

Dell DCS 'G5' & Intel® Rack Scale Architecture: Your Foundation for the Software-Defined Data Center

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History of Hyperscale Leadership

Industry's 1st hyperscale-focused solutions provider

Dell establishes Data Center Solutions (DCS) to meet the needs of the world's largest web & social media providers

DCS does first Dell MDC design

Dell DCS initiates Dell's development of Modular Data Centers

Key OpenStack supporter

Dell is a founding member of and leader in the OpenStack community

DCS Expands Offerings

Dell's Data Center Solutions group expands product offerings to meet the unique needs of the broader scale-out enterprise

2007

2008

2009

2010

2011

2012

2013

2014

Creation of density-optimized space

Dell DCS creates first 4-node-in-2u-chassis that is now prevalent in the industry.

Dell launches PE-C from DCS

DCS mainstreams 3 of its best-selling products under the PowerEdge C brand (C1100, C2100, C6100)

Open Compute Project

Dell DCS helps get OCP off the ground with 'Wildcat' and 'Spitfire' server solutions

One million cloud servers shipped

Dell DCS has shipped more than one million hyperscale servers since its founding, cementing its position as the density-optimized server leader



What does the Future Hold?
What is driving the Industry?

Contextualizing the megatrends

Traditional IT

- Virtualization
- Converged Infrastructure
- Private Cloud



Make my legacy more efficient; more responsive to my users

Cloud



New IT

Hyperscale my infrastructure to meet demand



- Radically scale-out
- Anti-RAS Hardware
- DevOps

IoT / Mobility



Help me deal with all these devices and BYOD

Capitalize on the always-on, always connected consumer



- Social Platforms
- New Revenue Models
- Content

Big Data



Help me better manage my business

Mine my user/subscriber base for value



- Unstructured Analytics/Hadoop
- Graphsearch
- Ad Rev Shift

Software-Defined



Make my infrastructure more **flexible** and cost-efficient

Make my infrastructure more **scalable** and cost-efficient



- Commodity networking
- New SW architectures

Business requirements drive IT innovation



Cloudy Forecast

Big Data

DRAM density, Flash cost, CPU cores ... have enabled the economics to make the data minable (profitable) for business insights



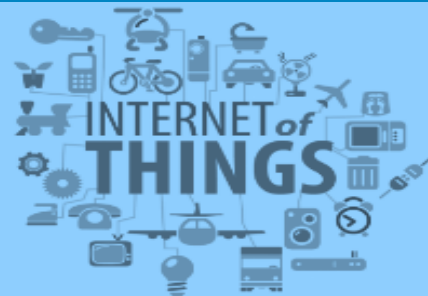
Software Defined: SDN, SDS, NFV

Enables composable IT from disaggregated resources, encourages Rack Scale Architecture



Internet of Things

Hot new era and technology enabled by shrinking transistors to enable low cost highly connected devices...



Public/Private/Hybrid Cloud

Economic driven ... enabled by cost of computing
Creating an on-demand bridge to more (Storage, Compute)

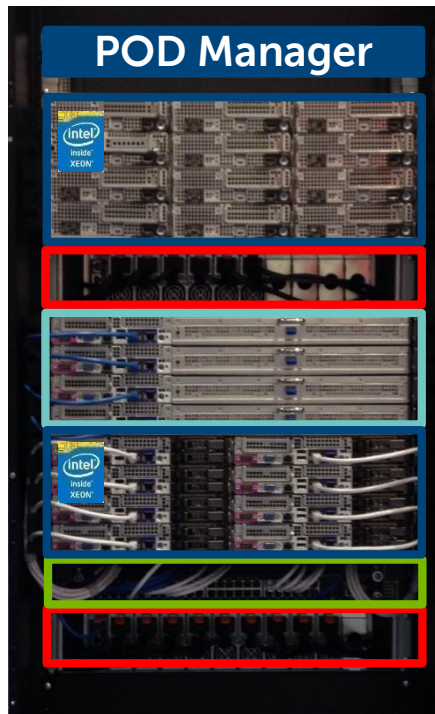
Intel Rack Scale Architecture and Dell DCS 'G5' - Building Blocks for the Software Defined Datacenter

