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Marketplace
The One-Stop-Shop for Data Synchronizer Connectors

by Ken Baker

To make it easier for you to take advantage of the real-time synchronization capabilities that Novell Data Synchronizer provides between different applications and mobile devices, the Data Synchronizer Marketplace Web site is now available at www.novell.com/marketplace. The Marketplace provides a place for customers to get the latest information on available Data Synchronizer connectors, find out what connectors will be available soon and request connectors that they need. Developers and vendors can use the Marketplace to promote their connectors, make them more accessible, learn what connectors their customers want them to develop and download the connector SDK.

> Featured Connectors
The Featured Connectors section of the Marketplace promotes and facilitates access to currently available connectors for Novell Data Synchronizer. (See Figure 1.) As of this writing, the available connectors include the Microsoft SharePoint, Mobility, Novell GroupWise, Salesforce.com, and Sugar CRM connectors developed by Novell, which have been described in detail in past articles. (See Higher Levels of Collaboration).

The Featured Connectors page also presents the recently released Notify Mobile Device Management (NotifyMDM) solution. Developed by Notify Technology, the NotifyMDM connector simplifies the centralized management and control of an array of wireless device platforms, such as iPhone, iPad, Android, BlackBerry, Windows Mobile, Windows Phone 7, HP/Pal WebOS and some Symbain wireless devices. The connector helps you address your security, visibility and manageability needs for these devices. It also provides a self-service portal that enables your users to manage certain aspects of their devices.

The Marketplace provides a place for customers to get the latest information on available Data Synchronizer connectors, find out what connectors will be available soon and request connectors they need.

On the Featured Connectors page you can click on any connector to bring up a page with more information about its features, system requirements and access or purchase details. This comprehensive repository makes it easy for organizations to get the information on the connectors they need. It also provides a powerful venue for vendors to promote and distribute the connectors they develop.
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For example, if you click on the NotifyMDM connector, you will see a connector-specific page that contains information you need to know about that connector. This page indicates, for example, that the NotifyMDM connector supports 5,000 users per server and that the server requires a L5520 Intel Xeon Processor (2.26GHz TurboHT), 4 GB of RAM, 3 X 73 GB Drives, W2k3 or W2k8 Standard, and SQL 2k8. When you click the Get the connector button on the page, it takes you to a Notify Technology Web page where you can get a free trial version of the connector or purchase a license/subscription for the connector.

**Featured connectors**

*Figure 1: The Marketplace gives you information on the currently available connectors for Novell Data Synchronizer.*

On the Featured Connectors page you can click on any connector to bring up a page with more information about its features, system requirements, and access or purchase details.
Coming Soon
The Coming Soon section of the Marketplace lists all of the known connectors to which Novell and its partners are currently contributing. (See Figure 2.) These upcoming connectors include the following:

- **Twitter** – Developed by Novacoast, the Twitter connector allows Novell GroupWise and Novell Data Synchronizer users to connect to their Twitter account and configure a variety of their e-mail settings from within GroupWise. As a result, you can tweet from your GroupWise mailbox without having to launch a browser.

- **Novell Vibe OnPrem** – Developed by Novell, this connector enables synchronization with the Novell Vibe OnPrem (formerly Novell Teaming) team collaboration application.

- **OpenText** – Developed by Maintainet, this connector synchronizes e-mail between GroupWise and the OpenText enterprise content management solution.

- **Easy Enterprise.x and Easy Enterprise.i** – Developed by Maintainet, these connectors synchronize information with the Easy Enterprise.x and Easy Enterprise.i document management archive solutions from Easy Software.

- **d.velop** – Developed by Maintainet, this connector synchronizes information with the d.velop e-mail management solution from d.velop AG.

- **Microsoft Exchange** – Developed by Maintainet, this connector synchronizes e-mail between Novell GroupWise and Microsoft Exchange.

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Coming soon connectors

*Figure 2: At the Marketplace you can find out what connectors will soon be available.*
> **Most Requested**

If you can’t find the Novell Data Synchronizer connector you’re looking for, the Marketplace lets you submit a request, which lets Novell and its partners know the level of demand for that connector. For example, as of this writing, in the Most Requested section of the Marketplace it shows that the connectors for SAP ERP and Google Apps have received the most requests. Likewise, you can indicate whether you “like” some of the connectors that others have requested. (See Figure 3.) Similar to requesting connectors, “like” votes for certain connectors can influence Novell and its partners to prioritize the development of those connectors.

*Requested or Liked connectors*

*Figure 3:* You can request the development of new connectors and see which connectors others have requested at the Marketplace.
If you’ve developed a connector and want to promote it for free on the Novell Data Synchronizer Connector Marketplace, you simply click the Submit a connector button in the Marketplace.

> Developing and Submitting Connectors

From the Marketplace, you can also download the free software development kit (SDK) for Novell Data Synchronizer connectors. The SDK helps you take advantage of the product’s open API for creating your own connectors. In addition to the SDK, the Novell Data Synchronizer Mobility Pack provides tools that help developers take advantage of Novell Data Synchronizer, including a generic SOAP connector that can be used as a sample connector and a flat file connector that provides a semi-technical programming interface for extending the capabilities of Data Synchronizer. (See Always in Sync)

If you’ve developed a connector and want to promote it for free on the Novell Data Synchronizer Connector Marketplace, you simply click the Submit a connector button in the Marketplace. (See Figure 4.) The system will prompt you to enter your name, e-mail address and the product or application that the connector supports. Once you provide that information, the Data Synchronizer team will contact you with instructions on the next steps for making your connector available through the Marketplace.

