

Centerity – First Predictive BSM for SAP HANA

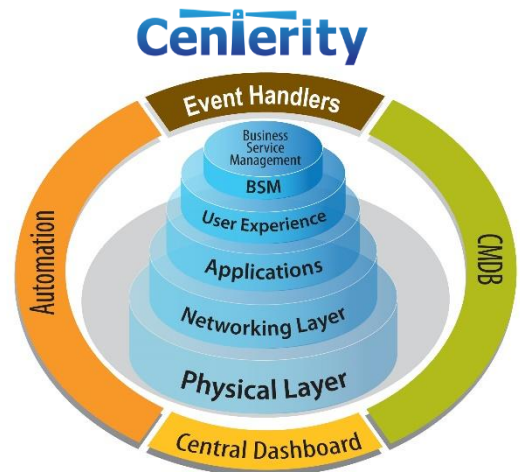
Technology cooperation between SAP Co-Innovation Labs and Centerity brings holistic Business Service Monitoring (BSM) monitoring capabilities to the entire SAP environment including SAP ERP, SAP Infrastructure and SAP HANA. Centerity Monitor has been tested by SAP Labs and this document describes that testing process and SAP's conclusions.

SAP HANA – More Options! More Demands!

SAP has recently introduced the **SAP Business Suite, BW** and other SAP solutions on **HANA DB platform**. This introduction highlighted the critical needs of SAP clients and integrators for **SAP HANA** comprehensive monitoring capabilities with the ability to comply with customers' business services management standards.

Business Service Monitoring (BSM) is one of the essential tools that allows IT and Business Units to create a holistic approach to complex enterprise services aligning expectations to deliver and required levels of service availability and performance for both external and internal customers (SLA/OLA).

SAP Co-Innovation Labs in Israel moved to full SAP HANA integration due to the evolving complexity of service topology involving multiple, hybrid components such as Hardware, OS, Networking, System, Applications and more.



Centerity Monitor – First Predictive BSM per SAP Labs!

Centerity's BSM solution was chosen for this integration over several other vendors due to the fact that Centerity is an established player in this domain and already has "out of the box" monitoring capabilities to SAP Systems (e.g., CCMS-based monitoring). Centerity was challenged by SAP to demonstrate the rapid implementation capabilities of its BSM solution within the existing service environment of SAP Co-Innovation Labs Israel and the ability to integrate HANA KPIs into its monitoring solution. While modern IT monitoring solutions provide various features, the focus of this SAP Co-Innovation Labs integration was the enablement of **full BSM stack monitoring** for a HANA-based environment.



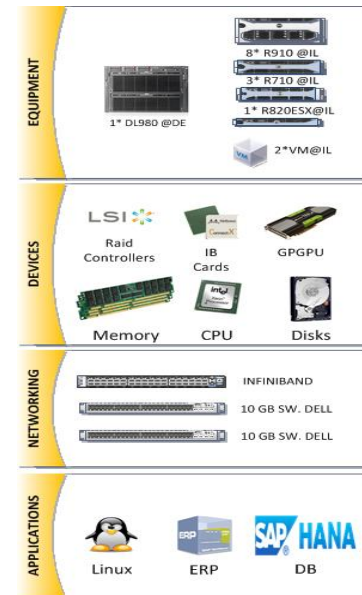
Centerity Monitor:
Best Extensibility –
Medium Deployments
EMA Radar™ for ENMS Q4-2012



EMA Radar for ENMS
Medium Deployments: Q4-2012
Centerity

SAP's Testing environment of Centerity:

- 15 Monitored servers in two locations (Israel and Germany).
- Networking Equipment: DELL SW + INFINIBAND.
- Monitor Selected Internal HW resources: GPGPU, LSI & PERC Raid Controllers, Disks, CPU, Memory and more.
- OS: Linux.
- Applications: ERP and HANA DB.
- The equipment described in the images on the right was successfully integrated with Centerity Monitor.
- More than 600 services were monitored in parallel during testing.



Centerity's Added Value to SAP:

- Centerity delivered an enterprise-class BSM solution based on Multi-Level SLA monitoring of every component in the application environment (e.g., HW, OS, Network, Applications, User Experience, etc.) including applicable **Public and Private Cloud** assets.
- Centerity provided *“out of the box”* integrate to existing customer Applications, Scripts & open-source plugins.
- Operations Team gained clear, comprehensive views and control over processes.
- Centerity supported agent-based and agentless monitoring.
- Centerity's BSM solution was scalable and could grow with customer needs.
- Centerity's BSM solution delivered various performance metrics, alerts, reports and availability statuses over different timeframes.
- Centerity provided a *“single pane of glass”* for failure identification allowing for immediate failure identification in corresponding components and layers.
- Interactive Dashboard Maps allow real-time interaction with the monitored objects (e.g., based on geo locations).

