



ERICSSON

UDC IN A BOX

A complete User Data Management Solution
to meet different business needs

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User Data Consolidation (UDC) in a Box allows Communication Service Providers (CSPs) to launch new services in the market faster and with a lower Total Cost of Ownership (TCO). As compared to traditional monolithic user database deployments, this solution allows the modernization of existing Subscriber Data Management (SDM) systems with significantly reduced footprint and impact to the existing network.

ENABLING CUSTOMER CENTRIC NETWORKS

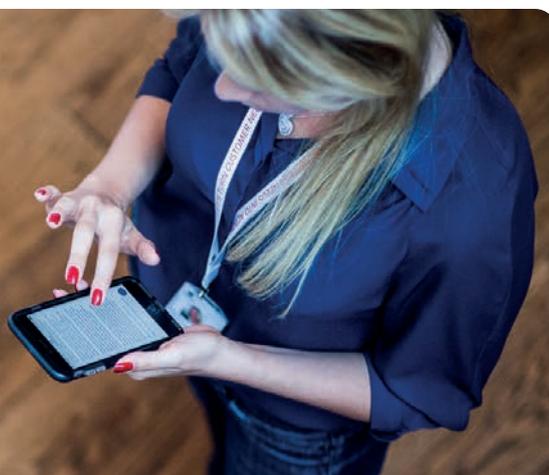
With the evolution of communication services, consumers and enterprises are placing higher demands on CSPs. The number of access technologies and devices that consumers today use to access the network are increasing frequently, pushing the consumers to demand high availability, seamless user experiences, and more personalized services.

While the service providers are continuously scaling up to meet their customers' expectations, it is highly important to launch new services in a timely manner. A very relevant question at this point is: Will the customers wait for months for a particular service to be launched? Or will they just turn to other service providers?

Subscriber Data Management (SDM) solutions are key components of the core networks that facilitate faster time to market for new end-user services. It is estimated that around 50 percent of the networks in the world are still using SDM solutions based on old monolithic architecture technology, which is neither future-proof nor can support the needs of a dynamic consumer base.

Small and mid-sized CSPs are slow to respond to the idea of a network transformation to layered architecture for different reasons, among them: the general perception that it takes too long to benefit from Total Cost of Ownership (TCO) improvements, the requirements on competence build-up on the new architecture and its

Imagine the potential of a multi-access data management solution that can also provide a 360 degree view of user's data assets... all in just one "box"?



components and the concerns in embracing a big technology shift in a very sensitive part of the network that is the user data bases.

To address these concerns Ericsson has now introduced the new UDC in a Box solution. It is not only footprint efficient but also supports multiple applications. Despite its compact size, UDC in a Box can be customized to provide access and mobility management support for 2G, 3G, 4G, Fixed and Wi-Fi. It also copes well with the different services and end-user requirements on data management, making it an optimal solution for consumers, enterprises, verticals and Internet of Things (IoT) business segments. It allows all user data to be consolidated in a common

database, thereby facilitating improved network and operational efficiency.

UDC in a Box can be further enriched with addition of an advanced functionality for embedded analytics and exposure of data, called User.360. It facilitates better visualization and understanding of users' data and customer behaviors. These insights can be further leveraged to improve network and operational efficiency as well as explore new revenue streams (i.e. data monetization).

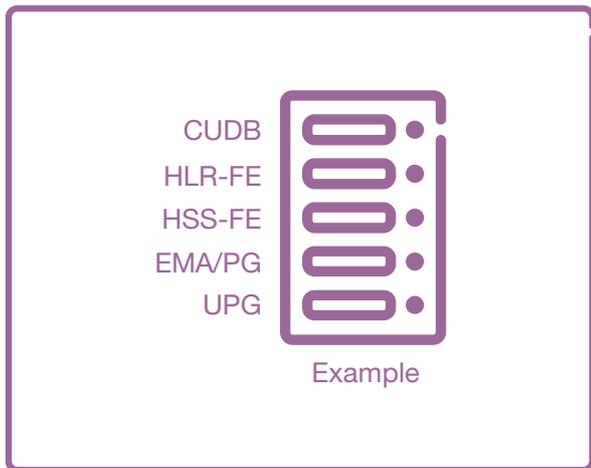
With its advanced features, UDC in a Box is the cornerstone of tomorrow's customer centric networks.



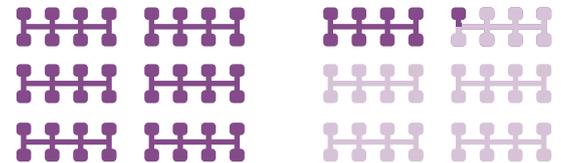
MORE THAN WHAT MEETS THE EYE

Ericsson BSP 8100 is a high capacity platform that, through the decoupling between hardware and software, will support the transition from core networks to virtualization and cloud. Today the BSP 8100 empowers every component of the Ericsson UDC solution making it highly flexible for adding new applications, and scalable to increase capacity when needed.