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Submit connectors and other buttons

*Figure 4: The Marketplace makes it easy for you to submit and promote for free your own developed connectors for Novell Data Synchronizer*
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> Visit the Marketplace
The driving force behind the Marketplace parallels that of Novell Data Synchronizer itself—to make it easier than ever to synchronize applications, mobile devices and collaboration systems so users can update and access the data they need, when and where they need it. So whether you want to see the latest information on available connectors, develop your own connectors, or influence the development of the connectors that your organization needs, visit the Novell Data Synchronizer Connector Marketplace—soon and often!

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• Novell Data Synchronizer Connector Marketplace
The Social CMDB
The Configuration Management Database Is a Social Media Channel

by Tobin Isenberg

ITIL defines a CMDB as a specialized data repository that provides the authoritative source for information about all the infrastructure elements that participate in the delivery of key business services—their identities, attributes, configuration states, and perhaps most importantly, their relationships with and dependencies on other configuration items (CIs). As a key component of the ITIL framework’s configuration and change management processes, the CMDB supports a very wide range of management functions and activities, and it needs to be accessible to a wide range of users from across the business. Many of these will be casual users with little expertise in special-use databases, yet all must be able to access the CMDB’s information and functionality quickly and easily with a minimum of orientation or mediation.

One way to make the CMDB more user friendly is to expose its features through a Web-based interface, leveraging the intuitive interactive techniques that are universally familiar from social media to simplify navigation, information access and collaboration.

> Introducing Novell Operations Center CMS
The Novell Operations Center Configuration Management System (CMS) allows everyone in the organization to contribute data and share knowledge about configuration items (CIs), providing a way to build and maintain a CMDB collaboratively. When more users can contribute, the CMDB inevitably becomes a more accurate representation of the actual IT infrastructure.

When you first log in to the Novell Operations Center CMS, the home page displays a summary of news, information and links determined by your preferences and membership in various CMS communities, allowing you to focus immediately on content of interest with minimum noise and distraction. (See Figure 1.) The summary page has two domain views: a home view that includes content from all your CMS communities, and group-specific views for each community. Key features of this interface and the logic behind it include:

**Communities** provide a way to associate items that are of interest to a group of CMS users who use those items regularly and work together to maintain them. An organization might have CMS communities focused on servers, databases, networking, security, compliance—any topic or affinity that dictates a shared interest in specific types of IT assets. Community membership may be open to all, available by invitation only or available by request to existing members.

A user’s community affiliations will be shown on the CMS home page by icons arranged along the left edge, and community-based filtering will determine much of the content that appears in other areas. Clicking on a community icon will filter the home page display to include only content relevant to that group.
The inbox, located in the home page center panel, displays messages related to the user’s community membership and roles, particularly if the user is a designated CI owner. These messages are likely to include alerts that certain configuration items have been flagged for management attention, as well as community membership notifications—invitations, requests, etc.

The community newsfeed, located directly below the inbox, displays recent events of interest. For a server community these might include a notice that a community member has installed a new operating system service pack on one server, or changed the IP address of another. Both the inbox and the newsfeed are critical channels for coordinating and synchronizing a community to manage and maintain the IT resources for which it has assumed responsibility.

A Google-like search function, located at top right, lets you search the CMDB using simple strings and queries, with no detailed knowledge of the system schema. Or you can click through to the search page to construct an advanced query based on CI attributes, class matches or Boolean expressions. (See Figure 2.) Making search simple and easy to use is a critical step in opening up the CMDB to users without specialized expertise. With the home-page search, an occasional user who is preparing for a system migration and needs an inventory of affected CIs for a planning meeting can log into CMS, do a quick search, print a report and be on her way to the meeting in a matter of minutes.

The Tag Cloud, located immediately above the inbox, is a useful feature that provides a visual grouping of a community’s key CIs, capturing several bits of information directly in the display. Each tag represents a category of items grouped by a specified attribute. The relative size of the tag varies with the number of items in the category, and the exact number is shown in parentheses at the end of the tag. Clicking on a tag brings up a list of all the items in the category.

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Figure 1: The CMS home page borrows a variety of content filtering and presentation techniques from familiar social media channels to simplify user access to CMDB information and services.
Each community can create its own tags to provide quick access to items of particular interest directly from the home page. A server community might choose to have cloud tags for Compaq, HP and Dell. A database community might choose Oracle, Sybase and SQL Server. The tags displayed on the summary page will change depending on the community affiliation chosen by the user.

The Pinboard, located at the top of the right-hand panel, provides a useful place to pin or bookmark CIs you are currently working with or might want to revisit often. It is also a place to locate recent or saved reports and searches.

> Viewing CI Details
Regardless of whether you find your way to a specific CI by way of a personal message, news feed bulletin, search, cloud tag or pinboard link, the method for accessing detailed information about that item is the same. Anywhere a CI name is linked, simply click on the name to bring up the Edit CI display. (See Figure 3.) In this view, clicking on the links at the top of the frame provides drill-down into the following topics:

- Definition – Provides the CI name and class
- Attributes – Provides information about the CI’s significant properties
- Relationships – Provides information on the CI’s associations with and dependencies on other CIs, and includes a navigable diagram that represents those relationships visually (See Figure 4.)
- Impacts – Provides a navigable diagram of all CIs the current CI impacts
- History – Provides a list and calendar timeline of all events related to the CI
- Flags – Provides a list of all flags and comments on the CI
Edit CI display

Figure 3: The CMS Edit CI display provides quick access to detailed information about a CI.

