

# ActiveBatch<sup>®</sup>

Redefining IT Automation<sup>SM</sup>

Integrations with Microsoft<sup>®</sup>

## Microsoft Partner

Gold Application Development

### Microsoft Technologies

Active Directory

Azure

Dynamics AX

Exchange Server

SharePoint

SQL Server

Team Foundation Server (TFS)

PowerShell

### Microsoft System Center

Configuration Manager

Operations Manager

Orchestrator

Service Manager

Virtual Machine Manager

# ActiveBatch® and Microsoft®



## General Overview

Advanced Systems Concepts, Inc. is a leader in the development of Workload Automation and Enterprise Job Scheduling software. Our software simplifies the automation and integration of business and IT operational processes across single or compound workflows that can share data and manage dependencies. Automating as well as integrating workflows improves resource utilization, ensures higher service levels and reduces the overall cost of operations.

ActiveBatch® Workload Automation and Enterprise Job Scheduling conquers the boundaries associated with today's complex IT environments by offering a single point of control that integrates systems never designed to work cooperatively. These systems include applications, databases, technologies and business types.

ActiveBatch supports script free integration that includes web services, stored procedures as well as extensions for mission-critical applications, such as:

- Microsoft
- Hadoop Ecosystem
- ServiceNow
- SAP
- Informatica PowerCenter
- IBM Cognos BI & DataStage
- Amazon EC2
- VMware
- SQL Server
- Oracle
- Teradata

and many more using events for timely initiation of these processes.

## About ActiveBatch® IT Automation

ActiveBatch IT Automation consolidates scripts and point scheduling tools, such as Task Scheduler and SQL Server Agent to simplify the building and automation of IT and business processes.

Through ActiveBatch's centralized approach it has never been easier for workflow designers to pass data and manage dependencies across applications, databases and technologies.

## Consolidate and Centralize IT Automation for Microsoft Solutions

ActiveBatch is an industry leading cross-platform solution that is tightly integrated with Windows technology making it the perfect Job Scheduling system for organizations that support Microsoft Windows and require key integrations with non-Windows systems. ActiveBatch leverages the Microsoft Windows Security model offering the option for users to utilize their current user accounts and groups from day one. ActiveBatch supports SQL Server as well as Oracle, WMI, MSMQ, and many other Windows technologies that are utilized within today's Data Centers.

The ActiveBatch Integrated Jobs Library provides access to templated Job Steps for:

- Active Directory
- SharePoint
- PowerShell
- .NET Assemblies
- SQL Server
- Web Services
- Dynamics AX
- Stored Procedures
- Task Scheduler
- Team Foundation Server (TFS)
- System Center Configuration Manager
- Operations Manager
- Orchestrator
- Service Manager
- Virtual Machine Manager
- Exchange Server

... and more

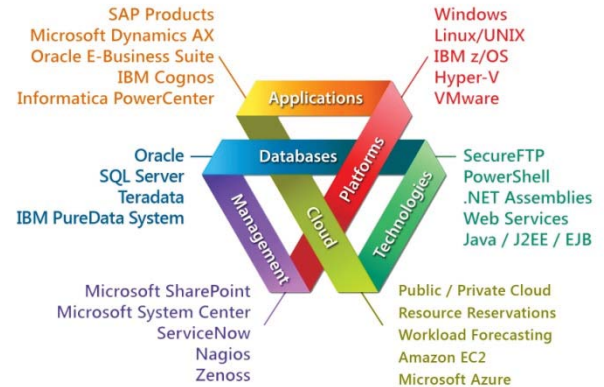
## Event Architecture

ActiveBatch's event architecture removes the need to manually manage tasks across servers as well as the wait time between jobs so that job streams or plans can be run upon completion, success or failure, for improved service levels. ActiveBatch supports a wide range of event triggers that include Files, Email, Web Services, MSMQ and many more.

ActiveBatch is the ideal and affordable choice for centralizing the automation of all your IT operational and business processes. Get started with ActiveBatch today and request additional information, such as a fully functional Proof of Concept that includes complete access to our industry leading technical support team.

## Partnership

Advanced Systems Concepts, Inc. is a Microsoft Silver Application Development Partner. ActiveBatch allows Microsoft users to easily build mixed workloads by coupling them with databases, applications and advanced technologies for improved business process automation. Visit Advanced Systems Concepts, Inc. on Microsoft Pinpoint, on the Microsoft System Center Marketplace, Microsoft System Center Alliance website or at [www.ActiveBatch.com](http://www.ActiveBatch.com) for more information.





# Automate and Manage Active Directory Processes for Increased Efficiency with ActiveBatch® Integrated Job Steps

## Benefits

- Automate the repetitive, routine tasks associated with Active Directory management.
- Save Time for network administrators and reduce human errors through the automation of tasks.
- Build Workflows that integrate Active Directory with other technologies, applications without the need for custom scripting.
- Streamline IT Operations with Job Steps that are able to make complex attribute modifications to multiple Active Directory objects using different parameters from multiple sources.

## Microsoft Active Directory: IT Boundaries Identified

With today's dynamic business environments, frequent adjustments and modifications must be made to objects, users and groups within Active Directory. Executing and managing these repetitive tasks is not only time-consuming, but also inefficient when network administrators must rely on custom scripting. New tools with advanced automation and scheduling capabilities are needed to efficiently automate repetitive Active Directory tasks, saving time for network administrators, reducing errors and streamlining IT operations.

## Automate and Manage Repetitive Tasks

ActiveBatch® Enterprise Job Scheduling and Workload Automation allows IT workers to automate and manage many of the repetitive and time-consuming administrative tasks associated with Active Directory management including adding users to groups, deleting objects or users and modifying attributes associated with various objects and users.

## Enhance Your Automation Capabilities

ActiveBatch provides Active Directory users with job scheduling capabilities that include constraints, event triggers, monitoring, alerts and audits. The Integrated Jobs Library provides over 130 templated production-ready Job Steps in an easy to use drag-and-drop interface that simplifies workflow creation and integration without the need for custom scripting. This allows for the automation and execution of Active Directory functions within workflows that integrate other applications, databases and processes.

## Use Case

Upon the change in status of a current employee you can automate the process of promoting that user account, adding them to the appropriate new groups, modifying security settings and then updating information in a database such as SQL Server. By using ActiveBatch as a centralized console and single point of control, IT workers can efficiently manage and automate tasks to save time and reduce human error.