SAP - Centerity in-depth Integration Layers:

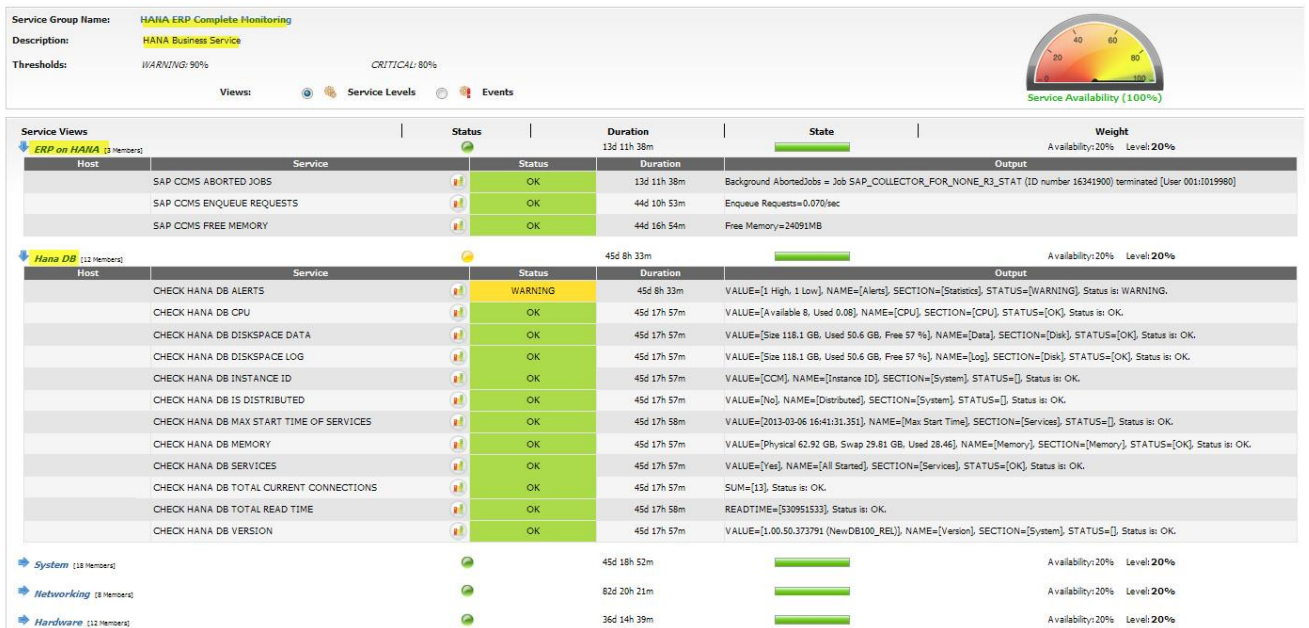
ERP Powered by HANA Application Monitoring Solution based on three levels:

- **Application** – ERP is monitored through CCMS service (existing tool).
- **Database** – The driver was designed and developed by Centerity and SAP labs with complete customization to SAP HANA tables.
- **HANA Processes-Monitoring based on OS level** – Centerity validates that HANA and ERP processes running normally.
- **Additional Services** were monitored on top of the application and DB service layers.

HANA DB Customized Monitoring Service Pack:

- Centerity Monitor was integrated with **SAP HANA DB** by using a highly customizable special driver on UnixODBC and Perl DBD/DBI.
- The CSP allows for the transfer of **full DB Server Connect Parameters & Credentials** and SQL queries as an argument with return values and running statuses.
- The query results were parsed and converted into performance values generating reports and alerts through management service.
- Additional logic was added to support different types of output.

SAP HANA – ERP Business Service Console:



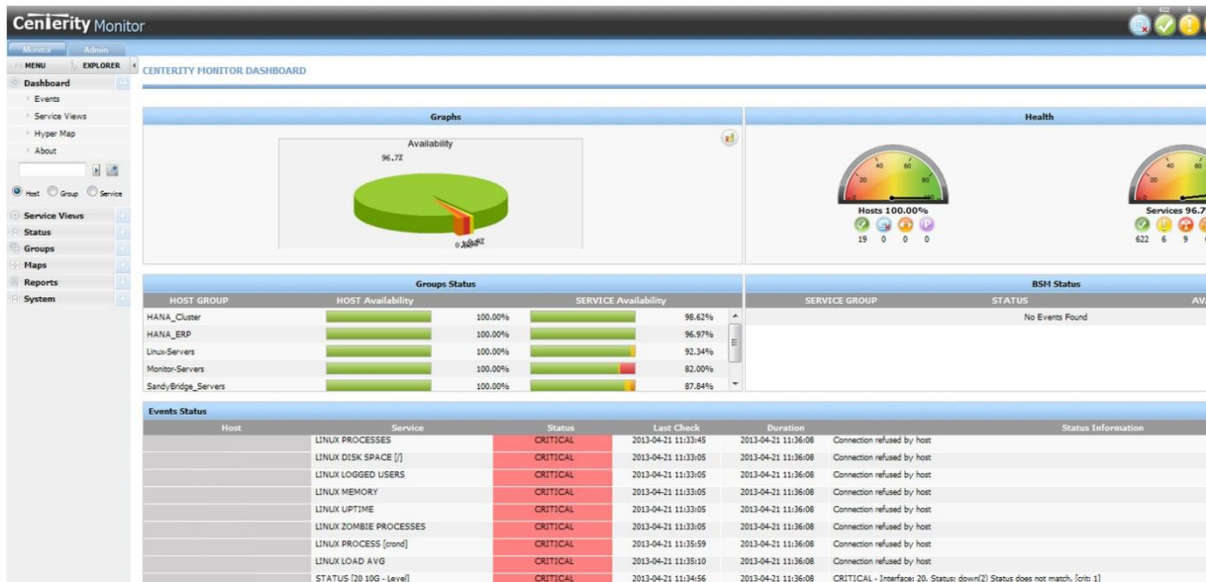


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SAP - Centerity Integration: A "Single Pane of Glass" for the Entire SAP Environment