A navigable CI relationship diagram

Figure 4: The CMS Edit CI display includes a navigable diagram that represents the relationships between CIs visually.
Setting Preferences
Most of the features and content that appear in your CMS summary page—the communities that appear in the left sidebar, the events in your news feed, the default behavior of the pinboard—are determined by preference settings that are configured in the mySettings summary page. (See Figure 5.)

You can find the mySettings summary page by clicking on the Actions menu on the home page, then selecting Settings from the drop-down menu. Simply select the features you wish to see, the events you need to be aware of, the reports you want to receive, and the communities to which you belong. Save your changes and your Summary page personalization is complete.

It Takes Collaboration to Build an Accurate, Authoritative CMDB
Building and maintaining an accurate CMDB isn’t something that a small group in IT can do in isolation. It requires participation from concerned service consumers throughout the business, in a process that is unavoidably social and collaborative in nature. If every non-specialist stakeholder is required to acquire and master a thick client application in order to participate, the process will inevitably fail. By providing an accessible, easy to use CMS interface with interactive features that are familiar from social media channels, Novell Operations Center makes that access and participation quick, convenient and rewarding. The result is a CMDB that is more timely and accurate because it is more widely and frequently used.

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• Novell Operations Center
At Your Service
Improving Service Management with Novell Service Desk
by Ken Baker

If you want to improve the quality of the IT service you provide to your internal customers in a way that meets your business needs, it’s time to take a look at Novell Service Desk. Whether you’re using Novell ZENworks or third-party solutions for endpoint management, endpoint security and asset management, Novell Service Desk complements your investments to give you the IT service management capabilities you need. It helps you close calls faster, so both your users and IT personnel can be more productive.

> Built on ITIL Best Practices
Novell Service Desk has been designed and built upon the IT Infrastructure Library (ITIL), the internationally recognized best-practices approach to IT service delivery. (See Service Desk Differentiators) Service Desk uses ITIL in a way that improves your IT organization’s ability to act as an IT service provider for your business units. This enables you to provide services with the quality and availability that you negotiate with those business units. It also lets you continuously review those services to make sure they’re the right services for the business and that they’re being delivered according to your Service Level Agreements (SLAs). (See Figure 1.)

SLA reports and incidents
Figure 1: Novell Service Desk enables you to deliver the right services for your business according to your Service Level Agreements.
To help you integrate IT with your business needs, Novell Service Desk provides fine-grained control over key business logic parameters for the following core ITIL service and delivery support processes:

- **Configuration Management** – Uses a centralized configuration management database (CMDB) to store, manage and control all types of infrastructure information.
- **Request Fulfillment** – Enables end users to obtain information or advice, as well as easily submit requests for change.
- **Incident Management** – Ensures the fastest path to resolution by facilitating the creation of incident workflows using a combination of states and transitions, configurable business rules, and automated notifications.
- **Problem Management** – Uses a combination of manual and proactive analysis with automatic problem-identification tools to rapidly identify root causes.
- **Change Management** – Manages and controls CMDB changes in accordance with documented change-management procedures.
- **Service-level Management** – Facilitates the ability to meet SLAs in accordance with ITIL best practices.
- **Service Catalog** – Assists with diagnosis and root-cause analysis by defining and managing the active or ‘live’ services offered to end users so you can group components with related dependencies under a single service umbrella.
- **Financial Management** – Quantifies the financial value of IT services and the underlying IT infrastructure so you can map budgets to the monetary value your services provide, based on actual usage and warranty information.
- **Release and Deployment Management** – Enables the planning, scheduling and control of changes and updates from test to live environments.
- **Knowledge Management** – Provides efficient knowledge creation, publication and distribution processes that speed resolution times, reduce frustration and empower customers.

**Info**

Any customers of ZENworks Configuration Management or Novell Open Workgroup Suite with current maintenance coverage are entitled to two free technician licenses of Novell Service Desk for Incident Management free of charge. For details, visit Novell Customer Center at [www.novell.com/customercenter/](http://www.novell.com/customercenter/).
Another big advantage of Novell Service Desk—one that differentiates it from competing solutions—is that it’s ready to use right out of the box. Putting it into play can be as simple as taking the following four steps:

1. Move it as an appliance into your virtual infrastructure and start it up.
2. Connect it to your existing directory services infrastructure (either Active Directory or eDirectory), and then use information in those directory services to populate information about customers and the technicians supporting them.
3. Bring in asset information already collected by ZENworks Configuration Management or other third-party asset management systems.
4. Start taking service requests via phone, e-mail or the Novell Service Desk Web portal.

Right out of the box, Novell Service Desk also lets you take advantage of ITIL best practices and adapt them to your unique requirements. It does this by including ITIL-based templates and fully configurable workflows that you can customize as needed. These templates and workflows let you prescribe how you want different types of incidents or change requests to be handled. They ensure that you don’t have to start from scratch or configure IT processes on your own. For example, one template provides a sample incident workflow that automates and streamlines the process of adding an incident to the system, reviewing it, assigning it to a technician or engineer, resolving it and finally closing it.

