

TelScale USSD

TelScale USSD is a robust and carrier proven USSD Gateway build on a modern extensible middleware platform. TelScale USSD has been deployed at telco operators around the world and is processing billions of USSD transactions each day.

TelScale USSD can be adapted to the needs of telecom service providers of different sizes in any country.

TelScale USSD enables operators to rapidly create and deliver new value-added, dialogue-based services by providing an intermediary platform that links content providers to end users and provides subscribers with high-speed interactive access to a wide range of content.

TelScale is Cloud-ready. It can be deployed on dedicated hardware, private cloud infrastructure or public IaaS such as AWS.

TelScale USSD supports load balancing at SS7 level as well as at application side. Multiple nodes can be arranged in a cluster across one or more geographically distributed data centers to scale up throughput and provide various levels of redundancy, high availability and fault tolerance.

One of the the biggest advantages of TelScale USSD as compared to competing products is that its built on a modern, extensible JSLEE platform, which automatically provides out-of-the-box integration with various other communication protocols such as SIP, Diameter, SMPP, XCAP, XMPP, MGCP and many others in addition to the base HTTP protocol for connectivity to Application's.

Architecture:

TelScale USSD is first and only open source USSD Gateway available as of today. TelScale USSD makes use of HTTP and SMPP* protocol between gateway and Value Added Service Modules or third party applications. TelScale USSD receives the USSD request from subscriber handset/device via GSM Signaling network, these requests are translated to HTTP or SMPP* depending on the rules set by the user and then routed to corresponding Value Added Service (VAS) or 3rd party application.

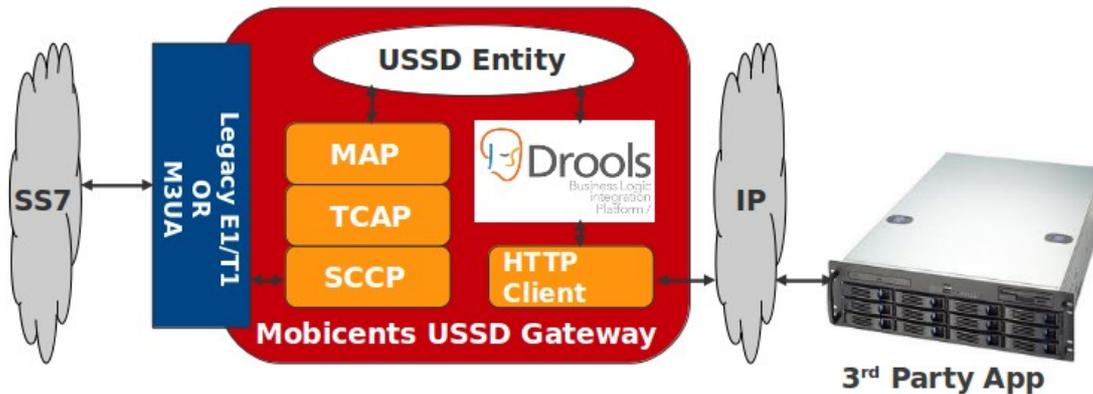
Note : * SMPP protocol is in roadmap and will be implemented in next release

TelScale USSD leverages rules engine (JBoss Drools) to derive the protocol between Gateway and USSD Application and also the information of the server (for example IP, port etc) where these applications are deployed.

TelScale USSD can connect to SS7 network over legacy E1/T1 links leveraging industry standard SS7 cards/hardware or can also connect over IP via SIGTRAN

(M3UA). TelScale Supports Dialogic cards, Dahdi based cards namely Diguim and Sangoma.

Below diagram shows the USSD Gw design overview



TelScale USSD

- can be controlled, maintained and monitored via Command Line Interface.
- can be deployed as Load-Balanced, High Availability architecture
- can be configured to serve any short codes
- generates the CDR for every transaction, including the response of users to menu passed. Hence its possible by 3rd party application to fire query in database and find out exact operation done by user and also to create statistics like total requests received, successful completion of request, request aborted by user, timeout etc. Gateway leverages 3rd party database to persist the CDR's.

HTTP Transfer Mechanism :

USSD Gateway supports implementation of HTTP 1.1 standards and acts as HTTP Client invoking (HTTP POST) the HTTP Application deployed on 3rd Party Application Server. The HTTP Request carries XML payload with USSD specific information.

HTTP callback makes 3rd Party Application agnostic to Operating System, Programming Language and Framework.

3rd Party Application can be either of following technologies on any OS

- Apache Tomcat, JBoss AS, Oracle Application Server, IBM Websphere etc for JSP/Servlet on Java



- PHP
- Microsoft IIS for ASP

HTTP errors are supported and recognized by the USSD Gateway

To understand the XML payload carried in HTTP, please refer to USSD Gateway documentation.

Licensing and Services:

To learn more about licensing options and services offered please send email inquiries to sales@telestax.com

About TeleStax:

TeleStax enables Telecommunication Service Providers and Enterprises to create scalable communication applications based on Open Source and Open Standards.

TeleStax provides Open Source Communications software and services that facilitate the shift from legacy SS7 based IN networks to IP based LTE and IMS networks hosted on private (on-premise), hybrid or public clouds. TeleStax products include JSLEE, SS7 Resource Adaptors, SIP Servlets, Rich Multimedia Services, Presence Services/RCS, Diameter/AAA Services, XMPP Services, Web Services and others.

TeleStax Enterprise Edition: **TelScale™** is built upon the open source core platform and a suite of additional management products, high availability and fault tolerance features that allow Enterprises and Service Providers to implement the most reliable, scalable and high performing cloud communications solutions available.

<http://www.telestax.com>