## ActiveBatch® Workflow for Microsoft Active Directory As displayed in the ActiveBatch Integrated Jobs Library

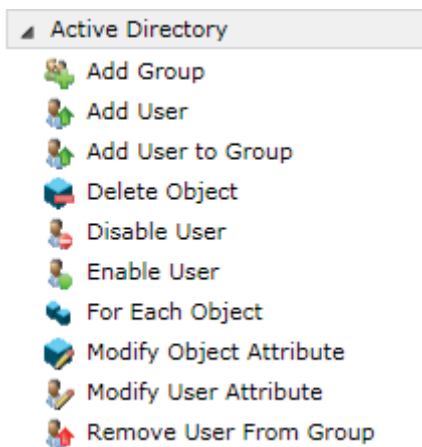
AddUser	
Domain	advsyscon.com
New Account Name	\${User}
New Account Password	\${Pass}
Credentials	<Optional>
Organizational Unit	ASCII User Accounts
Attributes	<empty>
Membership	<ADGroups>
ADGroup	ADGroup
Name	ASCII HR Group

AddUserToGroup	
Domain	advsyscon.com
Account Name	\${User}
Group Name	AB_HR_Global_Group
Credentials	<Optional>

ModifyUserAttribute	
Domain	advsyscon.com
User Name	\${User}
Find By	<default>
Credentials	<Optional>
Attributes	<ADAttributes>
ADAttribute	ADAttribute
Name	\${User}
Value	HR

CreateMailbox	
Exchange Version	Exchange2010
Exchange Server Address	ExchangeMailbox
Credentials	<Optional>
Authentication Type	<default>
New Mailbox Attributes	ExchangeMailbox
Display Name	ASCIIUserHR3
User Principal Name	UserHR3
Password	*****
Database Name	EXHR285d
Type	<default>
Force Password Reset	<default>
First Name	
Last Name	

ActiveBatch: Version 8 SP3 and above



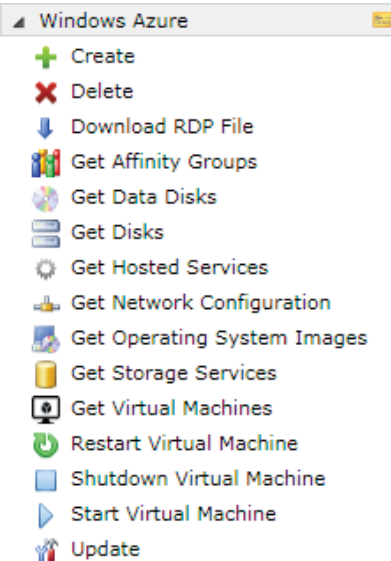
# ActiveBatch®

## Dynamically Allocate Microsoft Azure Resources to Workload Processing with "Just In Time" Provisioning

### Benefits

- Reduce Operating Expenses by dynamically provisioning and managing cloud resources with "just in time" resource provisioning.
- Integrate Microsoft Azure process types throughout the IT organization for better control of workloads running across both virtual and cloud environments.
- Streamline and Improve datacenter automation and efficiency by combining the execution of business processes and datacenter operations.

ActiveBatch: Version 9 SP3 and above



### Microsoft Azure Automation: IT Boundaries Identified

As IT organizations increasingly rely on virtual and cloud-based environments, managing the provisioning and de-provisioning of these resources to ensure their availability for workload processing can be challenging. Coordinating the availability of hosts through power management, preserving and restoring machine states through snapshots and configuring servers for specific tasks using platform-specific automation solutions can be problematic. Add to this the growing number and increasing variety of physical, virtual and cloud computing environments comprising your IT environment, and it becomes clear that a single automation solution for managing the workflows that span these different environments is required.

### Automatically Allocate Cloud Resources to Workload Processing

ActiveBatch® allows IT organizations to combine dynamic workload automation and management with the power and flexibility of cloud computing. Automating the management of Microsoft Azure instances within ActiveBatch provides the most effective way to automatically allocate cloud resources to workload processing where and when it is needed.

The ActiveBatch Extension for Microsoft Azure allows users to automate the provisioning and management of Azure instances within workflows that can manage other applications, platforms and process types, all from within the centralized interface of ActiveBatch. The ActiveBatch Extension for Azure provides over 60 Integrated Job Steps to automate various Azure tasks, including the provisioning and de-provisioning of Azure machines, the management of individual or groups of instances, security tasks, machine snapshots, rebooting, synchronizing or terminating instances and much more. These Job Steps are designed to provide users with a broad range of automation capabilities.

### Leverage the ActiveBatch Smart Queue to Automate Microsoft Azure Instances

ActiveBatch also provides for the automated provisioning of Microsoft Azure instances based on workload demands. Rather than manually building Azure Job Steps into individual ActiveBatch workflows, users can leverage ActiveBatch's Smart Queue capabilities, allowing ActiveBatch to automatically provision Azure instances based on operating parameters and thresholds entered into the Smart Queue by the user, such as maximum number of virtual machines. ActiveBatch will then automatically "spin up" additional Azure instances in advance of scheduled workloads to ensure adequate resource availability.

### Use Case

Automate the provisioning and configuration of a Microsoft Azure instance based on a workflow that only needs to run when a certain IT event occurs, such as an email being received. The workflow could power up the Azure instance, run the job, take a snapshot for checkpoint backups and de-provision the machine to conserve resources.

Additionally, the workflows can be integrated with other operations through the enterprise by leveraging the ActiveBatch Integrated Jobs Library, which provides over 130 production-ready Job Steps for various applications, databases and systems.

Users can create an ActiveBatch workflow that automatically creates an Active Directory and Exchange account and provisions an Azure machine for a new employee based on HR uploading a file to a network location.

# ActiveBatch®

## Automate and Integrate Dynamics AX Processes for Improved Business Process Automation with ActiveBatch®

### Benefits

- Incorporate Microsoft Dynamics AX within the context of a centralized cross-platform and cross-application enterprise scheduling system to automate all of your Business and IT Operational Processes.
- Reduce Errors and Minimize Delays by automating manual tasks.
- Leverage ActiveBatch's event automation architecture, compliance, auditing capabilities and alert mechanisms to more effectively schedule, automate and monitor Dynamics AX processes.

### Microsoft Dynamics AX: IT Boundaries Identified

As business processes grow increasingly dependent on the processing of ERP data, the ability to automate and manage Dynamics AX processes in real-time is becoming increasingly important. Compounding this automation problem is the need to integrate Dynamics AX within distributed environments that contain an array of application, data sources and heterogeneous process types. The result is the need to pass data and manage dependencies between Dynamics AX and other applications and data sources.

### Extend Dynamics AX Scheduling Beyond Date/Time and Custom Scripting

Traditionally, developers rely either on Dynamics AX's native batch processing capabilities or schedule the execution of Dynamic AX processes via command line utilities and scripts. The automation offered within Dynamics AX is limited to date/time scheduling, only supports Dynamics AX processes and offers no ability to dynamically trigger Dynamics AX workflows based on complex IT events, such as the arrival of an email, web services, a SecureFTP and more. Scheduling via command line utilities and scripts is time consuming and complex and offers no central point of control for scheduling and executing these tasks, monitoring job status and viewing return values and log files.