Compute
Building Block

Storage
Building Block

RSA-Ready Switch
w/Network PSME
Agent

POD Manager



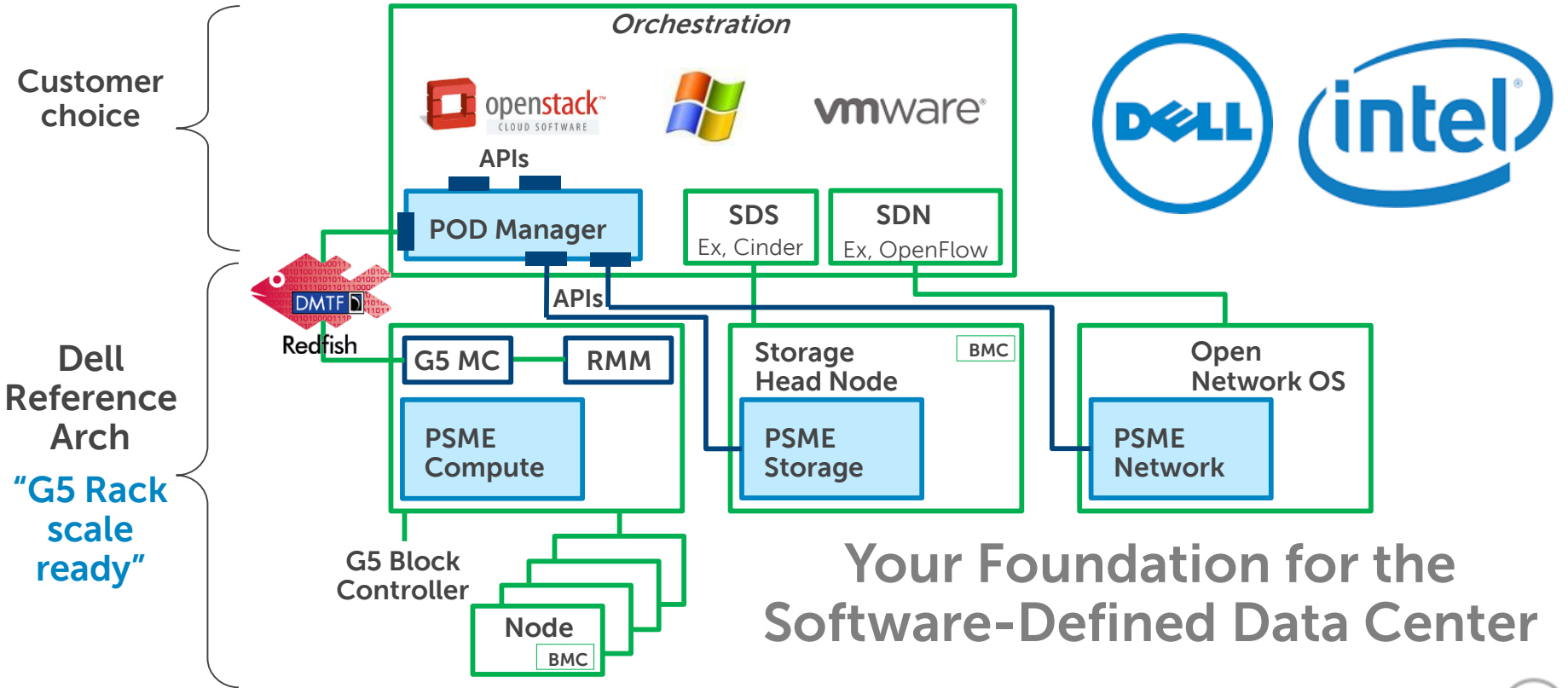
Disaggregated
Shared Cooling

Disaggregated
Shared Power

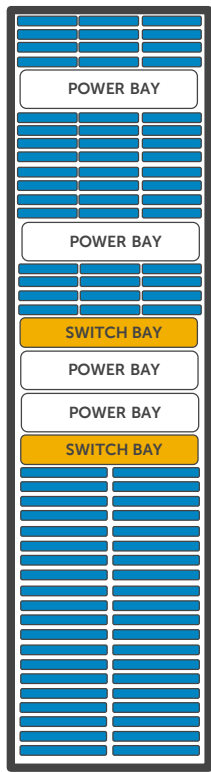
Rack-level
Management
w/PSME Agent
and RMM



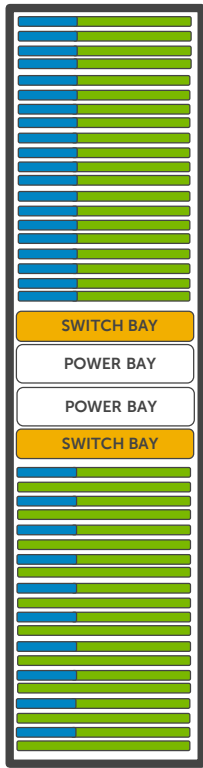
DCS 'G5' and Intel Rack Scale Reference Architecture



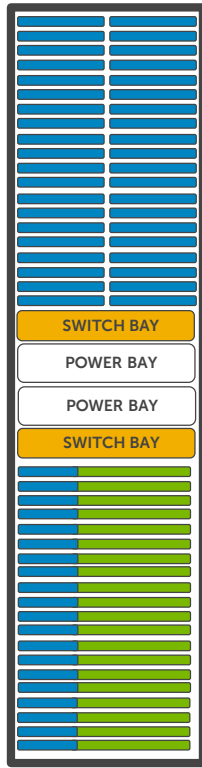
Tailoring to workloads with Dell DCS 'G5'



COMPUTE



Storage



HYBRID

Full rack-scale solution designed to **open hyperscale principles**

Third-, half- and full-width sleds for **maximum IT flexibility**

Compute, **storage**, **networking** and power infrastructure **fully cold-aisle serviceable**

Comprehensive management capabilities including Redfish

Rack scale ready beginning 2016

Dell 'G5' Rack Scale Ready Solution

foundation for the software defined datacenter

Example PoC Use Cases:

1. Telecommunications

- Cloud Compute / NFV Infrastructure – 1/3rd and Half-width compute; **OpenStack Nova, vEPC, vIMS**
- Big Data – Full-width storage; **OpenStack Nova, Swift, CEPH, Hadoop, CDN**

2. Web / Cloud Service Provider

- eCommerce – 1/3rd width compute; **OpenStack Nova, Search, Web front-end**
- Big Data / Object Storage - Full-width storage w/JBOD; **OpenStack Swift, Hadoop**

3. Others? Come talk to us



How to learn more

- **Visit us in booth 372**
(in the Data Center & Software Defined Infrastructure Community)
- **Get hands on with Dell's 'G5' rack scale hardware solution and see our Intel® Rack Scale Architecture demo**
- **Attend INFS006 – Exploring Redfish – Emerging Manageability Standards**
- **Or contact your Dell account rep to discuss Proof of Concept opportunities**

