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Canvas[®] USSI Gateway[™]
USSD over IMS Gateway

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Canvas® USSI Gateway™, USSD over IMS Gateway

For many years, Unstructured Supplementary Service Data (USSD) and USSD based services are widely used by Communication Service Providers (CSP). USSD based services became part of the mainstream services and were highly adopted by end users. Although many applications have emerged with the possibilities offered by the next generation network technologies, USSD based services are still preferred for rapid and secure interactive communications and continues to be widely used today.

USSD is designed to be a GSM service that allows high-speed interactive communication between the subscribers and applications across a GSM network. Unlike store and forward mechanism of Short Message Service (SMS), USSD is session-oriented such that when a user accesses USSD service, a session is established, and the connection stays open until the user, application or time out releases it. This makes USSD attractive for faster and interactive messaging services.

On the other hand, LTE networks do not provide built-in integrated services to end users. To offer such USSD based services to LTE users, separate network enablers and gateways are required to be deployed in the network.

Canvas® USSD over IMS Gateway (USSI GW) is a next-generation USSD over IMS gateway for service providers, MVNO's, and wireless operators to offer USSD-based applications and services seamlessly to both GSM (2G/2G) and LTE (4G) subscribers.

Canvas® next-generation consolidated messaging products fulfill ever increasing expectations and demands of mobile subscribers by offering modular and extensible solutions that enable operators to introduce new advanced messaging services with ease, based on current and future needs.

Canvas® USSI Gateway™ enables subscribers to access USSD services such as balance enquiry, various service configurations, etc., directly from attached LTE/IMS network and provides similar user experience for USSD based services which they are having in 2G/3G networks



Users still want to benefit from speed and interactivity characteristics of USSD-based communication to manage their legacy services as well as new generation LTE services even when they attach to an LTE network. CSFB method, which is used for this purpose, is not an efficient and preferred method, since it causes discomfort to users due to latency and decreased (2G/3G) data throughput levels. Canvas USSI Gateway eliminates all Circuit Switched Fallback (CSFB) problems due to lack of USSD support in LTE networks and provides seamless service continuity.

Canvas® USSI Gateway™ is member of Telenity's canvas USSD Service Center solution family. Together with Canvas® USSI Gateway™, Canvas® USSD Service Center product family provides a complete USSD solution to communication service providers to offer USSD-based applications to all 2G/3G/4G mobile subscriber base. Canvas® USSD Service Center family includes canvas USSD Gateway and canvas USSD Browser solution in addition to USSI Gateway. Canvas USSD Gateway™ provides traditional USSD interconnection with legacy 2G/3G networks and canvas USSD Browser consists of USSD Menu Creation & Execution Environment that allows creating multilevel dynamic/static menu/Submenu(s) to access interactive applications/services. For more information about canvas USSD Gateway and canvas USSD Browser, please refer to canvas USSD Service Center documentation.

Mobile Operators should adapt to new (emerging) business models & technologies and become more efficient to continue to deliver value added services in a profitable manner. Canvas® USSI Gateway™ solution provides fully virtualized, feature rich and future proof platform which enriches and completes USSD service offerings of operators in their convergent and multi-channel environments.