The workflow templates in Novell Service Desk allow everything from minor modifications or significant customizations designed to meet specific requirements. At a high level, the steps for modifying an existing workflow template include the following:

1. From the Workflow screen, select the name of an existing workflow template and duplicate it.
2. Rename the new workflow and provide a description of its purpose.
3. From the Process Type drop-down option, indicate what type of workflow it is, such as incident, change or problem.
4. Configure the fields for Default Open Status, Default Closed Status, Update Status to, and Email Note action.
5. Assign a SLA to govern the lifecycle period of the workflow.
6. In the Life Cycle tab, graphically define and map the workflow states, editing existing states or adding new states as needed.
To leverage this asset data, Novell Service Desk has been designed with an open interface that allows it to integrate and communicate with all of the Novell ZENworks solutions.

To further simplify and speed your deployment, Novell Service Desk includes a number of preconfigured items such as Service Level Agreements and standard reports. For example, it includes a sample SLA that outlines response times, restoration times and final resolution times based on ITIL best practices. (See Figure 2.) It also includes Service Level Agreements based on operational agreements and contracts for defining, managing and tracking service delivery levels.

> **Leverage the Value of Your Asset Data**

Another major advantage that Novell Service Desk delivers over competing solutions is that it allows you to leverage the valuable asset data that you have already gathered using Novell ZENworks Configuration Management. This provides your technicians with easy access to detailed information about your users’ hardware and software, enabling them to diagnose and resolve problems faster. (See Figure 3.)
To leverage this asset data, Novell Service Desk has been designed with an open interface that allows it to integrate and communicate with all of the Novell ZENworks solutions. This integration makes it easy to regularly import and leverage asset information from the ZENworks database to build out the resources your service desk will support.

In addition to ZENworks integration, the asset management integration engine (AMIE) in Novell Service Desk makes it easy to synchronize with a wide range of third-party asset management systems. It uses XML descriptor files embedded within Novell Service Desk to connect to an external host and transfer any desired type of asset management data into the Service Desk CMDB. While providing default integrations to Novell and most other major asset management systems, it also provides a simple mechanism that lets you create your own integrations using XML descriptor files.

Novell Service Desk lets you leverage Active Directory for managing your customers, technicians and other Service Desk users. It also supports LDAP and Novell eDirectory user authentication. And to let you control every aspect of user login and security, Novell Service Desk uses an authentication gateway that integrates with any LDAP or Active Directory server, supporting anonymous SASL and SSL authentication, as well as individual mappings. The gateway also lets you use mixed login techniques for different users or groups, and it can connect with any third-party server to validate user access. Finally, Novell Service Desk can be integrated with single sign-on (SSO) and identity management environments so your users can bypass the Novell Service Desk login page.
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SERVICE DESK DIFFERENTIATORS

The following outlines a few key differentiators between Novell Service Desk and traditional helpdesks.
• Novell Service Desk:
  • Built on ITIL v3 guidelines
  • Windows or Linux
  • Open standards-based with API
  • Low maintenance
  • Integrated processes
  • Application = just configuration
  • Plug and play + appliance
  • Low training requirements
  • Browser access; no plug-ins.

Traditional Helpdesks:
• Inconsistent standards
• Client server or .Net
• Platform locked
• Closed system
• High maintenance
• Isolated processes
• Toolkit = heavy services
• 18 months for implementation
• High training requirements
• Thick clients + browser plug-ins

One of the main goals of Novell Service Desk is to provide you with a single pane of glass for your IT administration and management efforts. To accomplish this, Novell Service Desk will soon feature even tighter integrations with Novell ZENworks solutions, enabling you to perform all your ZENworks and Novell Service Desk activities from a single console.

> Easy, Dynamic Interface

The browser interface in Novell Service Desk makes it easy for your support technicians to access the information they need to respond to service requests. The interface includes graphical dashboards with drill-downs and personalized views into all of your core processes. (See Figure 4.) It can present audit trails of all actions related to a service request, including resources used, notes and a complete client history. The technician can also view imported data collected by Novell ZENworks Configuration Management on user endpoints and other assets. Finally, it supports all major Web browsers, so it can be accessed from anywhere and doesn’t require any software installation to use.

With native language support for English, Chinese, Spanish, French, German, Norwegian, Romanian and Polish, Novell Service Desk automatically presents the interface in the language configured for the operating system your technicians happen to be using. This ability to dynamically present the interface in the appropriate language allows you to have one central instance of Novell Service Desk that services your entire global organization in each user’s native language. Additionally, its flexible framework makes it easy to customize or add new languages as needed.
In addition to adapting the interface to the user’s language, Novell Service Desk automatically accommodates the type of user accessing the system. The product, after all, isn’t limited to your support technicians; it’s also designed to be used by service managers, the end users you support and others. For example, end users can check on the status of service requests, interact with your support team or even look for information in the Service Desk knowledgebase that can help them resolve issues on their own.

> Integrating Business and IT

Novell Service Desk serves as the central point of contact between customers and your IT service organization. It is also the operational interface between business and IT, providing the service conduit for all IT-related incidents and requests. As such, Novell Service Desk helps you integrate IT with the business needs and service objectives of your organization.

