

# Reference Architecture for Communications Service Providers

## Helping CSPs capitalize on IoT and increasing mobile connectedness through event-driven iPaaS

The increasing number and diversity of IoT and mobile devices is driving an exponential increase in the amount of information being shared between applications, devices and people. McKinsey estimates that network performance and capacity will need to increase at least tenfold to cope with the demands of 5G.

That puts huge challenges and opportunities in front of the communication service providers (CSPs) who provide the networks over which that information will flow.

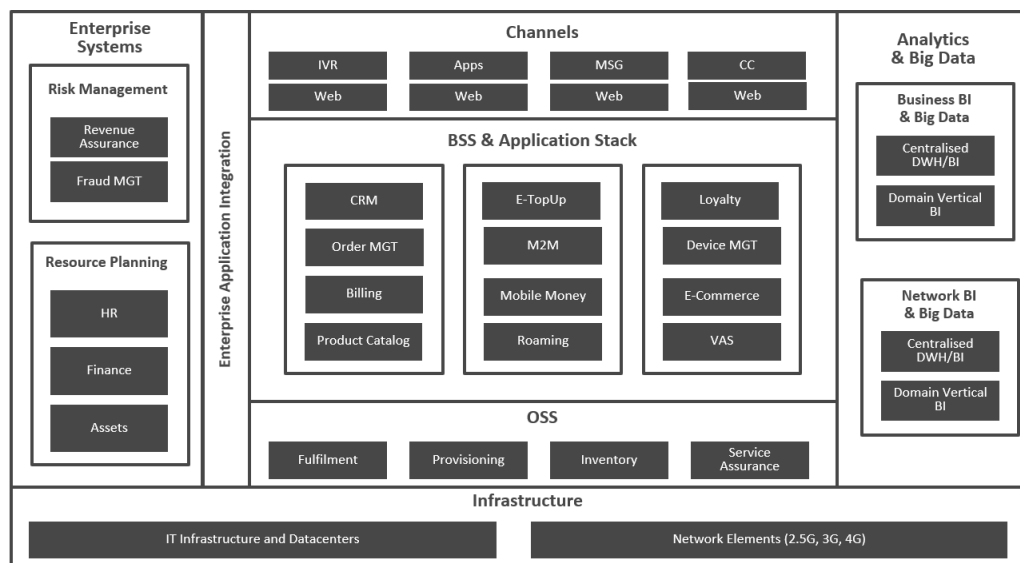
To capitalize on this trend, CSPs need to modernize the infrastructure that connects their BSS and OSS systems with customers and enterprise planning applications.

Dell Boomi and Solace have developed an architecture that can help CSPs capture, store and add value to the massive amount of data in such way that they can:

- Accelerate deployment and provisioning
- Achieve a 360-degree view of every customer
- Reduce cost and complexity

### Problems with Today's Typical Architecture

The infrastructure of most CSPs reflects the combination of systems acquired through M&A, and include technologies of various age and sophistication.



- Some services are only accessible through dedicated channels, and customer data is not shared between them.
- Consumer, commercial, fixed and mobile services depend on incompatible BSS; complicating integration and provisioning.
- The existence of multiple data sources makes it impossible to synchronize, govern and ensure the quality of data.

- Bridging incompatible systems leads to the tight coupling of applications across environments, making it difficult and expensive to adapt to change.
- The use of dedicated big data applications for BSS and OSS systems/processes leads to silos of information, hampering the ability to achieve an up-to-date 360-degree view of your customers.