Dynamics AX users require an easier approach to automating Dynamics processes and need a robust automation architecture that supports the integration of Dynamics AX with other key applications, data sources and platforms. To accomplish this, organizations are turning to ActiveBatch® Workload Automation and Enterprise Job Scheduling.

### Easily Build, Automate and Manage Dynamics AX Workflows and Processes

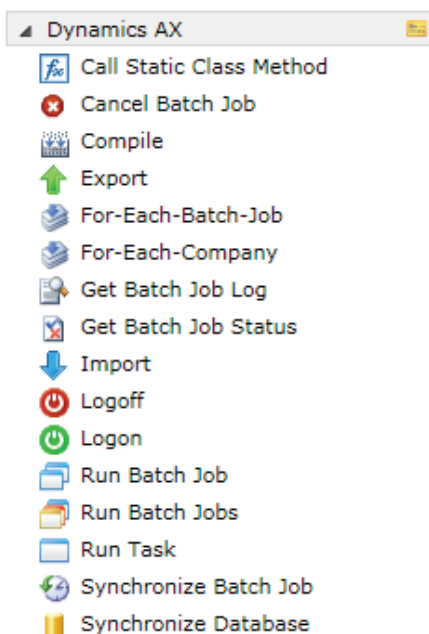
The ActiveBatch® Extension for Microsoft Dynamics AX offers industry leading scheduling and automation capabilities that simplify the building and automation of AX processes across IT environments. By using ActiveBatch to automate and manage Dynamics AX processes rather than command line utilities or scripts, developers benefit by consolidating complex, multi-step scripts into single, production-ready Job Steps that can be added to workflows in a drag-and-drop format.

Rather than being forced to hard code Dynamics AX parameters and variables into scripts, ActiveBatch's production-ready Job Steps provide drop-down menus to designate different variables, parameters or core Dynamics AX components, such as File Path, Server, Database, Values, Fields, Models and more. These drop-down menus auto-populate based on user responsibilities or technical specifications and ActiveBatch automatically passes variables downstream between Job Steps. For example, users can designate Dynamics AX Model types or specify a connection to a specific AOS in Job Steps such as Synchronize Database, Import, Export and Compile.

### Leverage Event Automation Architecture

Dynamics AX developers can also go beyond AX's limited job scheduling capabilities by leveraging ActiveBatch's event automation architecture to trigger these steps, including a range of events that are supported across platforms and application types, including Email, File events, Web Services, Microsoft Message Queue and more. These capabilities allow Dynamics AX processes to be triggered and managed in real-time based on specific business or IT events.

ActiveBatch: Version 9 SP1 and above



ActiveBatch® Extension for Microsoft Dynamics AX Workflow  
As displayed in the ActiveBatch Integrated Jobs Library

The screenshot displays a workflow in the ActiveBatch Integrated Jobs Library. It consists of three job steps:

- Logon** (Dynamics AX): The first step in the workflow.
- RunBatchJob** (Dynamics AX): The second step, which is expanded to show its configuration:
 

<b>Batch Job</b>	{{5637144863}} HelloWorld_BatchJob
<b>Wait For Completion</b>	True
<b>Logon Parameters</b>	Logon Parameters

 A tooltip for **BatchJobReturnValue** is also shown, listing:
  - BatchJobHistoryId (String)
  - Status (BatchStatus)
  - Log (String)
- Logoff** (Dynamics AX): The third step in the workflow.
- Create** (SharePoint): A fourth job step, also expanded to show its configuration:
 

<b>SharePoint Server</b>	MySPServer
<b>Item To Create</b>	List Item
<b>List Name</b>	BatchJobLogs
<b>Fields</b>	List of ListItemFields
<b>ListItemField</b>	ListItemField
<b>Name</b>	Title
<b>Value</b>	{{5637144863}} HelloWorld_BatchJob
<b>Type</b>	<default>
<b>ListItemField</b>	ListItemField
<b>Name</b>	Body
<b>Value</b>	%{RunBatchJob.ReturnValue.Log}
<b>Type</b>	<default>
<b>Site</b>	MySite
<b>User Account</b>	<Optional>

### Centralized Monitoring For All Dynamics AX Jobs

ActiveBatch centralizes the monitoring and alert functions of all Dynamics AX jobs to serve as a central point of monitoring for all Dynamics AX jobs, including the ability to retrieve job status and view return values and log files from a central location. ActiveBatch makes it possible to monitor individual job status and output, providing alerts for specific steps so failures or other issues can be quickly identified and operations notified via email, text message, SNMP and more. Workflow failures can be automatically entered into Help Desk systems, such as Microsoft System Center's Service Manager, to ensure an improved time to resolution, and start, restart or cancel Dynamics AX jobs without jeopardizing the completion of the overall workflow.

### Incorporate Service Level Agreements (SLAs)

When using ActiveBatch, Service Level Agreements can be incorporated into Dynamics AX workflows to communicate statuses and allow ActiveBatch to "take action" in managing job execution priorities. By doing this, computing resources can be managed by ActiveBatch to meet the expectations agreed upon by the organization and their IT counterparts.

### Integrate With Other Applications/Data Sources

Integrate Dynamics AX process types with other applications and data sources is made easier by the Integrated Jobs Library, which provides over 130 templated Job Steps that include a wide variety of tasks that would normally require a custom script (e.g. SFTP, Flow Control, database jobs, Java and more). These production-ready Job Steps allow users to easily build workflows in a drag-and-drop interface eliminating manual errors and delays in processing otherwise experienced due to custom scripting.

### Use Case

Developers and business architects can use ActiveBatch's Job Steps to automate and audit Dynamics AX processes more dynamically than ever before. Users can build a workflow to automate a Dynamics AX batch job, output the job log, start another process, and/or log off the system - all via the simple drag-and-drop interface found in the Integrated Jobs Library. The same workflow can then be triggered based on file arrival via SFTP, an email arrival or other IT events.

Alternatively, users can build compound workflows that integrate Dynamics AX with other applications or databases. As the screenshot demonstrates, users can utilize the "Run Batch Job" Job Step to schedule a Dynamics AX report, and based upon its successful completion, create a new List Item within SharePoint, another ActiveBatch Extension, and post that report for other users within the organization to view.



## Improve Performance and Control of Microsoft Exchange Server Task Automation with ActiveBatch® Integrated Job Steps

### Benefits

Easily automate Runbook and IT operations and integrate these procedures into other business and operational processes all through a single point of control.

- Automate the repetitive tasks associated with Microsoft Exchange management.
- Save Time for network administrators and reduce human errors through the automation of tasks.
- Build Workflows that integrate Microsoft Exchange Server with other technologies, applications, and platforms without the need for custom scripting.

