RED HAT
OPEN SOURCE DAY
Europe, Middle East & Africa

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I vantaggi dell'Open Source coi sistemi modulari Dell EMC

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#redhatosd

DELL EMC

FIRST OF ALL…

Is Dell EMC an Open Source Company?

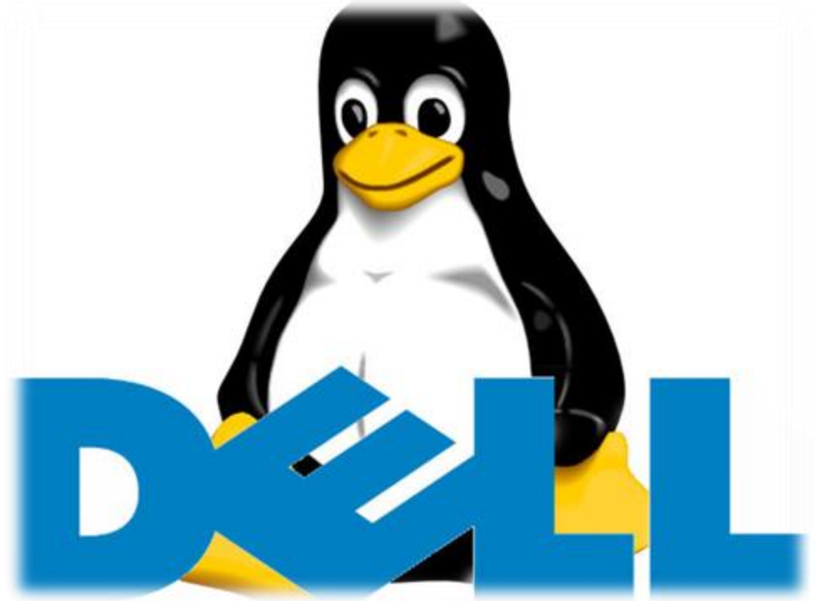
Dell Linux Engineering

https://linux.dell.com/

Dell partners with Red Hat, SuSE and Canonical, and so most of our efforts are focused on these distributions. Though we can't support every Linux flavor or hardware configuration out there, we provide you with an unofficial resource to help you use your Dell hardware however you choose.

Many on-line resources:

