

ORACLE ENTERPRISE MANAGER 10^g SYSTEM MONITORING PLUG-IN FOR VMWARE ESX SERVER

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SYSTEM MONITORING PLUG-IN FOR VMWARE ESX SERVER DELIVERS:

- Out-of-box availability and performance monitoring for both ESX Servers and Guest Virtual Machines
- Detailed configuration information collection and analysis
- Out-of-box reports for easier problem diagnosis, trend analysis and capacity planning.
- Advanced monitoring and event management features:
 - Monitoring Templates
 - Corrective Actions
 - Notifications
 - Dashboards
- Automated Administration
 - Prepackaged jobs to Start/Stop/Pause/Resume Guest Virtual Machines
 - Maintenance mode for ESX Servers

Virtualization is a reality today. As more and more data centers consolidate through virtualization, the management of those environments becomes a challenge. With the System Monitoring plug-in for VMware ESX Server, Oracle Enterprise Manager takes the first step towards managing complex virtualized environments. The plug-in brings Enterprise Manager's rich and comprehensive set of system management features for monitoring, configuration management, and administration to VMware environments resulting in better manageability and lower cost.

Real-time Monitoring of Virtual Resources

The System Monitoring Plug-in for VMware ESX Server monitors availability as well as performance of ESX Servers and Guest Virtual Machines running on them. Some of the key performance indicators collected include CPU Utilization, Memory Utilization, Disk I/O and Network Throughput for both Servers and Guest Virtual Machines. It is not required to deploy a Management Agent onto the ESX Server due to the remote monitoring design. In addition to real-time monitoring, Enterprise Manager also stores metrics in a management repository allowing administrators to get historical views, thus, facilitating trend analysis and reporting.

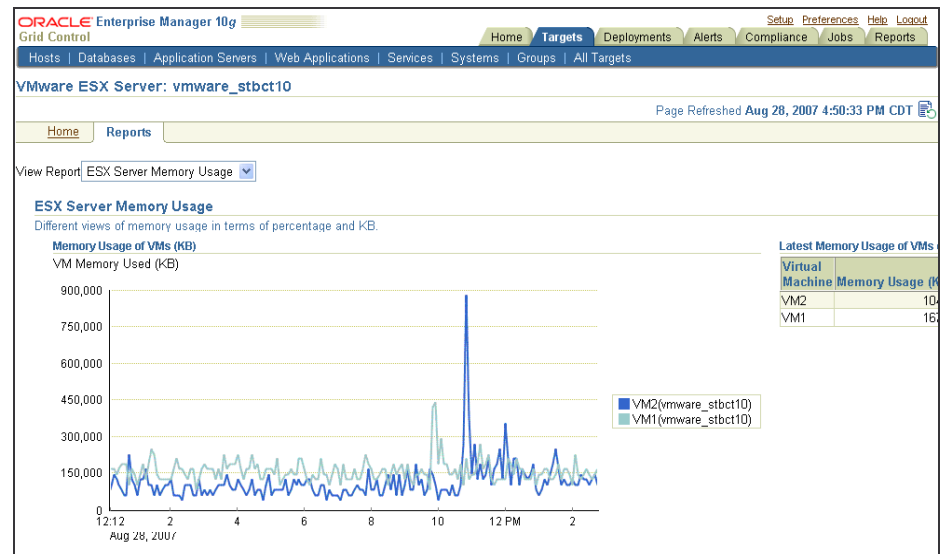


Figure 1: Report comparing memory utilization trends for two Guest Virtual Machines

One Centralized Console to manage both Physical and Virtual Environments

The System Monitoring Plug-in for VMware ESX Server complements Grid Control's existing support for host systems. Administrators can now manage both physical and virtual server components from one centralized console eliminating the need to compile and relate critical information from several different tools. This streamlines the correlation of availability and performance problems across the entire data center and reduces the total cost of ownership. Administrators can view relationships between Guest Virtual Machines and servers, and take decisions to balance resources to avoid saturation or overloading of servers.

Exception-based Management of Critical Events

The System Monitoring Plug-in for VMware ESX Server collects nearly 50 out-of-the-box metrics with pre-defined thresholds to allow administrators to derive instant value, while also giving them the flexibility to fine-tune these thresholds according to their specific operational requirements. Enterprise Manager can then raise alerts based on these thresholds.

