Dell PowerEdge R630 Configuration for MS Private Cloud Fast Track

Dell configuration for simple, scalable Microsoft Private Cloud deployments

IT organizations are seeking ways to transform their delivery model so they can react faster to customer demands, relieve IT budgets, and align better with critical business initiatives. IT teams today have to balance trade-offs when it comes to driving efficiency, performance or resiliency, lowering the cost of running critical workloads, accelerating infrastructure deployments and simplifying management. Cloud can be the enabling technology approach that solves for these, but many customers don’t know where to start.

Dell reference architectures for MS private cloud follow the MS Fast Track framework to combine servers, storage, networking and management into a configuration that provides a guide to building your MS private & hybrid cloud. Integration with MS Hyper-V and System Center provides full cloud capability that helps IT rapidly respond to dynamic business demands, maximize efficiency and strengthen IT service quality.

Getting the most from your Dell Microsoft Private Cloud - Dell’s PowerEdge R630 configuration for MS Private Cloud is designed to provide simplicity, flexibility and value on proven infrastructure and trusted software platform. Whether you are starting new or expanding a virtual environment, designing an IaaS platform to host applications, or building core infrastructure for a department or datacenter, you can leverage this configuration & customize it to your specifications. Leveraging Dell’s vast experience, industry best practices, and top-of-the-line components, we enable your organization to maximize the value of your infrastructure investment, and transform the way you provide IT services both today and in the future.

Dell Services - Dell Services accelerates your private or hybrid cloud deployment and keeps you moving forward. Dell’s cloud consulting services can assist in visualizing your cloud strategy, as well as getting involved in the foundation for planning, designing and implementing an efficient private or hybrid cloud solution. From white-boarding sessions to proof of concept to implementation, Dell can help you achieve your virtualization and cloud objectives.
As many customers look to modernize applications or integrate public cloud-based apps into their environment, it’s important to take a comprehensive approach to application management, and key functions like self-service portals, business workflows, and automation as you explore your cloud strategy. Dell’s consulting services team can help you navigate those critical IT Service Delivery elements as you reach that point in your cloud journey.

Deployment services can be included with the solution to ensure your implementation will be aligned with desired IT and business outcomes. Our acclaimed ProSupport team provides you peace of mind as your solution supports your users and customers, and there are also options for managed services if you want to take a hands-off approach to your private cloud.

**Conclusion** – Dell and Microsoft are working together to create options so ANY size customer can transition to IT as a Service (ITaaS) and cloud. Each environment is different, so we are providing a range of solutions that provide customers with a choice of approaches to reach cloud capabilities.

With the PowerEdge R630 Configuration for Microsoft Private Cloud Fast Track, Dell is providing a flexible reference architecture to help customers who want to start small and grow in a modular fashion. We take a practical approach that allows you to leverage existing investments, apply cloud capabilities incrementally, and simplify management of your cloud – enabling “Any Cloud” capability – or cloud on your terms.

**Architecture Basics:**

**Software Components:**
- Microsoft Windows Server 2012 R2 Datacenter Edition (includes Hyper-V)
- Microsoft System Center 2012 R2 (Update 5) including:
  - Configuration Manager
  - Operations Manager
  - Virtual Machine Manager
  - Orchestrator
  - Service Manager
  - App Controller
- Microsoft Storage Spaces
- Windows Azure Pack (WAP)
- Dell OpenManage Integration for System Center
  - PE mgmt for MS VMM
  - PV mgmt for MS VMM
- Dell iDRAC & LCC

**Hardware Components:**
- PowerEdge R630
  - Hyper-V cluster
  - HA Storage Spaces fileserver nodes (R630 or R730 – depending on whether you need cost optimized or performance optimized)
- Optional PowerEdge server for MS System Center Management node
- PowerVault MD1400 12G SAS DAS arrays
- Dell 4032F Network Switches

**Servers:**
- 5x PowerEdge R630
- 2 HA Storage Spaces fileservers
- 3 Compute / Hyper-V Cluster systems

**Server Specs:**
- 2 socket, Intel XEON E5-2600
  - 24x 16GB dimms
  - 8x 2.5” 1.2TB SAS
  - Broadcom 57800 2x10Gb BT + 2x1Gb BT Network Daughter Card
  - 12G SAS HBA’s (in the Spaces fileservers)

**Storage:**
- 3x PowerVault MD1400 12G SAS DAS array
  - HDD specs (each):
    - 3x 800GB SSD
    - 9x 4TB NL-SAS

**Network:**
- 2x Dell Networking N4032-F
  - 24x 10GbE SFP+ ports each
  - 40Gb uplink /stacking modules

Learn how to build your cloud at [www.dell.com/privatecloud](http://www.dell.com/privatecloud)