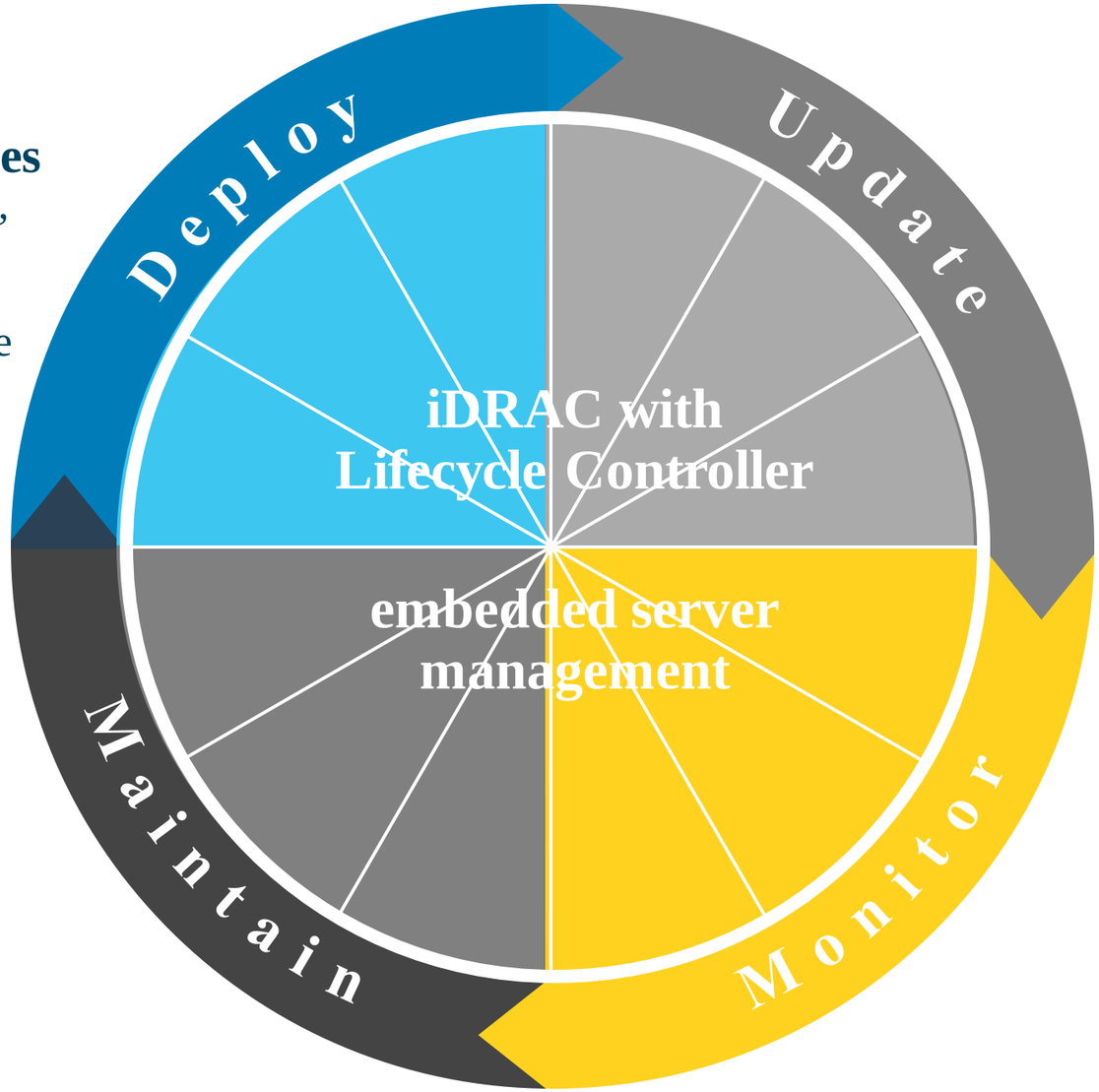
- Linux on Dell TechCenter
- Dell and Red Hat -Dell and SuSE -Dell and Ubuntu
- Git repositories, Docker containers
- Ansible playbooks,
- OpenManage yum & apt repos
- Dell System Update
- Dell OpenManage plug-in for Nagios Core
- Sputnik project..



Dell EMC OpenManage Consoles
OpenManage Essentials, OpenManage Mobile, Chassis Management Controller, OpenManage Power Center

Converged Infrastructure Management
Dell Active System Manager

Tools and Utilities
Repository Manager, OpenManage Server Administrator



Integrations for 3rd Party Consoles
Microsoft, BMC Software, VMware

Dell EMC Services
Managed Services, ProSupport Plus Services with SupportAssist

Connections for 3rd Party Consoles
CA, HP, IBM, Nagios, Oracle Enterprise Manager

