

Intercept EveryWhere Web Services Architecture

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Revision History

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# Overview

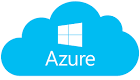
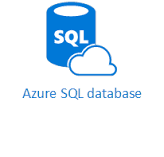
This document provides architecture of Web Services framework for Intercept EveryWhere, phase-1 of the project.

# Architecture

Refer to following architecture diagram. The solution includes the following:

1. Web Services
2. Admin Portal
3. SQL Database

The two servers are deployed in Azure and use Azure SQL Database for persistence data storage.



EveryWhere

Video Switch Platform

Video Flow

Web Services

Web Services

EveryWhere

Web Services

Admin Portal

Admin portal is used for System Service Configuration and User Management. In this phase the portal functionality is realized using Web Services calls. Following are the Admin Web services:

1. System Service Configuration
2. User Management

The EveryWhere Apps in mobile devices use the following Web Services:

1. User sign up, Registration & Login
2. User Services Configuration

## Interaction with Web Services

Web Services will have the following configuration to support registration of Apps, Video Switches and Admins.

* Default 64 bit Key for Apps called “Default\_App\_User\_Key”
* Default 64 bit Key for Video Switches called “Default\_Video\_Switch\_User\_Key”
* Default 64 bit Key for System Admin Users called “Default\_Admin\_Key”

The following flow diagrams explain the interaction procedure with Web Service by Mobile Apps and Video Platform for securely accessing the web services and session persistence.

#### **Application-Web Service Interactions**

The App will be embedded with a App\_User\_Key for Apps to register with the Web Service. App uses this key for initial registration with the Web Service (Hereafter called Server).

App

Web Service

App establishes HTTPS Session with the Server

App sends Registration Request with Default Key and UUID of the device

Server returns a Session Token

[App uses this Session Token for subsequent interactions with the Server]

Registration of the App [User not logged-in]

App

Web Service

App establishes HTTPS Session with the Server

App sends Session Token, UUID of the device and User Credentials

Server returns a Session Token along with login results

[App uses this Session Token for subsequent interactions with the Server]

User login

App

Web Service

App establishes HTTPS Session with the Server

App sends Session Token, UUID of the device and Web Service Request

Server returns an updated Session Token along with Web Service response

[App uses this Session Token for subsequent interactions with the Server]

App Accessing Web Services

#### **Video Switch-Web Service Interactions**

* The Video Switches will have the following configurations:

1. Default\_Video\_Switch\_User\_Key for them to register with the Web Service
2. Video user Credentials: login/password created in the Web Service.

* App uses this key for initial registration with the Web Service (Hereafter called Server).

Video Switch

Web Service

Switch establishes HTTPS Session with the Server

Switch sends Login Request with Default Key and Credentials

Server returns a Session Token and Login results

[Switch uses this Session Token for subsequent interactions with the Server]

Video Switch Login

Web Service

Switch establishes HTTPS Session with the Server

Switch sends Session Token and Web Service Request

Server returns an updated Session Token along with Web Service response

[Switch uses this Session Token for subsequent interactions with the Server]

Video Switch Accessing Web Services

Video Switch

#### **Admin Portal -Web Service Interactions**

* The Admin portal will have the following configurations:

1. Default\_Admin\_Key for it to register with the Web Service
2. Admin Credentials: We will create default admin user by inserting the user into the database.

* Admin Portal uses this key for initial registration with the Web Service (Hereafter called Server).

Admin Portal

Web Service

Admin Portal establishes HTTPS Session with the Server

Switch sends Login Request with Default Key and Credentials

Server returns a Session Token and Login results

[Admin uses this Session Token for subsequent interactions with the Server]

Admin Login

Web Service

Admin Portal establishes HTTPS Session with the Server

Switch sends Session Token and Web Service Request

Server returns an updated Session Token along with Web Service response

[Admin uses this Session Token for subsequent interactions with the Server]

Admin Accessing Web Services

Admin Portal

# User Management

These calls are initiated through Admin portal by user type “Admin User”. Initially we will use default admin credentials for admin to login.

## Add User

Requires:

* User ID
* User Type (APP\_USER/VIDEO\_SWITCH\_USER/ADMIN)

## Reset Password

Requires:

* User ID

System will send Forgot Password Code via email to the user’s Email ID.

## Disable User

Requires:

* User ID
* Notify User (YES/NO)

## Delete User

Requires:

* User ID
* Notify User (YES/NO)

## List Users

Requires:

* User State (ALL/SIGNEDUP/REGISTERED/REGISTRATION\_ INCOMPLETE)

# System Services Configuration Management

These calls are initiated through Admin portal by user type “Admin User”. Initially we will use default admin credentials for admin to login.

## Add Service

Requires:

* Service Name
* Authentication Method (CRENTIALS/oAUTH/SAML)
* Service Provider Info

## Modify Service

Requires:

* Service Name
* Authentication Method (CRENTIALS/OAUTH/SAML)
* Service Provider Info

## Delete Service

Requires:

* Service Name

## Show Service

Requires:

* Service Name

## List Services

Requires:

None

# User Sign Up, Registration & Login

## These calls are initiated by the App.

## Signup

Requires:

* Email ID
* Password

### Signup Confirmation

* System will send Confirmation Code via email to the Email ID specified
* Pending registration will expire if not activated within 1 week

## Registration

* User enters Confirmation Code to confirm the sign up and continue with registration process.
* Application will ask user’s permission to query the following information “Device & Location Information”:
* Device make, model, UUID, its video/audio capabilities, etc.
* Geo-location
* Registration requires:
* Confirmation Code
* Email ID
* Name
* Date of Birth
* Device Information
* Geo-location
* App steps through Service Configuration (this can be made mandatory or optional and can be prompted to the user to completed).

## User Login

Requires:

* Email ID
* Password

## User Logout

Requires:

* Email ID

## Forgot password Request

* System will send Forgot Password Code via email to the Email ID specified

Requires:

* Email ID

## Forgot password Confirmation

* User enters Confirmation Code to confirm the sign up and continue with registration process.

Requires:

* Email ID
* Confirmation Code
* New Password

# User Services Configuration

## These calls are initiated by the App.

## Add Service

* App shows list of services and user selects each of one of them.
* As per Authentication Method of the Service, App prompts the user to enter Credentials (if the method is CREDENTIALS) or makes users to authenticate with the Service (if it is OAUTH) and provides authentication info.
* System validates the credentials/oAuth artifacts with the Service and provides the results in response to this call.

Requires:

* User ID
* Service Name
* Authentication Info: Credentials or OAUTH artifacts

## Modify Service

* User may want to change Service Credentials or reauthenticates with the service through oAuth (if the credentials happened to have changed)

Requires:

* User ID
* Service Name
* Authentication Info: Credentials or OUATH artifacts

## Delete Service

Requires:

* User ID
* Service Name