

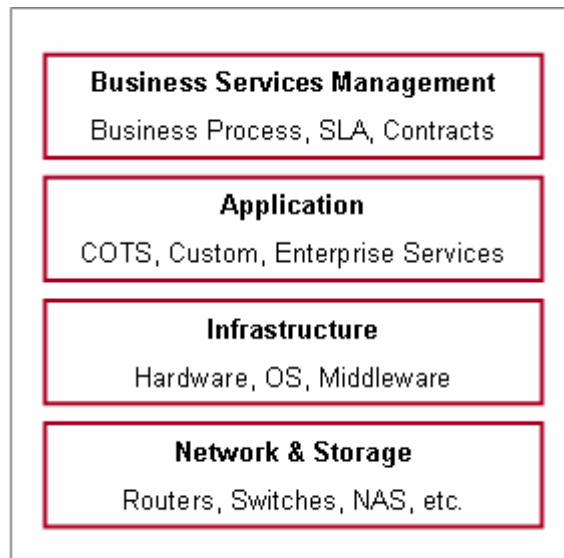
SOA REFERENCE ARCHITECTURE: BUSINESS SERVICE MANAGEMENT

SOA Blueprint

A structured blog by Yogish Pai

Business Service Management

The primary focus of business service management is monitoring and reporting on operations of the network, infrastructure, application, or business process.



Business Service Management

Network and storage: network elements such as routers, switches, PABX, load balancers, etc. Typically operations has a dedicated team to architect, design, and monitor the network with most of the long-haul networks purchased from telecom network providers.

Infrastructure: all the hardware, operating systems, and middleware such as applications, servers, databases, and LDAP. IT operations is responsible for monitoring and providing tier 1 support for the infrastructure layer, sometimes also referred to as data center monitoring.


Application: monitoring of application and enterprise services such as e-mail, search, and content management systems. IT operations provides tier 1 support, while a dedicated team provides application support.

Business service management: monitoring the business processes, policies, activities, and IT service level agreements.


Typical Current State of Monitoring

Most enterprises do not have comprehensive monitoring capabilities, resulting in:

- Multiple monitoring systems that overlap in functionality

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- Initiative not staffed at the required level, resulting in software still on the shelf
 - Limited or no mechanism to correlate events across business or product silos
 - Lack of a unified view of IT configuration to facilitate correlation
 - Limited or no view of service model that maps configuration elements to business processes for SLA management
 - Limited mechanism for tracking historical availability and performance of services
 - Limited integration of ticketing back to correlation to prevent duplicate notification.

Following is an exhaustive list of the capabilities required to support BSM. IT operations do need to review their current state and develop a roadmap for deploying these capabilities. Unfortunately, the biggest challenge for IT organizations is to get funding approval, especially as business tends to prioritize business capability over monitoring and management capabilities.

- **Ticketing:** tracking of problems that have been identified and escalated from incidents
 - **Incident:** any alert—not necessarily a problem—received by the monitoring system or the service desk
 - **Notification:** forwarding of tickets to the service desk or responsible work group for action; this would include previous requirements identified for paging
 - **Diagnostics and root cause analysis:** tools to diagnose the problem in order to identify the root cause; the diagnostic process typically includes a database of solutions or workarounds for known problems
 - **Event console:** provides view of the availability and performance management data stored in the monitoring data store
 - **Correlation engine:** software tasked with interpreting and manipulating incoming data from different sources
 - **Decision engine:** based on correlation result, this software makes a decision about what actions need to be taken, such as logging a ticket, alerting a responsible party, running a script, or doing nothing
 - **Monitoring data store:** centralized database containing event data and configuration information, also referred to as CMDB
 - **Service-level objectives:** central repository of availability and performance targets associated with applications or business processes
 - **Service-level reporting:** the ability to measure actual performance and availability against service level objectives
 - **Automation engine:** allows actions—such as log a ticket, run a script, or initiate another recovery process—to take place automatically for known problems
 - **Target methods:** process and workflow followed to manage known problems.
 - **Automatic scripts:** pre-defined actions to test for or react to known problems
 - **Capacity planning:** current and forecasted utilization for configuration items
 - **System modeling:** representation of the configuration items that comprise a system
 - **Workload simulation:** performance and capacity testing using an automated tool for generation of synthetic transactions against a test infrastructure.
 - **Probe:** software that gathers fault or performance information about a device, but is not installed on the device
 - **System monitor:** software installed on machines and network devices that gathers availability information
 - **End-user monitor:** software to measure the experience of an end user via synthetic transactions or monitoring actual user activity
 - **Business availability console:** provides a business perspective of how availability management data is impacting the business
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Future State of Business Service Management

SOA enables businesses to monitor and manage their business processes through business service management. Businesses must define and capture business process policies during the requirements phase and carry them through to implementation. To support this, IT organizations need to invest in additional software and secure additional funding, both for infrastructure and head count.

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