



> Cxp Solution Documentation

CCaaS

11 January 2024

Version: 2.0

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1 Solution Description Home

1.1 Goals

This document is designed to be used to communicate updates on the TelXL CCaaS Solution.

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Date Created	18/09/2023
Contributors	Vicky Banton, Stuart Castrell, Tom Moore, Dom Ali, Ben Foad, Katie Ellis, Stephanie Birch, Tim Brookes
Technical Author	Pip Boys
Version	2.0

1.2 Purpose Of This Document

This is a Partner and Customer facing document that will be used to answer technical questions about the TelXL Platform, respond to tenders and to aid in the training of technical staff to understand what we can and can't do. It can be used as a reference guide to answer Customer queries, provide information on our architecture and feature dependencies. This document will be updated regularly as features are added and as things change.

1.3 Document Change Control

Chapter	Status	Contributor	Date	Version
Architecture	New	Tim Brookes, Vicky Banton	06/11/23	V2.0

2 Platform Overview

Cxp is a full Contact Centre as a Service (CCaaS) Platform. It offers Resellers all the tools they need to bill, provision and report. Cxp offers Small to Medium sized Contact Centres all the tools they will need to run, operate and grow a Contact Centre service, including Digital and Social channels. It offers an extensive menu of bolt-ons to extend the platform's functionality as and when needed, such as PCI payment solutions, memorable numbers, or additional storage.

Voice Experience (Vxp): Vxp is a feature rich voice-orientated CCaaS with all the tools to operate a highly available voice-focused contact experience platform. Containing all the tools that a Contact Centre will need to operate, with the ability to grow through integrations potential to add Digital channels in the future.

Digital Experience (Dxp): Dxp is a Digital only Contact Centre that allows you to focus on the Digital channels and the capabilities that they offer. Dxp contains a drag-and-drop workflow studio to customise your experience and gives you access to all the Digital channels and AI Chatbot capabilities.

Omni Experience (Oxp): Oxp is an omni-channel Contact Centre solution providing unparalleled reach for your SME Customers brands. From Facebook Messenger, WhatsApp (and more) to Voice, your Customers will get all the tools they need to connect with your End customer, operate efficiently and collect valuable data to improve the businesses they serve.

3 Licensing

Our Cxp Platform has three licensing options:

1. Voice Only with Vxp
2. Digital Only with Dxp
3. Omnichannel with Oxp

Each license includes a range of functionality as per the Price List Document and other bolt-on services are available as an optional extra.

3.1 Vxp Licensing:

Vxp has two licensing levels:

1. Agent license
2. Wallboard license

Each licensed user will have access to the Agent UI.

3.2 Dxp Licensing:

Dxp licensing will allow an Agent to handle all Cxp media channels:

- Email
- Facebook Messenger
- Instagram DM
- Webchat
- WhatsApp

3.3 Oxp Licensing

Includes both Vxp and Dxp and allows Agents to handle Voice calls and Digital tasks across all media channels mentioned above.

3.4 Bundled Minutes

Each Vxp concurrent licence provides 4000 Bundled minutes per month, which include incoming and outbound calls.

The bundle includes the following types of inbound destinations:

- 01
- 02

- Standard UK Mobile numbers
- VoIP destinations
- Up to 1000 minutes of standard 03

The total number of minutes provided is shared by all concurrent Licences.

Customers who exceed their monthly usage pool will be charged normal usage rates as outlined in the TelXL normal Tariff Pricing.

4 Agent User Interface

The Agent UI is web browser based and is used to handle all incoming and outgoing interactions within the Contact Centre. Agents will use the same interface to handle all tasks whether they are Voice or across any of our supported Digital channels. While in an active task Agents will have the ability to see the Customer Contact Record and Customer History. The Agent UI can also provide the Agent with real time data about the status of the Contact Centre and their own performance stats.

The Agent UI will provide the Agent with call control functionality and the ability to make outgoing calls.

Call control features include:

- Hold
- Transfer (warm and cold)
- Conference
- Mute
- Stop/Start recording (these options will appear when an Agent is in an active call)

The Agent UI is fully customisable and can be configured in a variety of ways to suit the needs of the Contact Centre. Agents within the same Contact Centre may need to have a different Agent UI depending on their preference or job function.

For example: One Agent may need the ability to take payments where another Agent may not want or need this.

Supervisors and Wallboards will also have their own specific configuration built with the information that is needed to be displayed.

The Agent UI is built using widgets and each widget provides the Agent or the Agent UI with information or a specific feature.

The number of configurations that can be built is dependant on the number of Agent licenses. Three Agent Configurations can be built with the first 10 concurrent licenses, each additional ten licenses has one additional configuration.

4.1 Widgets

The Agent UI can be designed to meet the demands of the Contact Centre in order to provide better Customer service.

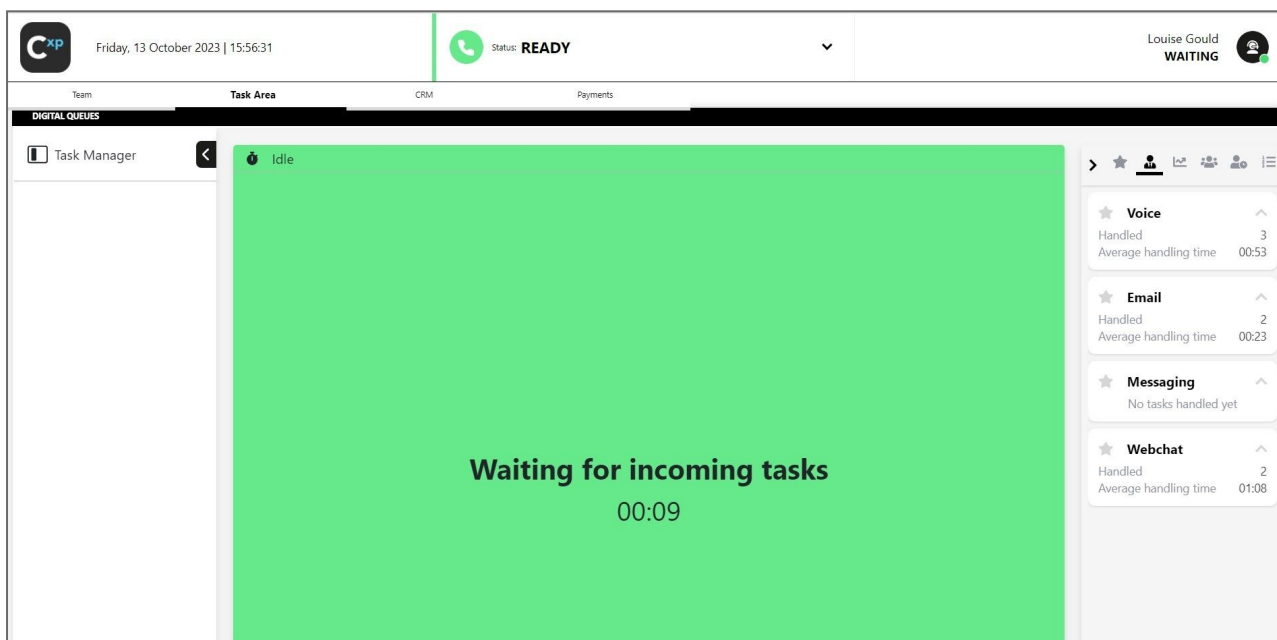
- Each Agent Configuration is made up of widgets, with separate configurations for Agents, Supervisors and Wallboards
- There may be multiple Agent configurations where Agents have different needs

Each configuration is comprised of Widgets, whether it is for an Agent, Supervisors, or Wallboard. Agents will require the following widgets at a minimum to handle Voice tasks:

- Call Control
- Agent In/Out
- WebRTC phone Widget

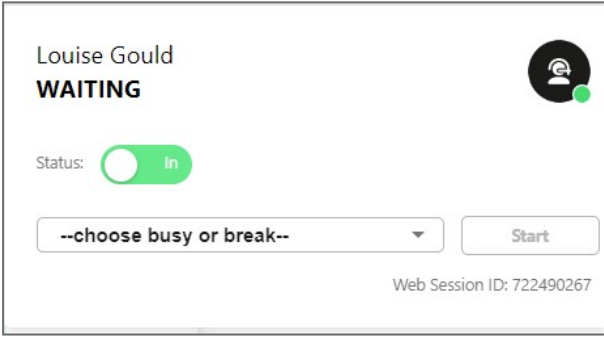

The widgets can be changed in addition to the configurations to meet the needs of the Agents. The colour of the header, text, and background can all be modified to match an organisation's colour scheme.

The following image example is a common configuration, which includes a Call Control Widget, Agent In/Out and a Web Page Area.



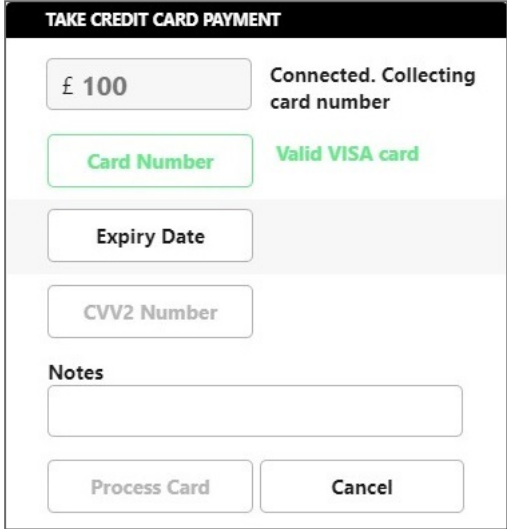
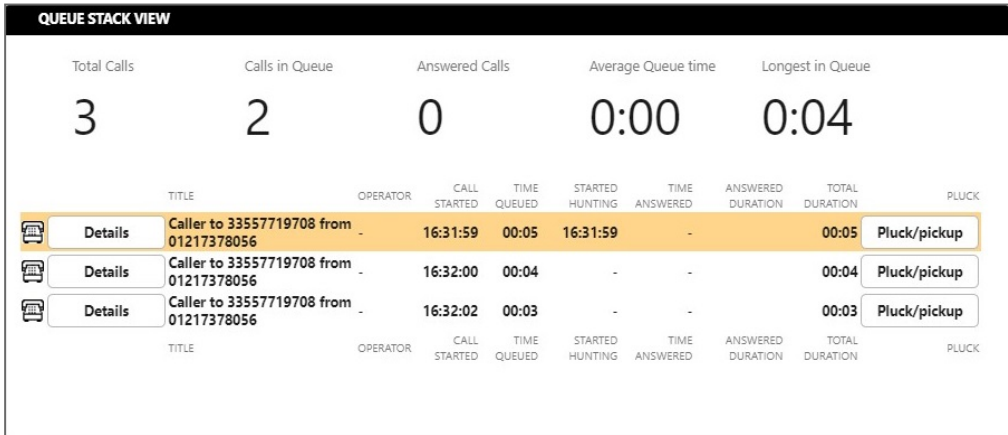
4.1.1 Call Control Widgets




























These widgets will need to be included in each Agent configuration at a minimum.

Widget	Description
WebRTC Phone	A VoIP phone using WebRTC is supported on most web browsers without the need for additional software. This widget needs to be added but is usually hidden.
Agent log in/out	<p>Allows Agents to log in and out, see their current state and adjust their state i.e. unavailable, break.</p> <ul style="list-style-type: none"> Break states are completely customisable and configurable across the platform These states can be used to run reports on how the agent spends their Busy and Break time 
Current Call Details	<p>This widget allows the Agent to answer incoming calls. It displays information about a call being taken by an Agent, including CLI, queue and all call handling features.</p> <p>This widget allows an Agent to make calls by using the directory or the key pad and will also show call history.</p> 

4.1.2 Agent Widgets

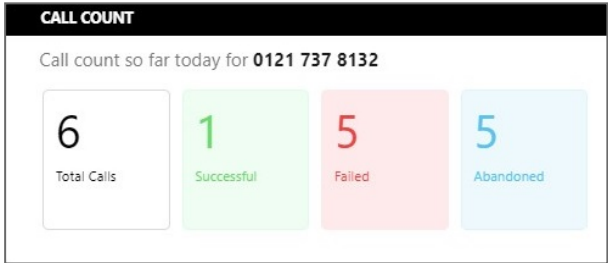
Widget	Description
Web Page Area	This area displays web pages from other areas of our web site or other web sites which could be an internal Knowledge base or CRM. It is used as a place

























Widget	Description
	to display call details, scripts (when being used by the Agent) and other such information. A web page area is required if you plan to use such features.
Agent Credit Card	<p>This allows an Agent to take a credit card transaction in a secure manner from the Agent queue node and outdialler.</p> 
Queue Stack View	<p>The queue stack displays the Callers in one queue. Agents will be able to choose a single queue, the details shown about each caller can be configured. Agents also have the ability to 'pluck' calls from the queue.</p> 
List of other Agents	This allows Agents to see who else is logged on, taking calls and their break status.