The base configuration of the UDC in a Box consists of the Centralized User Database (CUDB), the Provisioning Gateway (PG) and, one or more application front ends (for example Home Location Register, Home Subscriber Server, Policy, & Charging Rules Function) depending on the need. In addition, the User Profile Gateway (UPG) for User.360 data analytics and exposure solution can optionally be included in the box to facilitate the monetization of user data asset.



The solution also allows CSPs to add extra capacity or new application front ends in a convenient manner. Similarly, it also allows under-utilized resources to be re-located among different applications via simple software commands.



>80% LESS
IP switch ports needed

The communication between all the applications is achieved via the backplane which reduces cabling as well as bandwidth requirements in the IP backbone. External connectivity from all applications inside the box is achieved via the common node infrastructure which reduces the number of IP switch ports required on site by up to 80 percent.

Infrastructure sharing allows a common Operation & Maintenance (O&M) interface for all applications. Additionally, it also includes a Capturing Unit that manages call tracings among various applications.

Following the 3GPP UDC standardization criteria, the UDC in a Box solution deploys nodes in at least two different sites to achieve a distributed and geo-redundant database.



Single solution
for all applications



UDC cockpit

The solution also boasts of other important robustness characteristics such as replication of data and data consistency checks as well as Ericsson's unique mechanism to protect the database against signaling storms (for more details, [click here](#)).

UDC in a Box comes in a Network Functions Virtualization (NFV)-ready hardware, which means that software

upgrades alone will be enough to evolve the solution, depending on specific needs.

In summary, UDC in a box is a highly cost-effective solution, specially designed for small and medium capacity networks deployments, that helps reduce TCO and improve time-to-market for new services compared to traditional SDM solutions.



PROTECTED DATA



LOW TCO



CLOUD READY



CONCLUSION

The evolution of communication services demands innovative solutions that can facilitate faster launch of new services in an efficient way, maximizing the usage of network capabilities and resources. The UDC in a Box provides flexibility and speed that is needed to launch new services effectively, while significantly reducing the network's TCO on SDM. It also paves the way for the network's evolution to NFV and cloud for the future.

While being able to launch new services faster will give a head-start towards success, it is also very important to secure that the right services are launched services that fulfil customers' specific needs. To attain that, it is crucial to have a clear understanding of customers' behaviors which can be achieved with data analytics.

The Ericsson UDC in a Box solution, empowered with the User.360 module, is a powerful tool that helps Operators to understand customers' needs and launch

relevant services in the market in in a cost-efficient manner. It provides:



Multi-application expandable and Compact solution for subscriber data management



Ability to launch relevant services to end users with short time-to-market



Reduced TCO compared to traditional SDM solutions



360 degrees view of user's data



Paving the way to Virtualization and Cloud



GLOSSARY

3GPP	3rd Generation Partnership Project
CUDB	Centralized User Database
EMA/PG	Ericsson Multi Activation/Provisioning Gateway
HLR-FE	Home Location Register front end
HSS-FE	Home Subscriber Server front end
IMS	IP Multimedia System
IP	Internet Protocol
NFV	Network Functions Virtualization
O&M	Operation & Maintenance
PCRF-FE	Policy & Charging Rules Function front end
SDM	Subscriber Data Management
TCO	Total Cost of Ownership
TTM	Time-to-Market
UDC	User Data Consolidation
UPG	User Profile Gateway



FURTHER READING

- > Handling of signaling storms in mobile networks, brochure
<http://www.ericsson.com/res/docs/2015/handling-of-signaling-storms-in-mobile-networks-august.pdf>
- > Building robust signaling networks
<http://www.ericsson.com/res/docs/whitepapers/wp-building-robust-signaling-networks.pdf>

We are a world leader in the rapidly changing environment of communications technology – providing equipment, software and services to enable transformation through mobility.

Some 40 percent of global mobile traffic runs through networks we have supplied. More than 1 billion subscribers around the world rely every day on networks that we manage. With more than 37,000 granted patents, we have one of the industry's strongest intellectual property rights portfolios.

Our leadership in technology and services has been a driving force behind the expansion and improvement of connectivity worldwide. We believe that through mobility, our society can be transformed for the better. New innovations and forms of expression are finding a greater audience, industries and hierarchies are being revolutionized, and we are seeing a fundamental change in the way we communicate, socialize and make decisions together.

These exciting changes represent the realization of our vision: a Networked Society, where every person and every industry is empowered to reach their full potential.

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