- **Monitoring Templates:** Administrators can create a customized set of monitoring settings—metrics, thresholds, metric collection schedules, and corrective actions—that are appropriate for their environment, save these in a monitoring template, and apply these template settings to multiple ESX Server instances.
- **Corrective Actions:** Oracle Enterprise Manager offers corrective actions as a way to automate responses to alerts or events, eliminating the need for operator intervention and minimizing human error.
- **Notification Rules, Methods and Schedules:** Administrators can define when and how they should be notified about critical problems in system components, ensuring quicker problem resolution.

Configuration Management of Virtual Environments

Tracking configurations is one of the most time-consuming and difficult tasks administrators face on a daily basis. Being able to quickly view a detailed configuration snapshot, analyze historical changes and enforce standardization between systems is key to diagnosis, auditing, compliance, and making solid business decisions.

System Monitoring Plug-in for VMware ESX Server simplifies these tasks by:

- **Automatically collecting detailed configuration information** about VMware ESX Server, including the physical machine information, network interfaces, and file systems. This information is collected daily and stored in the management repository.
- **Automatically tracking all changes** to the VMware ESX Server configuration, helping administrators answer key questions about what changed, who is responsible for the change, and when the change was made.
- **Enabling enterprise-wide configuration comparisons** of VMware ESX Server instances, allowing administrators to quickly and easily pinpoint potential differences. This helps to keep systems synchronized and to reduce “configuration drift.” In addition, it simplifies investigations into why systems that are presumed to be identical, are behaving differently.

- **Allowing enforcement of policies** to automate detection of critical vulnerabilities and to continuously audit against prescribed configurations.

By tracking “what changed, when, and why” the Plug-in for VMware ESX Server enables administrators to bring servers back up to acceptable levels of performance and configuration compliance by applying appropriate solutions.

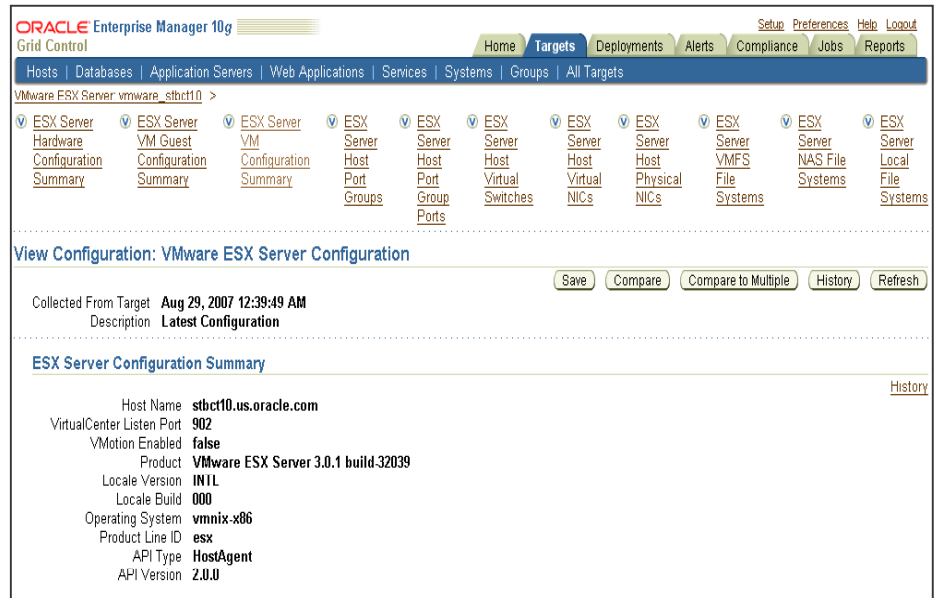


Figure 2: VMware ESX Server Configuration Management Page

Facilitated Administration of Virtual Environments

System Monitoring Plug-in for VMware ESX Server makes administrator’s job easier by giving them a top-down view of the applications running in virtualized environments. End-to-end visualization of IT resources facilitates optimal performance tuning and faster problem resolution. The Plug-in lets administrators

- Start/stop/pause and resume Guest Virtual Machines immediately or at a later time by taking advantage of pre-packaged Enterprise Manager jobs
- Set the ESX Servers in and out of maintenance mode
- Prevent unnecessary alerts from being raised during scheduled maintenance operations
- Manage ESX Servers “many-as-one” by taking advantage of Groups/Systems

Groups/Systems significantly simplify management of large numbers of components, allowing administrators to combine ESX Server instances in groups. By including them in heterogeneous groups or systems, administrators can benefit from a wealth of group management features, such as ability to proactively monitor availability and alerts of all group members via the System Monitoring Dashboard.

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