Widget	Description																																																	
	<div><div>VIEW OF OPERATOR STATUS</div><table><thead><tr><th>PRESENCE</th><th>CALL STATE</th><th>NAME</th><th>CALL</th></tr></thead><tbody><tr><td></td><td>IN</td><td>Waiting (For 02:51)</td><td>Aisha Adams</td><td><button>Call</button></td></tr><tr><td></td><td>IN</td><td>Waiting (For 02:51)</td><td>Andrew Thompson</td><td><button>Call</button></td></tr><tr><td></td><td>OUT</td><td>Logged out</td><td>Andy Nicolson</td><td><button>Call</button></td></tr><tr><td></td><td>IN</td><td>Waiting (For 03:34)</td><td>Craig Mellon</td><td><button>Call</button></td></tr><tr><td></td><td>OUT</td><td>Logged out</td><td>Jason</td><td><button>Call</button></td></tr><tr><td></td><td>OUT</td><td>Logged out</td><td>Kevin Ellis</td><td><button>Call</button></td></tr><tr><td></td><td>OUT</td><td>Logged out</td><td>Laura Jones</td><td><button>Call</button></td></tr><tr><td></td><td>IN</td><td>Waiting (For 02:25)</td><td>Louise Gould</td><td><button>Call</button></td></tr><tr><td></td><td>IN</td><td>Waiting (For 03:34)</td><td>Matthew Morris</td><td><button>Call</button></td></tr></tbody></table></div>	PRESENCE	CALL STATE	NAME	CALL		IN	Waiting (For 02:51)	Aisha Adams	<button>Call</button>		IN	Waiting (For 02:51)	Andrew Thompson	<button>Call</button>		OUT	Logged out	Andy Nicolson	<button>Call</button>		IN	Waiting (For 03:34)	Craig Mellon	<button>Call</button>		OUT	Logged out	Jason	<button>Call</button>		OUT	Logged out	Kevin Ellis	<button>Call</button>		OUT	Logged out	Laura Jones	<button>Call</button>		IN	Waiting (For 02:25)	Louise Gould	<button>Call</button>		IN	Waiting (For 03:34)	Matthew Morris	<button>Call</button>
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	IN	Waiting (For 02:25)	Louise Gould	<button>Call</button>																																														
	IN	Waiting (For 03:34)	Matthew Morris	<button>Call</button>																																														
Call Log	This widget displays the call logs received on a given Agent. This is an Agent view and doesn't provide automatic refresh.																																																	

4.1.3 Supervisor Widgets

These widgets are included within the Agent license but are designed for use by Supervisors:

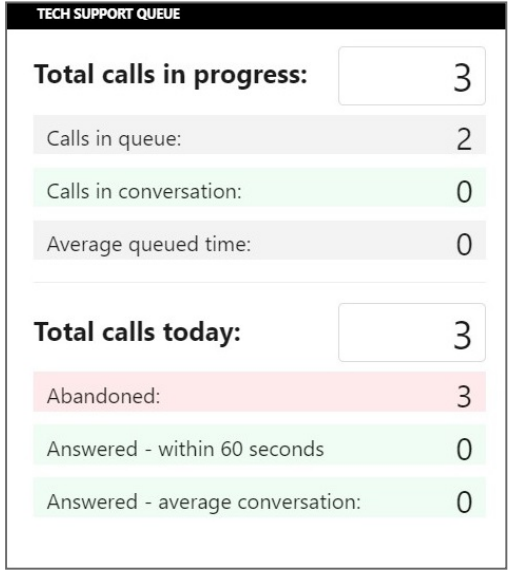
Widget	Description
Call List	The Call list is a real-time version of our call log. It shows calls as they arrive, updating as the callers progressed through the IVR or is connected to someone. There are many configurable fields to choose how much information the user would like to see.
Call Count	<p>This widget displays the total number of calls received on a given or collection of queues so far that day. You can also include a percentage of successfully answered, failed, and abandoned calls.</p>  <p>The screenshot shows a widget titled 'CALL COUNT' with the subtitle 'Call count so far today for 0121 737 8132'. It displays four colored boxes: a white box with '6' labeled 'Total Calls', a green box with '1' labeled 'Successful', a red box with '5' labeled 'Failed', and a blue box with '5' labeled 'Abandoned'.</p>
Call Log	<p>This widget displays the call logs and looks to a specific report. You can choose to view a list of calls or a graph. There is also the ability to export the data to:</p> <ul style="list-style-type: none"> • PNG • JPG • PDF • SVG • CSV • XLSX <p>This is the Full version allowing you to use any report type and to use an automatic periodic refresh.</p>
Agent List	<p>This allows a Supervisor to see:</p> <ul style="list-style-type: none"> • the state of all the Agents • log them in and out • monitor any active calls • perform other admin tasks <p>The stats that are displayed within this widget can be configured which can include:</p>

Widget	Description																																																																								
	<div><ul style="list-style-type: none">• totals• percentages• totals presented• totals answered• totals lost• average answer time• average wrap time• average talk time• time logged in• time in break• time busy• inbound answered and more</div> <div><div>OPERATOR MANAGEMENT LIST</div><table><tr><th>PRESENCE</th><th>CALL STATE</th><th>NAME</th><th>WRAP TIME</th><th>OP DETAILS</th><th>MONITOR</th><th>CALLS</th><th>TOTAL ANSWERED</th></tr><tr><td> In</td><td>Waiting</td><td>Aisha Adams</td><td>0s</td><td>Detail</td><td>-</td><td></td><td>0</td></tr><tr><td> In</td><td>Waiting</td><td>Andrew Thompson</td><td>0s</td><td>Detail</td><td>-</td><td></td><td>0</td></tr><tr><td> In</td><td>Waiting</td><td>Matthew Morris</td><td>0s</td><td>Detail</td><td>-</td><td></td><td></td></tr><tr><td> In</td><td>Waiting</td><td>Sureya Hassan</td><td>0s</td><td>Detail</td><td>-</td><td></td><td>0</td></tr><tr><td> In</td><td>Waiting</td><td>Vanessa Smith</td><td>0s</td><td>Detail</td><td>-</td><td></td><td></td></tr><tr><td> Out</td><td>Logged out</td><td>Andy Nicolson</td><td>0s</td><td>Detail</td><td>-</td><td></td><td></td></tr><tr><td> Out</td><td>Logged out</td><td>Craig Mellon</td><td>0s</td><td>Detail</td><td>-</td><td></td><td>0</td></tr><tr><td> Out</td><td>Logged out</td><td>Jason</td><td>0s</td><td>Detail</td><td>-</td><td></td><td></td></tr></table></div>	PRESENCE	CALL STATE	NAME	WRAP TIME	OP DETAILS	MONITOR	CALLS	TOTAL ANSWERED	 In	Waiting	Aisha Adams	0s	Detail	-		0	 In	Waiting	Andrew Thompson	0s	Detail	-		0	 In	Waiting	Matthew Morris	0s	Detail	-			 In	Waiting	Sureya Hassan	0s	Detail	-		0	 In	Waiting	Vanessa Smith	0s	Detail	-			 Out	Logged out	Andy Nicolson	0s	Detail	-			 Out	Logged out	Craig Mellon	0s	Detail	-		0	 Out	Logged out	Jason	0s	Detail	-		
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Agent Group Membership	Allows the Supervisor to manage the groups that Agents are members of and the skill set against each group.																																																																								

Widget	Description
	<div> <div> <div>OPERATOR GROUP MEMBERSHIP</div> <div>SUPERVISOR MODE</div> <div>SELECT GROUP :</div> <div>Sales</div> <div> <div>9 operators in this group</div> <div>< Previous 1 2 Next ></div> <div> <div>OPERATORS IN THIS GROUP</div> <div>SKILL</div> <div> <div>Andrew Thompson</div> <div>100</div> <div>Remove</div> </div> <div> <div>Andy Nicolson</div> <div>100</div> <div>Remove</div> </div> <div> <div>Jason</div> <div>100</div> <div>Remove</div> </div> <div> <div>Kevin Ellis</div> <div>100</div> <div>Remove</div> </div> <div> <div>Laura Jones</div> <div>100</div> <div>Remove</div> </div> <div> <div>Louise Gould</div> <div>100</div> <div>Remove</div> </div> <div> <div>Sales Supervisor</div> <div>100</div> <div>Remove</div> </div> <div> <div>Sureya Hassan</div> <div>100</div> <div>Remove</div> </div> <div> <div>Tom Hynes</div> <div>100</div> <div>Remove</div> </div> </div> <div> <div>9 operators in this group</div> <div>< Previous 1 2 Next ></div> </div> </div> <div> <div>16 operators NOT in this group</div> <div>< Previous 1 2 Next ></div> <div> <div>OPERATORS NOT IN THIS GROUP</div> <div> <div> <div>Aisha Adams</div> <div>Add</div> </div> <div> <div>Craig Mellon</div> <div>Add</div> </div> <div> <div>Matthew Morris</div> <div>Add</div> </div> <div> <div>Pip Boys</div> <div>Add</div> </div> <div> <div>Supervisor 1</div> <div>Add</div> </div> <div> <div>Vanessa Smith</div> <div>Add</div> </div> <div> <div>Z Agent 1</div> <div>Add</div> </div> <div> <div>Z Agent 10</div> <div>Add</div> </div> <div> <div>Z Agent 2</div> <div>Add</div> </div> <div> <div>Z Agent 3</div> <div>Add</div> </div> </div> <div> <div>16 operators NOT in this group</div> <div>< Previous 1 2 Next ></div> </div> </div> </div> </div></div>

4.1.4 Wallboard Widgets

Each Customer will have access to a Wallboard and its corresponding widgets. Widgets display information or provides ways in which a user can interact with our application.

Wallboard Specific Widgets	Description
Operator State Totals <i>(In development)</i>	Shows lists of Agents in columns, based on what state they are currently in.
Queue Bar Graph	This widget shows a bar graph, one for each queue. The graph indicates the number of callers currently answered, hunting or queuing and the average queue time for one or more calls.
Queue Overview	<p>This shows a summary of the current calls in one or more queues, along with totals over the day (or part of a day such as a shift). As with other widgets, the font sizes can be adjusted for high visibility on a large display.</p>  <p>TECH SUPPORT QUEUE</p> <p>Total calls in progress: 3</p> <p>Calls in queue: 2</p> <p>Calls in conversation: 0</p> <p>Average queued time: 0</p> <p>Total calls today: 3</p> <p>Abandoned: 3</p> <p>Answered - within 60 seconds: 0</p> <p>Answered - average conversation: 0</p>
Queue Line Graph	Shows a graph of how many callers are queuing and answered over time for a period between an hour and a day.
Calls in progress graph	Shows a graph of how many callers are queuing and answered over time for a period between an hour and a day.

A list of other available widgets are as follows:

- Magnifier control widget make any given data display/number larger and be displayed separately for Wallboards

- Response rate indicator widget dial/bar indicator of SLA figures

4.2 Supervisors

Supervisors will use the same UI as Agents and will have the ability to create the view that they want of their Team and of the Contact Centre.

4.2.1 Supervisor Features

1. Supervisors will receive a more detailed version of the Agent Management List Widget, allowing them to monitor and listen in on Live Agent calls. They will also be able to utilise this widget to update the status of an Agent.
2. Supervisors will be able to handle interactions by being in queue or by 'plucking' calls from the queue with the Queue Stack Widget (please see the [Widgets](#) chapter for more information on Supervisors specific features).
3. The Real Time view from within the Portal will give the Supervisor an Agent utilisation showing the percentage of time spent busy, available and on break.
4. Supervisors will also have the ability to monitor Digital queues and monitor live chat interactions. Within this functionality the Supervisor can message the Agent only or both the Agent and the End customer.
5. Supervisors with the right Admin access will have the ability to run reports, listen to and download call recordings.

4.3 Performance Dashboard

The Performance Dashboard enables Agents to monitor their own performance, the queues* they are part of as well as real time information about the number of colleagues who are on a break or available.

There are six sections within the Performance Dashboard which are:

1. **Favourites:** Agents can pin certain measures from each section by clicking the star icon.
2. **Agent Performance:** This will show the Agent the number of tasks they have handled within that day, displayed by media type.
3. **Queue Stats:** Each queue the Agent is part of has their own tile which will display:
 - Queue name
 - SLA
 - Longest wait time
 - The number of tasks Accepted, Abandoned and Waiting
4. **Team Stats:** Displays the availability of an Agents colleagues within the same Teams. The metrics include:
 - Total logged in
 - Available

- Busy
- On Break

5. **Availability Stats:** Presents the aggregated time duration the Agent has spent in various states

6. **Queue Items include:**

- All Items which will show all tasks currently waiting in queues the Agent is logged into
- Manual Assignment which lists tasks Agents can pick from manual queues. The Agent will only use this if they are in manual assignment queues

(* at the moment this is only Digital queues. Voice queues will need a separate widget)

5 WebRTC And System Requirements

5.1 Voice

WebRTC enables Voice communication to work inside web pages. Our Agent UI uses WebRTC to provide the Voice path to Agents, below are the minimum workstation requirements.

