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ERICSSON
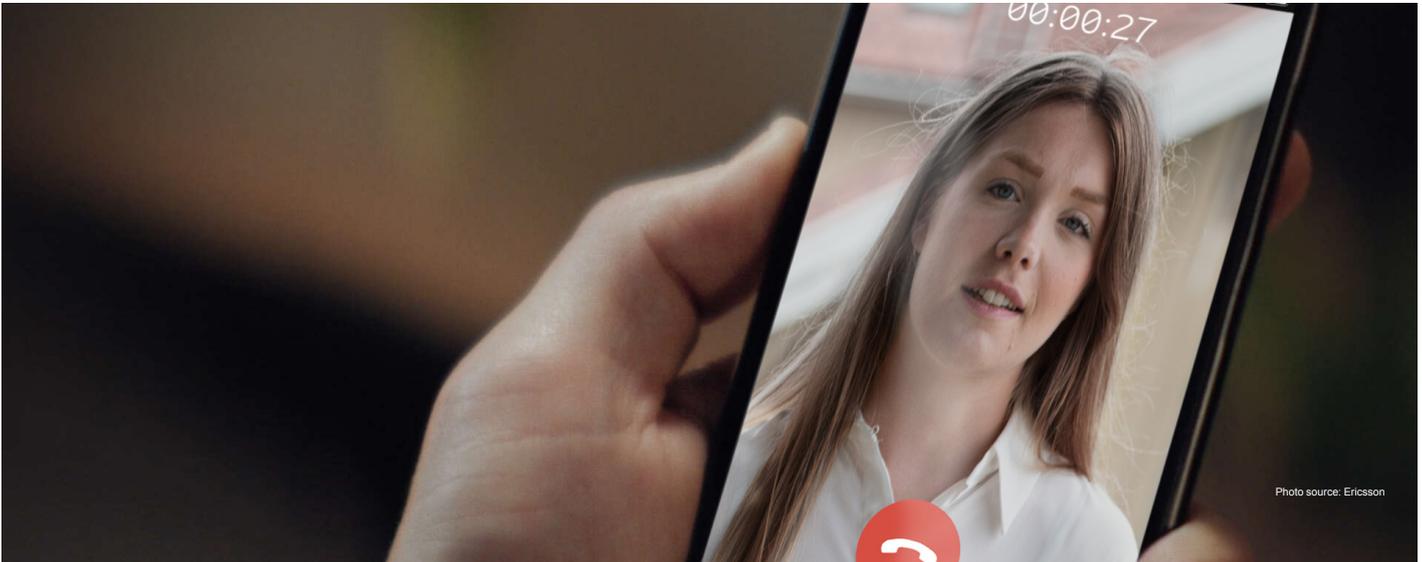
Evolved Communication Services with Ericsson and VMware

Voice over LTE (VoLTE) is becoming the mainstream technology for IP based communication services

Ericsson chose VMware as one of the verified options for its virtualized VoLTE deployments
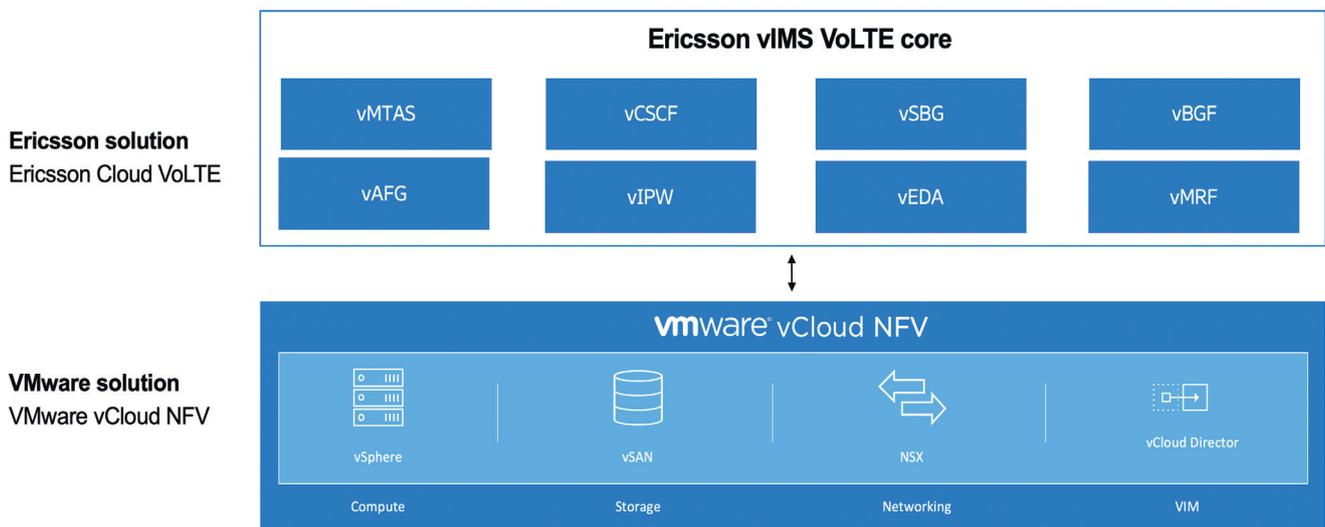

Photo source: Ericsson

Ericsson Cloud VoLTE is an industrialized solution to deliver VoLTE service onto a customer data center cloud. The solution includes vIMS and supporting nodes to add VoLTE service to an existing 4G/LTE and 5G data network and serves as a foundation to evolve and expand service offerings. Ericsson Cloud VoLTE is based on software only virtual network functions (VNFs) that integrate with VMware® vCloud® NFV™, leveraging the two part certification and system verification process established by the two companies to ensure simplified management and operations, and accelerated time to market for CSPs who run software from both companies.