One of the ways that the product helps integrate IT with your business objectives is through its service catalogs, which can help you map the relationships between your services and your underpinning technology and infrastructure. For example, this might include a logical map of how you deliver e-mail to your mobile devices. So, if your users ever experience problems receiving e-mail on certain mobile devices, you can analyze the logical map to determine the location of possible break points. This streamlines troubleshooting efforts by letting you quickly identify the most critical elements and potential trouble spots in your e-mail delivery.
Novell Service Desk also provides an array of built-in standard reports that let you quickly see how well your service team is performing. The reports also let you drill down into the detail needed to assess why certain things are occurring in your environment. For example, if a report shows that a particular server generates more errors than others, you can use these detailed reports to drill down and analyze the underlying root cause of those errors.

> Straightforward Licensing Model

Unlike many competing helpdesk offerings, Novell Service Desk features a straightforward licensing model. It’s available in two editions that address different requirements your organization might have. Novell Service Desk for Incident Management is geared toward IT departments primarily focused on day-to-day operations or a “keep it running” mode. This edition is designed to let you start taking calls and improving end user service very quickly.

Designed primarily for larger organizations or enterprises, Novell Service Desk for ITIL Service Management is ideal for IT departments that want to operate as a business within a business or focus on providing long-term services to the rest of their organization. You can easily move from one edition to the other by entering a new license key (no need to reinstall the product).

Additionally, Novell Service Desk includes many features for which competitors charge a premium, such as an end user portal (See Figure 5.), knowledgebase, user contact to service desk via e-mail, technician status updates to users via e-mail, and connectors for directory services and ZENworks Configuration Management. (See Free Licenses)

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**Self-help user portal**

*Figure 5:* The customer portal lets users submit service requests and check on the status of existing requests.
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Novell Service Desk gives you a complete, ITIL v3-based best practices service desk solution that can reduce your mean time to repair, while helping you continually improve your service management environment.

> Complete Service Desk Solution
Novell Service Desk gives you a complete, ITIL v3-based best practices service desk solution that can reduce your mean time to repair, while helping you continually improve your service management environment. It streamlines and automates service desk functions, while enabling you to submit, solve, track and manage requests via e-mail, PDA or a convenient customer portal. It gives you the high visibility and accessibility you need among all your core processes, and it creates a customer-focused environment where your service and support issues can be managed according to your service level agreements.

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- Novell Service Desk
- Novell ZENworks Configuration Management
Following the merger of its two constituent companies, the new business of SUMOL+COMPAL needed to implement a uniform IT infrastructure that it could deploy with minimum disruption. By implementing SUSE Linux Enterprise Server to support its main business platform, the company benefits from lower costs, while ensuring high availability and security.

> Overview
Formed by the merger of Portuguese companies Sumolis and Compal, SUMOL+COMPAL combines the two organisations’ extensive portfolios of some of the best-known brands in Portugal. Specializing in non-alcoholic beverages, the company employs 1,400 people and achieves an estimated annual production of 500 million liters.

> Challenge
Following the incorporation of SUMOL+COMPAL, the new organization faced the challenge of integrating its constituent companies’ IT infrastructures. With Compal using Novell technologies, and Sumolis on a proprietary UNIX platform, the company wanted to migrate its core business applications to a standardized solution that it could implement with minimal disruption to ongoing operations.

> Solution
SUMOL+COMPAL worked with Data Identity, one of its IT partners, to migrate critical SAP applications including SAP NetWeaver Business Warehouse and SAP Customer Relationship Management to SUSE Linux Enterprise Server on the company’s existing hardware. The company mainly operates Fujitsu Siemens servers.

> "As Compal employees already had extensive experience of using Novell software—and were very positive about its benefits—SUSE Linux Enterprise Server was immediately one of the front runners," said Dr. Luis Gravato. “When we discovered that the flexibility of the Novell operating system meant we could use it with practically any type of hardware, it became the most logical option, making the merger of our IT systems a relatively straightforward process.”

The migration of the SAP applications to SUSE Linux Enterprise Server took only three months, and caused no interruption to daily operations, with business users largely unaware that such a fundamental change was even taking place.
“We trusted Data Identity as their consultants knew our systems inside out, and they championed Novell for its excellent support and easy implementation,” said Dr. Luis Gravato. “The rollout of SUSE Linux Enterprise Server ran smoothly, and there were no problems in getting drivers for our existing hardware.”

The simple licensing model for SUSE Linux Enterprise Server was a significant draw for SUMOL+COMPAL; the proprietary UNIX platform previously used by Sumolis required additional investments as new applications were added. By selecting SUSE Linux Enterprise Server, the company was able to take advantage of known licensing costs with no restrictions on user numbers or workloads. Additional cost savings emerged from the reduced hardware resource consumption and low management overhead offered by SUSE Linux Enterprise Server.

SUMOL+COMPAL was previously unable to leverage the advantages of virtualization. Implementing SUSE Linux Enterprise Server with built-in Xen virtualization technology has opened up new possibilities and enabled further expansion within the existing hardware footprint.

> Results
By standardizing on SUSE Linux Enterprise Server as its platform for SAP software, SUMOL+COMPAL has gained a flexible operating environment that offers enterprise-class reliability, availability and vendor support. The company was able to deploy the Novell operating system on its existing Fujitsu Siemens hardware, eliminating the need to invest in new hardware.

The solution has also enabled the use of virtualization at no additional cost through the built-in Xen hypervisor. This has produced a number of benefits for SUMOL+COMPAL, enabling IT staff to consolidate hardware, simplify infrastructure management and maximize the utilization of existing resources.

