Management Pack for Oracle Coherence

Oracle Enterprise Manager is Oracle’s on-premises management platform, providing a single pane of glass for management of Oracle environments, whether in customer data centers or in Oracle Cloud. Through deep integration into Oracle’s product stack, Enterprise Manager provides market-leading management and automation for Oracle engineered systems, databases, middleware, and hardware.

Increase business agility through application to disk automation and hybrid cloud management. Maximize service levels through intelligent management of the Oracle stack performance and availability. Reduce costs through comprehensive lifecycle automation, combined hardware and software management, proactive monitoring and compliance control.

HEALTH AND PERFORMANCE DASHBOARD AND HEAT MAP

Oracle Coherence is an in-memory data-grid and distributed caching solution. Oracle Coherence is composed of many individual nodes or JVMs which work together to provide highly reliable and high speed virtual caching. The complexity of the cluster is completely hidden from the user of the virtual cache. While this greatly benefits developing highly available and efficient applications, it also poses a serious
challenge for an administrator responsible for monitoring and maintaining the Oracle Coherence Clusters.

Oracle Enterprise Manager provides detailed visibility into performance of all the artifacts such as Coherence Caches, Nodes, and Services. A Cluster level dashboard view provides near real-time status of the Cluster, Nodes, and Caches. It also displays key metrics over time and top components charts based on a selection of critical metrics (e.g.: Top Nodes by CPU usage, top Caches by hit/get ratio, top Services by largest number of backlog tasks). A summary view of Hosts and Services including their status (Endangered, Machine safe, Site safe, etc.) is also available in the Cluster dashboard. Using topology view, operational teams can quickly correlate cluster nodes with the underlying hosts to determine CPU and memory utilization on those hosts in order to make better decisions for scaling their clusters.

MONITOR THE CLUSTER PERFORMANCE HOTSPOTS

For preventive monitoring it is critical to get alerts on the performance issues. Using the Incident system in Enterprise Manager, users can set threshold on metrics to create events that can trigger rule based incidents and notification presented on the console or by various other mechanisms such as email, mobile text, SNMP trap, etc.
Oracle Enterprise Manager also provides highly customizable performance views for monitoring performance charts and trends. Administrators can overlay metrics for multiple nodes or caches in the same or different cluster for detail analysis to provide detailed visibility at the desired level. Nodes, caches, services and Oracle*Extend connections are displayed via drill down views that allows administrators to determine the root cause of performance problems or simply identify performance trends in the Coherence Cluster.

CONFIGURATION AND LIFECYCLE MANAGEMENT

Oracle Enterprise Manage provides a complete provisioning and configuration management solution for Oracle Coherence. Administrators can maintain their Oracle Coherence setup image in the software library and deploy it throughout their infrastructure to create new clusters or add nodes to an existing cluster.

Oracle Enterprise Manager collects the nodes and caches configuration periodically. Users can search and compare configuration items across multiple clusters (such as production cluster vs. QA cluster), and even be alerted on configuration changes. Getting visibility into the configuration of caches and services helps identify issues which could be affecting the application performance. E.g. if the service task backlog is consistently high, an administrator can quickly find out the thread pool configuration of the service and decide if the bottlenecks are caused by lack of adequate threads. Similarly, cache configuration parameters such as high units and low units, indicate the cache capacity configured on the node.

CENTRALIZED CONSOLE FOR COHERENCE QL

Administrators routinely have to find out if entries pertaining to certain filter criteria are available in the cache. Oracle Enterprise Manager provides a centralized console to run Coherence QL on the caches. The queries can be stored for easy access. Administrator can also check the performance of the queries using Query Trace and Query Explain Plan features. These functions indicate how the indexes are used for the selected Coherence QL query.

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