Cisco Tidal Enterprise Adapters for Agentless Scheduling

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

Product Overview

Cisco Tidal Enterprise Adapters for Agentless Scheduling

Cisco Tidal adapters for agentless scheduling extend the reach of Enterprise Scheduler to applications that are, for various reasons, beyond centralized IT’s ownership or control. Computing environments are becoming more dispersed and decoupled, and, in many cases, the ability to control a computing resource is limited. Job scheduling managers are forced to make decisions and connect to resources with ever-increasing levels of complexity, because target applications are running on resources that cannot be managed with traditional locally executable agents.

Any SSH-Enabled Environment

![Diagram](image)

**Figure 1.** This is the architecture of agentless scheduling adapters in Windows and SSH-enabled environments.
Where Agentless Scheduling Makes Sense

Using Cisco Tidal adapters for agentless scheduling makes sense for targets that have critical performance controls, where the execution of an external agent may cause process degradation and job failures, or where strict change management controls “lock down” a target image, preventing attempts to install and execute software on that machine.

Highly secured environments may also restrict administration or scheduling access to specific machines. In addition, as more data centers embrace virtualized and cloud computing environments, agentless job management may be the only way to connect to and interconnect these decoupled resources.

Those types of environments and business needs are well served by agentless scheduling.

Features and Benefits

Cisco Tidal agentless scheduling capabilities extend an organization’s reach to remote Windows machines, as well as Linux, UNIX, and any other SSH-enabled environments, reducing the time and effort required to schedule jobs that run across these environments. For agentless scheduling in Windows environments, the specific adapter to order is named Cisco Tidal Enterprise Remote Job Adapter for Windows. For agentless scheduling in SSH environments, the specific adapter to order is named Cisco Tidal Enterprise Adapter for SSH.

Agentless Scheduling for Windows Environments – Each job to be run by Enterprise Remote Job Adapter for Windows is predefined within the Enterprise Scheduler web interface. A secured proxy machine, acting as a job scheduling agent, makes the necessary network connections to the target Windows machines using the WMI. The adapter then launches, populates, and runs each job using the target machines’ Windows Task Scheduler.

Each job supplied through the adapter is discrete and encapsulated and can be run on a scheduled, change-based (e.g., watched resource) or on demand instance. Job definitions run by the target machines’ Task Scheduler services are never saved on the target machines. They are automatically removed, preserving the security, performance, and image integrity of the target machine.

Every point in the job runtime process is monitored and can be acted upon by IT operations staff. If the adapter finds that the target is unreachable due to network, machine, service, or authentication failures, Enterprise Scheduler can be configured to alert IT managers to issues as they happen—often acting in conjunction with its ability to execute auto-recovery steps.

And as remote jobs are run on a scheduled or event-driven basis, they can be monitored in Enterprise Scheduler, using the job details screen. Job output is equivalent to the data captured in the task manager log, which is delivered back to Enterprise Scheduler. Exit codes are also available.

Agentless Scheduling for Linux, UNIX, or Other SSH Environments – Agentless job scheduling for Linux, UNIX, or any SSH-enabled environment is defined and managed using Enterprise Adapter for SSH. Enterprise Scheduler can make direct calls to a target machine using the adapter without the need for a proxy. Security management is achieved through the use of defined runtime users as with all other adapters for Enterprise Scheduler.

As in the case of any other job schedules, SSH jobs are defined using Enterprise Scheduler. Once a connection to a target has been defined, established, and user/machine credentials verified, job instances are supplied automatically to the target, and the agentless job instance is then run on the target machine.

As scheduled or event-based jobs are run, they can be monitored like any other type of job defined in Enterprise Scheduler. Standard output information is captured and delivered back to the Master by the adapter for real-time job monitoring. Exit codes are also available.

Runtime Control – These adapters for agentless scheduling provide the following runtime job control capabilities to users. These capabilities are important, because they reduce the effort and time required to manage schedules and job execution. Users can:

- Hold a job instance waiting to run
• Re-run a job instance that completed
• Delete a job instance

Key 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. Enterprise Scheduler and these adapters can be installed and deployed by the user 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 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 Enterprise Scheduler to keep their daily operations running smoothly. Cisco’s enterprise job scheduling and performance management solutions can deliver even greater levels of automation and optimization to the data center than conventional scheduling and performance management solutions.

For More Information

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