“The cost savings associated with SUSE Linux Enterprise Server (Link to: http://www.novell.com/products/server/) have really impressed us, especially those produced by virtualization, which has proved a key element in our new streamlined infrastructure,” said Dr. Luis Gravato. “Sharing resources using Xen for virtualization has enabled us to get the most value from our server hardware investments, while enabling greater speed and flexibility in meeting new business requirements.”

With SUSE Linux Enterprise Server, SUMOL+COMPAL has complete freedom in choosing the future hardware platform for its SAP software, and can draw on both the highly active open source user community and on Novell technical resources for enterprise-class support.

“SUSE Linux Enterprise Server has proved perfectly suited to our needs, providing a truly flexible and high-performing solution that is the ideal environment to support the applications critical to our new merged organization,” said Dr. Luis Gravato. “The cost savings will grow as the years pass, because we now have a more compact infrastructure that costs less to run, maintain and extend.”
SUSE Linux Enterprise-based Technologies and IBM’s zEnterprise System
by Meike Chabowski

An Open-Ended Holistic Partnership.
Server proliferation is a widespread industry and data center problem. Whether horizontal, with ever-multiplying racks; or architectural, introducing disparate special-purpose architectures—it causes problems. It’s expensive, with minimal economies of scale; it’s fragmenting, expanding the number of vendors dealt with; it’s difficult, involving staff training and specialization; it’s complex, requiring obscure networking connectivity; it’s time-consuming, since physical servers can’t be provisioned quickly or automatically; and it’s environmentally unsound, increasing power and cooling requirements. Running SUSE Linux Enterprise-based technologies on an IBM zEnterprise System can become the perfect remedy to this widespread challenge.

> Linux Quietly Conquers
While Linux still lacks major brand recognition—devices such as Amazon’s Kindle, Google’s Android, TiVos, the world’s Internet servers, and mainframes usually lack “Linux Inside” labels—it’s quietly become everywhere. From x86 to mainframe, from netbook to desktop, from network router to Internet server, Linux is the desktop-to-data-center platform that standardizes environments and simplifies management across systems.

This proliferation provides striking simplicity, benefits, value, efficiency, and economies of scale/skills/knowledge—but only if managed correctly.

> The New Linux Math: zEnterprise System = z196 + IFL + zBX + SUSE Linux Enterprise + zManager
 Fortunately, once again for mainframes, what’s old is new again.

When System/360 began the mainframe era almost five decades ago, supporting both commercial and scientific computing, information technology was simpler than it is today. To accommodate diverse workloads, rather than defining a “one size fits all” solution, S/360 provided a standardized universal architecture available in models ranging from small to massive. Today’s System z represents the inclusive mainframe heritage which began with System/360. And instead of being an obsolete and dying technology, System z supports the massive cumulative investment in mainframe applications and systems—what might be called z/Legacy—and a new approach to enterprise computing.

Announced mid-2010, the IBM zEnterprise System consists of the new z196 hardware generation, the zEnterprise Unified Resource Manager (zManager), and the zEnterprise BladeCenter Extensions (zBX). It’s a powerful and integrated hybrid system architecture.

The z196, delivering up to 50 BIPS (billion instructions per second), is ideal for data and transaction serving for mission critical applications. The lowest-cost platform for large-scale Linux consolidation, it benefits from a large portfolio of z/OS and Linux on System z applications, as well as those for z/VM, z/VSE, and z/TPF.
The Integrated Facility for Linux (IFL) is a full-capacity processor uniquely dedicated to Linux workloads on IBM System z servers. It is supported by IBM’s z/VM virtualization software and Linux; because it cannot run other IBM operating systems, its workloads do not increase IBM software charges for traditional System z operating systems and middleware. An IFL allows you to buy a single software license and share it across many Linux virtual machines. You are charged only for a single processor license, which can mean huge software license savings.

Providing another functional dimension, Linux on System z adds industry-wide open standards to the unmatched power of IBM System z servers. Proven in demanding real-world settings for more than a decade, the first supported enterprise-class Linux operating system was SUSE Linux Enterprise Server for System z. Running this proven operating system on a z196 helps lower IT costs by supporting massive consolidation, while concurrently running diverse mission-critical and infrastructure workloads.

IBM’s zBX provides additional integrated infrastructure to the mainframe, managed by the zManager. Built with certified standard components, tested and packaged together, it extends proven System z qualities of service and management capabilities to workloads running on select general purpose POWER7 blades running AIX, IBM x86 Blades running Linux¹, and workload accelerators. The zBX connects to the z196 through a secure, high-performance, private network; it hosts high-performance processors for specific workloads, such as IBM’s Smart Analytics Optimizer for DB2 for z/OS.

When IBM will make available the IBM x86 based servers for zBX later this year, SUSE Linux Enterprise Server will be fully supported on this platform. SUSE Linux Enterprise Server will be fully supported on this platform. SUSE Linux Enterprise Server integrates the latest virtualization technologies to provision, deprovision, install, monitor, and manage multiple virtual machines (VMs) on a single physical system. It includes full commercial support for Kernel-based Virtual Machine (KVM), an open source full-virtualization solution for Linux on zEnterprise z196 and zBX x86 hardware, and also provides the current Xen hypervisor version.