http://opensource.dell.com/releases/

Dell Networking OS10 software

- ✓ **Uses an <u>unmodified</u> Linux kernel and distribution**

  Enables OS standardization across data center infrastructure

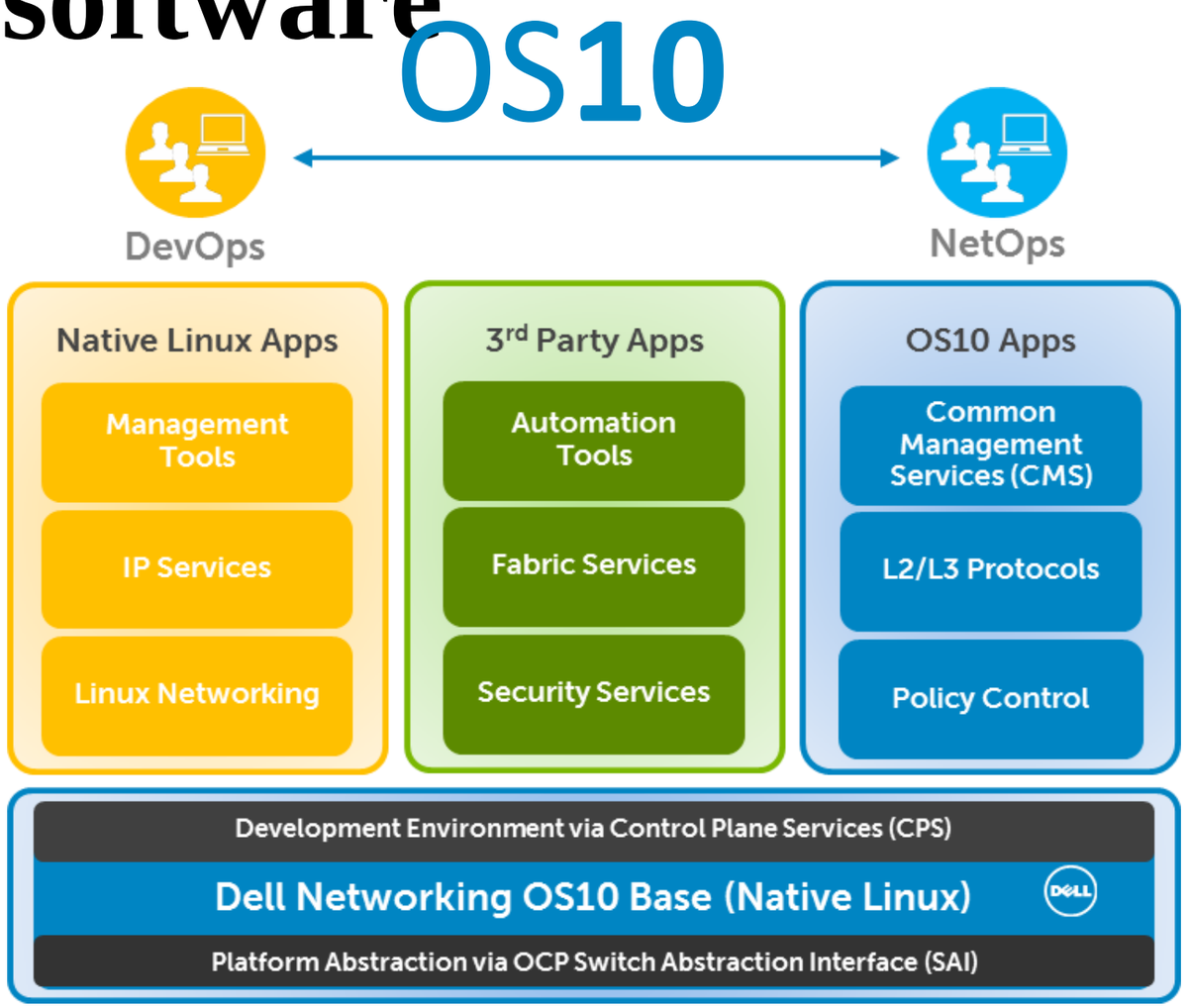
- ✓ **Completely disaggregated software architecture**

  Base system software decoupled from L2/L3 protocol stack and services

  Unrestricted programmability and portability via CMS, CPS and SAI

- ✓ **Mainline software for Dell Networking portfolio**

  Not developed for a 'bolt-on' product set, or product sub-set



Modern software for modern operations

Dell EMC Modular Solutions

Options to solve needs of any Environment

Similar building block of compute to provide a comparable solution for branch offices to datacenter to co-location hosting. Commonality helps reduce complexity of IT infrastructure, lowers OPEX and support costs while increasing efficiency

Optimized to help solve physical density, cooling and power needs

Options for any Workload

Solution choices with different ratios of compute, storage types, and I/O deliver optimized application performance for traditional and emerging workloads

Flexibility to easily reassign or add resources accordingly when application demand increases or additional workloads are needed

Dell EMC PowerEdge C series
Hyper scale ultra-dense, efficient solutions for HPC and the cloud.