The essential question for CSPs is how to take advantage of the mobile broadband opportunities enabled by 4G/LTE and 5G while maintaining and growing their current communication revenues with more attractive communication packages demanded by end-users. With the already deployed radio access of 4G/LTE

and the advent of 5G, CSPs are introducing a broadband-only communication technology, enabling a high-definition voice and video communication experience across a multitude of endpoints and devices.

New devices supporting VoLTE capabilities are launched globally, and users expect more advanced high-quality services to stay with their operator. VoLTE is a starting point for the evolution of communication services, and the Ericsson Cloud VoLTE solution encompasses all communication core network components necessary to provide VoLTE communication services such as HD Voice, HD+ Voice, IP Messaging, and IP Video Communication.

To satisfy the scale and service agility required to address growing consumer and enterprise market opportunities, it is paramount that a Cloud VoLTE solution is designed and optimized for automated cloud deployment and maintenance

Ericsson vIMS VoLTE core

Ericsson solution
Ericsson Cloud VoLTE

vMTAS	vCSCF	vSBG	vBGF
vAFG	vIPW	vEDA	vMRF

vmware vCloud NFV

VMware solution
VMware vCloud NFV

| vSphere	vSAN	NSX	vCloud Director
Compute	Storage	Networking	VIM

VMware vCloud NFV: A production proven NFV platform

VMware vCloud NFV is a fully integrated, modular, multi tenant network functions virtualization (NFV) platform. It provides compute, storage, networking, management, and operational capabilities to help simplify, scale, and secure production NFV services. The transformative platform allows CSPs to accelerate time to market, increase revenue, streamline operations, reduce network infrastructure costs, and deploy elastic business models for telecommunication workloads. Its flexible platform architecture allows CSPs to deploy applications and services today for 4G/LTE networks, deploy services at the edge, and seamlessly migrate to 5G networks.

Testing to ensure carrier grade reliability

Ericsson VNFs on VMware are tested, verified, and performance tuned via a joint, two part certification and system verification process that ensures the companies are bringing substantial value to CSPs.

VMware and Ericsson have jointly invested in ensuring that their combined solutions scale to meet the requirements and demands of telco clouds at any scale.

Certification
Fundamental

Performance

Security

Automation
(VNF workflows)

Additional test blocks
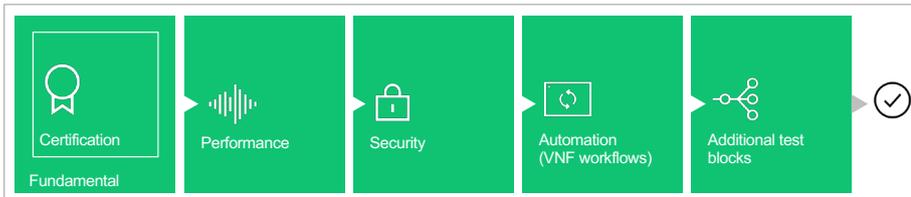
Ericsson VNFs verified on VMware

- vMTAS (virtualized Multimedia Telephony Application Server)
- vCSCF (virtualized Call Session Control Function)
- vSBG (virtualized Session Border Gateway)
- vBGF (virtualized Border Gateway Function)
- vAFG (virtualized Authentication Federation Gateway)
- vIPW (virtualized IPWorks)
- vEDA (virtualized Ericsson Dynamic Activation)
- vMRF (virtualized Media Resource Function)

As of November 2019, the total sum of these eight VNFs added up to 236 production deployments on VMware vCloud NFV in operation in CSP networks.

Photo source: Ericsson

Photo source: Ericsson

Voice and Communication Services Outlook

CSPs continue to evolve their voice services and build IP based networks founded upon VoLTE. These have now been launched in more than 170 networks in over 85 countries[1]. VoLTE is being deployed using cloud/NFV technologies to support more cost efficient network operations, enablenabling easier capacity scaling and faster deplodeployment of new services.

The number of VoLTE subscriptions is projected to reach 5.9 billion by the end of 2024, accounting for more than 85% of combined 4G/LTE and 5G subscriptions.

VoLTE technology will be the foundation for enabling 5G voice calls, SMS over IP, and new types of communication services on various 5G devices. This will be deployed in several network evolution steps in the 4G/LTE and 5G networks in different markets, using LTE NR dual connectivity, Evolved Packet System fallback, and voice over NR.

What's next?

Contact your VMware and Ericsson sales representatives to see how these companies can help accelerate your telco cloud journey

1 GSMA (April 2019)

VodafoneZiggo case study

Wanting Dutch customers to have the best possible voice services, VodafoneZiggo selected Ericsson and VMware to successfully install the country's inaugural cloud-based, end-to-end VoLTE and Wi-Fi calling solutions. Vodafone Ziggo now has the world's best voice-quality score.

VodafoneZiggo achieved

- The best-ever voice score
- A top-5 data+voice score (historically)
- A top-4 data+voice score (in the last 24 months)
- The 16th-place data score (historically)

VodafoneZiggo case study