For maximum flexibility, SUSE Linux Enterprise Server supports all leading open source and proprietary hypervisor technologies and is the optimal host for a virtualized IT infrastructure or the “perfect guest” operating system.

zManager is an integrated System z management facility which centralizes resources and workload management on zEnterprise, extending System z qualities of service across the full system infrastructure. It provides simplified hypervisor installation, a factory-installed and configured network, simplified energy management resource allocation, priority adjustments based on customer business-related policies, and flexibility and consistency of virtualization.

Software Appliances Simplify Adding Powerful Capabilities

Software appliances are system servers, utilities, and product versions packaged with just enough operating system (JeOS) to perform specific desired tasks. These integrated software applications and purpose-built operating systems contain everything needed to install and boot on standard industry platforms. Preconfigured combinations of applications and operating system integrated into a single image and optimized to run on industry-standard hardware, these compact, self-contained, and self-sufficient tools deploy in minutes, requiring only simple final setup.

¹ At launch of IBM zEnterprise System, IBM had announced as a statement of direction the availability of zBX running Linux on x86 blade servers for 2011.
Appliances are much easier to maintain than traditional software installations and ensure effective configuration and installation. In addition, appliances management is simpler because support teams need not debug complex system environments or distribute software patches not relevant to particular applications.

Since most applications don’t require extensive operating system capability, software appliances offer an unprecedented opportunity to reduce application and operating system footprint, along with complexity of installation, maintenance, and support. This simplicity dramatically lowers the cost of customer hardware and software ownership and reduces development, installation and maintenance burdens for software vendors and corporate application developers.

Software appliances are an application developer’s or data center manager’s dream, because they’re:

- Simple
- Lightweight
- Reliable
- Efficient
- Tailorable
- Economical to develop and run

> Rapid Appliance Creation with SUSE Studio and SUSE Appliance Toolkit

SUSE Studio is the fastest and easiest way for independent software vendors (ISVs), IT staff, and developers to create, test, configure and showcase software appliances. It lets users quickly create and test fully supported software appliances based on SUSE Linux Enterprise. SUSE Studio creates images for almost any physical, virtual or cloud environment. With just a few mouse clicks it builds appliances and immediately publishes them in SUSE Gallery.

SUSE Studio eliminates inefficient manual approaches to application deployment by simplifying the process from creation to deployment. In minutes, SUSE Studio builds an appliance with an integrated, preconfigured, and fully supported enterprise-class Linux operating system ready for deployment anywhere from desktop to cloud.

SUSE Studio offers a simple, intuitive interface to build, test, share and download appliances using several starting-point templates, including SUSE Linux Enterprise Server and SUSE Linux Enterprise JeOS. Developers can configure and optimize operating system code needed for specific applications, improving performance, simplifying maintenance, and increasing security.

SUSE Appliance Toolkit provides a comprehensive tool collection for large and very large enterprises, reducing complexity of software deployment, maintenance and support. It is the most efficient way to improve the deployment and maintenance of software applications in physical, virtual and cloud environments. SUSE Appliance Toolkit includes SUSE Studio Onsite, a stand-alone version of SUSE Studio for large enterprises to build software appliances on SUSE Linux Enterprise Server. In addition, WebYaST enables remote configuration for SUSE Linux Enterprise Server via a Web interface. Based on YaST, it provides a framework for remote appliance configuration and creating custom configuration modules—such as license kill switches—embedded in appliances to meet unique remote management needs. Finally, SUSE Lifecycle Management Server, which is deeply integrated with SUSE Studio, is a simple and economical patch tool for creating, managing and updating software appliance repositories.
The SUSE Appliance Toolkit provides:
- Mass customization of the operating system
- Reduced deployment cycles
- Reduced maintenance cost due to reduced software updates
- Increased productivity of deployment and maintenance
- Complete control over the lifecycle of deployed systems
- Complete management and control of deployed software appliances
- Enhanced security with application control and timely updating

The technology to easily build scalable System z server images with the x86-based SUSE Studio/Appliance Toolkit will be made available later in 2011 and will be an ideal workload for zBX blade servers.

> **IBM’s Smart Analytics Optimizer**

IBM’s Smart Analytics Optimizer (IBM SAO) is a leading-edge example of a SUSE Linux Enterprise-based appliance, built with SUSE Studio technology. Running in the zBX, it’s a high performance, integrated, centrally managed hardware/software accelerator for delivering dramatically faster (5x-80x) analytic query responses.

A workload-optimized database add-on, IBM SAO couples business insights with operational processes by connecting to DB2 for z/OS through deep integration, providing application transparency and accelerating select queries yielding unprecedented response times.

It enables “train of thought” analysis, letting decision makers perform the sort of business analysis never before possible—analyzing trends, predicting outcomes and producing fundamentally better business results. IBM SAO provides:
- Rapid information access to decision makers
- Hybrid computing architectures with fit-for-purpose work allocation
- Ultra-efficient in-memory processing
- Massively parallel architecture
- Optimal row-and-columnar storage technologies
- Highly compressed data and compressed data operations
- Seamless DB2 z/OS connection
> The Perfect Comprehensive Fit-for-Purpose

IBM zEnterprise System combines previously separate architectures into a "system of systems" configured, managed and operated holistically. Complementing this unique hybrid approach, SUSE Linux Enterprise Server from Novell provides the most interoperable and ubiquitous operating system foundation for mission-critical computing. Leadership in systems and application development and operation makes SUSE Linux Enterprise the perfect fit for zEnterprise’s groundbreaking technology, which blends heterogeneous architectures into a unified system. SUSE Linux Enterprise Server is the ideal environment for maximizing capabilities, productivity and reliability of all IBM zEnterprise System components.

