

telenity

Canvas<sup>®</sup> BCM<sup>™</sup>  
Bandwidth & Content Manager

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# Canvas<sup>®</sup> BCM, Bandwidth & Content Manager

With both existing LTE/LTE Advanced functionalities and the upcoming capabilities of 5G, the Communications Service Provider (CSP) network is envisioned to be a multi-service network supporting a wide range of verticals with a diverse set of performance and service requirements. To make that vision a reality, network operators will have to be able to orchestrate certain capabilities of their whole network including each node through one end to another. From the beginning of LTE technology although whole network became fully IP based, these IP capabilities will not be sufficient enough when total network starts to cover all edges, fog and cloud-based environments. In this case, Network slicing plays the leading role since it capitalizes on the capabilities of software-defined networking (SDN), network functions virtualization (NFV), orchestration, and analytics and it must be dynamic to fully understand the network elements behavior and can take actions accordingly. Canvas<sup>®</sup> BCM<sup>™</sup>

Bandwidth & Content Manager is the answer for all these critical problems and it is one of the world's first dynamic network slicing solution that can communicate and manage both edge and core elements of the CSP network.



Telenity's innovative Canvas<sup>®</sup> BCM<sup>™</sup> product, a platform that is both subscriber and application aware, introduces 4G LTE and 5G networks with dynamic slicing and best Quality of Service management capabilities. The features and functions of Canvas BCM and its ability to on-demand creation of Dynamic Network Slices are also compatible to work with edge and fog computing environments.

Canvas<sup>®</sup> BCM<sup>™</sup> provides application and subscriber profile aware resource/QoS management functionalities. Since Canvas<sup>®</sup> BCM<sup>™</sup> can settle in between backhaul and core network, it provides the orchestration of both sides' resources by communicating standard protocols through each network elements.

In the existing LTE environment, application/subscriber profile awareness in data path is not supported. When a UE initiates an application through internet, the provided QoS parameters will be best effort or based on very static configuration rules. Canvas BCM introduces CSPs' networks with this awareness and can generate one application/subscriber or application/subscriber group specific slices. Therefore, even from now on, Canvas<sup>®</sup> BCM<sup>™</sup>, as an enhanced digital service enriching technology, provides the fundamental readiness to 5G environment.

# Benefits

**Price/Performance combination** enables wireless operators to start with a small system, reducing operational costs, and grow to a larger capacity according to their entire subscriber base.

**Both 4G and 5G Support** is provided in the same system enabling wireless operators to achieve more economical deployments by offering an extremely small footprint that significantly reduces total cost of ownership.

**Edge Computing Support** is also provided with Canvas BCM. Canvas BCM is capable of working at the edge on top of Multi-Access Edge Computing platform and manage the applications bandwidth requirements and content.

**Modular design** that allows pre-packaging approach with flexible feature selection and deployment options.

**Several business/ownership models** are supported including Capex vs Revshare vs Managed service.

**Future proof product for tremendous use cases** that prepares the landscape for complicated and integrated network environments. Canvas BCM has the leading role for managing separately and simultaneously all kinds of use cases (high data consumption, increase of video usage, smart city, IoT, public safety)