Dell EMC PowerEdge FX2
Redefining data center agility with modular infrastructure

Dell EMC PowerEdge m1000e
Cutting-edge app performance & efficiency

Dell EMC PowerEdge VRTX with Intel® Xeon® processor
Data center performance at your desk side

Why Modular-Servers Solutions?

Workload optimization

Help lower overall costs and improve workload performance with the unprecedented level of IT infrastructure density the FX modular architecture offers. Scale your data center with "bite-sized" modular blocks of computing resources that allow you to closely match your workload's exacting specifications.

Data center efficiency

Achieve phenomenal data center flexibility for important workloads, including dense virtualization or scale-out Hadoop environments for Big Data analysis. A full portfolio of FX components and performance-enhancing technologies allows you to fine-tune your data center to the peak of efficiency.

Simplified management

Simplify building and managing data centers by combining Dell EMC OpenManage enterprise-level systems management and hypervisor integration with a modular infrastructure. Deploy and provision your servers faster and automate daily operations with agent-free lifecycle management through the integrated Dell EMC Remote Access Controller (iDRAC) with Lifecycle Controller and the Dell EMC Chassis Management Controller (CMC).

http://www.dell.com/en-us/work/learn/fx-server-solutions

Dell Red Hat OpenStack RA

openstack
POWERED

#1

1st to deliver
Instance HA, host live migration, containers

Greater flexibility
flexible RA with validated options and extensions

Largest NFV
deployment powered by Dell EMC, Red Hat and Big Switch

1st
to Co-engineer OpenStack Cloud solution

Only
OpenStack config supporting multiple storage backends via cinder

1st
SPEC Cloud IaaS benchmark

1st
to integrate Ceph object storage and SDS architectures

Dell Red Hat OpenStack Cloud Solution

Solution benefits

- Create dynamic business results with agile, open, and flexible IT services
- Unlock efficiencies with cutting edge cloud services and automation
- Assert control with open source technologies
- Capture innovation in the OpenStack community

Differentiation

- Automated deployment with OpenStack OOO, Heat, Ironic
- Ceph integration, Instance HA, OpenStack services HA, host maintenance mode, in place version upgrade
- Docker containers via Red Hat OpenShift
- Scale compute and storage independently.
- Scale on Demand payment options from Dell Financial Services

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DELL EMC

Red Hat® OpenStack® Platform
Red Hat Ceph 1.3 Storage

Compute/Controller nodes:
R430/630/730/FC630

Storage nodes:
R730xd / FC630+FD332

Dell EMC Networking
S3048/S4048-ON switches

- Core architecture: 10 nodes, 10Gb networking, 1 rack
- Mix-match sizing: scale back to 0.5 rack, scale out to 3 racks
- Supports multiple storage back ends simultaneously, Dell EMC Storage SC/PS options)
- Validated extensions for PaaS, SDN, Cloud and app management