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- SUSE Linux Enterprise Server
- SUSE Studio
Who’s on First? Beyond the “Who,” “What” and “I Don’t Know” of Identity Management
by Richard Whitehead

Costello: “Look Abbott, if you’re the coach, you must know all the players.”

Bud Abbott and Lou Costello were comedic geniuses. Their classic “Who’s on First?” routine can depict what it’s like to attempt a move to cloud computing without first establishing an enterprise-ready foundation of identity.

Before you consider moving workloads around, you need to know who has access to what, what proprietary data is in the workload, what will happen once the workload has executed—as well as a host of other important characteristics and processes necessary to ensure reliable performance, security and policy compliance.

I realize this may seem like pretty basic info for many readers, but stay with me. I’ll get to the relevance of cloud computing and intelligent workload management (IWM) shortly.

> It’s a Whole New Ballgame
Today security just doesn’t work without identity. The whole point of IT security is controlling who has access to which resources, and what they can and can’t do with those resources. Without identity, it’s pretty tough to know: “Who did what to which resource?”

The traditional approach to IT security was one of trying to determine where a user was connecting from in order to authenticate them through the firewall and onto the network. That worked to an extent in its time. But today, partners and vendors often need access to the internal network—as do mobile workers. Location-based security simply wasn’t enough. At the same time, companies rely more on temporary workers at times when insider threats persist.

> Finding Out Who Is “Who”
Identifying who is granted access is now a well-understood concept. Employees, partners and vendors are all given identities at this point, and most organizations understand their roles. Companies have invested millions of dollars in order to define policies that limit what people in these roles can and can’t do.

The creation of user identity had some beneficial “side effects,” allowing companies to simplify and automate the process of provisioning and deprovisioning users. This saves time and money while increasing security and compliance. For example, now when a sales person leaves to go work for the competition, you can make sure that their access to your customer lists is turned off. This can be automatically triggered by an event, such as an employee termination from human resources.

> Identity Doesn’t End with the Living
Identifying people is only the first step. Identities must go beyond “who” to include “what.” That’s because you must be able to manage what it is people have access to. Identities must be assigned to technology resources—everything from desktops, laptops, printers and storage
devices to databases and line-of business applications. Even virtual and cloud resources need identities.

Once you have the “what,” you can begin making intelligent security decisions and putting policies in place to control who has access to what.

> The Identity-Infused Enterprise

Still, even this level of identification is not enough to truly control access to your network. You also need to be able to tie identity to actions. Then, and only then, can you actually answer the question of “Who did what to which resource?”

For example, you can now not only determine if users can connect to the network via the Internet, you can also control their exact level of access when doing so. In the data center, you can granularly control who can perform what actions on physical servers, virtual machines, applications, processes and stored data.

With identity infused into your enterprise IT environment, you can now understand the context of people, actions and resources—and make the right security decisions.

> Intelligent Workload Management

With WorkloadIQ from Novell, identity is what puts the intelligence in intelligent workload management (IWM). It intelligently controls access to resources and applications—whether in the data center, on the road or in the cloud. And it provides the tools to ensure enterprise security policies are consistent across different systems. Giving workloads identities can also ensure performance metrics and service levels are met for business-critical applications—an important capability when you’re not exactly sure where a workload may be running.

> So What Does All of This Have to Do with the Cloud?

As you extend to the cloud, identity provides an increasingly important role in enterprise computing. For one, identity continues to simplify and automate user account provisioning and deprovisioning, as you work with managed service providers and their external infrastructures.

Regardless of where you are with cloud-deployment today, infusing your enterprise with identity will help you push intelligent workloads beyond your firewall with confidence when you’re ready. Without errors or confusion.

IDC agrees. According to IDC, security and identity and access management are critical factors to the success of cloud computing. In essence, what their analysts have said is that you need those capabilities integrated into your own systems, devices, operating systems, middleware and applications before you can venture into any public cloud with confidence.1

> Infusing Identity into Workloads with Identity Manager 4

Identity is the common characteristic that spans all information systems—physical, virtual and even cloud-based. That’s why Novell believes identity is the point of integration for intelligent workload management.

Identity management products such as Novell Identity Manager 4 greatly simplify this process by automating provisioning, user access and policy management. Novell Identity Manager 4 positions your enterprise for the future of cloud computing by extending identity management across SaaS applications and other resources beyond your firewall through our connectors. You can automatically provision and deprovision access to cloud resources and roll out new applications with the intelligence and efficiency you expect from Novell.
Who’s on First? Beyond the “Who,” “What” and “I Don’t Know” of Identity Management

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> Keeping Track with Novell Sentinel
Providing service beyond simple security monitoring, Novell Sentinel collects, correlates, monitors and displays data from thousands of events per second in real time. This is essential for government applications and compliance regulations such as PCI-DSS, SOX and FISMA. That way, you always have up-to-the-minute reports on the health of your organization’s security and compliance right at your fingertips. Moreover, by identifying highly confidential workload data that is outsourced to a cloud provider, you can know with certainty who has accessed that data—and be sure that no cloud-provider employee has been perusing your proprietary information after hours.

> Getting the Last Word In
Costello may never have quite understood Abbott’s explanation of who was on first base. But with intelligent, identity-infused workloads, you can confidently take your business to cloud, knowing the “who” and “what” and avoiding all the “I don’t knows.”

-Richard


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