### Microsoft Exchange Server: IT Boundaries Identified

With today's dynamic business environments, system administrators are often required to modify, add and delete mailboxes and distribution groups within Microsoft Exchange. For those who manage Microsoft Exchange through the use of custom scripts, this job has become increasingly time-consuming and inefficient as business and IT requirements often change. New solutions that provide users with advanced automation and scheduling capabilities are needed for administrators to efficiently keep their organizations running smoothly and successfully.

### Automate Repetitive Tasks

With ActiveBatch® Workload Automation, IT operators can automate and manage critical Microsoft Exchange tasks, such as creating and enabling mailboxes and distribution groups, associating members to specific distribution groups and deleting or disabling mailboxes and distribution groups.

Users of Microsoft Exchange can further benefit by using ActiveBatch Job Scheduling capabilities to automate the execution of Microsoft Exchange jobs within workflows that integrate other applications, databases and processes.

### Use Case

When Human Resource personnel initiate contact information for new employees, ActiveBatch can automate the process of creating and enabling a new mailbox within Microsoft Exchange and assigning the new employee to the proper group. ActiveBatch automation saves time, reduces human error and makes daily administrative activities easier.

### ActiveBatch Workflow for Microsoft Exchange Server

As displayed in the ActiveBatch Integrated Jobs Library

AddUser <span>Active Directory</span>	
Domain	advsyscon.com
New Account Name	\${User}
New Account Password	\${Pass}
Credentials	<Optional>
Organizational Unit	ASCI User Accounts
Attributes	<empty>

AddUserToGroup <span>Active Directory</span>	
Domain	advsyscon.com
Account Name	\${User}
Group Name	AB_TEST_Global_group
Credentials	<Optional>

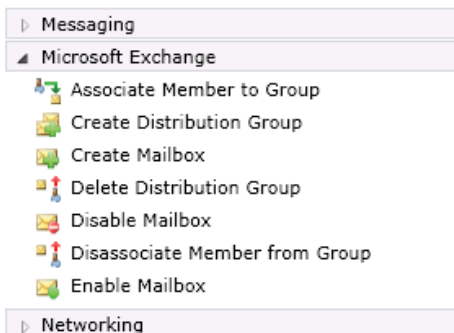
ModifyUserAttribute <span>Active Directory</span>	
Domain	advsyscon.com
Account Name	\${User}
Credentials	<Optional>
Attributes	<ADAttributes>
ADAttribute	
Name	ADAttribute
Value	

CreateMailbox <span>Microsoft Exchange</span>	
Exchange Version	Exchange2007
New Mailbox Attributes	
Display Name	ExchangeMailbox
User Principal Name	
Password	
Database Name	

DisableMailbox <span>Microsoft Exchange</span>	
Exchange Version	Exchange2007
Mailbox Name	

DisableUser <span>Active Directory</span>	
Domain	advsyscon.com

ActiveBatch: Version 8 SP3 and above



# ActiveBatch®

## Improve Productivity and Automate Microsoft SharePoint Jobs and Processes with ActiveBatch®

### Benefits

- Improve SharePoint Scheduling that includes event automation to expand SharePoint job scheduling beyond just Date/Time.
- Save Time and Reduce Errors for SharePoint developers by reducing your reliance on custom scripting.
- Streamline IT Operations and Improve IT Service Levels by constructing ActiveBatch workflows that integrate SharePoint processes across a broad range of other IT applications, systems and processes.

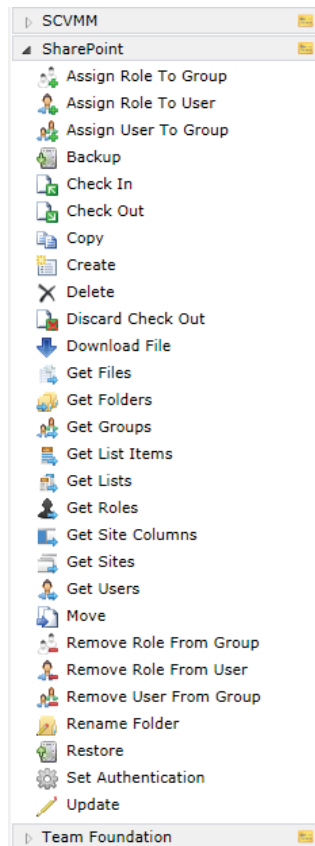
### Microsoft SharePoint: IT Boundaries Identified

With today's growing business demands, the management, scaling and provisioning of Web technologies and infrastructure is becoming increasingly complex and involves systems and technologies across the enterprise. As a result, users of Microsoft SharePoint are now being required to execute more advanced SharePoint scheduling in addition to process and system integration, workflow automation and more. Unfortunately, Microsoft SharePoint's Timer Job service provides only limited Date/Time Scheduling capabilities and requires custom scripting in order to run more complex, event-based processes involving SharePoint tasks. A more advanced, centralized scheduling and automation solution is required.

### Extend SharePoint Scheduling

The ActiveBatch® Extension for SharePoint allows users to automate the execution of critical SharePoint tasks and jobs within ActiveBatch's centralized console, including running backups, copy, creating, deleting or restoring SharePoint objects and more. ActiveBatch goes beyond Date/Time Scheduling and provides SharePoint developers with more advanced scheduling capabilities to schedule and execute SharePoint tasks based on a wide range of event triggers including e-mail triggers, file events, database triggers, Web Services, PowerShell and more.

ActiveBatch: Version 8 SP3 and above



### Integrate SharePoint Tasks with Non-SharePoint Tasks

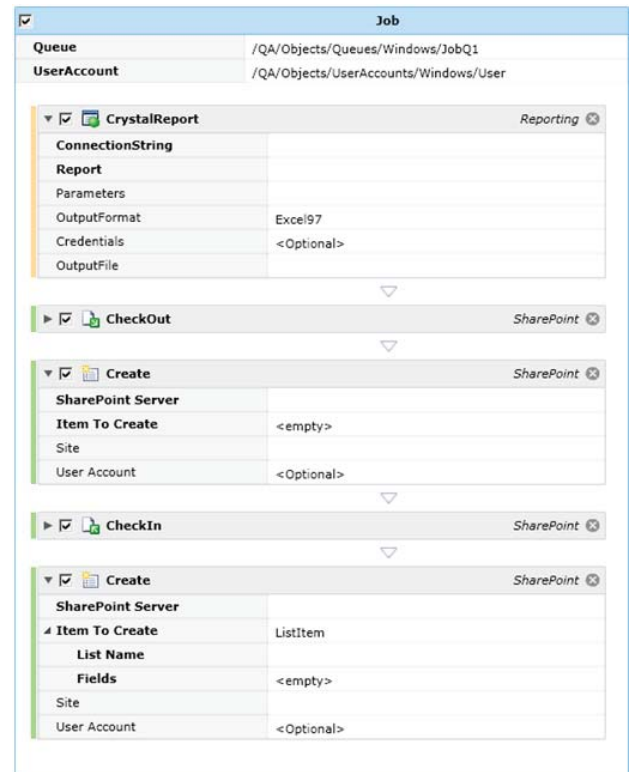
In addition to SharePoint, ActiveBatch also provides production-ready Job Steps for other Microsoft and non-Microsoft technologies, including Active Directory and Exchange, SQL Server, Oracle and others to allow users to construct workflows that automate and integrate SharePoint tasks with other applications and technologies across the enterprise. The result is being able to use ActiveBatch as a single automation solution to automate all of your Runbook and IT administrative processes, business processes and more from a centralized solution.