Type	Requirement
PC Specification	1 GHz 32-bit (x86) or 64-bit (x64) processor
Operating System	Windows 10 32-bit or higher Windows 10 64-bit or higher Other Operating Systems such as Mac OS, Linux, Chrome OS etc may work but are not supported by TelXL
Web Browser	Google Chrome 88+ Microsoft Edge 98+ Other browsers that support WebRTC may work but are not supported by TelXL

5.1.1 Network Requirements

WebRTC sessions take place over different types of transport protocols TCP and UDP, with signalling connections via HTTP.

For WebRTC outbound connections to initiate, the following eleven IP addresses need to be unblocked on the Customer firewall, and port 8089 set as the destination port.

These IP Addresses are subject to change:

- 83.244.221.201
- 213.161.91.50
- 109.231.237.250
- 109.231.237.228
- 80.169.12.50
- 62.254.189.228
- 80.169.12.72
- 94.75.70.36
- 80.169.12.91
- 149.6.121.93
- 149.5.96.29

Further configurations may be required, the TelXL support team will be on hand for troubleshooting. STUN connections are required when using UDP outbound from the Customer on port 3478. This is a service which will help negotiate the audio path, and will not be necessary for all calls, but could cause 'no audio' issues if not allowed out.

RDP connections will initiate from TelXL via UDP through a high numbered port range between 20,001 and 30,000. The Customer firewall should allow this inbound connection from our eleven IPs.

A list of ports to be opened below:

Port	Direction	Protocol	Source/Destination	Reason
HTTPS (443)	Outbound	TCP	TelXL (webservers)	Cxp Agent Connectivity
STUN (3478)	Outbound	UDP	Stun.TelXL.org	STUN service to help connect media path
RTP (20001 - 30000)	Inbound	UDP	TelXL Asterisks	Call Media Path

5.1.2 IP Whitelisting

IP Whitelisting can be used to control Portal access.

IP Whitelisting is a feature that allows Cxp Admin Portal users to keep a list of 'sites', that can designate a range of IP addresses from which that user can log in, limiting access to those who do not have the stated IP addresses.

5.2 Digital

Cxp is dependant on Microsoft O365 licensing as it uses Azure Active Directory to authenticate Agent and Administrator users and for access to use our Email channel solution.

Voice only Customers can authenticate without using Azure but the following functionality will be missing from the Agent Experience:

- Customer History when answering an incoming call
- Disposition Codes within the Task Area

5.3 Single Sign On

Single Sign On (SSO) is configurable to control access to the Portal.

1. SSO is a feature that allows an Agent or website user to access our systems using their Microsoft Active Directory (AD) account information, which is the information the user enters to access the computer.

2. To use the SSO feature, the Customer must first create an 'access token' with an Identity Provider (IdP), such as Jumpcloud, Azure, or ADFS. During the SSO procedure, this token is a collection of data or information that is sent from one system to another.
3. SSO can be deployed to all platform users, such as platform Administrators and Agents, or to specific Administrators and Agents.

5.4 Azure Permissions

The TelXL application needs to integrate with Azure 365 to enable the following benefits:

- Ability to see presence information
- See other users contact details along with contact numbers, mobile number, title, department. This is required when using email and to view contact details for forwarding calls via the voice platform

The permissions Cxp requires does not give TelXL insight into your Microsoft 365 estate, TelXL has no admin access, and will not request any administrative permissions. 'Admin Consent' means an Administrator from your organisation grants the below permissions on behalf of the organisation. (This is a feature built for Administrators so they can consent to the permissions, individual users won't be prompted to consent to it as they may not know what it means).

API Name	↑↓	Claim value	↑↓	Permission	↑↓	Type	↑↓	Granted through	↑↓	Granted by	↑↓
Microsoft Graph											
Microsoft Graph		openid		Sign users in		Delegated		Admin consent		An administrator	***
Microsoft Graph		profile		View users' basic profile		Delegated		Admin consent		An administrator	***
Microsoft Graph		email		View users' email address		Delegated		Admin consent		An administrator	***
Microsoft Graph		offline_access		Maintain access to data you ha...		Delegated		Admin consent		An administrator	***
Microsoft Graph		Presence.Read.All		Read presence information of a...		Delegated		Admin consent		An administrator	***
Microsoft Graph		User.Read.All		Read all users' full profiles		Delegated		Admin consent		An administrator	***

The above are all read only permissions.

The type of access being requested for the application is Delegated, this means:

- Our application cannot query or login to your Active Directory, there is no way our application can access any data without a user within your organisation logging in. This ensures your company's protection as your users continue to adhere to your password policies and multi factor authentication
- The user must sign in using the Microsoft login pages, in which our application then receives the users access token from their login. The application will use an access token to query Active Directory. Tokens automatically expire in c.1 hour and can be withdrawn manually via Active Directory

- Our application only stores a user's External id, this is used to match the user login to the user on our application

5.4.1 User.Read.All

This is required to be able to read other users profiles in your organisation, which we need for:

- Various screens within the application to provide search facilities so users can search for people within their organisation
- Seeing other users contact details along with contact numbers, mobile number, title, department. This is required when using the email or forwarding on a conversation, and contact details for voice

5.4.2 Offline_access

- This does not mean that we can access users that are offline, this is required for:
 - **User experience:** we use OpenID Connect Scopes to enable integration with multiple authentication platforms
- Enabling the application to refresh a user's token, Microsoft tokens have a c.1 hour expiry, without the offline_access a user would be prompted to re-login every 1 hour

5.4.3 Email Channel Connector

For access to use our email channel solution, a separate set of permissions to the above table needs to be granted. You can, and we recommend, you segregate the mailboxes access being used in our application:

Follow these steps to only provide us access to the mailboxes required:

1. Create a mail-enabled security group in Exchange.
2. Add the mailboxes that are going to be used as TelXL Email Channels to this newly created group.
3. Create a New-ApplicationAccessPolicy to allow TelXL to read/write emails on behalf of the accounts added to the group.

The email connector uses an application token which is granted access to a mailbox when adding the mailbox. Application permissions are required for email, as the application needs to subscribe to a mailbox to receive incoming emails, this is a background service with no user interaction.

6 Interactive Voice Response (IVR) And Workflow Creator

6.1 Voice IVR Workflow Creator

The IVR is at the heart of our Platform, giving our Customers the ability to create bespoke journeys for their own Customers.

- Vxp IVR Builder allows our IVR to be as simple or as complex as the requirement allows to fulfil the needs of the Customer
- IVR's are built with Nodes and there are a number of nodes available as standard with the platform

Using these nodes will allow:

- Businesses to quickly connect Callers with Agents and streamline the Customer journey
- Customers to get quick answers to simple questions and help Customers to identify the right resources to help with Customer issues

The IVR can look-up Customer records, read back information, take payments and move calls to other services. A business can use mid-points (i.e. press one) and a multitude of endpoints (routing to an Agent or a Voicemail box etc), to ensure that processes are orchestrated to meeting operational needs, while ensuring interactions with consumers feel effortless. Each IVR can have up to 250 nodes maximum per number service. The number of IVR services available are based on the number of user licenses, up to ten licenses gets two IVRs, then one IVR for every ten licenses.

6.2 The IVR Nodes:

Node	Node type	Description/use	Included in Vxp
Hang up	Call completion	Hangs the call up.	Yes
Play one or more recorded message	Message playing	Plays a message to the Caller. These can be pre-recorded messages or ones created using the text to speech functionality.	Yes
Random message	Message playing	Same as above, however multiple messages are held and the one played to each Caller is chosen at random. Example is for playing a selection of adverts.	Yes
Play a reference number	Message playing	Plays either the call id or a number determined by the Customer – this will	No

Node	Node type	Description/use	Included in Vxp
		increase by 1 for each call. This will allow the Caller to be given a reference number for their call.	
Menu	Decision	Provides a list of options for the Caller to choose from. Each option has a different call flow. The menu prompt is customisable using recorded messages. For example: Press 1 for reception, press 2 for sales.	Yes
Time switch	Decision	Provides different call flows depending on a specific date/day or the week and time of day. Fully configurable.	Yes
Switchboard	Decision	Routes calls using the last four digits of the dialled number. For example: If the Customer has a range of sequential phone numbers and each number belongs to a specified person.	No
CLI check	Decision	Checks against a list/multiple lists of CLIs (callers phone number). Call flow can be different for each list. For example: A list of blocked numbers can be maintained.	Yes
Path Selection	Decision	This node should be added as the first node in all IVRs as it provides alternative call flow paths. Calls can easily be switched between paths. For example: A disaster recovery and/or a testing path.	Yes
If	Decision	Used to route calls down one of two possible call flows, depending on whether a specific condition is met. Variables to check can be picked from a fixed list or bespoke data capture variables can be used. For example: If the number dialled equals x then route to a different Agent	Yes

Node	Node type	Description/use	Included in Vxp
		to other dialled numbers.	
Set	Decision	Sets values into data capture variables. There are a variety of different options on what and how to set the values.	Yes
Goto	Decision	To redirect calls to any other node within the current IVR, to the start of a separate IVR owned by the same Customer.	Yes
Call single phone number	Talking to People	Routes a call to a single destination. This can be one of the Agents, a specified phone number or a number in a data collection variable.	Yes
Operator queue	Talking to People	Routes a call to a queue where it will sit until an Agent is available to answer the call. There are a variety of different queueing methods and configuration settings to adjust the queuing experience for the Caller.	Yes
Outdialler	Talking to People	Specialist use for making initiated outdialler calls. Administrator restricted.	No
Offline queue	Talking to People	An offline queue is where the original Caller is no longer on the phone while the system hunts to find an available Agent. When an Agent is found they can either connect back to the Caller or a message can be played to the Agent with the Callers' details. This is enabled in the features tab of the IVR.	Yes
Voicemail box	Collecting information	Allows the Caller to leave a message. The message can be emailed to the recipient.	Yes
Collect number	Collecting information	Collects a number which can be stored in a data capture variable. Number is entered using the Caller's keypad.	Yes
Speech recognition	Collecting information	Collects data from the Caller saying a key word/number. The data collected via the speech recognition can be stored in a data collection variable.	Yes

Node	Node type	Description/use	Included in Vxp
Record short message	Collecting information	This allows the Caller to record a message. The message can be played to the Agent. For example: Give a brief description of an issue if calling a helpline .	Yes
Collect/verify/process Credit card	Collecting information	Securely collects credit card information and uses this to process a payment.	Yes*
Send SMS	Send/distribute info	Sends a specified text message to specified recipient (s). Also used with broadcast.	Yes
Send Email	Send/distribute info	Sends a specified email message to specified recipient (s). Also used with broadcast	Yes
Send http request	Send/distribute info	Sends a specified HTTP request to a specified URL. Used for third party integration. Formats supported are: <ul style="list-style-type: none"> • GET/ • POST/ XML POST (e.g. SOAP) • JSON POST/ POSTFILE 	Yes*
Send multiple notifications	Send/distribute info	Sends both an email and a text message to specified recipients.	Yes
Text to speech	Send/distribute info	Plays a message to the Caller – taken from text in one or more data capture variables.	No - this is a bolt-on
Check PIN	Administration	Validates a PIN – either the default set for the Customer or one set against the service. Used to restrict functions to valid Administrators.	Yes
Login with account number/pin	Administration	As above, not used for multiple accounts.	Yes
Change recorded message	Administration	Changes the voicemail greeting.	Yes
Voicemail admin	Administration	Gives access to listen to the messages in a voicemail box.	Yes
Operator admin	Administration	Allows an Agent to log in remotely using their phone.	Yes

Node	Node type	Description/use	Included in Vxp
		For example: An out of hours non-VoIP Agent calls in to log in or out of their shift.	
Operators: change state (log in/out)	IVR Utilities	Logs a specified Agent and in or out.	Admin only
Operators: change pin	IVR Utilities	Updates an Agent's PIN .	Admin only
Operators: Select first available	IVR Utilities	Picks the first logged in and available Agent from a group.	Admin only
Operators: Get operator/group details (e.g., Agent name)	IVR Utilities	Retrieves details about an Agent.	Admin only
Operators: Get op details by extension number	IVR Utilities	Select an Agent from a group based on an extension number.	Admin only
Operators: Browse operator greeting messages	IVR Utilities	Plays the introductory message of each Agent, followed by a menu offering the option to speak to them. Only logged in and waiting Agents are played.	Admin only
Conference: get idle conference room	IVR Utilities	Looks for a conference room that's not been used for X days, else it creates a new one.	Admin only
Variables: split string	IVR Utilities	Splits a string based on a delimiter and stores the result in data capture variables.	Admin only
Variables: Clean phone number	IVR Utilities	Takes a string and tries to make a valid phone number of it .	Admin only
Variables: Switch route (based on value)	IVR Utilities	Routes down a path based on the numerical value of the variable specified.	Admin only
Queue: Get info about a queue	IVR Utilities	Loads queue info for Agent queues with a specific data capture variable set.	Admin only
Audio: download a WAV file by HTTP	IVR Utilities	Downloads a wav file from a remote HTTP server and stores it for local use.	Admin only
IVR utility (general)	IVR Utilities	Blank Utilities – there are several other utility options which can be applied but not created as a separate node type.	Admin only

(* while these nodes are included as part of the license bundle, the action of taking credit card payments and HTTP requests will be subject to additional charges)

6.3 Digital Workflow Creator

The Digital Workflow is a visual designer to complement the Interactive Voice Response (IVR) flow, also providing the ability to create bespoke journeys. The node types differ to the Voice designer due to the nature of handling Digital conversation. With the logical decision making available directly within the designer, the flow can be directed to the next required node based on conditions being met within the conversational flow.