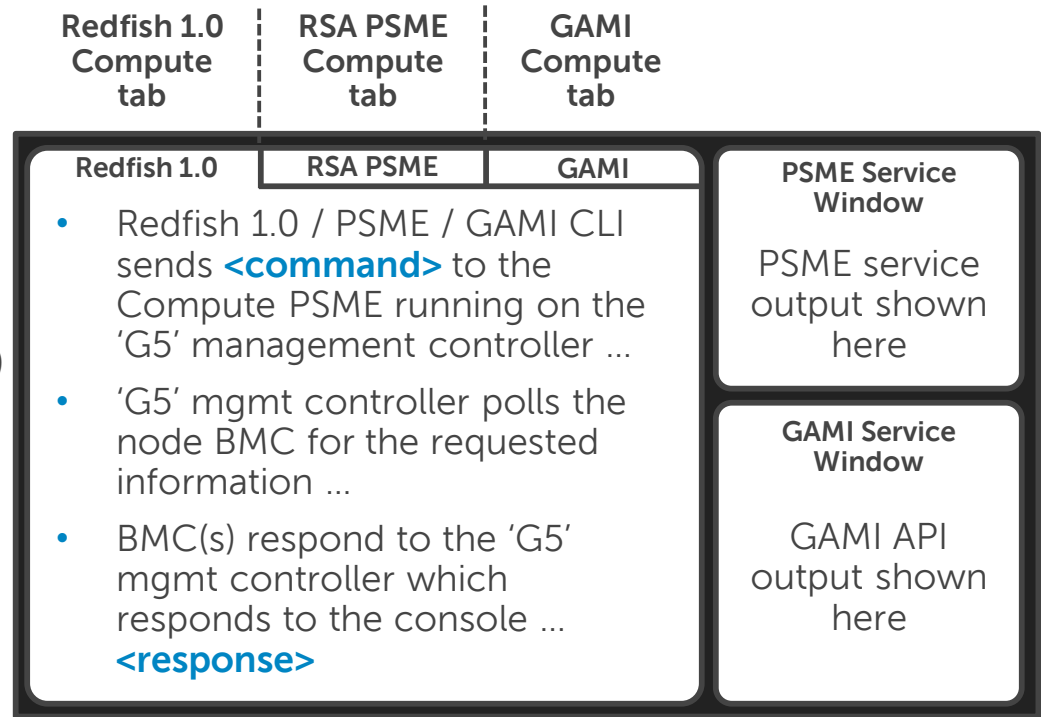
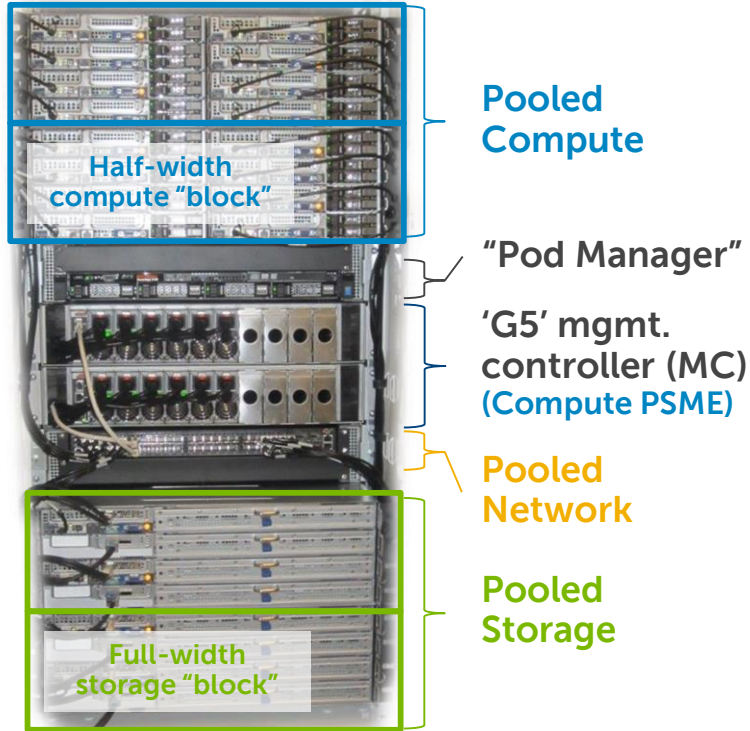




Thank You



'G5' and Intel® Rack Scale Architecture Demo



Demo Monitor