Product Overview

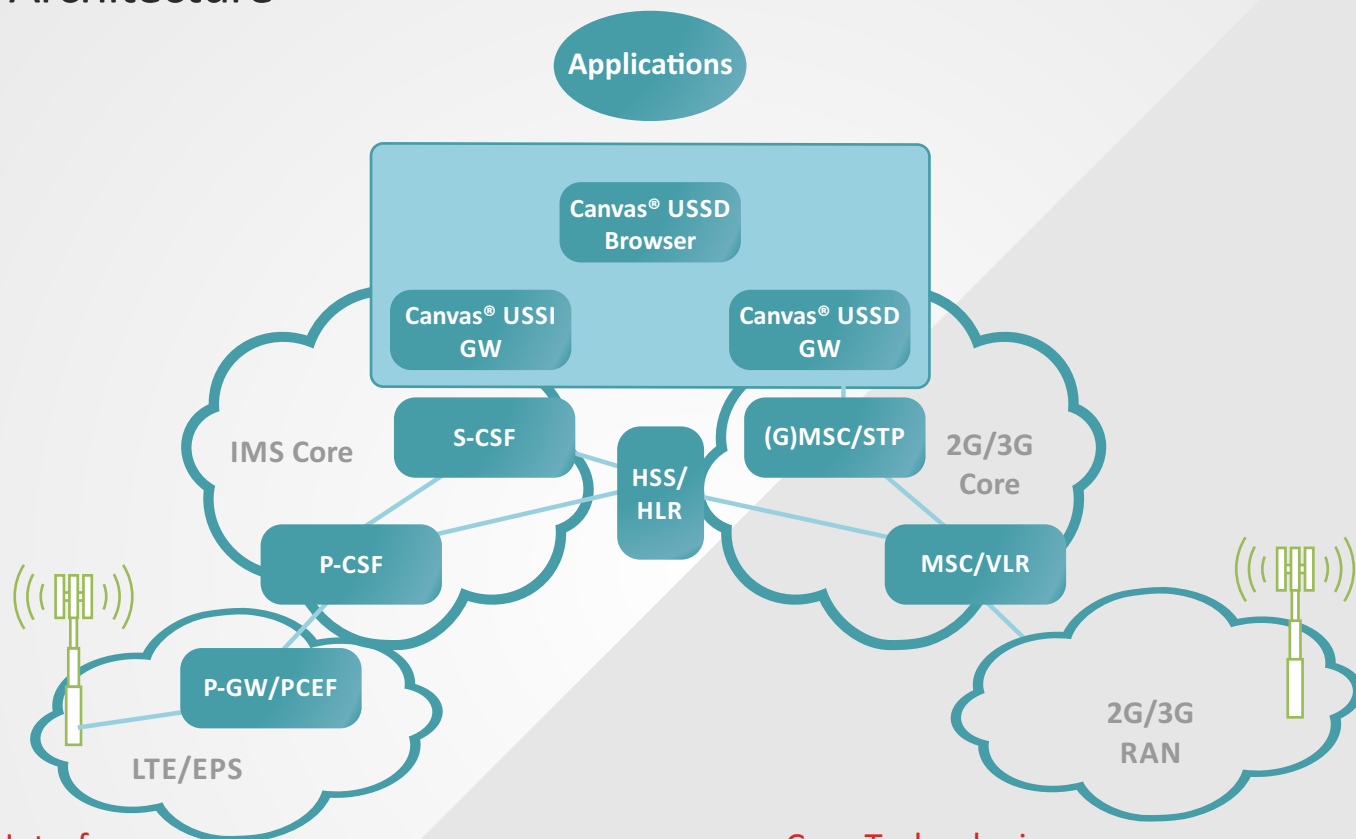
Canvas USSD over IMS Gateway (Canvas® USSI Gateway™) is a 3GPP compliant solution, which provides USSD operations support on LTE/IMS networks. As a member of canvas USSD Service Center product family, Canvas® USSI Gateway™ can be deployed as a standalone application server in LTE/IMS network and can be also combined with other members of family to build a fully consolidated multi-network interworking solution which simplifies operations of operators with a single point of administration and with well-defined unified integration points.

Conforming to the latest industry standards, Canvas® USSI Gateway™ enables operators to offer interactive bidirectional USSD-based services (such as infotainment services, enterprise services, self-care services, billing and charging services) to their subscribers in LTE/IMS networks just like they do for traditional USSD communication, eliminating inefficient and cumbersome mechanisms. Thus, it helps to improve user experience and satisfaction.

Feature Summary

- Compliant with latest industry and 3GPP specifications
 - 3GPP TS 24.390 USSD using IP Multimedia (IM) Core Network (CN) subsystem IMS
 - IETF RFC 3261 Session Initiation Protocol (SIP).
 - IETF RFC 6086 SIP INFO Method and Package Framework
- Supports mobile-initiated USSD operations in MMI mode
- Supports network-initiated USSD operations
- Acts as an Application Server in LTE/IMS domain
- Provides the same GSM/UMTS USSD-based user experience in LTE/IMS
- Fully integrated with USSD Service Center modules for consolidated solution:
 - USSD Gateway (SS7/SIGTRAN MAP)
 - USSD Browser (Menu Creation & Execution Environment)
- Advanced SLA and QoS configuration support
- Screening list management
- Centralized OA&M features, out-of-the-box reports, troubleshooting
- Modular and scalable architecture with built-in redundancy/high-availability
- Fully virtualized and NFV enabled deployment options
- Support for different deployment models (on-premises, cloud-based, hybrid)

Architecture



Interfaces

- LTE/IMS
- GSM/UMTS (with USSD Gateway option)
- SS7/SIGTRAN MAP (with USSD Gateway option)
- SIP
- Diameter
- SMPP, SOAP/XML, REST
- SNMP

Core Technologies

- Java SE/EE, JDBC, JMX
- Web Services, REST, XML

Operating Environment

- Red Hat Enterprise Linux, CentOS, Oracle Solaris
- VMware, KVM, XenServer



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