

Fortress® Virtual Core Network (vCN) Server

Connectivity with Certainty



Dell R430 Server



Dell EMC PowerEdge XR2 Server

All the functionality of a COTS server in a complete, highly scalable Evolved Packet Core (EPC) solution

Deployable on a variety of COTS computing platforms

Low SWaP reduces total cost of ownership

Customizable for private, public safety and tactical LTE deployable networks

Security zone and firewall protects against external attacks

Overview

The Fortress Virtual Core Network (vCN) Server has been specifically designed and optimized for distributed LTE network deployments. Available on the Dell R430 server or Dell XR2 ruggedized server, the vCN's highly flexible architecture can be tailored to meet operational, deployment scenario and system requirements. The vCN contains a 3GPP Evolved Packet Core (EPC) and other essential network support functions for a complete core network solution. The vCN can also host a number of optional functions, which can be included as required. The vCN is also available on the Dell Extreme 14 rugged laptop for transportable systems where local management capability is required.

What Sets Us Apart

- **Virtualization** – Facilitates deployment on a wide range of COTS or application specific platforms optimizing Size, Weight and Power (SWaP) and reducing total cost of ownership
- **3GPP Compliant** – Fully interoperable with the Fortress LTE portfolio, enabling end-to-end integration into state-of-the-art communication networks
- **High Performance** – The flexibility of up to 8,000 UEs and 1 Gbits/s user plane, full duplex delivers a customizable solution for private, public safety and tactical deployable systems
- **Scalability** – Facilitates the creation of distributed core network architectures incorporating multiple vCNs to support multiple deployables for highly resilient fixed networks
- **Secure** – Security zone and firewall protects against sophisticated external attacks

Enhanced Functionality Features

- **3GPP Evolved Packet Core (EPC)** - Mobility Management Entity (MME), Serving GateWay (SGW), Packet data network GateWay (PGW), Home Subscriber Server (HSS) and Policy Charging Rules Function (PCRF) logical nodes
- **Management System** - Contains an Element Management Server (EMS) that facilitates fault, configuration, accounting, performance, and security management capabilities for the RAN and EPC
- **Virtual Switch Fabric** – High performance switch fabric, firewall and gateway that enables secure external network connectivity
- **Domain Controller** - Contains LDAP, DNS, NTP and licensing servers
- **Equipment Identity Register (EIR)** - Allows device access control

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High Availability Features

- ECC Memory
- Single Device Data Correction (SDDC)
- Spare Rank
- Hot-plug hard drives
- iDRAC with Lifecycle Controller
- Support for HA clustering
- Virtualization – ready
- Internal Dual SD Module (Failsafe Hypervisor)
- TPM 1.2



Dell EMC PowerEdge XR2 Server

High Availability Features

- High-efficiency, hot-plug SAS or SATA SDD hard drives
- Hot-plug redundant PSU, HDD, fans
- Up to 16 DDR4 DIMM slots for 512 GB RAM
- Continuous operation in temperatures up to 45°
- MIL-STD-810G (temperature, shock vibration, altitude), MIL-STD-461G (Military) compliant
- Remote manageability with the latest generation iDRAC9
- Front-facing LCD, no need for keyboard/mouse setup
- Up to eight accessible 2.5" hard drives for up to 30TB storage
- Extensive power management



Optional Features

- Diameter Routing Agent (DRA) – Facilitates inter-PLMN roaming
- Security Gateway – Enables IPSec protection of the link between the vCN and the eNodeB, as well as inter-vCN links
- Application Servers – Enable the vCN to operate independently as a self-contained network

vCN Server Specifications

	Dell R430 Server Platform	Dell EMC PowerEdge XR2 Server
Processor	Dual Intel Xeon Processors	Dual Intel Xeon Processors
RAM	64 GB	64 GB
HDD	2 x 512 GB SSD (raid 1)	2 x 960 GB SSD (raid 1)
Ethernet	2 x 10 GBE, 8 x GBE	10 x1 GBE
Weight	19.9 kg (43.87 lbs)	13 kg (28 lbs)
Maximum EPC User Plane traffic	600 Mbps full duplex	600 Mbps full duplex
Maximum number of simultaneously connected UE	4,000	4,000
Maximum number of HSS Subscriptions	8,000 with on-board HSS	8,000 with on-board HSS

GENERAL DYNAMICS

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