CONSULTING SERVICES

TIBCO Services Life Cycle Best Practices: An Introduction

TIBCO®
The Power of Now®

HIGHLIGHTS:

The information described here is part of a series of introductory best practices reports for deploying a successful SOA. Other TIBCO reports in this series include:

- TIBCO Service-Oriented IT Organizational Structure: An Introduction
- TIBCO SOA Governance Best Practices: An Introduction
- TIBCO SOA Project Organization, Staffing and Funding Best Practices: An Introduction
- Designing Services in an SOA Using TIBCO BusinessWorks

This document provides a summary of TIBCO's best practices for identification, packaging, governance, proliferation and management of services within a Service Oriented Architecture (SOA).

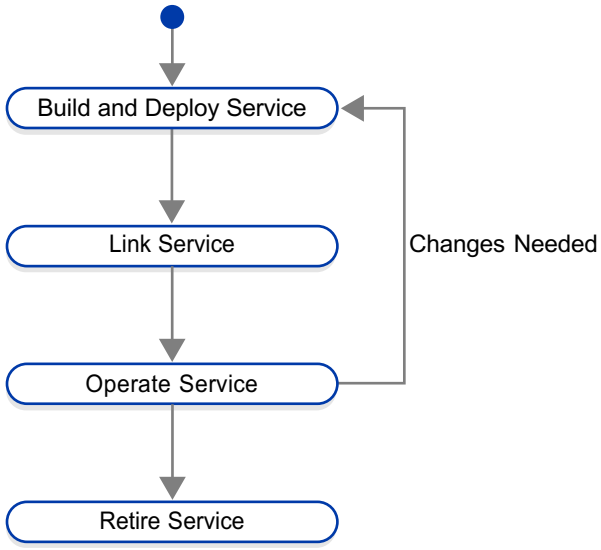
This series is part of a larger in-depth set of best practices that support TIBCO's proven delivery methodology, the TIBCO Accelerated Value Framework, which is used by our TIBCO Professional Services Group to help our customers minimize risks, accelerate delivery and enable a quality integration and SOA strategy and deployment.

Contact TIBCO Professional Services Group for more details on the topics presented in this report and to find out how we can help you develop and deploy an SOA that best meets your unique requirements and environment.

Services Life Cycle Overview

A service is a shared unit of functionality, and this intent to share deeply influences every aspect of its life cycle. Each of the activities in the life cycle involves interactions with the consumers of the service and the providers of services upon which this service depends. In order for the service to be usable by multiple applications, the potential usage of the service must be taken into consideration as the service is built and deployed. Access to services is usually restricted, so the interactions required to access the service must be established. When the service is in operation, its availability affects the availability of the applications that depend upon it so its management must be coordinated with the management of the applications. If changes are needed to the service, the life cycle of implementing those changes must be again coordinated with the life cycle of the application requiring the change. Finally, a service can only be retired when the usage community agrees that the service is no longer needed.

Figure 1.
Service Life Cycle



The number of required interactions between the organization responsible for the service and the organizations responsible for the using applications (and used services) makes it prudent to define and standardize these interactions. This, in turn, will make it possible to establish governance over the processes to ensure that these interactions not only occur, but achieve their objectives.

It is critical that a governance process be established that spans the entire life cycle of a service.

Summary of Best Practices

The following summarizes TIBCO's services life cycle best practices.

