Summary of the Dell Efficient Datacenter Solutions Announcement
Analysts: John Webster and Russ Fellows

On Thursday December 10, 2009, Dell announced their approach to the integration of data center infrastructure around 10GbE fabrics. Dell's Efficient Datacenter Solutions announcement combines Virtual Ready Infrastructure configurations with Dell's Advanced Infrastructure Manager application based on Scalent's Infrastructure Manager, also new with this announcement. Dell's Efficient Datacenter Solutions are available now and offer SME and medium scale business IT organizations an entry point into private cloud computing.

HIGHLIGHTS

- Solution sets consist of Dell's PowerEdge servers, EqualLogic storage, PowerConnect switches, and Advanced Infrastructure Manager software.
- A hypervisor is optional, with Dell support for VMware, Xen and Hyper-V
- Solution set configurations include support for all Dell supported Operating Systems, including Windows, Linux and Unix environments.
- Advanced Infrastructure Manager (AIM) software (OEM'd from Scalent) acts as a centralized management console for the entire configuration
- Converged, 10 Gb end to end network solutions support 10 Gb from the server to storage
  ○ Multi-protocol storage attachment via Converged Network Adapters (CNA's)
  ○ 10 GbE top of rack switches
  ○ Dell EqualLogic system support for 10 GbE
- Targeted for customers looking to implement virtualization technologies and private cloud architectures and have limited time, talents or budget for integration of the technology stack.

OVERVIEW

Dell's Efficient Datacenter Solutions consist of:

- PowerEdge M-series blades
- EqualLogic PS6000 iSCSI SANs
- PowerConnect switches
- Dell Advanced Infrastructure Manager (AIM) software

A suggested starting configuration (price: $240,000.00) that supports up to fifteen physical workloads or up to one hundred virtual workloads with medium expandability consists of

- 15 x Dell PowerEdge M610 blades for business applications plus an additional M610 blade supporting Scalent Infrastructure Management software
- Single Dell EqualLogic PS6000X iSCSI SAN (capacity?)
- Dell AIM software for 15 (2-socket) blade servers.
- 2 x PowerConnect 6220M Blade switches
- Brocade Foundry 424 or PowerConnect 6224 - 24-port networking switches
- Dell OpenManage

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Dell's Advanced Infrastructure Manager (AIM) software is a Dell version of Scalent's Infrastructure Manager. It acts as a centralized administrative control point for server-software reconfiguration, network monitoring and provisioning, storage capacity provisioning, and power state monitoring. Dell provides a certified support matrix for AIM software that includes servers, storage and networking gear from multiple vendors. AIM supports integration with other vendor's management applications including BMC BladeLogic and Microsoft System Center.

AIM is packaged and sold to customers in one of three ways:

1.) Packaged with the entire solution (server, networking and storage components).
2.) As a software media kit packaged with Dell PowerEdge servers or EqualLogic storage
3.) As a stand-alone software media kit.

In addition to pre-testing and validating the solution stack, Dell's Product Group has written a solution deployment guide and a guide detailing best practice scenarios.

With this announcement, Dell is also providing Dell service offerings to support the newly announced solutions. These include:

- Infrastructure consulting for data center optimization, server virtualization and storage consolidation
- Server, storage and network deployment and installation
- Specialized support services for individualized customer requirements

END TO END – 10GB SOLUTIONS

Also included in this announcement was a set of components including:

- EqualLogic PS6010 and PS6510 support 10 GbE
- PowerConnect 8024F (top of rack layer 3 seitch supporint 10 GbE
- 10 GbE CAN (converged network adapters) for PowerEdge servers
- PowerConnect B series (FC switches)
- Dell Infrastructure Manager (remote provisioning for server software, network and storage)
- Dell Lifecycle Controller (integrated server lifecycle management)
- Business Ready Configurations (tested and ready to order infrastructure solutions)

