

ORACLE ENTERPRISE MANAGER 10g: ORACLE MANAGEMENT PACK PLUS FOR SOA



KEY BENEFITS

- Reduces the time and effort required to set up application performance management
- Minimizes errors associated with manual application performance management processes
- Dramatically improves ability to keep up with environmental changes
- Significantly lowers total cost of ownership

Understanding complex service dependencies, monitoring consumer expectations, and controlling service ownership costs are the biggest barriers to effectively managing service-oriented architecture (SOA) applications and infrastructure. To overcome these challenges, administrators need solutions that increase service visibility and production assurance while lowering the cost and complexity of managing SOA environments. Oracle Management Pack Plus for SOA provides runtime governance through composite application modeling and monitoring as well as comprehensive service and infrastructure management functionality to help organizations maximize the return on investment from their SOA initiatives.

Harness the Value of BPEL and Service Bus Applications

As the use of SOA becomes commonplace in today’s IT infrastructures, organizations are increasingly choosing Business Process Execution Language (BPEL) for modeling business processes in order to orchestrate the complex yet flexible world of Web services. When using BPEL, a service bus is required on the front-end to create a common layer for requests from various sources and provide a rich set of tools to transform and route data using a variety of protocols. By combining BPEL with a service bus, organizations can implement SOA solutions that might have previously been too difficult to achieve.

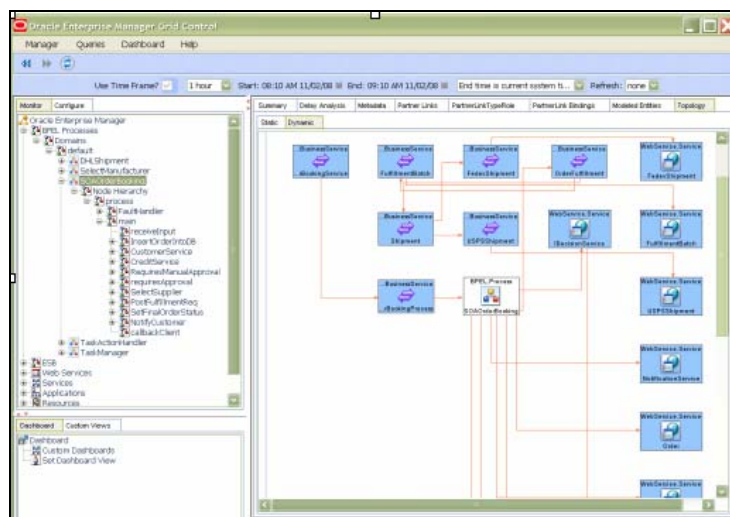


Figure 1: Oracle Composite Application Monitor and Modeler models BPEL process and Oracle Enterprise Service Bus services and their relationships over multiple topologies.

Once implemented and deployed, these complex SOA applications become critical to the success of an organization's IT infrastructure and the business services that depend upon them. Maintaining high availability and top performance is critical to continued business success. However, managing the performance and availability of these highly distributed, loosely coupled applications requires a unique application service management solution that can effectively address the complexities associated with composite application architectures.

Automate SOA Service Management

Oracle Management Pack Plus for SOA provides administrators with a consolidated browser-based view of the entire SOA environment, enabling them to monitor and manage all their components from a central location. This streamlines the correlation of availability and performance problems for all components across the SOA environment. Oracle Management Pack Plus for SOA integrates seamlessly with the Oracle BPEL Process Manager console, Oracle Service Bus console, and Oracle Business Activity Monitoring. With a rich set of service- and system-level dashboards, administrators can view service levels for key Web services, BPEL processes, Oracle Service Bus proxy and business services, as well as SOA infrastructure components.

Oracle Management Pack Plus for SOA allows you to manage your Oracle SOA Suite applications leveraging a model-driven "top-down" approach within your development, quality assurance (QA), staging, and production environments. Business application owners and operational staff can automatically discover and correlate your BPEL workflows to the underlying Web services, enterprise service buses (ESBs), and back-end Java 2 Platform, Enterprise Edition (J2EE) resources through detailed modeling and drill-down directly into the performance metrics at the component level.