# Product Overview

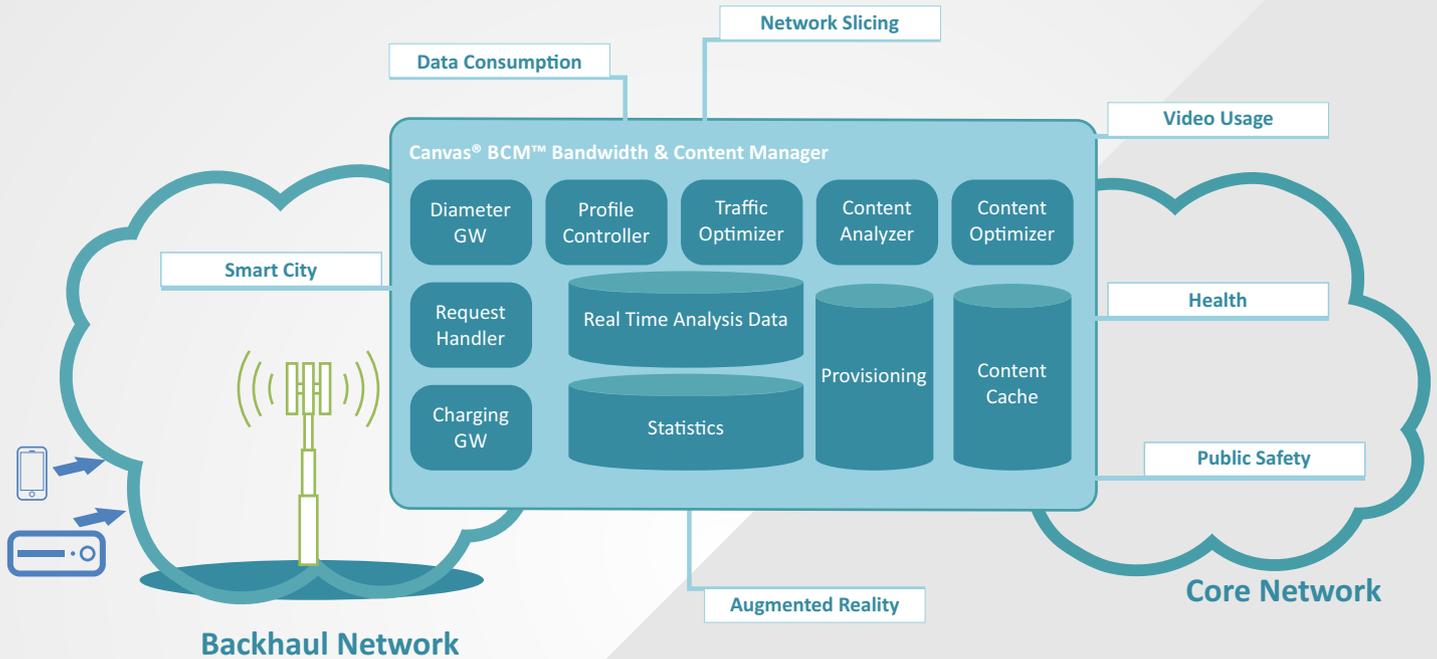
Canvas® BCM™ provides application/subscriber aware Quality of Service management, generates network slicing models and manages the application and/or subscriber based SLAs. It also provides content awareness and caching at the edge according to the ETSI and 3GPP standards.

Canvas® BCM™ can be located according to CSP's needs in their network. It has the capability to communicate with the Policy Control Function nodes to provide dynamic and assured QoS per slice or per application group based. It can also be located at the edge where it works as a bandwidth and content management module based on edge computing standards.

## Feature Summary

- Compliant with industry standards (3GPP, ETSI, GSMA)
- Only standard interfaces that are based on 3GPP 4G and 5G interface definitions
- Compliant with LTE and 5G network QCI definitions
- Support of ETSI MEC Rest API standards for bandwidth and content management
- Capability to work both at the edge and within the core network
- Rich set of APIs to the UE applications to dynamically allocate bearers
- Dynamically stores the existing subscribers and provided services
- Support of content caching and enhanced optimization techniques
- Better utilization of the core and radio network resources
- Support of diameter gateway capabilities through the core network elements
- Support of Prepaid and Postpaid Charging Capabilities according to CSP's network
- 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 and 5G
- Rx, Gx, Mp1
- Diameter
- REST,LDAP,SOAP

## Core Technologies

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

## Operating Environment

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



telenity

Spread Intelligence Across Your Network

info@telenity.com  
www.telenity.com



Corporate Headquarters:  
EMEA Headquarters:  
APAC Headquarters:

755 Main Street, Building 7 Monroe, CT 06468, USA  
AHL Serbest Bolgesi, A Blok No. 472 Yesilkoy 34149 Istanbul, Turkey  
2nd Floor, A-57, Sector-4, 201301, Noida, Uttar Pradesh, India

Phone: +1.203.445.2000  
Phone: +90.212.468.2100  
Phone: +91.120.4311.157