Some node features are only available on certain channels, and will be listed below in the following categories:

- **All:** Available across all channels
- **Messaging:** Available across messaging channels like Webchat, social messaging, WhatsApp etc.
- **Email:** Available across Email channels

Node	Channel type	Description/use
Check Opening Hours	All	<p>This node verifies your Channel's opening hours and allows you to make routing decisions based on the output of that verification.</p> <p>These outputs are available:</p> <p>Open: The Channel is within business hours, with no holidays.</p> <p>Closed: The Channel is outside of business hours, no holidays.</p> <p>Holiday: Holiday is set for the Channel, and the Channel is closed.</p> <p>You may modify the name of the Check opening hours as per your requirements.</p>
Custom Bot	Messaging	<p>Use this node to add your custom bot integration to a Workflow. Custom bots are bespoke apps that can be built to be part of the conversational flow.</p> <p>Add property allows integrators to pass data to the custom bot with the Assign Conversation request, such as configuration data, allowing integrators to re-use the custom bot.</p> <p>It has the following outputs:</p> <p>Success: The custom bot has successfully finished.</p> <p>Failed: Something went wrong with Your custom bot.</p>
Custom Question	Messaging	<p>Use this to specify a custom question, provide suggested actions, store the answer in a Workflow property key & use it later on in the</p>

Node	Channel type	Description/use
		flow, use Regex to create a validation rule for the answer your Customers provide as well as provide a retry count and repeat the message.
Identify Customer	Messaging	Use this node to identify the incoming Customer by your selected/chosen property. This is useful to provide Agents with the Customer profile and history of previous conversations when the conversation is routed to them. This follows a similar concept as the identify and validate process, but simply used to access data available to Dxp.
Menu Selection	Messaging	<p>The menu selection node allows you to type in a question and provide suggested actions. The system will automatically validate those suggested actions. If the Customer types in a message that is not within the scope, the Menu selection node will not exit but will continue waiting for the correct answer to be provided, without repeating the question.</p> <p>You may:</p> <ul style="list-style-type: none"> • format your message using the space key on your keyboard, enter or tab • paste in emojis, bullet points and other Unicode characters • use the Windows-built in character map to find the character you are looking for <p>You may use the left-right arrows to re-arrange your suggested replies without needing to remove them and re-add them.</p> <p>Outputs:</p> <p>Each suggested action has its output allowing you to define your routing decisions.</p>
Queue	All	Allows you to route conversations to Agents. When you create a queue, you must select the routing mechanism for it. It can be automatic or manual. You may not change this later on for a given queue, but you may delete the queue and recreate it with the new routing mechanism.
Send Message	Messaging	Send message allows you to send a message to the Customer, then continue with the action. You may use Workflow data, either set by a set Data node, custom bot, or existing data.
QnA Bot	Messaging	Allows you to select one of your existing Language Custom Question integrations configured in Dxp.

Node	Channel type	Description/use
		Outputs: No answer: QnA confidence score fell below the specified threshold and left the conversation. Specify what should happen next.
Set Data	All	Set Data node allows you to set Workflow data and re-use it later on either in a Switch node or Customer message. For example: You have the following set data node: Property key is set to openHours and property value is set to Open. If your message node is: The Contact Centre is {Workitem.openHours}, then the Customer will receive the following message: 'The Contact Centre is Open.' Outputs: Then: Specify what should happen after setting the data.
Switch	All	Provided to make decisions based on configured condition and criteria. Any data collected from the Workflow can be used to route the conversation to the desired node with Switch. Outputs: Each property has its output. Decide what happens based on these properties. Default: Acts as a fail safe, decide what happens if no condition is met.
End Conversation	All	Closing down the conversation for the incoming End customer. Note: if the Customer sends another message after this, it will create a new conversation and reinitiate the Workflow.
Evaluate Email	Email	Use this to evaluate the subject and the body of the email to see if certain keywords are raised. This can then be used to route to appropriate queues based on discovery.

7 Digital Channels

Cxp supports the following Digital Channels:

- [Chat Bots](#)
- [Email](#)
- [Webchat](#)
- [WhatsApp](#)
- [Facebook Messenger](#)
- [Instagram Direct Messaging](#)

7.1 Chat Bots

Dxp has the ability to integrate with Custom and 3rd Party Chat Bots through an easy to use interface within the Admin portal. This would require the Customer to source the 3rd Party Chat bot themselves.

7.1.1 QnA

Dxp provides an integration point to Microsoft's Language Question Answering service, which can be used in Workflows to provide a QnA custom question answering bot for the Digital Channels.

The Question Answering service is created within Azure and as such, is created by the Customer to be used within their Digital Workflows. As an example a Webchat Workflow for a Support desk may send incoming chats to a QnA bot before being routed to an Agent. Questions configured within the Question Answering Service may answer simple questions pointing End customers to self help resources.

You can read more about Language custom questions through the official Microsoft documentation found [here](#).

If there is no match within the Question Answering service, the Chat will be transferred to an Agent, the Agent will be able to see the entire conversation between the End customers and the QnA Service.

7.1.2 Agent Assistance

This will allow Customers to configure Question Answering to assist Agents. Generally, Question Answering is used to save an Agent time by providing answers to End customers. However, Agents can benefit from the same functionality as well while engaged in a chat conversation with an End customer.

You can specify a QnA configuration for a given queue node by setting the Agent Assistance field to the QnA configuration you wish to use. This configuration will only be used to assist Agents.

Should you want to use the same configuration to aid Customers as well, simply add a QnA bot node to your Workflow.

7.2 Email

Within Cxp, emails can be handled in a number of different ways to suit the business needs. The nodes available within the Email Workflows will allow Contact Centres to send automatic replies when an End customer sends an Email in, these automatic replies can be different for each specific channel and will be sent as soon as the End customer Email hits the Workflow.

Emails can be routed directly to a specific queue or they can be routed based on matching key words within the subject, the body or both the subject and the body of the Email. We provide the option to download a pre-formatted CSV template direct from the administration portal. Here is where you type your keywords and the queue (group) those keywords will be transferring the emails to.

An example of the csv as seen below:

KeyPhrase	GroupName
Brochure	Sales
Information	Sales
Fault	Support
Issue	Support
Incident	Support

Phrases are supported, however, when scanning the content or the subject of the Email, this phrase must be an exact match.

For example: If your keyword is 'windows 11 upgrade' it will not match 'upgrade to windows 11' as it is not an exact match.

Email template replies can be created within the Admin portal to allow the Agent the ability to quickly respond to general queries. The templates can be previewed and edited when selected before sending the reply.

Dxp licensing includes the provision for up to fifteen email inboxes.

7.3 Facebook Messenger

Before provisioning a Facebook channel a Customer will need to have the following in place:

1. A Facebook page.
2. An Administrator account for the Facebook page.



Our help portal has links to documentation which provides more detail on how to set these up.

While Customers are able to use all nodes within our platform, there are some limitations that are dictated by Facebook directly.

The current set of limitations for the Facebook Messenger chat integration are:

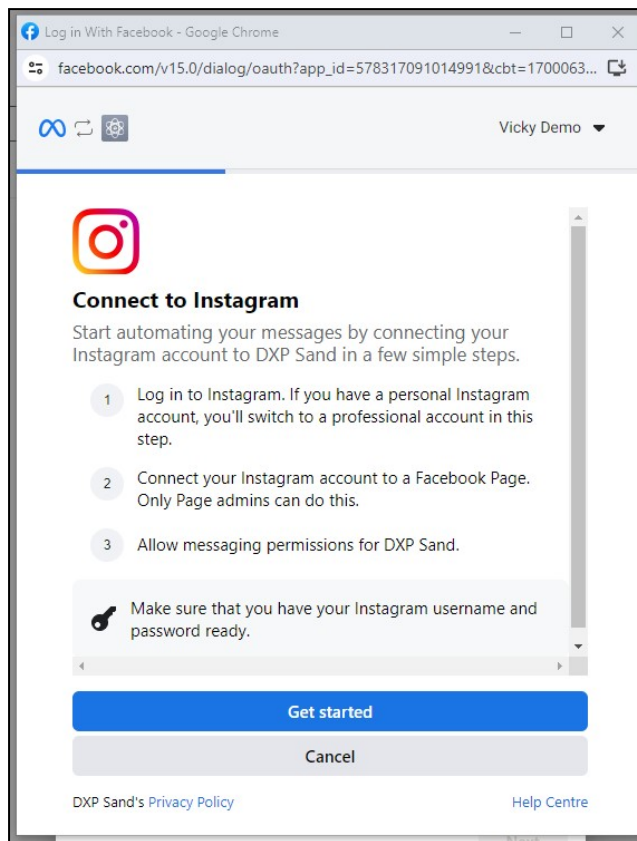
- There is no control over the attachment size provided by Customers using Messenger, this is done exclusively on Facebook Messenger's side, while the Agent UI does restrict attachment size on Agent's side.
- Typing indicator does not show up for Agents as Facebook currently does not support that, however a Customer using Facebook Messenger chat will see the Agent's typing indicator.
- The Agent UI will not render certain attachment types from Facebook Messenger, such as stickers, gifs and large emojis. Instead, the Agent can opt-in to download these using the direct link to them.
- Message delivery status (Seen) is not supported in the Agent UI. Customers will notice a message has been seen when the Agent or system replies.
- Message reactions are not supported in Agent UI. Customers can react to messages in Facebook Messenger but this information is not sent.
- While we can support more, only thirteen quick replies will be sent to Facebook Messenger as this is a current Facebook limitation.
- Attachments sent from Facebook Messenger are not stored within Cxp. Simply forward the Facebook download link to the Agent.
- Current Power BI reporting does not include the new channels. We are currently working on an improved OData feed to deliver high quality data source to all of our Customers.

7.4 Instagram Direct Messaging

Cxp provides an Instagram DM integration using Meta's Messaging API. The Messaging API supports Instagram Business accounts or Creator accounts.

Connecting to Instagram is a simple process that the Dxp Admin Portal will guide you through. When a channel is created, the Admin Portal will prompt users to Connect to Facebook and then Connect to Instagram. If the Instagram account that is being used is a personal account, this process will switch it to a professional account.

In addition to that, to provision an Instagram channel, you will be asked to select a page as well. This is because it will link the Instagram account to that page, in order to enable the Messaging API.



7.5 Webchat

Webchat channels are created within the Dxp Admin Portal.

- Each channel generates a Webchat widget code snippet automatically, which is used to embed Webchat onto the Customer website
- The Webchat channel configuration includes being able to set business hours for when they Webchat is available, the widget colours and how they will appear on the website, welcome and invitation messages and any avatars to be displayed

Webchat Workflows allow chats to be routed to Agents using skills based routing similar to how Voice calls flow through an IVR (Interactive voice response) to an Agent.

Webchat Workflows can include the ability to:

- Send messages
- Offer a menu selection to route Customers to the right department
- Gather information from the Customer in order to bring up their history

7.5.1 Webchat Features

1. Identifying the Customer can match on email address and/or their phone number.
2. The Agent will only see the Customer history if they use the Identify Customer node within the workflow.
3. Webchat Workflows can use chat bots that have been integrated into the platform, simply by using the chat bot node.

Dxp licensing includes the provision for up to ten Webchat channels

7.6 WhatsApp

Cxp integrates with WhatsApp directly through available Meta API's however, during channel provisioning, Meta specific resources are required. The help portal has detailed documentation to guide through the whole process.

7.6.1 Meta Pre-requisites

Before adding a WhatsApp Business account, Customers need to make sure the following resources are created for their organization.

- Meta Business Manager
- Meta Developer account
- Meta Business application
- Meta System User

WhatsApp provides 1,000 free conversations per month. Once a Customer reaches this threshold, Meta will charge based on your region and the price per conversation they have for that given region.

A conversation in the realm of WhatsApp lasts 24 hours, as such, if the Agent terminates the conversation early and the same End customer initiates a new conversation again, it will not use another WhatsApp conversation, because the 24 hours window was not closed.

8 Web Service API Integration

Communicating with an organization's web service API can offer numerous benefits, both for the organisation itself and for systems or organisations who are interacting with the API.

