



# OPENMANAGE

Flexible Management for the Scalable Enterprise

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## View from the Top

### Simplifying IT Management: Two Choices, No Compromise

Dell offers two ways to help simplify IT management without compromising functionality: Dell™ systems management tools built on the Altiris® infrastructure or the systems management tool of your choice from a Dell OpenManage™ Certified Partner.

Systems management tools are supposed to simplify IT management. But today's complex IT environments require so many tools—tools for managing clients, tools for managing servers, tools for managing storage, and so on. Sometimes it seems like management tools are adding complexity instead of taking it away. At Dell, we're building two different ways to reduce the number of tools required to manage your IT environment without sacrificing management functionality.

#### Dell OpenManage Certified Partner tools

If you would like the flexibility to use your own systems management vendor, the Dell OpenManage Certified Partner Program certifies systems management products that integrate Dell hardware management—allowing you to seamlessly manage Dell hardware from the Dell-certified management tool of your choice.

In particular, we provide Dell hardware management developer toolkits that enable participating vendors to add functionality such as deployment and change management for Dell servers to their applications. When the integration is complete, Dell engineers test

the applications to certify that they deliver the required functionality. Vendors whose applications pass are designated as Dell OpenManage Certified Partners and granted a Dell OpenManage Certified Partner logo to affix to certified products.

Already, a wide range of systems management vendors such as Microsoft, Quest Software, Novell, BMC Software, and CA are in discussions with Dell about participating in the program. Altiris and LANDesk have signed and are scheduling their certification tests. The Dell OpenManage Certified Partner Program gives our customers not only the capability of managing their Dell hardware without having to deploy a separate tool, but also the flexibility to choose the systems management console that fits their environment the best.

#### Dell integrated systems management suite

If you prefer a systems management solution from Dell, we offer the comprehensive Dell OpenManage portfolio of deployment, monitoring, and update tools for Dell hardware. And in November 2006, we announced our intent to build our next-generation console

in partnership with Altiris. For basic administration, this suite will remotely discover, inventory, monitor, configure, and patch Dell hardware assets including clients, servers, storage, printers, and more at no additional charge. For advanced functionality such as deployment and imaging, software delivery, and backup and recovery management, you will be able to purchase plug-in modules that seamlessly integrate into the Dell console.

Furthermore, because this suite will leverage the Altiris infrastructure, advanced feature modules will be readily available from Altiris such as asset management, OS/application patching, virtualization management, and help-desk capability.

#### The choice is yours

Dell is committed to helping you simplify the task of IT management. Choose a Dell Certified Partner and manage your Dell hardware assets seamlessly without having to use a separate tool. Or choose Dell systems management tools and manage your IT environment in a simple, scalable, pay-as-you-grow way—all from a single console. Either way, the choice is yours. ■

# TECH CORNER

By David Weber, Enterprise Technologist, Dell Inc.

## Unified Manageability Architecture: A Blueprint for Flexible Systems Management

Currently, most systems management architectures are proprietary and monolithic—and increasingly unsuited to the challenges posed by today’s complex, heterogeneous IT environments. Unified Manageability Architecture is designed to facilitate systems management by providing a layered, standards-based blueprint for the development of flexible, scalable, and open systems management infrastructures.

Today’s systems management marketplace is filled with proprietary, best-of-breed tools that are good at what they do, but don’t easily integrate with one another. Part of the reason for this is that there has never been a universally accepted systems management model that standardizes systems management terminology, functionality, and interfaces in a single, unified architecture. The result is that, in addition to ending up with a plethora of individual tools that cannot integrate with one another, IT organizations have no standard way of modeling the systems management requirements of their IT infrastructures as a whole, and no way of assessing whether the tools in place deliver on those requirements.

Until now.

Dell has developed Unified Manageability Architecture (UMA) based on standards and technologies from the Distributed Management Task Force (DMTF) and other standards bodies. UMA is a layered, standards-based systems management architecture that codifies systems management terminology, functionality, and interfaces. UMA is

designed to simplify systems management by providing a blueprint that allows IT organizations to comprehensively model their systems management requirements and enables vendors to develop products with open, standards-based systems management instrumentation that seamlessly interfaces with standards-based management tools or consoles.

### Systems management layers

UMA partitions systems management infrastructures into six layers, as shown in Figure 1. The first four layers—platform, logical mapping, aggregation, and access—address aspects of the managed device, while the remaining two—resource management and orchestration—pertain to the overall management system.

At the managed device level, the *platform layer* describes the actual physical elements being managed, such as processors, disk drives, and memory, and includes environmental information such as temperature, enclosures, and location. The *logical mapping layer* consists of the software drivers and providers used to map logical

representations to the physical elements within the platform layer. The *aggregation layer* is responsible for aggregating logical representations to various data models used to correlate and describe the managed elements. Finally, the *access layer* is the communication interface between the managed device and the management system.

At the management system level, the *resource management layer* encompasses most of the functionality currently found in management applications, such as servicing user and management application requests, requesting and parsing responses for resource management functions, and creating and terminating sessions with managed nodes. The *orchestration layer* is an optional layer that provides a level of capability beyond that of traditional management systems. This layer enables automated, policy-based management through a policy engine with defined service levels.

At all levels of the architecture, UMA takes advantage of current and emerging industry standards whenever possible. Standards such as the Common Information Model (CIM) for data, the Systems Management

Architecture for Server Hardware (SMASH) Server Management Command-Line Protocol (SM CLP), the Desktop and Mobile Architecture for System Hardware (DASH), and the WS-Management Web services specification provide IT administrators with a frame of reference. In this way, organizations can map their environments and provide vendors with open standards for developing flexible, interoperable management interfaces.

### Standards-based product instrumentation

At Dell, we’re committed to simplifying systems management. In fact, our engineers and partners are applying the principles of UMA right now to help standardize the management instrumentation on Dell products such as servers, storage, switches, client systems, and printers. These efforts allow Dell managed devices to work seamlessly with third-party, standards-based management tools such as Microsoft System Center. We know IT infrastructures are increasingly complex, but we don’t think they should be complicated to manage. ■

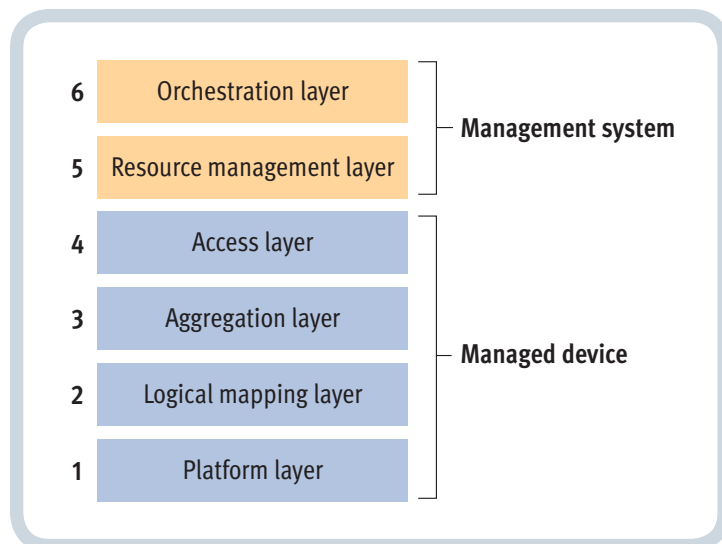


Figure 1. Unified Manageability Architecture model