SERVICES LIFE CYCLE OVERALL

- Every service proposal must be validated to establish that a) it warrants being separated as an independent service, b) is functionally generic enough to be used in multiple contexts, c) can be invoked in a standardized manner from multiple contexts and d) can be cost-justified. This should be a formal gatekeeping activity.
- After the specification for the service and the estimates for its creation and operation have been completed, the service must be re-validated against the validation criteria used in the initial proposal screening. This should be a formal gatekeeping activity.
- Within the IT organization, the responsibility for validating and specifying proposed infrastructure services should be explicitly assigned. The group to which this responsibility is assigned must be cognizant of the usage requirements throughout the intended usage community.
- Within the business community, a policy must be defined as to which organizations will validate proposals and specify business services.
- Business services must be evaluated in the context of the business processes in which they will be deployed. Such evaluations must consider both the functional and non-functional needs of the business processes.
- The organization approving service proposals and specifying the business services must have visibility across the entire scope of the business process in which the service will participate.
- Service monitoring and management requirements must be well-defined before beginning the design and implementation of the service.
- A common repository for service-related discovery and usage information must be established.
- The information characterizing each service must be deployed in this repository, including non-technical high-level service descriptions and the procedure necessary to access and utilize the service.
- The service specification repository should be indexed to guide users to services of interest.

- The responsibility for establishing the terminology used to index and describe services must be assigned to a single organization to ensure consistency.
- Procedures must be established for interacting with this terminology management group when deploying information that characterizes services.
- The organizational responsibility for operating the service must be clearly identified.
- The operational goals (availability, response time, capacity, outage recovery time) must be clearly defined. These operational goals constitute a service level agreement (SLA) for the service.
- The performance of the service against its SLAs must be actively monitored and corrective actions taken when the SLAs are not being met.
- The organization responsible for maintaining the service repository must be clearly identified.
- The procedures for deploying the service must include the deployment of service information into the services repository.

LINKING TO A SERVICE

- The use of a formal approval process is recommended to manage access to services. The process should be defined and documented. The responsibility for the governance of this process should be clearly assigned.
- The organization responsible for approving access to each service must be clearly identified.
- The access approval process must ensure the availability of adequate capacity when granting access.
- The organization responsible for the implementation of service access must be clearly identified and must actively manage the implementation of the service access.
- The organization responsible for service monitoring must be clearly identified. This organization must take action (or oversee such action) when SLAs are not being satisfied.

SERVICE OPERATION

- The organization responsible for operating a service must maintain a list of users of that service and contact information so that shutdowns of the service can be coordinated.
- Emergency shutdown and restart of the service should only occur when it is not possible to schedule a service outage.

CHANGING THE SERVICE

- Emergency bug fixes to services (changes that bypass normal gatekeeping and quality control activities) should only be allowed when the cost of non-availability of the service justifies taking on the risks involved in bypassing these activities.
- The responsibility and authority for making the judgment as to whether a proposed change qualifies as an emergency fix must be clearly assigned.
- Decisions to make emergency changes should be reviewed after the fact for appropriateness.
- Changes that affect the functionality of a service must go through the entire service life cycle including the service proposal and specification activities.
- Services should be deployed in such a way that multiple versions of the same service can be deployed simultaneously.
- Where possible, service updates that alter existing interfaces should be deployed concurrently with the old version of the service. This enables the service users to migrate individually from the old version to the new version.

RETIRING THE SERVICE

- The records that are kept by the service operators concerning the users of the service should indicate which version of the service they are currently using.
- Before a service is retired, all known users of the service about to be retired must approve the retirement of the service.

For More Information

This document provides a summary of TIBCO's best practices for identification, packaging, governance, proliferation and management of services within a service-oriented architecture (SOA).

Contact TIBCO Professional Services Group for more details on the topics presented in this report and to find out how we can help you develop and deploy an SOA that best meets your unique requirements and environment.

This document is part of a larger in-depth set of best practices that support TIBCO's proven delivery methodology, the TIBCO Accelerated Value Framework, which is used by our TIBCO Professional Services Group to help our customers minimize risks, accelerate delivery and enable a quality integration and SOA strategy and deployment.

TIBCO®
The Power of Now®

Global Headquarters
3303 Hillview Avenue
Palo Alto, CA 94304

Tel: +1 650-846-1000
Toll Free: 1 800-420-8450
Fax: +1 650-846-1005

www.tibco.com