Here are some of the key advantages:

1. **Automation:** APIs allow for automated interactions with an organization's systems, which can streamline processes, reduce manual effort and improve efficiency. This is especially useful for tasks like data retrieval, updates, or integrations between different software systems.
2. **Data Access:** APIs provide a structured and controlled way to access an organization's data, making it easier to obtain the information you need. This can be particularly valuable for businesses and developers looking to analyse or integrate data from multiple sources.
3. **Integration:** APIs enable the integration of different software systems, helping organizations create a cohesive technology ecosystem.
 - **For example:** an e-commerce Customer might use APIs to integrate with payment gateways, shipping services, and inventory management systems.

When communicating with Web Service APIs the Cxp platform supports the HTTP GET, HTTP POST, XML POST, and JSON POST methods. In addition to having full control of the main body of the request that is made you can also specify additional HTTP headers to pass through with the request. HTTP Basic Authentication can also be used if required.

As with all nodes within our IVR, whenever a call passes through a HTTP node we write a log to the call record detailing what action has been performed, in this case the destination and body of the request that has been made. Customers can optionally hide this information on a node by node basis.

Customers have the ability to control what happens upon receiving a response to a request. They can:

- Wait for a response and just proceed to the next node in the IVR
- Wait for a response before progressing. Upon receiving a response Customers can:
 - Store the body text/HTTP code of the response in data capture variables
 - Parse the response as XML/SOAP XML/JSON and store the parameters as data capture variables
 - Split the response based on a delimiter (e.g comma) and store parameters as data capture variables

Storing the response as data capture variables enables the Customer to use information, such as the amount of money a Customer is due to pay, later down the line in another node, such as one for taking payments.

9 Webchat Translation

Cxp provides the ability for Agents to translate Webchat interactions including any Workflow messages that have been presented to the Customer. The Agent will have a button when in an active Webchat which will allow them to turn on Translation live while in the chat. The Agent will have access to the translation menu which will allow them to select a language to translate to.

Available languages include:

- Bulgarian
- Chinese
- Czech
- Danish
- Dutch
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Indonesian
- Italian
- Japanese
- Korean
- Lithuanian
- Latvian
- Norwegian
- Polish
- Portuguese
- Romanian
- Slovakian
- Slovenian
- Spanish
- Swedish
- Turkish
- Ukranian

The support for more languages is being added.

Cxp utilises an integration with DeepL as the translation service, this is dependant on the Customer having signed up with DeepL and having an account. There are various plans a Customer can sign up for and the pricing depends on the volume of chats needing to be translated: <https://www.deepl.com/pro/change-plan#developer>

10 Announcements

Announcements that are to be used within any call flow, can be created and uploaded at Reseller and Customer level.

- Announcements can be created and recorded on the fly or uploaded from a .wav file
- All audio files must be created as 8KHz, 16 bit, PCM encoded WAV files
- MP3 files can also be uploaded and our platform will convert to wav for you
- Announcements can also be created to use the Text to Speech functionality

Once created and imported (or recorded), the announcement will be available for selection and used where required within the IVR configuration. Multiple copies of the same prompt can be uploaded and put into 'categories' to allow multi-lingual IVRs.

Generic announcements can be made available to multiple Customers or locked down to each specific Customer on the platform.

Announcements can also be used as a 'whisper' to Agents before they answer a call.

10.1 Queue Treatments

Queue Treatments can be added to Digital queues to provide comfort messages or the position in queue to Customers waiting to be answered. Queue Treatments can include a wait time step before a message is to be presented and all steps can be repeated until the task is answered.

11 Voicemail

Our Platform includes Voicemail capability whether Agents require their own individual voicemail, a group or out of hours mailbox. One mailbox is included with each Vxp licence.

- Agents with access to a mailbox will be able to manage, view and listen to voicemail recordings
- Voicemail recordings can also be sent direct to your email inbox automatically

12 Callback

Whilst in a queue (with this function enabled) a caller can elect to be called back rather than waiting in a queue.

- Selecting this option is usually done by DTMF
- When the call reaches the front of the queue the Agent is called and once answered the system calls them back and connects them together
- This results in a queue containing a combination of people on the line and those waiting for a callback
- The option to offer a callback is either on or off. It can't be triggered by a set of pre determined criteria i.e. if there are so many calls in the queue then offer callback.

To make sure calls are not staying indefinitely in the queue there is a setting that will define the period your call can be in this state.

- Once this period is reached callback Callers will be dropped from the queue
- This setting is found in Call queue node/Callback tab in the call flow details... [Maximum time to spend queueing] Queued callback time is limited to 4 hours maximum

12.1 Offline Queueing

This function will collect Callback information and then hang up. There will be no callers in the queue who are waiting on the phone only a queue of people to callback.

13 Task Delivery To Agents

The Cxp Platform routes calls to Agents using Agent Groups. As well as Agent Selection within a queue and Skills based routing, calls can be delivered to Agents using the following methods:

- Longest idle
- Random selection
- Cyclic fair rotation of Agents
- Linear in order starting with the first
- Concurrent/broadcast ringing all at once and per Agent

The Intelligent Routing within the platform will allow Contact Centres to manage the number of interactions Agents are able to handle at any one time, as such:

- Agents can only ever be presented with one Voice Call at a time
- Some Agents may be able to handle multiple Webchats and Emails at any one time
- Some Agents may wish to handle only one Webchat or Email at any one time

The Work Item Thresholds are a system wide setting but these can be overridden at Agent level for new Agents and those in training.

Interactions coming through any of the Digital channels can be delivered in a Manual or Automatic mode.

- **Manual:** queues allow skilled Agents to pick items by themselves from the Manual Assignment Task List
- **Automatic:** Uses our intelligent skills based routing mechanism to find the first skilled available Agent

13.1 Agent Scripts

Scripts can be used in a variety of ways within the Cxp platform. Scripts can be used as a pre-defined series of questions and/or statements to assist an Agent while handling a Customer call.

As well as a mechanism for displaying items, scripts can be used to collect data while the Agent is on the call. Data Collection scripts can be in the format of a text box allowing the Agent to free type information, radio buttons with a series of pre defined questions for the Agent to complete, checkboxes and dropdown boxes

- Scripts can be used to provide call notes for post call Disposition Code. These can be in the form of multiple dropdown options or a free type notes capture field
- Agents will need to have a Web Page Widget within their Agent Configuration in order to use any scripting capabilities

- Scripts can be assigned to a queue so different scripts specific to the needs of each queue can be used. These are normally shown on the Agent UI at the point when the call rings the Agent and will be shown in the script widget
- Scripts can also be linked to a script widget for outbound calls so that Agents who make an outbound call can also have a script appear

13.2 Outbound Dialler

There are two types of automated out dialling:

1. Those being Broadcast
2. List based out dialling

Although being similar, they fulfil two different purposes. Both approaches require a data list set up with the phone numbers set in a phone number format.

13.2.1 Lists

Lists are created by a Supervisor or System Administrator with the appropriate admin access to do so. The Agent controls the flow of the calls by using the Outdialler List widgets.

13.2.2 Broadcast

Broadcasting is a way of automatically initiating a range of services including SMS and Voice messages but can also be used with an IVR (Interactive voice response) and even include an outbound Agent queue.

There is a broadcast widget which is configured into an Agent's UI. This allows the Agent to choose a list from their Customer data lists. The widget controls the rate of the broadcast for optimum performance.

14 Customer Management

Cxp includes a Customer Management Database which will allow businesses to create Customer Records.

These records will include:

- Customer name
- phone number
- email address
- optional custom fields which are created at the system level

These records are created automatically whenever a Customer enters the system through a channel with an associated Workflow.

- The Customer record list is used to tie a Customers interaction history together
- This history will be presented to the Agent as they handle an interaction no matter which channel the Customer is using
- The Agent will also have the ability to edit the Customers details and merge their details with another entry in the Customer record list
- The Customer records list also allows a user with Admin access to the Portal, to see the entire list of their Customers stored in Cxp and search the Interaction History. This could be used by a Supervisor to search for a previous conversation if there was a complaint or a dispute

14.1 Blacklisting

Cxp offers the ability to add blacklist rules to prevent unwanted End customers reaching the Contact Centre.

The blacklist rules allows users to partially or completely ban End customers from reaching out to all or specific Digital channels. Blacklist is available for Email, Instagram, Facebook and WhatsApp. It is not available for unauthenticated Webchat or Voice.

- Within the Customer Management Database, each End customer that has been in touch with the Contact Centre will have a End customer record
- Within this End customer record is to option to Blacklist and this will give you the option to block the End customer from all or just for a particular channel type, enter a reason and save against the End customer record

14.1.1 Features

1. The blacklist rule may be removed at any time (whitelist) and you can review your blacklist rules within the Dxp Admin Portal. This will also show how many attempts have been made

by that End customer since they have been blacklisted.

2. Once blacklisted the End customer will no longer be able to reach out via the channels they have been blocked against.
3. For Webchat, the End customer will not receive any message or be placed into the workflow.
4. This feature can also be extended to blocks calls from specific numbers at network or Customer level, although this will need to be actioned by the Service Desk.

15 Business Units

Some organisations may handle Customer Data across multiple business entities. Business Units act as a mechanism to segregate data within an organisation. The prime example of a Business Unit use case, is within Business Process Outsourcers as they enable the complete separation of data between of each Contract/Customer while also allowing the Agents to service the different Contracts from the same place.

Each Business Unit keeps a separate instance of Customer Data, has a different set of email templates and disposition codes. Agents can be assigned to multiple Business Units.

Business Units do the following:

- Allow organisations to filter and segregate their Customer record lists
- Act as a filter for various other entities and operations within an organisation
- Allow organisations with multiple entities to restrict Customer Data records, Workflows, Channels and templates that Agents can see in the context of a conversation

16 Post Contact Surveys

Cxp provides the ability to offer Customers a Post Contact Survey after a Caller interaction with the Contact Centre.

16.1 Voice Surveys

For the Vxp interactions, we would utilise the SMS capability of the platform, to deliver a Survey to a Caller at the end of the call.



This feature is not included as standard as part of the Agent license, you would need to add this as a Bolt on to provide this service.

Surveys can be SMS opt in or the Caller can be given the option to stay on the line and complete a survey using DTMF collection.

16.2 Digital Surveys

Digital surveys are a use case for using the custom questioning node within the Workflow Designer. Questions can be asked to collect survey data and will be available as part of the Digital reports.

16 Reports

Report generation is a built-in feature of Cxp and provides the ability to run reports on an ad-hoc basis, selecting from a suite of pre-defined reports with the ability to specify certain input parameters.

16.3 Voice Reports

There are a standard set of reports that can be configured by users to run automatically on a daily/weekly basis, with the report output issued via email or file transfer protocol (FTP).

16.4 Report Features

1. The reports provide a full breakdown of the number inventory along with a range of usage statistics such as calls by user, call queue times etc.
2. Call data report output can be downloaded in a telecom industry standard CDR (call detail record) format.
3. Our reporting tool will provide the ability to help track Agent utilisation and queue SLA's.

Anyone with access to Cxp and who has been granted the necessary permissions, can access the Reports page which will allow them to use any of the predefined reports.

16.5 Ad-hoc Reports

Ad-hoc reports can be configured using the picklists. For example:

- Totals for a specific report type
- Calls within a specific time frame or all calls
- For individuals or groups

The screenshot shows the Cxp Reports interface. At the top, there are three dropdown menus: "Show me" (set to "totals"), "for" (set to "all calls"), and "on" (set to "inbound calls for Katie.ellis@telxl.com"). Below these, there is a "Show reco" checkbox and a "Click here to" button. A dropdown menu is open, listing various report types: "the help screen", "call lists", "calls and billing" (highlighted), "calls and CDRs", "recorded calls", "one call", "totals", "grouped totals", "totals by time of day", "totals by dialled number", "totals by service", "totals by customer", "totals by CLI", "totals by operator", "totals by cost centre", "totals by map region", "CC Number Configs", and "CC Spreadsheet". Below the dropdown, there is a "Result of requ" section and a "Call Coun" section. At the bottom, there is a table with columns "Day", "Evening", and "Weekend", and rows for "0", "0", and "0".

16.6 Reporting Criteria And Automation

Reports can be automated and scheduled hourly or daily, while some can be done weekly or monthly.

