Cisco Tidal Enterprise Adapter for Web Services

Introduction to Enterprise Scheduling and Adapters

IT operations that focus on the automation of business processes involve integrating a wide range of custom and enterprise applications and the infrastructure on which they run, often with complex interdependencies. In such environments, IT typically uses job scheduling tools to control batch and on-demand event processing, which are vital to the success of a range of business operations, from sales to manufacturing to financial management.

For the past decade, Cisco® Tidal Enterprise Scheduler has been defining standards for job scheduling usability, scalability, and breadth of coverage. The role of the many adapters available for Cisco Tidal Enterprise Scheduler is to make the connectivity, control, and visibility of diverse technologies accessible directly through the enterprise scheduler user interface. The breadth of coverage these adapters provide simplifies end-to-end scheduling of processes across the enterprise.

Product Overview

Cisco Tidal Enterprise Adapter for Web Services

In service oriented architecture (SOA) environments, business process management (BPM) engines expose workflows enabled by Web Services. Schedulers must support these types of connections in order to drive complex job runs to completion. Cisco Tidal Enterprise Adapter for Web Services does just this - by automating and simplifying the scheduling of web-enabled and SOA-based deployments to provide control over jobs of all magnitudes and complexities.

The Web Services Integration Challenge

Typically, complex process scheduling is developed and tested offline before being migrated to production environments. Moving job scheduling definitions from development to test to production environments must be carefully managed in a structured and repeatable way.

Automating job scheduling across Web Services-enabled environments is very challenging because, unlike traditional enterprise resource planning (ERP) systems, Web Services environments provide an array of point services that must be coordinated and deployed. In addition, the boundaries between the composite applications based on these services are loosely defined, which allows the underlying components that provide the services to be quickly changed and recombined to serve business units as they evolve. As a result, these environments create significant complexities for enterprisewide scheduling solutions.

The capabilities of Cisco Tidal Enterprise Adapter for Web Services, in combination with the broad coverage and rich functionality of the Cisco Tidal Enterprise Scheduler itself, work to reduce these complexities and enable IT organizations to realize the benefits of standards-based, end-to-end scheduling.

Features and Benefits

The feature set and capabilities of this adapter not only reduce the effort and simplify the process of scheduling jobs in web services-enabled environments, but also allow those jobs to be viewed and managed in the context of other enterprise jobs through a single view. Enterprises can increase efficiency and improve business process execution by taking advantage of the following Cisco Tidal Enterprise Adapter for Web Services functionality.

REST Method Scheduling

Cisco Tidal Enterprise Adapter for Web Services gives you the flexibility of two of the most common types of Web Service integrations: representational state transfer (REST) and Simple Object Access Protocol/Web Services Description Language (SOAP/WSDL). REST-based architectures allow system resources to be addressed in a stateless, client‑server architecture where clients access and manipulate web resources through the HTTP protocol. The Web Services environment consumes the request in the most efficient manner, sometimes parsing the request as it is fulfilled. REST APIs are commonplace - by integrating the REST methodology in the Cisco Tidal Enterprise Scheduler, we give our customers an easy-to-use Web Services interface that does not need additional environmental modifications.

SOAP/WSDL Operations Visibility

Complementary to REST, SOAP creates a predefined contract with the client that describes how the service will be called, what parameters it expects, and what data structures it returns. The SOAP/WSDL job instance is an invocation of a Web Services operation defined for the connection. When the job instance runs, the SOAP request— with the operation name and its arguments (WSDL) - is sent to the Web Services endpoint, and the output of the event is returned as a SOAP response. The response can be modified and passed on to subsequent jobs across the entire range of scheduled job types available.

One of the key strengths of the adapter is that once the components of the Web Services Description Language (WSDL) have been parsed, all the operations inherent in the WSDL become available for scheduling design through the standard graphical job definition screens, extending the standardized operations approach across the full range of environments that are SOAP-enabled.

Rich Web Services API

Web Services permit the deployment of standard service-based architectures across an underlying range of current and legacy platforms and applications. The Cisco Tidal Enterprise Scheduler is able to define jobs and run job instances against these services and therefore against any application endpoint (Java, .NET, or application platform) or on any OS platform (Windows, UNIX, or Linux, and so on) that have been enabled for REST or SOAP Web Services.

Enterprise Scheduler Integration

Cisco Tidal Enterprise Adapter for Web Services extends the reach of the enterprise scheduler with critical capabilities that simplify scheduling for web services environments:

- Allows jobs to be defined that invoke Web Services operations
- Supports any REST and SOAP Web Service
- Parses the WSDL to discover all the defined operations and arguments
- Imports WDSLs directly into the adapter from an existing services library
- Supports standard PUT, GET, POST, and DELETE syntax for REST methods
- Uses variables as input arguments to Web Services calls, allowing the passing of information across job flows
- Supports the passing of web services call responses to jobs of any type in larger business flows, including the ability to modify output via XML style sheet language for transformations (XSLT)

Because Cisco Tidal Enterprise Scheduler Web Services jobs are defined like any other Cisco Tidal Enterprise Scheduler job, you can take full advantage of job, file, and variable dependencies, calendars, events, email notifications, and all other enterprise scheduler capabilities to manage the most complex Web Services scheduling environments in your enterprise.

Move to a Single Scheduling Environment

Cisco Tidal Enterprise Scheduler provides IT operations staff with an integration platform for all job scheduling needs. With Cisco Tidal Enterprise Adapter for Web Services, IT operations staff can include a vast array of Web Services-based deployments in a single standard scheduling environment, regardless of the types of applications and systems deployed across the enterprise. These solutions eliminate multiple tools, scripting, protracted resolution times, and many other costly and time-intensive issues.

Cisco Tidal Enterprise Adapter for Web Services demonstrates the ongoing support that Cisco Tidal scheduling solutions provide to dynamic, evolving IT environments.

Major Requirements

Although specific planning and sizing is straightforward, actual requirements can vary by enterprise, depending on the environment and type of coverage needed. Specific requirements information is easily obtainable after an initial conversation with a product expert. Cisco Tidal Enterprise Scheduler and its adapters can be installed and deployed by users or by engaging Cisco Services. There is also an array of online materials available through Cisco Knowledge Services.

About Cisco Tidal Enterprise Scheduler

Cisco Tidal Enterprise Scheduler drives efficiency by centralizing and providing a single view of cross-enterprise job scheduling events. This powerful yet easy-to-use solution enables organizations to assemble complex batch job and business process schedules that span the enterprise. With its ability to closely monitor scheduled jobs, automatically detect problems, and define actions to aid in recovery, business process performance can be greatly enhanced.

With the broad coverage provided by Cisco Tidal Enterprise Scheduler, IT operations teams can effectively schedule processes that touch a wide range of databases, systems, and applications. They can also easily incorporate and manage new applications as they come online, which helps improve the operation of mission-critical business processes as the enterprise expands and evolves.

Companies in a variety of industries rely on Cisco Tidal Enterprise Scheduler to keep their daily operations running smoothly. Cisco's enterprise job scheduling software combined with Cisco's performance management solutions can deliver even greater levels of automation and optimization to the data center than conventional scheduling and performance management solutions.

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