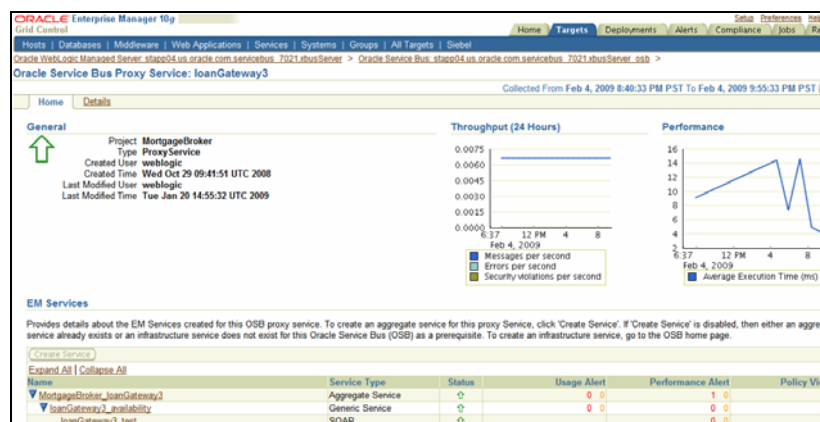


Figure 2: Oracle Enterprise Manager showing an Oracle Service Bus proxy service.

By providing and maintaining the business context while traversing your organization's application infrastructure, your developers and operational staff can leverage Oracle Management Pack Plus for SOA to meet the high availability and top performance criteria necessary to maximize business results.

Oracle Management Pack Plus for SOA enables your application development and support teams to

- Manage Oracle SOA Suite applications with minimal manual effort, regardless of application-specific knowledge or programming expertise
- Correlate and display BPEL workflows with the associated performance measurements of the discrete tasks, and drill down into internal business logic
- Quickly isolate and diagnose the root cause of SOA application performance problems in QA, staging, and production environments

Discovery and Service Modeling

Oracle Management Pack Plus for SOA discovers BPEL processes and Oracle Service Bus services deployed on the respective Oracle BPEL Process Manager and Oracle Service Bus servers as well as associated BPEL partner links and Oracle Service Bus proxy to business service references. Discovery also includes SOA infrastructure components such as the Oracle BPEL Process Manager server, the Oracle Service Bus server, the application server (such as WebLogic, Oracle Application Server, or IBM Websphere), the dehydration store, and the host server.

Oracle Management Pack Plus for SOA offers out-of-the-box automated system modeling capabilities for the SOA infrastructure. BPEL processes and Oracle Service Bus proxy services are modeled as Oracle Enterprise Manager generic services, and the SOA infrastructure system and service are also created to model the components supporting the BPEL process and Oracle Service Bus service. Topology maps identify the relationship between various infrastructure system components and services.

Respond to Changes in Real Time

Oracle Management Pack Plus for SOA automates performance management setup and correlation, detects real-time changes in the application environment, and reconfigures itself automatically. This reconfiguration ability allows IT teams to respond to application changes even if they are unaware changes are taking place.

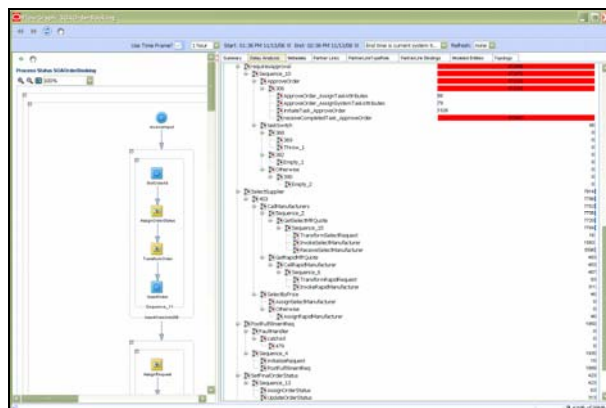


Figure 3: Oracle Composite Application Monitor and Modeler uses its modeling engine to create full transaction maps of the application, automatically correlating low-level measurements with high-level business transactions and BPEL processes.

Service Test Monitoring

Oracle Management Pack Plus for SOA provides the means to monitor services from an end-user perspective using a variety of protocols such as HTTP(s), Simple Object Access Protocol (SOAP), File Transfer Protocol (FTP), and SQL. Administrators can define SOAP tests for one or more partner links of a BPEL process, an Oracle Service Bus proxy and business service, any hosted Web service, or an external service. These tests measure and record availability and performance of the service for historical trending, troubleshooting, and root cause analysis purposes. One or more of these SOAP tests can be defined as key tests to determine BPEL process, Oracle Service Bus service, or Web service availability.

Improve Problem Solving

Oracle Management Pack Plus for SOA provides transaction maps and models, allowing users to quickly isolate issues within SOA applications that affect mission-critical application services. The solution takes problem-solving and service-level improvements to the next level with the ability to track individual requests throughout the BPEL and Oracle Service Bus application infrastructure. This includes BPEL activity level metrics, as well as Oracle Service Bus step and action level metrics. IT can see exactly what service-level outliers did within the application with request traces automatically tied to the transaction models.