These reports can be sent to:

- FTP
- SFTP
- FTPS
- Emailed

The Image below demonstrates how to schedule reports to be run automatically:

Report	Description	Enable	Period	Email	Email To	FTP	Keep days
Collected data	This report is the same as the report you get by selecting "collected data" from the call log. It includes recorded calls, short recordings and voicemails. Short recordings are joined together to make a single recording for each call.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Data files	This report is the same as the report you get by selecting "data files" from the call log. It produces a spreadsheet with all your calls, CDRs and data capture variables. In addition it generates a CSV file containing this information for import into other systems.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Totals by Operator	This report is the same as the report you get by selecting "Totals by Operator" from the call log.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Totals by Dialed Number	This report is the same as the report you get by selecting "Totals by Dialed Number" from the call log.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Usage Graphs	If you select a daily frequency it will give you a breakdown of usage per hour. If you select a weekly frequency it will give you the breakdown by day of the month so far.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Operator Outbound Summary	Summary of operator outbound calls, dialler/CC4Web and IDA.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Totals	Summary of all calls.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Time in Queue	Report of callers experience in operator queues.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Operator status logging	Breakdown of operator time.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Response times by number	Caller's experience of calls.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>
Operator busy/break	Breakdown by break type.	<input type="checkbox"/>	<input checked="" type="radio"/> Daily <input type="radio"/> Weekly	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="7"/>

- Existing reports can be edited and a further 30 bespoke reports can be created
- The reports can be downloaded and exported to csv and Excel files
- The platform also has API access to request reports direct from the Web Portal

The table below details the list of available reports out of the box:

Report	Description
Collected Data	Produces a Zip file with all recordings. It includes recorded calls, short recordings, and voicemails. Short recordings are joined together to make a single recording for each call.
Data Files	Produces a csv file with all your calls, CDRs and data capture variables.

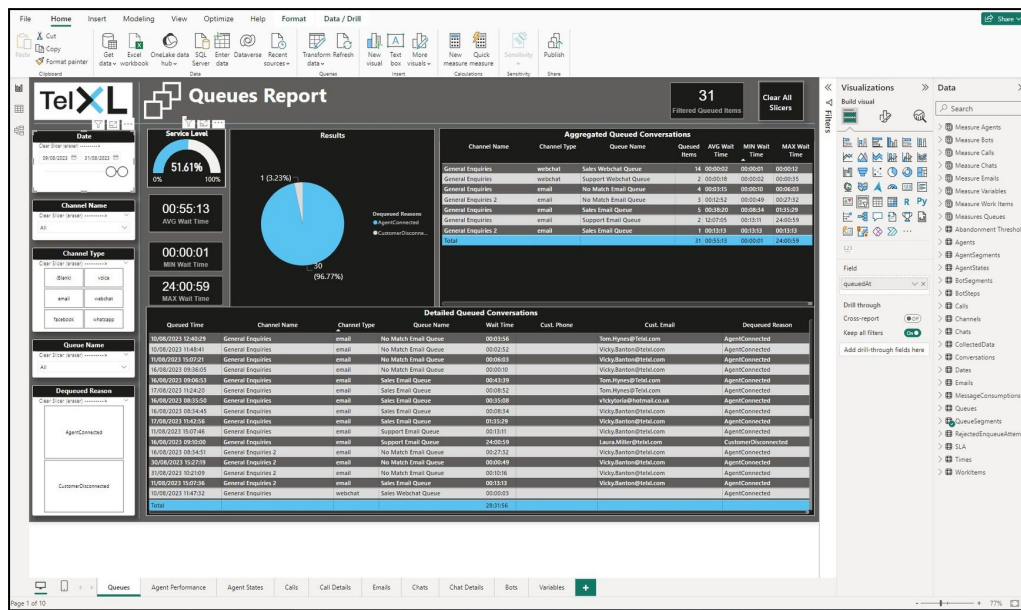
Report	Description
	Commonly used for importing into other systems.
Call Totals	A high-level report that provides basic totals for volume of calls, duration of calls, and billing costs across a specific period.
Call Lists	Provides a list of calls made during a specific period, including the date and time of the call, details about the caller, whether the call was answered, and links to a recording of the call (if available).
Time In Queue	Provides statistics for calls into queues, including how many were answered, and how long they spent queued.
Licence Provisioning	Provides a summary of Agent licences provisioned to an organisation over a specific period.
Licence Usage	Provides a heat map showing the percentage of provisioned licences that are in use by an organisation over a specific period.
Operator In / Out Report	Provides details of when Agents have signed in or out of the client application.
Web Access Log	Provides a break-down of actions taken by Website users, Agents and Supervisors, including taking calls and entering specific states.

16.7 Digital Reports

Dxp utilises Microsoft's Power BI to provide historical reporting capability, via an OData Feed.

In historical reporting we strive to show high and low level data about the various entities and features within the platform such as Bots, queues, Agents, work items and conversations. Data is usually available within a few minutes of the event occurring, however we would suggest using the Realtime reporting functionality to monitor data for the current day.

The reports can be viewed either through the web at Power BI Service or in the Desktop Application by opening a file with the '.pbix' extension which will be provided by TelXL. This file is a template which will provide a range of Historical Reports such as Agent Performance, Agent States, Emails, Chats and will give a range of performance data for each report. (see image below)



The data can be viewed, edited and published using Power BI Desktop application which is a free tool with a valid Microsoft Organisational account. Publishing the report to the Power BI Online Service has many advantages, such as easily sharing the report with colleagues, embedding the report in Microsoft Teams, setting up subscriptions, creation of dashboards.

16.7.1 Features

- Historical reporting aims to show data from the previous 24 hour period, to the time period governed by the data retention policy. The data retention period by default is 18 months but this can be changed within the Admin Portal.
- You may filter the data in the reports by date and by other categories of data. You can use the filter to control the time-frame of the historical data shown
- Each report as a number of filtering options to narrow down data by queue, Agent, channel name as examples
- Data can be exported into Excel to allow reports to run as a csv file
- The template can be amended and changed to show the data you want to see
- Data View shows the raw data which can be manipulated to create your own templates and reports

17 Administration

Our Voice and Digital Platforms are administered via a Web Browser Admin Portal. Each Portal will allow Administrators to add users, create Workflows and run reports.

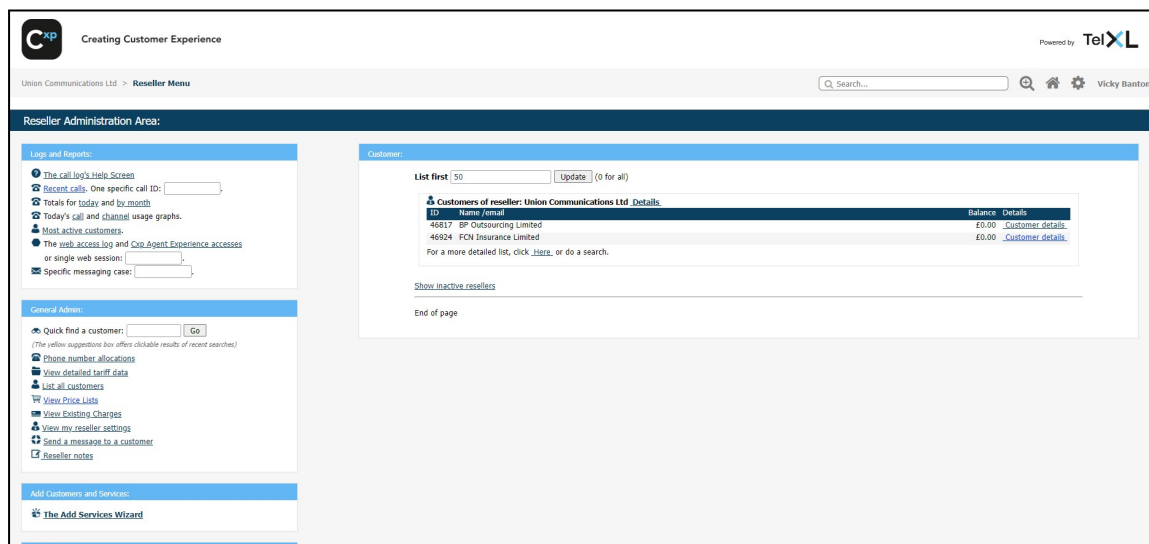
17.1 Voice Admin

Administrators will have access to the system via a Web Service Portal and can manage the system using the Web based UI.

- Partners will use the Web Portal to add Customers and from there assign services to them
- The Web Portal will be used by Partners and their Customer (if desired) to manage the system administration tasks such as, adding/removing Agents, creating Agent configurations, creating IVR Workflows, creating announcements and making any changes
- Agent configurations such as adding and removing widgets is also done within this portal
- Customers will use the portal to run historical reports and to listen and download call recordings.

The Portal supports the following browsers:

- Microsoft Edge
- Google Chrome



17.2 Digital Admin

Administrators manage the technical environment with the Admin Portal using your own secure URL via a web browser.

- The Admin Portal for Digital uses Microsoft O365 credentials to log in users, these details may need to be provided the first time a user logs in
- Your browser may be able to store these details and provide credentials automatically. This is dependant on your browser, version and local security policy

Supported browsers:

- Microsoft Edge
- Google Chrome

Users may be configured to access multiple tenants and the required tenant is selected when the user logs in. Each User with access to the Admin Portal is assigned a role, these roles define what features they have read and write access to.

The Digital Admin Portal supports the ability to do a bulk import of users into the system via a downloadable csv file. Once this file has been downloaded and completed with the Agents details, the file can be imported back into the system and the Agents will be added.

18 Call Recording

High quality Mono call recording is included within the Vxp and Oxp licensing models and as standard calls will be stored for thirty days.

- TelXL can provide long term storage or recordings can be downloaded and stored locally on a Customer storage facility
- Customers can choose to send recordings to their own SFTP site by providing a URL location
- Recordings can still be accessed via the Portall but the recording link will automatically redirect the user to the SFTP location
- Once recordings are moved to our long term storage, access to these recordings is via request and a charge for this service will be applied
- You can also decide which call recording format to set, between Mono and Stereo, which decides the quality of the audio-file.
- Supervisors and Administrators with the appropriate access will have the ability to listen and download recordings from the Admin portal.
- The platform has the ability to restrict and track access to call recordings to help to comply with GDPR and other regulatory requirements.
- Agents have the ability to highlight recordings to be reviewed at a later date.
- The retention policy can be changed at a system wide level.

Call recording can be configured in 3 ways:

1. Standard Recording
2. Elective Recording
3. Percentage Based Recording

18.1 Recording Transcription

Cxp doesn't provide transcription of recordings natively but we integrate with Callminer and Awaken to provide this functionality.

19 Workforce Management

Cxp has the ability to output data to a third party Workforce Management system.

- TelXL has worked previously with Calabrio, Teleopti and Playvox
- This will require Deployment and Management Services for simple integrations or Custom Development Service for more complex requirements
- Outbound API requests will be subject to usage limits

20 Credit Card Processing

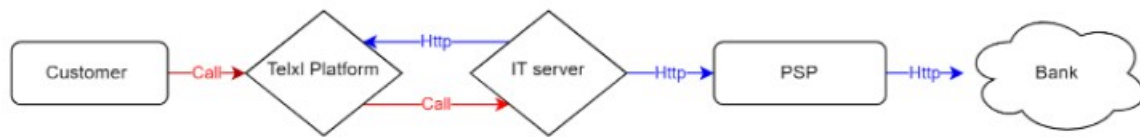
Our platform allows us to take payments on a phone call by using Dual-Tone Multi-Frequency (DTMF) tones to enter card details (no reading out your card numbers on a call). The DTMF tones are suppressed from the Customer and not played to the Agent or stored in the call recordings.

The details are collected and sent to a Payment Services Provider (PSP) who handle the money transactions behalf of TelXL. TelXL simply provides them with the details they require and they advise if the transaction was successful or not.

This can be done with an Interactive Voice Response (IVR) node which automates the process or can be handled directly in a conversation with an Agent.

20.1 How Does That Work?

1. A Customer phones a number on the TelXL platform, they are then for example, connected in a conversation with an Agent. When the Agent is ready to take a payment they will enable DTMF suppression and go to step 2.
2. A connection is made from the current call on the TelXL platform to the IT Server on either PCI Pal or PCI Telecom.
Important: We make a phone call to the IT server and it communicates back with http requests.
3. The connection is created by our platform making a call to the IT server, which then communicates back with http requests. The call is not yet answered.
4. The IT server sends a HTTP request to the TelXL platform to confirm it has received a call, this includes details of which call it came from.
5. TelXL platform confirms the call is correct and responds to the IT server, this syncs the two platforms
6. IT server now answers the incoming call from the TelXL platform.
7. The Agent controls the card collection process with a widget, they instruct the Customer to enter card details with their number pad. Once all details are collected they Click Process payment.
8. The IT server will take all the collected data and make a HTTP request to the PSP provider. They will then communicate with the required banks and will respond with if the TelXL was successful or failed.
Important: At no point does the TelXL platform get any exposure to the card details
9. The IT server will then send a HTTP request to the TelXL platform advising if the payment was successful or failed.



This is the basic operation of how a payment works however most PSP providers require more than just card details to make a payment. Often they also want details like billing address and contact number, these can be collected as data variables by any process you like. They just have to be in the appropriate data format before we attempt to process the payment.

For example: these variables can be collected by the Agent with a script pop or even in the IVR beforehand.

When the Agent clicks 'process payment' these additional variables are sent to the IT server. The IT server then sends these with the collected card details to the PSP provider.

20.2 Payment Providers

With integrations to twenty-eight different payment service providers including leading names such as CyberSource, Opayo and Global Payments and both in conversation and automated IVR payment mechanisms, TelXLs PCI Credit Card Processing solution enables organisations to process card payments securely.