SERVICE VIEWS DASHBOARD

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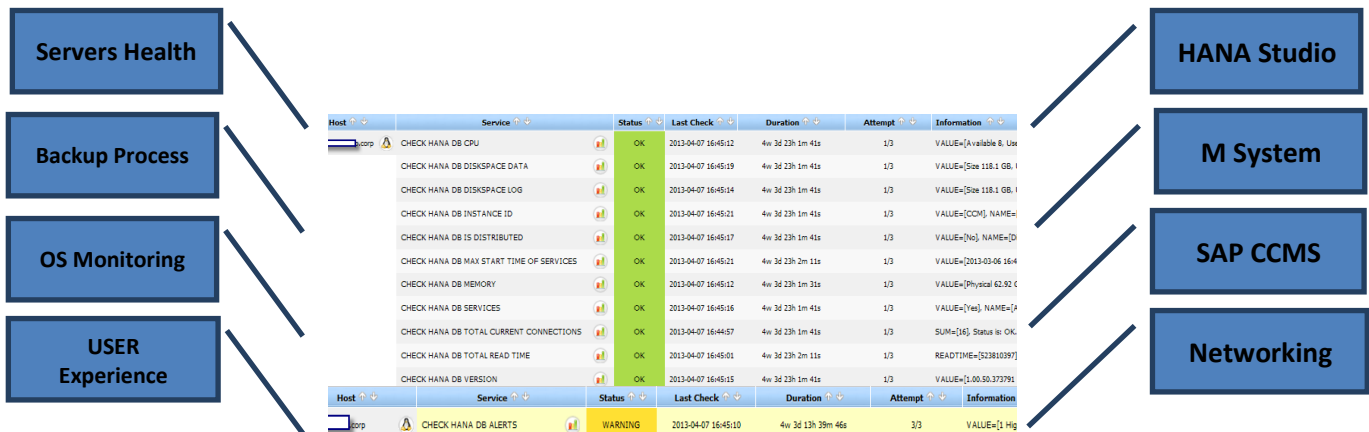
HANA ERP Complete Monitoring



HANA Distributed Landscape



Linux Load Average



SAP's Conclusions

Installation and Deployment

- Centerity was delivered as a software appliance that can be installed on physical or virtual servers.
- The initial setup took only one day and included connections to all SAP Labs equipment including custom hardware, Server Management Interfaces, LSI storage Adapters and Switches. During the 30 testing days, the performance of the monitoring services remained fast and responsive. SAP monitored more than 600 services in 5 minute intervals. The complete setup took two days.
- HANA plugin configuration was done through management and it allow for the instant creation and execution new SQL-based queries for KPI monitoring.
- Agent installation was straight forward.

BSM Service Configuration

- BSM configuration was a straight forward process which allowed for defining scores, breakdowns and layers based on existing monitored topology.
- Centerity provided SAP ERP monitoring out of the existing CCMS Features Service Pack which worked “*out of the box*” with our SAP ERP system. With almost no effort, non-standard plugins (e.g. gpgpu, Dell servers mgmt. interface), SNMP for our Mellanox and DELL switches were integrated into the BSM.

Usability and Management

- Advanced UI facilitated the immediate enablement of new monitoring KPIs by incorporating output analysis from plugins with regexp for parsing output values and assigning threshold.
- Advanced UI for power user provided many convenience features for monitoring service administrators and consumers, e.g., customization of org roles and responsibilities.

Overall Experience

- The solution surprised us by reducing the monitoring management effort to a minimum.
- The solution delivered monitoring and alerts in visual and intuitive ways allowing us to see problems clearly as these arose.
- BSM services allowed correlate between components in very convenient way.

SAP Runs Even Better With Centerity!

About Centerity

Centerity Systems, Inc., (www.centerity.com), headquartered in Needham, MA USA, is the pioneering developer of All-in-One, enterprise-class and carrier-class monitoring solutions for critical information systems and IT infrastructure. While changing the rules of monitoring by providing a next generation unified platform, Centerity enables IT organizations in all market verticals to simplify all aspects of infrastructure and networking monitoring and information flow. Centerity's advanced features provide accurate measurement of performance and availability as well as End-User Experience Monitoring, Business Service Management (BSM), Inventory Management and dynamic threshold management. Centerity is the Top Value Leader in EMA's Q4-2012 Enterprise Network Monitoring Systems Radar Report and won EMA's Special Recognition Award for Best Extensibility in the Medium Deployments category.



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