Centerity: Monitoring Business Critical Big Data Applications (SAP HANA, Hadoop) on FlexPod

Big Data is typically defined as data that is beyond the ability of conventional tools to process and analyze it. While challenges exist, big data can create new and different organizational insights; thus, many organizations are choosing SAP HANA or Hadoop (or both!) to deliver on their Big Data objectives. As is typically the case, these new technologies also introduce new challenges. Some of these reflect staffing and skillsets deficiencies, the need to maintain multiple systems, and a lack of experience in optimizing and fine-tune the infrastructure to support these new applications.

FlexPod® provides a pretested, low cost solution that is fully integrated containing Cisco® Unified Computing System™ (UCS™) C-Series servers, NetApp® FAS Storage, Cisco Nexus® switches, and Cisco UCS Manager for an affordable, easy-to-deploy infrastructure solution. This solution can reduce the number of servers and storage capacity required for Big Data applications, simplify the overall infrastructure and present an optimized architecture with best-of-breed components. FlexPod's unique solution provides for: (1) simplified management; (2) higher availability with less downtime; (3) flexible workload designs; (4) resiliency with hot spares and RAID protection; (5) improved storage efficiency and (6) efficient scaling.

Notwithstanding the foregoing, with the introduction of Big Data platforms like SAP HANA and Hadoop, the need to simplify operational complexity, reduce MTTR and OPEX has never been greater. What is needed is a business intelligence layer across the entire IT environment (physical, virtual, application and cloud) to give both management and administrators real-time actionable intelligence regarding the status and performance of its key business processes. This involves collection performance metrics not just from the infrastructure layer but also from the application layer *plus* the ability to correlate these metrics across these domains and present real-time operational analytics in a clear, intuitive way.

Centerity™, through its Business Service Management (BSM) capabilities, can correlate performance metrics across *all* technology domains to display the status of critical business processes via executive dashboards as well as provide impact, trend and root cause analytics for comprehensive service assurance. To meet organizational service level requirements, two key capacities are essential. First is the ability to anticipate problems and trigger an automated intervention *before* warnings become critical. This is implemented by having both static and dynamic threshold alerts in place on both individual metrics and on overall business processes. Second, because incidents usually impact more than one application, service dependency maps are key to performing rapid, root cause analysis. Centerity provides

Business Benefits

Faster Time to Value:
- Prevalidated and Preconfigured
- Create New Business Incites
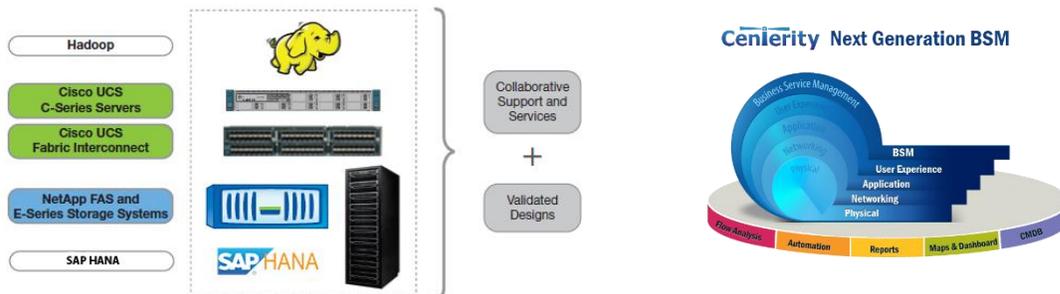- Focus on Strategic verse Tactical Issues

Better Big Data:
- Industry Standard In Memory Computing: SAP HANA
- Leading Hadoop Distributions: Cloudera, Hortonworks, MapR

Reduce Complexity, MTTR & OPEX with:
- IT Operational Analytics
- End-to-End Business Intelligence
- Customizable Executive Dashboards

continuous threshold checks and alerts that can trigger an automated response based on the service dependency profiles on the platform.

FlexPod has been pretested and jointly validated with SAP HANA and with leading Hadoop vendors including Cloudera and Hortonworks. Likewise, Centerity has been certified by SAP as well as Cloudera, Hortworks and MapR. These pretested and validated platforms combine to create a very short time-to-value (TTV), low Total Cost of Ownership (TCO) and rapid Return on Investment (ROI).

Centerity Monitor, a unique unified platform delivered as a single software appliance, provides an end-to-end, single-pane-of-glass performance view of all physical, virtual and cloud assets and applications deployed. It provides real-time IT operational analytics with systemic health views and live statuses of key business processes including drill-down capabilities through service dependency maps for rapid root cause analysis. IT operational analytics provide transparency, control and measureable service level status. Centerity Monitor provides automated scheduling for SLA/OLA compliance reporting and proactive alerting on the entire SAP business environment including SAP HANA, SAP R3 and other applications supporting tailored executive and operator dashboards. Centerity Monitor gathers information from Cisco UCS Central Software and Cisco UCS Manager which is continuously correlated with SAP HANA KPIs, applications KPIs (SAP ERP), operating systems performance KPIs (SUSE Enterprise Linux), network status (Cisco Nexus) and NetApp FAS / AFF storage status to provide complete executive business service views.

Centerity provides this same functionality on Hadoop ecosystem components and services such as:

- HDFS
- Hue
- Oozie
- Sqoop

- HBase
- Impala
- Solr
- YARN

- Hive
- KS Indexer
- Spark on YARN
- ZooKeeper

For Service Providers (MSP/CSP), Centerity Monitor helps accelerate the rapid rollout of new managed services in the Big Data Layer. Centerity provides automatic VMware topology discovery, intuitive Business Service Management (BSM) view creation, comprehensive inventory discovery via proxy agent and proxy network discovery, automatic discovery with KPI assignment, service dependency mapping, dynamic drill-down root cause analysis, advanced ticketing management, CMDB and enhanced real-time visual layouts.

More Information:
- Cisco Delivering Holistic BSM for SAP HANA
- Cisco FlexPod for SAP
- NetApp FlexPod Select with Hadoop
- NetApp Maximize IT Responsiveness. Minimize Risk. Leverage Pre-validated FlexPod solutions from NetApp and Cisco: Solutions
- Centerity Monitor Unified Monitoring Platform
- Centerity Monitor for SAP HANA Solutions
- Centerity Solution Overview on Hortonworks