### Use Case

Construct a workflow that automatically uploads a Crystal Report from a SQL database, checks it into SharePoint as a document and notifies users of the new document.

### ActiveBatch® Extension for Microsoft SharePoint Workflow

As displayed in the ActiveBatch Integrated Jobs Library





## Enhance Microsoft SQL Server Scheduling with ActiveBatch® Integrated Job Steps

### Benefits

- Single Point of Scheduling to easily integrate SQL Server jobs with other scripts and applications all managed through the ActiveBatch job scheduler.
- Job Chaining across multiple SQL Server systems giving operators the ability to communicate and manage multiple SQL Server jobs.
- Pass Information from SQL Server databases to other servers, databases, or applications.
- Improved Reliability through ActiveBatch non cluster failover, checkpoint restarts, and workload balancing.
- Integrating File, Resource, and Variable Constraints with SQL jobs, DTS and SSIS Packages, to reduce errors and ensure that data is in fact valid.
- Customizable and Flexible Alerting for SQL server jobs finally give organizations peace of mind knowing that their data will be up to date each and every day.

### Microsoft SQL Server: IT Boundaries Identified

With the increasing complexity of today's IT environments, businesses are looking to incorporate and integrate Microsoft SQL Server functions as a part of greater workflows that contain both SQL Server and non-SQL Server systems. Without an enterprise-wide job scheduling solution in place, system and database administrators are bounded by the limited scheduling capabilities inherent to SQL Server, for example, the ability to execute workflows across SQL Server machines (sometimes referred to as Chaining). As these jobs and dependency requirements become more complex, they also become harder to manage and the custom scripts become more time-consuming and expensive to develop and maintain. New tools are needed to easily and efficiently automate and schedule SQL Server functions as a part of greater, more complex workflows while saving time for users of SQL Server and reducing the need for custom scripting.

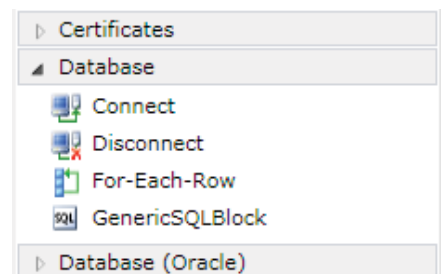
### Production-Ready Job Steps for SQL Server

ActiveBatch® Enterprise Job Scheduling and Workload Automation supports the creation of end-to-end workflows that incorporate and integrate Microsoft SQL Server functions as Job Steps within workflows. ActiveBatch provides a series of "templated", production-ready Job Steps, as an alternative to custom script creation, for a broad range of SQL Server database functions/tasks.

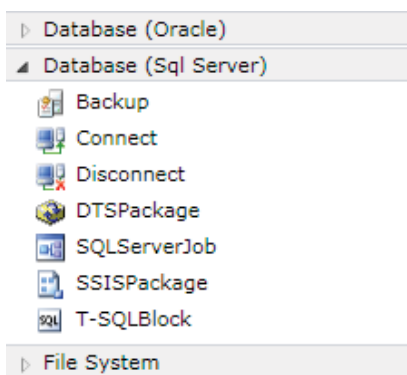
These Job Steps simplify the management of SQL Server database functions by providing auto-populating, dropdown menus and shortcuts for users to enter job properties, variables and configurations, which shortens the overall time to implementation. For example, the SSIS Job Step simplifies the management of SSIS configurations by allowing developers to use ActiveBatch Job Variables to populate SSIS configurations dynamically at runtime.

The SQL Server Job Steps are supplemented by a series of database flow control Job Steps, such as *ForEachRow*, which simplifies the implementation of workflow logic for database processes. For example, the *ForEachRow* Job Step allows a developer to designate which rows of data within the database table should be loaded or retrieved for the automation of file operations or database table cleanups. Using ActiveBatch's Integrated Jobs Library of Job Steps, IT organizations report, on average, between 50% to 80% less time building and managing SQL Server processes manually or via SQL Server Agent.

### Database Job Steps



ActiveBatch: Version 9 SP3 and above



George Bowen  
Solution Consultant  
Xcel Energy®

***"The ActiveBatch Job Step makes it much easier to manage these configurations than the built-in SSIS configuration mechanism, which is problematic to say the least. We store the configuration information in an XML file and pull that information using job variables and populate them at runtime, saving our team time and headaches."***

## Extend SQL Server Scheduling

SQL Server's scheduling functions are extended by ActiveBatch advanced scheduling capabilities that include constraints (or dependencies), monitoring, alerting, auditing and more. Job Steps within the Integrated Jobs Library allow users to incorporate operations such as FTP, SFTP, FTPS or even Web Services into workflows by coupling the business execution logic found in SQL Server with the robust framework that ActiveBatch has to offer. ActiveBatch authentication/user credentials simplifies the management of jobs across multiple databases by allowing DBAs to log into ActiveBatch once and execute processes across any database they have permissions for without the need to log-in at the server level.

ActiveBatch scheduling capabilities can be incorporated in the execution of SQL Server jobs on the server where they are maintained for the utmost flexibility and performance, or on other systems running the SQL Server Client. In addition, ActiveBatch gives the designer a choice between agent and agentless access to the SQL Server systems for invoking the SQL Server task, and incorporating these tasks into end-to-end workflows that include other systems.