openstack
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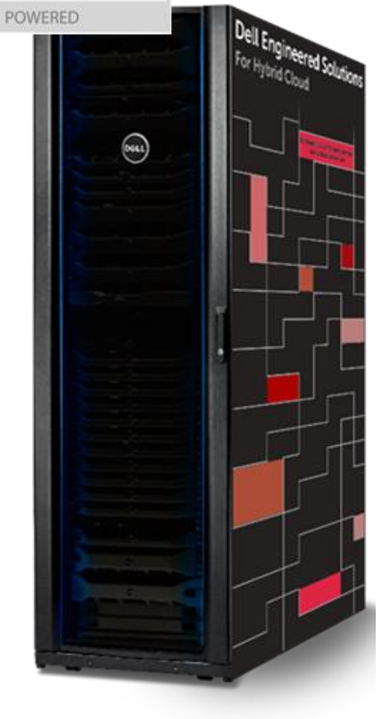
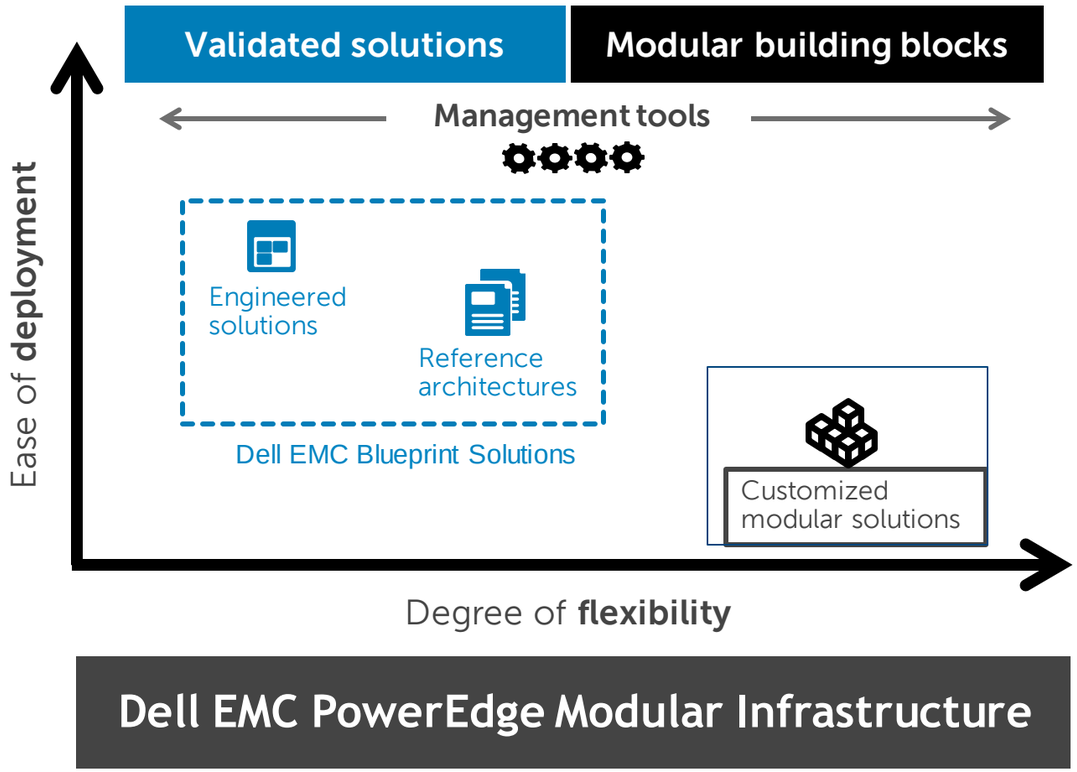
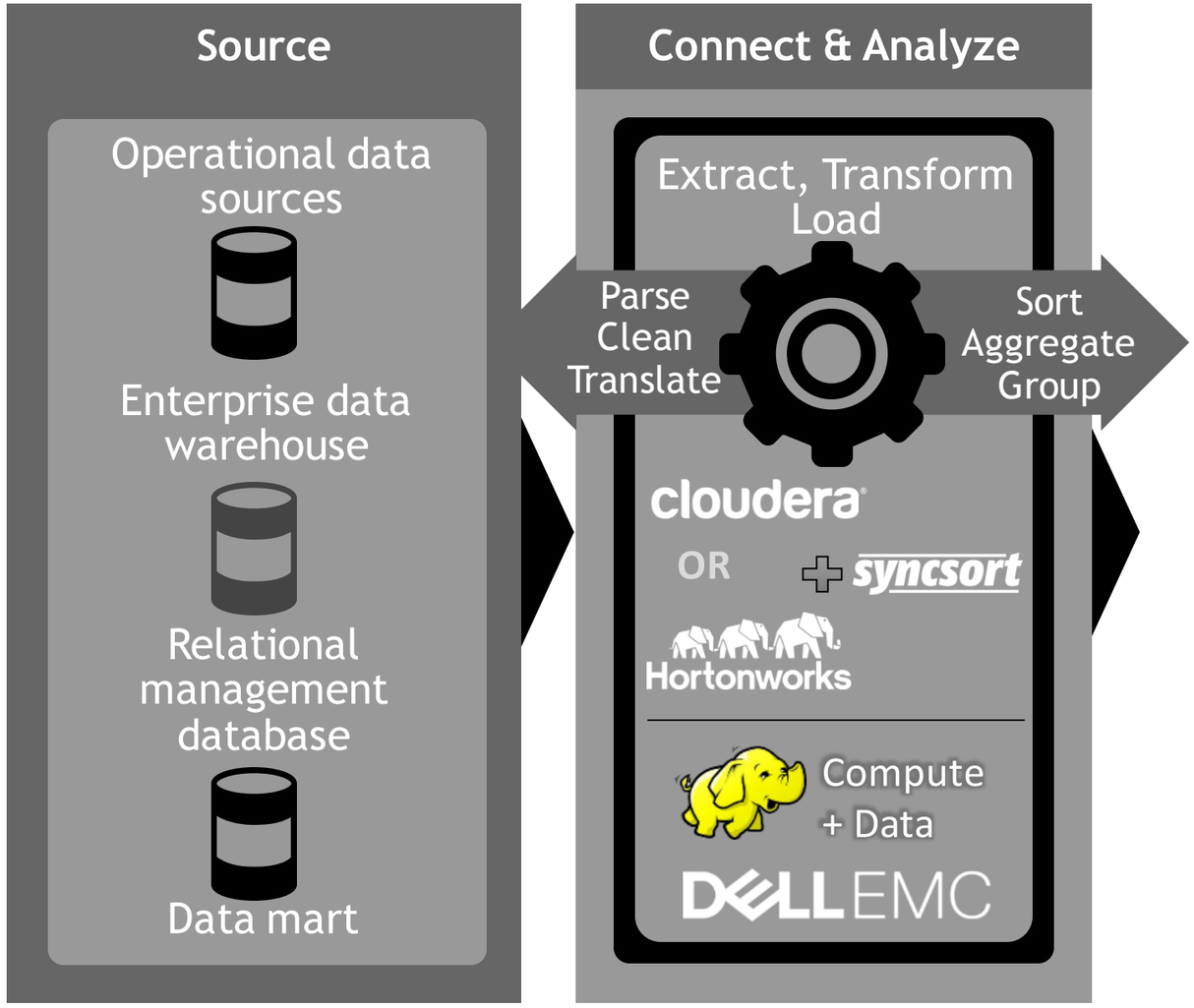