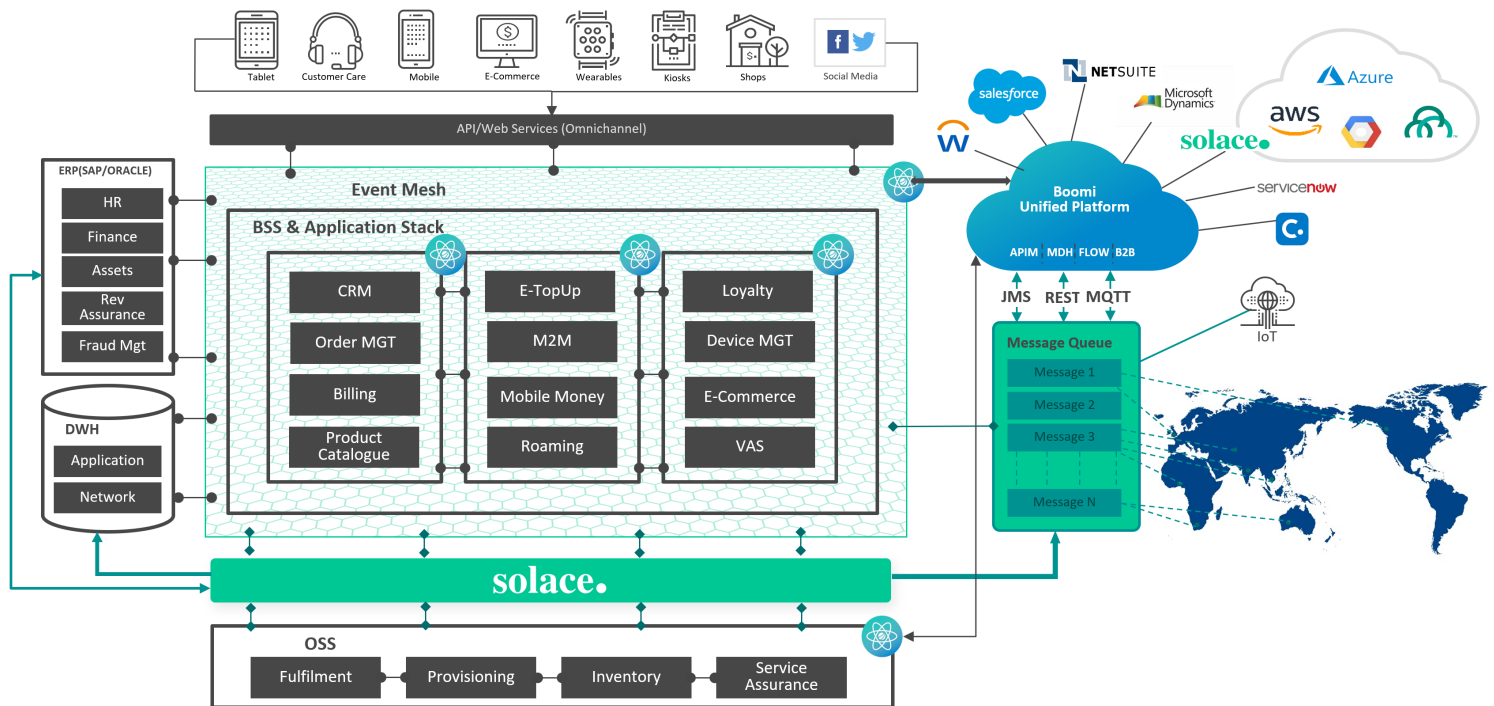
### Key Capabilities

- Guaranteed distribution of events and information across geographies and environments, both cloud-native and on premises
- Data synchronization, quality assurance and governance
- Support for diverse exchange patterns, levels of persistence qualities of services and open protocols such as AMQP, JMS, MQTT, and REST
- Built-in fault tolerance, high availability, disaster recovery and high throughput with no idle connections
- Elastic capacity and burst handling - scales to millions of connections
- Unified platform for a consistent experience across the enterprise
- Supports easy implementation of technologies in areas such as AI/ML, Blockchain, IoT, NFV and SDN

# Event-Driven iPaaS is the Ideal Architecture for CSP Infrastructure

The point-to-point synchronous interactions of most ESBs and iPaaS offerings meet the information distribution needs of some businesses, but don't provide the scalability and flexibility required for BSS, OSS and enterprise systems.

Together Dell Boomi and Solace PubSub+ let CSPs upgrade their infrastructure by leveraging a modern, cloud-native iPaaS that's backed by the fastest, most robust event platform available.



## What Dell Boomi Brings to the Table

Boomi provides pre-built connectors and process orchestrations to help CSPs break down silos between applications and information sources.

- **Master Data Hub synchronizes data across sources to create a 'single source of truth'** and that provides a 360 degree view of every subscriber.
- **API Management enables the creation, publication and management of APIs** (including governance, authentication, policies etc.) so CSPs can offer all products and services via all channels.
- **Low-code workflow and process automation** accelerates the creation and optimization of business processes, leading to better customer engagement and experience
- **Facilitates the integration of on-premises/legacy applications with cloud-based applications**, and between applications and services running in a variety of public and private clouds.

## What Solace Brings to the Table

Solace technology efficiently distributes events and information between diverse applications, connected devices and data stores.

- **Solace PubSub+ event broker enables an event mesh** that dynamically delivers information between systems anywhere in the world across public cloud, private cloud and on-premises environments.
- **Support for open APIs and popular messaging protocols** like AMQP, MQTT, JMS, WebSockets and REST so developers can use the best technology for each interaction.
- **Unparalleled performance, robustness, scalability and security** including burst-management, high availability and disaster recovery.

# solace.

Solace's smart data movement technologies use open APIs and protocols to rapidly and reliably route information between applications, devices and people across clouds. Elite enterprises and high-growth startups around the world use Solace to modernize legacy applications and successfully pursue analytics, hybrid cloud and IoT strategies.

Learn more or contact us at <https://solace.com>.