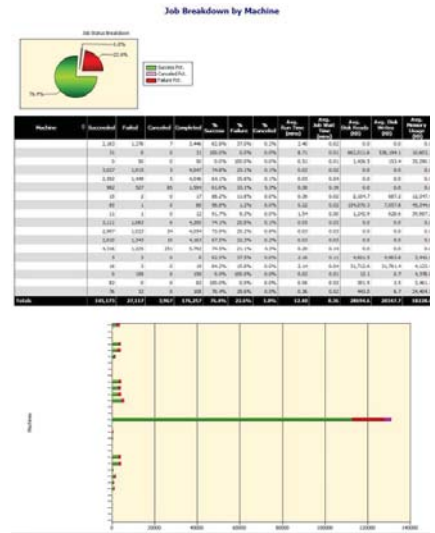
## Reporting Services

ActiveBatch supports a variety of reporting needs for today's IT organizations and users including support for packages like SQL Server Reporting, Crystal Reports and more to report on data in both list and graphical format allowing for improved analysis and better decision making

### Reporting Job Steps

- ▶ PowerShell
- ▲ Reporting
  - ▶ CrystalReport
  - ▶ CrystalReportServer
  - ▶ SqlServerReport
- ▶ System Administration

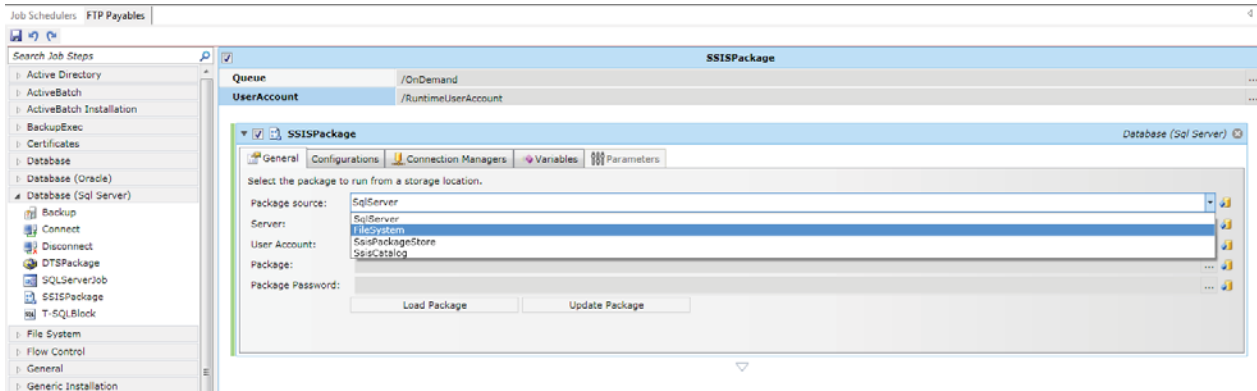
## SQL Server Reporting



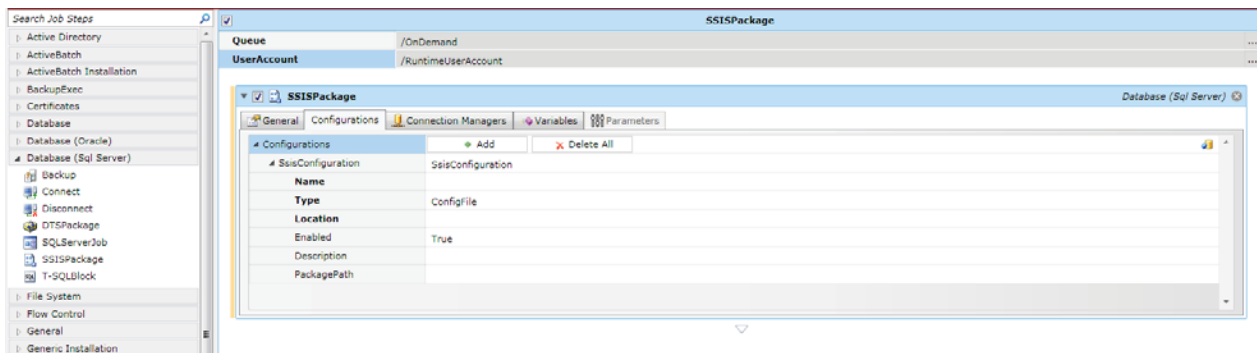
## Migration Services

The ActiveBatch Migration Tool for SQL Server enables users to seamlessly convert SQL Server Agent jobs into ActiveBatch Objects without the need for manual intervention. The Migration Tool converts SQL Server jobs into T-SQL scripts, parses them and then converts them into an XML file for uploading into ActiveBatch.

## SQL Server Job Step/SSIS Package



## SQL Server Job Step/SSIS Package





# Improve Productivity and Automate Microsoft SharePoint Jobs and Processes with ActiveBatch®

## Benefits

- **Test Environment Scheduling** prevents unnecessary project delays by ensuring that testing, builds and staging environments are run at the proper time.
- **Role-Based Permissions** to allow users without Team Foundation Server access to schedule and deploy builds to ensure they are working with the latest version of the software.
- **Schedule and Distribute Team Foundation Reports** either based on date/time or based on completion of a Team Foundation Server task, such as the completion of a build, so developer teams have an up-to-date status on outstanding work items.
- **Integrate** with other applications to improve accuracy and automate repetitive tasks.
- **Reduce Errors and Minimize Delays** by automating manual tasks.

## Microsoft Team Foundation Server: IT Boundaries Identified

Developers are being asked to build, deploy and maintain growing numbers of applications. The use of manual deployment procedures to coordinate the various steps, from testing, staging and production, add complexity and lead to errors. Microsoft Team Foundation Server (TFS) is a source code management and reporting tool used by development teams worldwide as a collaborative, software development solution. However, TFS lacks any type of formal scheduling tool; developers who want to schedule tasks such as creating a work item or triggering a build must do so via Web Services or rely on Team Foundation Server Task Scheduler Service. Team Foundation Server Task Scheduler Service is not designed as an all-purpose scheduling solution and is limited to just date/time scheduling.

## Extend Team Foundation Server Scheduling

The ActiveBatch® Extension for Team Foundation Server provides developer teams with a single point of scheduling to automate Team Foundation Server processes to cope with the growing number of software deliveries and deployments. It allows application build and release processes to become automated and repeatable workflows, thus enabling development teams to schedule and automate the deployment of applications. A user can use ActiveBatch to automate various Team Foundation Server tasks, such as creating a Work Item, starting a Build or modifying a Build.

## Use Case

ActiveBatch adds event automation capabilities to Team Foundation Server so scheduling can be expanded to include various IT events. Use ActiveBatch's Integrated Jobs Library Job Steps to construct a workflow that launches a build within TFS, and based upon its completion, automatically deploys that installation in a QA environment to minimize lag time and remove an otherwise manual process.

ActiveBatch also allows Team Foundation Server processes to be integrated with processes running on other applications and systems. Use ActiveBatch to integrate TFS with a QA/Test system by creating a workflow that automatically creates a new work item within TFS every time a bug is logged.

