Not set..."/>	<input type="text" value="Not set..."/>	<input type="text"/>

The Visible Columns section allows you to define which columns of data should be shown on the Viewer page. These columns are also the ones that can be used in the equations of the expression terms in the Expression Filter. The type of data helps you to determine what the form of the values will be. An Integer type will be a number. A Flag type will be a single character, "Y" or "N" (meaning yes/true or no/false).

The choices, once applied, will be remembered for your user name.

Visible Columns

Use the grid below to select which columns you want to appear in the Viewer page. For changes to take effect, you must "Apply".

Use the "Defaults" button to reset selections to their initial defaults, if desired.

Defaults

(You still need to "Apply" to effect the change.)

Show	Column	Description	Type
<input checked="" type="checkbox"/>	Call ID	The primary call ID, unique within the ShoreTel system	Integer
<input type="checkbox"/>	CC Call ID	Contact Center call ID, unique since the start of the CC process	Integer
<input type="checkbox"/>	2nd Call ID	Call ID of associated secondary call, if any	Integer
<input checked="" type="checkbox"/>	ACD Call?	Was call an ACD type call?	Flag
<input checked="" type="checkbox"/>	Start	Date and time the call started, as known to the Contact Center	DateTime
<input type="checkbox"/>	End	Date and time the call ended, as known to the Contact Center	DateTime
<input checked="" type="checkbox"/>	Duration	Duration of the call, as known to the Contact Center	Time
<input checked="" type="checkbox"/>	Calling	Calling party number	String
<input checked="" type="checkbox"/>	Called	Called party number	String
<input type="checkbox"/>	IRN	Contact Center IRN, if any	String
<input type="checkbox"/>	IVR List	List of IVR applications transited by this call	String
<input type="checkbox"/>	Svc List	List of Contact Center services transited by this call	String
<input type="checkbox"/>	Grp List	List of Contact Center groups transited by this call	String
<input type="checkbox"/>	CCS List	List of Contact Center scripts transited by this call	String
<input type="checkbox"/>	Agent ID	Contact Center agent ID of first agent involved on this call	String
<input checked="" type="checkbox"/>	Agent Nr	Agent extension of first agent involved on this call	String
<input checked="" type="checkbox"/>	Agent Nm	Agent name of first agent involved on this call	String
<input type="checkbox"/>	In Q	Number of seconds waited in Contact Center queue (voice calls only)	Integer
<input type="checkbox"/>	In Ring	Number of seconds agent's phone rang (voice calls only)	Integer
<input type="checkbox"/>	In Conn	Number of seconds connected to agent (voice calls only)	Integer
<input checked="" type="checkbox"/>	Aban?	Was call abandoned?	Flag
<input type="checkbox"/>	Xfer?	Was call transferred?	Flag
<input type="checkbox"/>	Divert?	Was call diverted?	Flag
<input type="checkbox"/>	OFlow?	Did call overflow?	Flag
<input type="checkbox"/>	IFlow?	Did call interflow?	Flag
<input type="checkbox"/>	MultiAgt?	Was more than one agent involved on this call?	Flag
<input type="checkbox"/>	Conf?	Was call involved in a conference?	Flag
<input type="checkbox"/>	OutDial?	Was call created by outbound dialing?	Flag
<input type="checkbox"/>	CP Values	List of Call Profile names and values	String
<input type="checkbox"/>	Wrap Value	Agent assigned numeric wrap value	String
<input type="checkbox"/>	Wrap Code	Agent assigned named wrap code	String
<input type="checkbox"/>	Media	Media type of the call (voice, web, email)	String
<input type="checkbox"/>	GUID Link	Configured web link based on unique call GUID	String