Process and Instance Diagnostics

Oracle Management Pack Plus for SOA measures throughput and load across the BPEL and Oracle Service Bus server. The number of open, closed, and faulted BPEL and Oracle Service Bus executions is reported over time in a throughput graph. In addition, average latency times for synchronous and asynchronous processes are displayed. An instance error hospital is also listed, with an in-context drill-down to the BPEL control. Administrators can track a list of error instances and choose to be notified for instance failures as well. A set of BPEL instance level reports helps to identify top instances by processing time, pending instances, and top activities for each process.

Infrastructure Management

Oracle Management Pack Plus for SOA monitors the availability of the BPEL and Oracle Service Bus infrastructure components. Both current and historic availability of components—such as BPEL process manager, Oracle Service Bus server, dehydration database, Oracle WebLogic Server, and host server—are recorded for troubleshooting and root cause analysis. The SOA infrastructure system and service availability is also recorded. Administrators can be notified when any of the components go down, or troubleshoot after the fact via topology maps to understand which component was responsible for the service failure. By allowing administrators to “manage many-as-one,” management of large numbers of components is dramatically simplified. By combining SOA targets in systems, administrators also benefit from a wealth of system management features, including the ability to proactively monitor availability via a system monitoring dashboard.

Oracle Management Pack Plus for SOA integrates seamlessly with administrative functionality provided by other Oracle products. The Oracle WebLogic console, BPEL control, and Oracle Service Bus console enable administrators to perform basic tasks such as start, stop, deploy, and un-deploy applications. Similarly, with the Oracle Database control administrators can perform basic administration actions on a production database, such as start, stop, and other tasks. In addition, using the Oracle Enterprise Manager job system, administrators can automate key tasks while managing a production BPEL dehydration store, Oracle Service Bus reporting database, and middleware components.

Business—IT Alignment

Enterprises can consolidate their IT and business management tools into a unified system using Oracle Management Pack Plus for SOA. With a powerful data exchange connector, data can be exchanged with any other system over a Java Message Service (JMS)-compliant hub. The connector provides a means to integrate Oracle Enterprise Manager with business management systems such as Oracle Business Activity Monitoring. Through this bidirectional data exchange users can view business key performance indicators (KPIs) in Oracle Enterprise Manager and access system information—target availability information, metric data, and alerts—in Oracle Business Activity Monitoring. In addition, Oracle Enterprise Manager enables users to set service levels on a combination of system metrics and business KPIs to facilitate comprehensive service level management.

Service Level Management

Oracle Management Pack Plus for SOA provides comprehensive service level management functionality that allows administrators to

- Monitor services from the end-user perspective using service tests or synthetic transactions, model relationships between services and underlying IT components, and report on achieved service levels
- Specify service levels using a combination of system metrics and business KPIs
- Define service levels for BPEL processes, Oracle Service Bus proxy and business service, or for any Web services internal or external to the enterprise

Configuration Management

Key configuration metrics for the Oracle BPEL Process Manager, Oracle Service Bus server, and BPEL processes are collected and stored in the Oracle Enterprise Manager repository. With this information, administrators can

- View the historic configuration changes across the BPEL and Oracle Service Bus environment
- Baseline a working configuration by saving it in the repository
- Compare BPEL and Oracle Service Bus server and domain configuration parameters with other servers and domains
- Compare BPEL process versions to observe changes across successive deployments

Deployment Automation

Administrators can deploy multiple BPEL process suitcases and Oracle Service Bus projects and resources to multiple BPEL servers and Oracle Service Bus domains using the deployment procedure framework. A multistep interview process lets users choose the source files for the process, project or resource, the target BPEL server and Oracle Service Bus domain, set credentials, and schedule a future deployment using the job system.

Historical Analysis and Reporting

In addition to real-time monitoring of metrics for SOA infrastructure targets, Oracle Enterprise Manager stores the collected metric and configuration data in a central repository enabling administrators to analyze metrics through various historical views (such as Last 24 Hours, Last 7 Days, and Last 31 Days) to facilitate strategic trend analysis and reporting. Customizable service and system dashboard functionality allow users to create reports on various services and systems for service level availability, usage, performance, and business indicators.

The Ideal Choice

SOA delivers agility to an enterprise; however, if not properly managed, it will increase management complexity and cost, while simultaneously reducing visibility into the IT environment. Oracle Management Pack Plus for SOA makes it easy for IT administrators to effectively manage SOA complexity by providing runtime governance in conjunction with business and IT alignment. Offering service level management, triage, and root cause analysis at all BPEL application levels across both Oracle and non-Oracle products, Oracle Management Pack Plus for SOA is an ideal choice for maximizing consistent SOA application performance and creating a superior ownership experience.

Contact Us

For more information about Oracle Management Pack Plus for SOA, please visit oracle.com/enterprise_manager/index.html or call +1.800.ORACLE1 to speak to an Oracle representative.



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