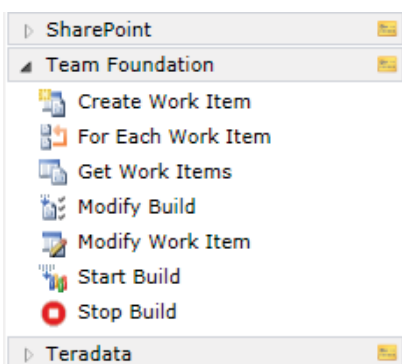
## ActiveBatch® Workflow for Microsoft Team Foundation

As displayed in the ActiveBatch Integrated Jobs Library

The screenshot displays two job steps from the ActiveBatch Integrated Jobs Library for Microsoft Team Foundation Server:

- StartBuild:**
  - Team Foundation Server: TfsServerEndpoint
  - Server URL: http://TEAMFOUNDATIONSERVER:8080/tfs/DEVDEPT
  - Credentials: /RuntimeUserAccount
  - Project Name: ActiveBatchProject
  - Build Controller: Build1
  - Build Definition: Dev
  - Queue Timeout Threshold: 0
- ModifyBuild:**
  - Team Foundation Server: TfsServerEndpoint
  - Server URL: http://TEAMFOUNDATIONSERVER:8080/tfs/DEVDEPT
  - Credentials: /RuntimeUserAccount
  - Project Name: ActiveBatchProject
  - Build Specification: BuildSpecification
  - Retention: True
  - Build Quality: (Dropdown menu with options: Initial Test Passed, Lab Test Passed, Ready for Deployment, Ready for Initial Test, Rejected, Released, UAT Passed, Under Investigation, Unexamined)

ActiveBatch: Version 9 and above





## Automate and Integrate PowerShell Scripts with ActiveBatch®

### Benefits

- Automatically Trigger PowerShell Scripts to ensure workflows are executed reliably, improving efficiency throughout the organization.
- Integrate PowerShell Scripts within jobs and processes that span across various databases, applications and technologies of your IT environment.
- Improve Control and Flexibility of Workflows with event triggers, monitoring, alerts, audits and more.

### Microsoft Windows PowerShell: IT Boundaries Identified

Microsoft PowerShell is the de facto standard scripting language for the automation and administration of systems and applications on Microsoft Windows. For IT professionals and programmers who use PowerShell to execute various tasks throughout an organization several major issues remain:

- How are these scripts triggered for execution?
- Is there a way to determine whether they have executed properly?
- Is there a way to establish a relationship between different but related PowerShell scripts?

### Automate PowerShell Scripts and Use Them Within Workflows

ActiveBatch® Workload Automation provides integration and automation capabilities for PowerShell scripts. With ActiveBatch you can trigger script execution across a wide variety of events (e.g. file, email, web services, etc.) including business date/time, create workflows and ensure that these workflows execute reliably across your entire enterprise. With ActiveBatch's Integrated Jobs Library you can use the templated, drag-and-drop Job Steps to integrate PowerShell scripts and cmdlets without the need for custom script creation. This creates the best of both worlds in that you can avoid scripting entirely when needed.

### Object-Level Integrated Support

ActiveBatch provides object-level integrated support for PowerShell and offers object collection passing from one Job Step to another, providing users with improved integration and execution of PowerShell scripts. By leveraging PowerShell within the ActiveBatch environment, users can take advantage of more than 130 production-ready Job Steps to incorporate PowerShell scripts within workflows that contain other important business and/or administrative functionality. As PowerShell scripts are executed within the context of an ActiveBatch job, they can be enhanced by all the features of that object, including constraints, resource management, date/time or event-based triggers and more.

### Use Case

Instead of manually triggering a PowerShell script to take a server offline, run an update and wait for it to complete, and then reboot the server for each server in an organization, ActiveBatch can automate this process by using the PowerShell script(s) in a workflow, ActiveBatch will automatically execute the PowerShell script for each server called, based on the parameters indicated.

### ActiveBatch® Workflow for Microsoft Windows PowerShell

As displayed in the ActiveBatch Integrated Jobs Library

JOB2	
Name	Value
Queue	/QA/Objects/Queues/Windows/CheckQ1
UserAccount	/QA/Objects/UserAccounts/Windows/User
ForEachValue	
Name	Value
List	Tristan;Luna;Zeus;Libra;Pieces
Separator	;
ContextName	Server
ExecutePowerShellScript	
Name	Value
Machine	.
Script	\$MainServer = Get-Server %{\$Server}
InputObject	\$MainServer = Get-Server %{\$Server}
InputObjects	\$MainServer.SetOffline()
Implicit Remote	StartUpdate(%{\$Server})
Imported Command Properties	\$MainServer.SetOnline()
PowerShell Console File	
Format Output Objects	
No profile	

ActiveBatch: Version 8 SP3 and above

- ▶ OpenPGP
- ▶ Power Management
- ▶ PowerShell
  - Execute PowerShell Script
  - Format PowerShell Objects
- ▶ Reporting
- ▶ System Administration

# ActiveBatch® Integrations for Microsoft® System Center®

ActiveBatch® is a centralized automation solution that brings all of your IT processes and automation requirements into a single and unified framework, including Job Scheduling, Workload and Runbook Automation, IT and Business Process Automation and more. ActiveBatch integration with the Microsoft System Center suite of products offers Data Center and IT Professionals the ability to easily develop and automate workflows and IT processes.

## System Center Configuration Manager

The ActiveBatch Extension for System Center Configuration Manager provides administrators with a series of production-ready Job Steps to automate System Center Configuration Manager processes. The production-ready Job Steps cover a host of common System Center Configuration Manager objects and functions, including a *Create Job Step* for the creation of Packages, Deployments, Programs, Folders, an *Assign Package to Distribution* Job Step, etc....

## System Center Operations Manager

ActiveBatch's integration with System Center Operations Manager can be used to monitor critical workflows, processes and services within the ActiveBatch system, including Microsoft Windows and non-Windows systems.

## System Center Orchestrator

The ActiveBatch Extension for System Center Orchestrator allows users to schedule, run and monitor Orchestrator runbooks from within ActiveBatch via a series ActiveBatch Job Steps that allow users to include the execution of Orchestrator runbooks within ActiveBatch workflows.

The ActiveBatch Integration Pack for System Center Orchestrator allows users to manage both Orchestrator runbooks and ActiveBatch Jobs and Plans from within the Orchestrator interface, thus simplifying the management, monitoring and integration of runbook and business processes all from a single point of control. This allows IT organizations to increase productivity and more reliably automate IT operational and business workloads.

## System Center Service Manager

ActiveBatch's integration with System Center Service Manager allows a workflow failure to immediately raise an Incident Request, without manual intervention, that can be easily assigned and managed in order to improve accuracy of the incident, and reduce time to response and ultimate resolution.

