

# IBM Systems Director and Tivoli Converge: The New IBM Systems Director 6.1

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There are a lot of vendors in the systems management market including Dell, CA (the former Computer Associates), EMC (and its VMware subsidiary), Hewlett-Packard (HP), IBM, Microsoft, Sun, and Symantec to name a few. And *Clabby Analytics* is both familiar with and has in the past written about all of these vendor's management environments.

There is a commonality amongst these vendors in terms of overall strategy. Ultimately, they want to make it possible to automatically provision workloads on underlying, virtualized, physical systems. Or, put another way, these vendors all focus on providing the means for physical systems management, virtual (logical) resource management, and automated provisioning.

But there are also major differences amongst them in terms of product depth, breadth, and integration. Some vendors focus on homogeneous environments (for instance, Microsoft and VMware focus on Windows/Linux on Intel architecture). Some offer advanced provisioning capabilities (HP, IBM, and Sun are noteworthy in this class). Finally, some offer automated discovery, energy management, high-availability management, and other add-ons which helps differentiate one product from another.

Three vendors stand-out amongst these competitors in terms of product completeness: CA (with Advanced Systems Management); HP (with Insight Manager) and IBM (with Systems Director). All of these products offer:

- Solid physical systems management – including facilities for high-availability, backup and restore, software/patch distribution, and security;
- Additional logical (virtual) systems management – to discover, pool, and manage virtualized systems resources;
- Automated provisioning – to enable workloads to be deployed and executed with minimal human involvement; and,
- Various optional add-ons – features that can be added according to buyer requirements.

But, despite similar design objectives and common functionality, there is one major difference between these vendor's products: the level of integration of all four of the above mentioned product functions.

## IBM's New System Director 6.1

When IBM Systems Director was first released in 1993 (as NetFinity Manager), it focused on physical systems management but over time it also took on responsibility for managing virtual systems. More advanced functionalities, such as workload management, automated provisioning, and orchestration were part of IBM's Tivoli product offering. And the two were not particularly well integrated information technology [IT] managers and administrators would have to switch between different user interfaces to use these products, and information in one silo could not be easily transferred for use in others).

About two years ago, the System Director product group started working closely with the Tivoli organization to integrate their offerings. Their goal was to create a consistent, com-

mon graphical user interface through which IT managers/administrators could manage entire systems environments (physical and logical systems, workload management, provisioning, and business process management) all rolled into an integrated management package. And, with the release of the new System Director 6.1, IBM has accomplished this goal.

The way in which IBM has gone about integrating these environments is particularly interesting. Back in the “old days”, a vendor could place simple network management protocol (SNMP) agents on various devices to trap information from and capture information about those devices. Management programs could then be tucked-into a much larger management framework and the vendor could then claim to offer an integrated platform. Only, the problem was that information captured in this scenario could not readily be shared with other management programs running under the same framework. Systems Director 6.1 now pools the information that it captures into a CCMDB (change and configuration management database) that can federate the data that it captures and share that data amongst cooperative management programs.

The reason IBM’s new approach is important to IT managers is that the resulting combinations of information can help IT managers troubleshoot problems more quickly and the same information can also be used to tune systems for capacity management, process integration and a whole lot more. In addition, information about hardware, operating environments, middleware dependencies and other essential operational elements can be captured and massaged and can then be used by IT managers to perform all sorts of tasks.

As an example of how CCMDB works, consider energy management. The IBM energy agents residing on servers can capture energy usage data and report it back to Systems Director. That data is then placed in the CCMDB where other programs can make use of it. For instance, IBM’s Active Energy Manager can use the collected data in order to show IT managers how they can save energy. That data can also be used to generate charge-back billings based upon energy usage by specific facilities, departments or work groups.

### **A Closer Look: The Systems Director Demo**

As part of the research for this article, Clabby Analytics attended an on-line demonstration of IBM Systems Director 6.1. Having seen this product in previous iterations, the first thing that jumped-out was the level of integration between Systems Director and Tivoli that IBM has achieved. By blending these two product offerings, it became readily apparent that IT managers can now use Systems Director 6.1 to align IT operations with given business objectives, enhancing the governing, controlling, and optimizing of IT operations.

In the virtualization management segment of the demo, IBM showed great improvement in billing, in the automation of virtualization management, and in virtualized resource configuration and mapping. Automation improvements include the dynamic balancing of application resources as well as the ability to transparently move virtual servers between systems (virtualization mobility). Of all of this functionality, the mapping of virtualized resources – and the ease with which those resources can be managed – was most impressive. The new graphical user interfaces and the level of integration should go a long way toward simplifying the management of heterogeneous environments.

In the section of the demo on aligning datacenter energy use and service management objectives, IBM demonstrated how key metrics (cooling, power consumption, etc.) could be

monitored across the entire datacenter – and then showed how its management products could serve to optimize business services based on those metrics. These metrics could also be used to help design new more energy-efficient datacenter.

In the demonstration on server and storage energy usage characteristics, IBM showed how energy could be managed against pre-defined service level agreements (SLAs). The basic concept was to deliver the agreed computing services on time in the agreed power envelope (energy use can be throttled to serve the user requirements, while not wasting energy by over serving those requirements). Server and storage energy use can be easily throttled and adjusted to preserve performance and not waste energy– and details that support charge-backs for energy consumed can also be collected if desired.

In the demo showcasing advances in availability management, IBM focused on how hardware metrics contained in data warehouses can be used to help drive automated, customer-defined actions (a kind of scripting activity driven off of information). IBM also showed how hardware and software infrastructure data could be combined to map and illustrates overall systems capacity. This is a great aid for IT managers trying to balance capacity against necessary workloads. And IBM showed how health, status, alerts, and monitoring could all work together proactively to help solve problems and resolve performance and/or availability issues.

### **Summary Observations**

In days gone by, IT managers worried primarily about keeping their physical information systems up-and-running. Deployment, monitor/control, and change management were their core tasks, and other specialists were assigned to manage IT operations such as networked resources, telephony, storage and clients.

But then, upper-level management demanded greater IT operational efficiencies. CIOs required resources to be virtualized to increase resource utilization and simplify management, and that data center energy consumption be reduced. Then management pressured vendors for better, more integrated physical and logical systems/storage/network management tools. Along the way, they also asked for utilities to help reduce costs associated with managing across IT silos (systems, storage, networks, databases, and applications), and to reduce costs associated with managing heterogeneous environments.

The task at hand for today's IT manager is to manage often highly complex physical and virtual (logical) heterogeneous resources in a consistent, uniform manner. And many vendors are working to build all-encompassing, physical/virtual management suites that allow for cross-platform, heterogeneous resource management and automated provisioning. CA's Advanced System Management and HP's Insight Manager are examples of outstanding systems/storage/network management environments. And IBM's Systems Director 6.1 is one of the best management suites that *Clabby Analytics* has seen to date for managing physical and logical systems environments as well as for providing integrated provisioning, orchestration, and process flow functionality.

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