Dell EMC Big Data Solutions



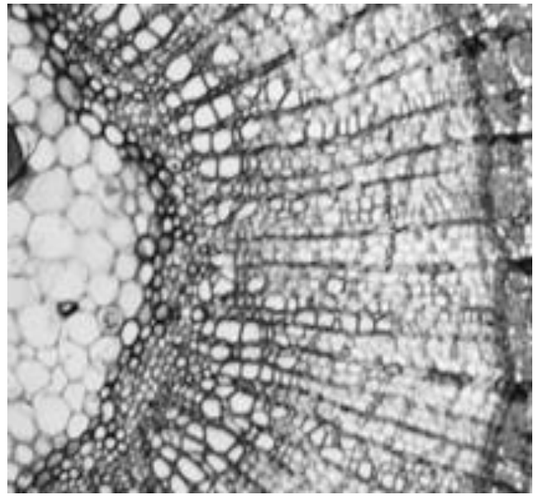


Realized value with Dell HPC Systems

20-30% gain
in NCSA iForge system performance over previous generation
— National Center for Supercomputing Applications (NCSA)

95%
less rack space
Designing the planes of the future with GPU-accelerated HPC system
— Imperial College London

40x faster
data transfer rates speed up healthcare/life sciences research
— Tulane University



70%
reduction
in storage costs by combining HPC and big data storage in one cluster
— Arizona State University

For more stories, visit the customer story site: http://www.dell.com/learn/us/en/uscorp1/customer-stories

Dell Solution Centers

http://dell.com/solutioncenters

Architect & Prove

- **Briefings**: 30-90 minutes, gain insights and understanding
- **Design Workshops**: 1-4 hours, address specific requirement, identify base architecture
- **Proofs-of-Concept**: 5 to 10 days, hands-on "prove-it"

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Grazie

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