21 Architecture

The TelXLVoice network originated with the requirements of a TDM based architecture. Our switches were hosted in multiple data centres situated in the North, the Midlands and the South of England, to provide access to local geographical routing and also for distributed resilience and redundancy. Today TelXL no longer runs TDM and like most of the industry is now completely Voice over IP (VoIP) based. Local access routing is no longer a requirement with VoIP networks, however we maintain the underlying architecture of distributed data centres (switch sites) for those same resilience and redundancy reasons.

Each site runs from a set of building blocks that plug together to create the overall services. The idea of redundancy and resilience continues as a theme through to how we use those building blocks and to create redundant solutions on many layers.

- Starting with dual power feeds to the racks and dual power to nearly all equipment. Where dual power is not an option (supplier equipment for example) we use a two into one power rail and generally run multiple instances and connect those to the different power supplies
- We use two separate backbone suppliers for dual resilient network between all our switch sites
- We use multiple different Internet Service Providers (ISPs) to provide Internet connectivity at each of our data centres
- We create clusters of telephony servers per switch site by scaling the individual server blocks horizontally, which allows for almost infinite growth

The same applies to our web based solutions that run across a cluster of web servers. All web and Voice services run at all sites and so a user of the TelXL network can be making use of the technology at any of the data centres and should be completely unaware of which site they are using. We can then seamlessly migrate Customers around our network to allow us to perform maintenance tasks without risk to our Customers. If an unfortunate system outage does occur, the user can be reconnected on another server at the same or at another site and in many cases would only need to refresh their screen to continue. Redundancy and resilience is at every layer of our product portfolio.

The TelXL Digital network is hosted in the UK Azure cloud with backhaul connectivity to the Voice network. The Digital services are built in some robust fashion

22 Voice Architecture

Explanation of our voice network – Our Voice platform spans three Data Centres (DC) within the UK, based in Birmingham, Manchester and London. Each DC houses three Session Border Controllers and multiple Call Control Servers. Multiple database and file servers, with replication across all sites via multiple backhaul service providers providing no single point of failure.

We have multiple Carriers per site for interconnect (voice connectivity) for resiliency.

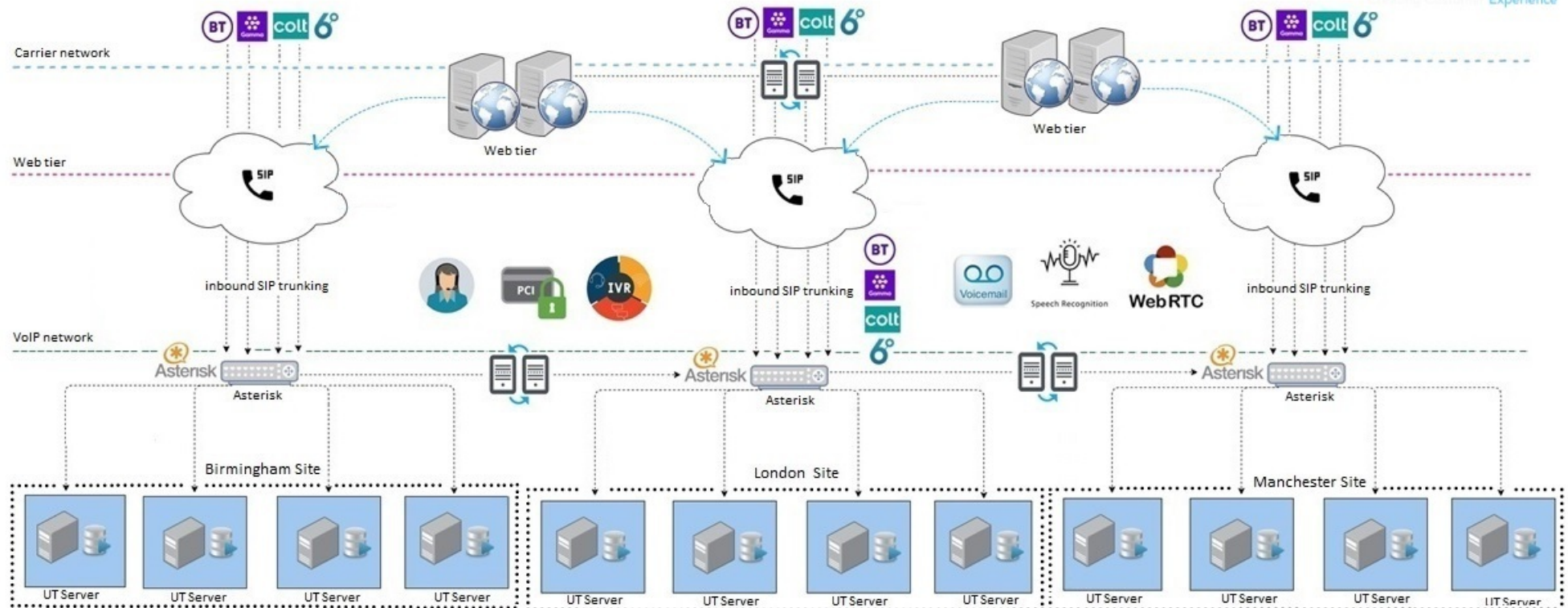
The diagram below is missing Vodafone, a recent addition.

[View image on next page](#)

22.1 Availability And Resiliency

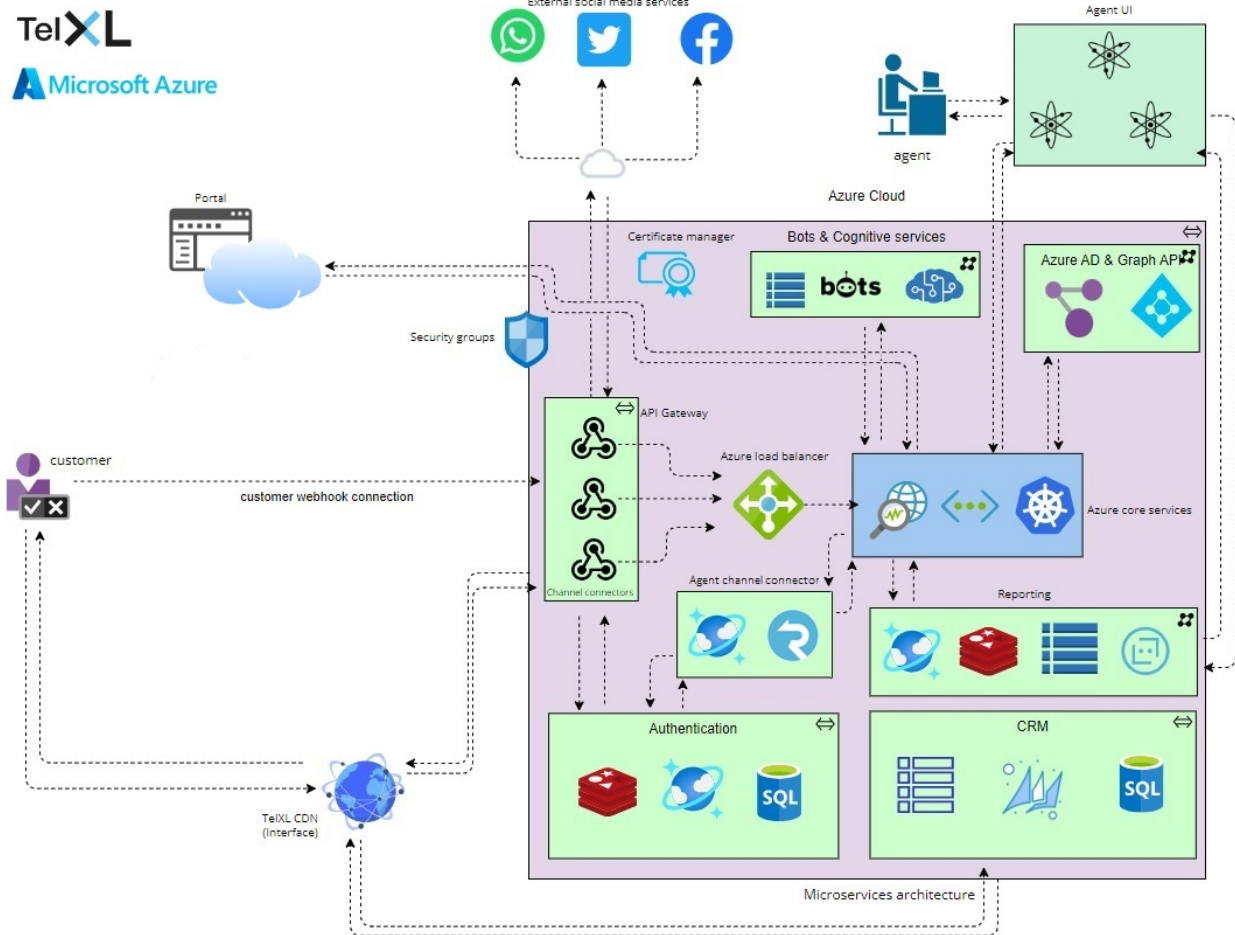
TelXL guarantees 99.999% uptime, with a 60-second recovery time objective SLA. Calls are load-balanced across three data centres, to ensure no single point of failure. Data is synchronised between the sites every 100ms.

VXP Multi-site Deployment



24.1 Digital Architecture

The Digital Architecture represents key characteristics to ensure scalability and security for the Digital cloud service. Hosted in Azure with consumption of data storages with built-in encryption to ensure data security compliance.



25 Data Centres

Our Data Centres (DC) are monitored 24/7 and are certified to the following:

- PCI DSS
- ISO 27001
- ISO 22301
- ISO 9001
- SOC 2
- OFFICIAL (IL2/IL3)
- UTI Tier III aligned

Each DC holds multiple servers to ensure if one DC was lost, the other servers have the capacity to fully run the service. Each DC has its own Database server and replication occurs across all three sites.

Our Solution utilises Asterix Servers which act as Session Boarder Controller's, routing calls and allowing Agent Log on. Every Asterix Server is aware of every Agent log on and there are multiple servers in each DC. As well as DC and Server resiliency, our platform is registered with multiple Internet Service Providers (ISPs).

Our hosting centres are 'Level 1' recognised centres, meaning there is a variety of security measures in place, including:

- Entry to DCs is strictly controlled for both security and equipment integrity
- Physical barriers at each stage of the facility: Anti-tailgating measures, Biometric Scanners, and On-site Security Staff
- Lockable server racks
- DC Cooling
- Power cabling designed to minimise heat and maximise power distribution
- N+1 redundancy for power

26 Monitoring And Reporting

TelXL uses a bespoke monitoring and maintenance system, as well as popular open-source projects for monitoring and DevOps environments.

- This includes: Zabbix, Telegraf, and Influx DB with Grafana
- Our support desk uses third party ticketing software
- We also monitor rack temperatures and power consumption

TelXL report on all servers, collect metrics via Zabbix, and have a number of Grafana dashboards for alerting and observation purposes.

Key reports show us:

- Availability
- Network usage
- Disk usage
- Disk availability
- CPU usage
- Various application specific metrics

TelXL have also developed an in-house monitoring and alerting solution, which sends email and text alerts to an on-call engineer in the event of an emergency. This is monitored 24 hours a day, 365 days a year.



Due to the resiliency of the TelXL Network, we do not notify Resellers/ Customers of a failure within certain Nodes within our network, we would only notify a Reseller/ Customer of a service affecting outage.

TelXL operate three Switching Sites located in London, Birmingham, and Manchester for site based resilience and load balancing across the UK.

- There are dual Ethernet backbones from separate suppliers linking the three sites together
- The same functionality is available at each Switch Site, therefore any can be used to provide a service
- These three locations in an emergency situation can operate as a standalone site
- Each site is backed with dual Uninterruptible Power Supply (UPS) from the hosting centre. Each site has UPS and generators, which typically support a minimum of 8 hours.
 - Our London Data Centre for example has multiple fuel suppliers and 24 hours of diesel fuel runtime at full load
- Along with architecture resilience, there is built in service resilience (Wellness Assessment) that triggers the call to retry via multiple paths through the network, if a single call fails for a reason other than end user unavailable

26.1 Roles, Users And Permissions

There are different account types, levels of access and permissions that can be customized to restrict access to the Portal by an individual.

Within each account type, there are different levels of access:

- **Core Users:** Able to create, remove and maintain other Portal users across the Reseller or Customer as per their account type, in line with our self-service philosophy. Core Users will need to limit the access levels of the General Users.
- **General User:** An account created by the Core User, able to configure and maintain the services within their account type in line with the permissions they have been granted by the Core User.
- **Read-only Users:** An account created by the Core User, able to view all information within their account type but unable to maintain or configure the services.

Customizable permissions also known as Access can be restricted per user by the Core User, restricting the viewable services, e.g. call recording and billing.