TARGET MARKET AND VALUE PROPOSITIONS

Dell's Efficient Datacenter Solutions are directed primarily towards the small-to-medium enterprise (SME) and midrange customer segments that have been Dell's strongest customers. Dell believes that this set of offerings will resonate with these customer segments. Dell's value propositions include:

- Open, Pragmatic and Comprehensive (Dell's stated objectives for this set off offerings)

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- The pre-integration of data center components (servers, network, storage, and management applications) reduces integration issues and increases the chance of successful projects when deploying new virtual operating environments. IT administrators in these segments have wide responsibilities, and have limited time and budgets to address the challenges of integrating networking and storage elements with virtualized servers
- An open architecture will not force customers to buy components that they either don't want, don't need or don't trust – thereby allow customers to leverage existing infrastructure components
- The Dell brand is already strongly associated with simplified packaging, ordering, and pricing models, Efficient Datacenter Solutions are an extension of these models. Dell assures Efficient Datacenter Solutions customers that their configuration will be pretested and validated, and that the configuration includes everything required (i.e. no discovery during implementation that a critical piece is missing).

EVALUATOR GROUP COMMENTS

An item of interest is that this set of offerings appears to be a response to the VMware, Cisco, EMC (VCE) set of integrated cloud offerings announced last month. The announcement from Dell and the VCE coalition show the radically different types of solutions, which we expect other vendors will be proposing in the future.

Within the last few weeks, a number of major IT infrastructure vendors have stepped forward with offers of integrated compute stacks. In addition to Dell, these include HP (Converged Infrastructure), Cisco/EMC (VCE and Vblock). The success of integrated compute stacks will generally depend upon a number of factors:

- *Positive perception of the vendor as an organization capable of supporting all of the major components – servers, storage, networking, and management software as well as being capable of supporting critical applications.*
- *The perceived need among IT users for a "one throat to choke" contact point for all major IT components, and in the Dell case, configurations with or without virtualization as a core component*
- *The desirability of private clouds leading to a perceived need for a "cloud-in-a-box" solution*
- *Pricing and value perception of the integrated stack versus ala carte pricing for the technology and services.*

Positives:

We believe that integrated compute stacks will have significant appeal to many organizations, particularly SME and midrange IT organizations that are typically understaffed and over burdened. The integrated stack concept takes much of the planning and guesswork out of new application deployment and server virtualization projects. Dell has built a solid foundation within their midrange SME customer base and this integrated solution should appeal well to this audience. In addition, the integrated stack concept is essentially a simplified packaging, pricing, and support model. Dell is well known for simplifying the IT infrastructure acquisition process.

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The Dell stack is open, allowing potential customers to substitute major components while maintaining the integrity of the stack concept—integrated hardware and software managed from a central control point. This will help when competing with closed configurations from other vendors. Although the amount of integration declines as Dell components are removed.

Overall, Dell has met their objective of delivering open, pragmatic and comprehensive offerings to address the need for virtual compute infrastructure. These solutions are not billed as "Cloud Computing" for the reason that Dell is looking to deliver solutions that are well understood, rather than lofty visions of cloud or other nebulous concepts.

We believe that Dell has put considerable time, effort, and planning into this offering. These solutions are more than a set of parts, with indications that Dell is planning further enhancements in 2010. Potential enhancements include further management integration with AIM, automated capacity provisioning capabilities for users and groups, and will address integration with cloud offerings.

Potential Concerns:

Dell has clearly taken a different approach than some competing offerings, most notably the VCE coalition's Vblock approach. (For more information on this announcement, see Evaluator Group's analysis of the VCE announcement).

Dell's more loosely integrated solutions have the potential to provide a less tightly integrated solution. Although this approach provides far more flexibility, the downside is that tight integration may not exist. The competing Vblock offerings from VCE coalition claim high levels of integration, although these claims have yet to be validated by IT administrators.

Overall, Dell's approach appears to meet the requirements IT staff are outlining, and ultimately customers will dictate which approach is more appealing.