26.2 Firewalls

TelXL has network-level measures in place to prevent breaches of security such as unauthorised access, including:

- Firewall at edge of network and access log on edge devices, which can be manually reviewed as needed
- MAC Access Control List (ACL) for connection to network at the office where physical CAT5 sockets are located, with switch logs
- VPN access logs for remote users
- Failed password account lockouts, with logs and automatic alerts
- ESET and Symantec protection with software firewall logging and malicious app prevention

Iptables firewall technology is used on both the routers and on the Session border controllers (SBCs). Session Initiation Protocol (SIP) and Real Time Protocol (RTP) traffic will be allowed between TelXL SBCs and 3rd party SBCs.

TelXL will allow Internet Control Message Protocol (ICMP) for error reporting and testing, such as for network trace route and ping tests for diagnostics if the SBCs are unable to talk to each other. No other traffic will be allowed.

TelXL take a number of measures to ensure the security of their data:

- Limit the employees who can access the firewall, this is based upon AD roles
- Servers can only be accessed by employees who are inside the network
- Reloads will fail if there is an error and alert the person trying to reload

- We maintain records of all failed login attempts and other unauthorised attempts to access our system. The Zabbix monitoring solution notifies key users through an alert system

26.3 Data Security And Encryption

TelXL is a multi-tenanted CCaaS vendor. TelXL are focused on resiliency. The core TelXL service runs across four UK Data Centres on dedicated hardware for unparalleled resiliency and redundancy of Customer services and data, while also leveraging Microsoft Azure Cloud resources for powerful scalability and cutting-edge technology. With communication over private Ethernet and Customer data distributed across the locations, no single Customer is tied to a specific server or instance.

As part of our Cyber Essentials Plus certification we rigorously protect and maintain our systems in the following areas to ensure the security of your data:

- **Firewalls:** we operate hardware and software firewalls as a multi-layered approach
- **Security Updates:** by applying all security updates within 14 days of release we ensure the platform is protected from the very latest exploits and vulnerabilities. This applies to all our equipment including staff devices. We execute a phased roll-out approach through multiple test stages to ensure patch compatibility and efficacy of protections applied so that service availability is not impacted
- **Endpoint Protection:** every managed system on the platform has real-time advanced anti-malware protection as well as centralised logging to our Security Event and Incident Management (SEIM) system for real-time alerting and efficient root cause analysis.
- **Secure Access:** on-premise and cloud services are protected via multi-factor authentication and role based authentication. Administrative roles and credentials are limited to the minimum amount of individuals and are required for all system changes including the installation or running of new software. All requests for software are submitted for approval and tested in an isolated environment prior to installation.

Confidentiality and integrity of data is of the up most importance to TelXL. Data exchanged between a Customer and TelXL is protected using the relevant Transport Layer Security (TLS) standard. The Agent UI enforces HTTPS communication for all connections. We support large data and report exports which can be sent via an encrypted Secure FTP (SFTP) and password protected. Passwords are sent separately to the recipient in line with our password policy.

Customer data is encrypted at rest and any unencrypted data in transit within the TelXL platform is sent over dedicated private Ethernet.

26.4 Patch Management

The TelXL Cyber Essentials Plus accreditation dictates that all high and critical rated patches must be deployed within fourteen days of their release.

To satisfy this requirement, TelXL have a monthly patching cadence which is based upon the Microsoft 'patch Tuesday week' (second week of each month). TelXL deploy patches at the

beginning of the second week after 'Patch Tuesday' of each month (generally the fourth week of the month). This balance ensures we avoid any patches that are recalled or changed in the first weeks of release that may cause platform instability while also staying compliant to the standards set by Cyber Essentials.

For reliability of service we have multiple test groups of servers and phases of release:

1. The Phase 1 group gets updates as soon as they are released by the vendors, sent to a handful of test machines within TelXL.
2. We then have a Phase 2 group that receives updates 2-7 days after release. This goes to the QA and Development teams for them to test.
3. We then have a Phase 3 group that receives updates **7-10 days** after release, targeted at select low impact machines on the platform.
4. The Final Phase takes place then 12-14 days after release, staged over a couple of days to the rest of the live platform.

The TelXL Cyber Essentials Plus accreditation also requires us to use operating systems and software within support, so end of life operating systems and software are removed from the network during these maintenance cycles.

27 Glossary

A

Agent

Agents (also known as Operators) are Customer service representative personnel who engage the Customers via a Conversation to fulfill their business requests (inbound Conversations) and/or the call center's business tasks (e.g. outbound Conversations). The term also might be referred to the TelXL software component that the Agents use to perform their duties ('TelXL Agent application', 'Agent site', etc.)

Agent Application

The Agent facing website providing the UI elements to consume its feature set.

Agent States

Agent States control whether the system can assign Work Items to Agents.

Agent Workspace

Agent Workspaces control the Script that gets executed for the Agents during conversations. It also designates additional properties, like Hold music, Disposition Codes, Wrap-up timers, etc.

Announcement Bundles

These are a set of voice audio files uploaded to the Portal in a ZIP package format. These gets played back to the Customer at various stages during their voice call, for example while waiting in a Queue.

API

An application programming interface (API) is a way for two or more computer programs to communicate with each other. It is a type of software interface, offering a service to other pieces of software.

Azure AD

Microsoft Azure Active Directory service used by the organizations Teams CC Customers for their own corporate directory uses. the organization authenticates both the Agent and Administrator users against this system (except for the Legacy Portal that is in the process of being decommissioned).

B

Bot

A software service that can interact with Customers to collect or provide business information before (or in place of) the Conversation being routed to a human Agent.

Business Entity

RBAC controlled software services, configurable on the the organizations portal.

C

CCaaS

Contact Center as a Service (CCaaS) is a Customer experience solution that provides the capabilities required to route inbound Customer interactions to Contact Center Agents. Cloud-based CCaaS solutions let businesses only buy necessary tech and reduce reliance on in-house IT. Because CCaaS platforms are highly customizable, businesses can modify the solution to meet their evolving needs and requirements over time.

CDR

Call Detail Record (CDR) is a computer record created by a telephone exchange or other telecommunications equipment that contains a detailed record of all the telephonic calls and other communications transactions such as text messages that pass through that facility or device.

Channel

A resource that allows inbound Conversations via a particular Media to be served by a host of different Participants, like Bots or human Agents.

CLI

Calling Line Identification (CLI) is a feature that allows you to see the phone number of the person who is calling you before you answer the phone. It can also be used to screen incoming calls and verify the identity of the caller. CLI is data that is generated at the time a call is established and passed through the carrier networks, and includes the called party's number, the calling party's number, the date and time of the call, the call's duration and routing

Contact Record

A set of data representing a Customer. It is searchable, editable in the Agent application via the Directory.

Conversation

Whenever a Customer is connected to a Channel, a Conversation is started and is closed when this connection is finished. A Conversation encompasses the actual dialogue portion of the engagement between the Customer and the system, including the phase when a Bot, and/or a human Agent is added.

Customer

An external Participant that is initiating the inbound Conversations, or is the recipient of Outbound Conversations, established to achieve a business goal.

D

Disposition Codes

A configurable set of short labels to tag each Work Item after a Conversation is ended. These codes can be used for Reporting.

DTMF

DTMF stands for dual tone multifrequency. Each key on a telephone keypad generates a unique DTMF tone when pressed. These tones are transmitted over the voice channel and equipment at the receiving end then 'listens' to the tones and translates them into specific commands such as dialling a particular number. The tones can also be used to control remote equipment, navigate an IVR menu or capture sensitive information such as credit or debit card numbers.

I

IVR

A menu that maps a series of customisable, recorded audio prompts that let Customers indicate their reasons for calling. IVRs allow inbound calls to be directed to the most appropriate department or Agent, based on the reason for each call.

M

Media

A communication modality to utilize for Interactions between Customers and Agents. Webchat, various Social providers, Voice and Email are the main types of media.

Monitor

A Supervisor feature providing the option to silently monitor an Agent-Customer Interaction. Neither of those parties are aware of the Supervisor's presence.

O

OData

An OData feed is a way of accessing and manipulating data using a standard protocol called OData, which stands for Open Data Protocol. OData is based on REST principles and allows you to create and consume data APIs in a simple and uniform way.

P

Participant

A contributor or 'party' in a Conversation. The customer, Agents, Bots, called external consultation contacts and Supervisors can be Participants in a Conversation. For example, when a Customer is talking to an Agent, both of them are Participants of this voice call. If during this call an Agent calls an external consultant and sets up a Conference, then all 3 of them are Participants of the Conversation.

PCIPal

PCI Pal Digital Payments makes secure omnichannel payments possible for contact centres. Merchants can take payments seamlessly with full visibility across multiple engagement channels, with flexible digital payment options to suit any customer.

Portal

The Cxp administration web interface, accessible to privileged users.

Q

Queue Treatment

A set of features to manage Conversations waiting in a Queue for one of the qualified Agents to become available.

Queueing

A service used when a Workflow needs to assign an inbound Conversation to one of the qualified Agents.

R

RBAC

The Role Based Access Control mechanism allows detailed control on who and to what extent can access the portal. It is based on default and custom Roles associated to various Business Entities with a set of Permissions.

Reporting

The feature of presenting data on Conversation, Agent state and other processes happening in the Contact Centre . It covers the real-time as well as longer term trend analysis on these.

Resource

Lageacy term for Business Entity. RBAC controlled software services, configurable on the organizations portal.

Roles

Default or custom created objects containing a set of Permissions to associated Business Entities. Within RBAC, Permissions are not assigned to Users directly, but via Roles instead.

Routing

The process of identifying what should happen to a Conversation while it traverses the Contact Centre. For an inbound Conversation for example, parameters such as which Media it arrived from, which Channel, Workflow should it be associated to, which Participant to associate, what Attributes are needed, etc. are all part of the overall Routing service.

S

Scripting

The use of a predefined set of guidance information to Agents to formalize the dialogue with the Customers. It helps making sure the right information are collected from and provided to the Customers.

Segment

A Segment is part of a Conversation and represent a continuous dialogue between a Customer and a Participant. A Segment is closed when the communication with the associated Participant is closed.

SFTP

Secure File Transfer Protocol (SFTP) is a file protocol for transferring large files over the web. It is built on file transfer protocol (FTP) and includes Secure Shell (SSH) security components. Secure Shell is an encryption component for Internet security. SSH and SFTP were designed to improve web security. SFTP uses SSH and encrypted FTP commands to transfer files securely to avoid password sniffing and exposing sensitive information in plain text. SFTP can also prevent man-in-the-middle attacks since the client needs to be authenticated by the server.

Snippet

A tiny HTML/Javascript code that Customers embed in their website, that in turn loads the full Widget from from the content delivery network.

SSO

Single sign-on (SSO) is an authentication solution that allows users to log in to multiple applications and websites with one-time user authentication. Given that users today frequently access applications directly from their browsers, organizations are prioritizing access management strategies that improve both security and the user experience. SSO

delivers both aspects, as users can access all password-protected resources without repeated logins once their identity is validated.

Supervisor

A person supervising Agents. Can access Supervisor features on the Agent app – e.g. barge-in, real-time Supervisor metrics, etc.

T

Task

Synonymous to Work Items, see definition there.

Task List

A list of Tasks in the left side of the Agent Application the Agent is having.

Task Manager Panel

A section of the Agent app that is used to enter Disposition Codes and other business information before closing a Work Item whose Conversation was already completed.

Team

Coming soon: A set of Agents and/or Supervisors within a tenant, to fine tune reporting and other capabilities.

TLS

Transport Layer Security (TLS) is a cryptographic protocol designed to provide communications security over a computer network. The protocol is widely used in applications such as email, instant messaging, and voice over IP, but its use in securing HTTPS remains the most publicly visible.

U

User

An person with an administrator responsibility, having some kind of a permission to access the Portal.

V

VoIP

is shorthand for a telecommunication technology called Voice over Internet Protocol, and it's a modern alternative to traditional phones. VoIP allows voice calls to be transmitted over the internet. Your VoIP phone is simply a node on the internet with an IP address, much like your desktop computer. Although VoIP phones work over the internet, they behave almost exactly the same as traditional landline phones - they use area codes and phone numbers, not usernames or passcodes.

W

Wallboard

A separate Configuration and license used to create a Wallboard/Dashboard of real time stats to be viewed either on a big screen in the Contact Centre. Will require a Wallboard license and wallboard widgets.

wav

WAV files are in Waveform Audio File Format and are uncompressed lossless audio. It's a container audio file that stores data in segments to store audio data, track numbers, sample rate, and bit rate.

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sample rate, and bit rate.

Widget

A HTML webchat interface Customers can tweak and embed in their own corporate webpages to offer chat services to their web visitors.

Work Item Data

A data container set up to collect information of a Conversation. These data can be used to steer routing decisions in the Workflow, alter Scripting, and to store for Reporting purposes.

Workflow

Workflows are an extremely flexible way to control how Customer Conversations are handled by DXP. A workflow can be used for more than one Media.

Workflow Node

An element of a Workflow with all its configuration to perform certain actions based on conditions.

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