## System Center Virtual Machine Manager

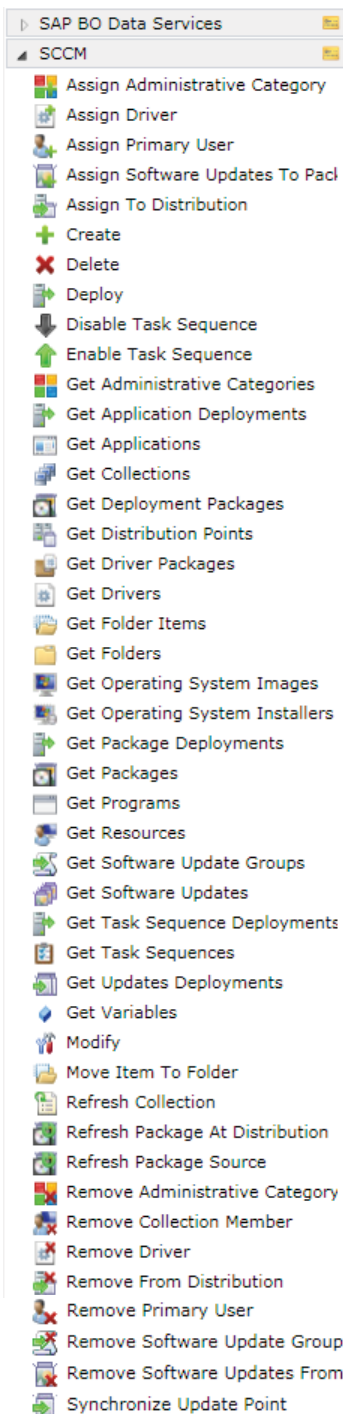
ActiveBatch, using System Center Virtual Machine Manager, offers access to defined Job Steps to manage Virtual systems (e.g. add, delete, clone, etc.) and can be used in conjunction with ActiveBatch's resource reservation system for the rapid provisioning of Virtual or Cloud based systems, without scripting or coding.

ActiveBatch offers today's IT organization the premier solution to develop and automate processes and workflows from within a single console that has been proven to reduce the number of errors from manual processing or scripting, improve IT service levels and reduce the cost of operations.



## Automate System Center Configuration Manager Processes with ActiveBatch's Production-Ready Job Steps

ActiveBatch: Version 9 SP3 and above



### Microsoft System Center Configuration Manager: IT Boundaries Identified

As IT organizations are being forced to manage an expanding array of hybrid platforms, operating systems, mobile devices, servers and more, client management tools such as Microsoft's System Center Configuration Manager supports an array of various client platforms and application delivery models. To improve efficiency, reduce administrative effort and lower PC total cost of ownership, IT organizations are looking to automate client management processes and workflows, such as OS deployment, patch distribution and other administrative functions, without the need to rely on scripting.

To automate System Center Configuration Manager processes, system administrators typically rely on VB or PowerShell scripts. Moreover they rely on these scripts to integrate System Center Configuration Manager processes with other System Center solutions and IT administrative systems for the automation of client/desktop management workflows, such as relying on PowerShell to open a ticket within System Center Service Manager based on an System Center Configuration Manager process that finds unauthorized software or low HDD on desktops. These scripts require system administrators to spend significant time building, testing and maintaining these workflows and are unreliable, thereby proving a point of failure to the business and negatively impacting IT service levels.

### Create Automated Workflows Consisting of System Center Configuration Manager Processes

The ActiveBatch® Extension for System Center Configuration Manager provides administrators with a series of production-ready Job Steps for System Center Configuration Manager allow administrators to automate System Center Configuration Manager processes. The production-ready Job Steps cover a host of common System Center Configuration Manager objects and functions, including a *Create Job Step* for the creation of Packages, Deployments, Programs, Folders, an *Assign Package to Distribution Job Step*, *Delete* and *Modify Job Steps* and many more.

The ActiveBatch Integrated Jobs Library allows users to drag and drop these Job Steps into workflows that manage the dependencies between System Center Configuration Manager functions and/or other systems that System Center Configuration Manager is dependent on. Users can use auto-populating dropdown menus to select and assign System Center Configuration Manager Objects, Job variables and properties so users don't have to hard-code these within a script. For example, a system administrator could use the *Create Job Step* to specify the creation of a Package and then deploy that Package to a Distribution Point using the *Assign Package to Distribution Job Step*.

These workflows are executed leveraging ActiveBatch's date/time scheduling and/or event automation framework, which allows ActiveBatch to recognize a business or IT event to trigger a workflow in real-time. This includes file triggers, Email, WMI, Web Service Triggers, Database Triggers, JMS/JMX and more.

### Direct Integration with Other Microsoft Solutions

The Integrated Jobs Library also provides direct integration with a host of other IT operational, administrative, software development and platform solutions, including the System Center suite of products, Microsoft Active Directory, Team Foundation Server and virtual/cloud platforms such as Microsoft Azure, Amazon EC2, VMware, Hyper-V and more. These integrations allow Admins to use ActiveBatch for the end-to-end automation of IT operational and administrative processes that involve System Center Configuration Manager and other dependent systems and process types.

# Microsoft® System Center Configuration Manager

## ActiveBatch® Extension for Microsoft System Center Configuration Manager

As displayed in the ActiveBatch Integrated Jobs Library

**Search Job Steps**

- Cognos BI
- DataStage
- Dynamics AX
- Informatica
- Netezza
- Oracle E-Business Suite
- PeopleSoft
- SAP
- SAP BO Data Services
- SCCM
  - Assign Administrative Category
  - Assign Driver
  - Assign Primary User
  - Assign Software Updates To Pac
  - Assign To Distribution
  - Create
  - Delete
  - Deploy
  - Disable Task Sequence
  - Enable Task Sequence
  - Get Administrative Categories
  - Get Application Deployments
  - Get Applications
  - Get Collections
  - Get Deployment Packages
  - Get Distribution Points

**Deploy\_7Zip**

Queue: /Sales Demonstration/TargettedCapabilities/SCCM/Objects/localhost  
 User Account: /Sales Demonstration/TargettedCapabilities/SCCM/Objects/testuser2

**Create** (SCCM)

SCCM Server	SCCM.domain.net
User Account	<Missing>
Item	Package
Package Name	Adobe
Package Source	No Source
Manufacturer	Adobe
Version	CS6
Refresh Schedule	<empty>
Description	

**AssignToDistribution** (SCCM)

SCCM Server	SCCM.domain.net
User Account	<Missing>
Item	Package
Package Name	Adobe
Distribution	Distribution Point Group
Group Name	Marketing

## Use Case

ActiveBatch is used to dynamically trigger a System Center Configuration Manager process and integrate it with directory services such as Active Directory. For example, use ActiveBatch's production ready Job Steps for System Center Configuration Manager, SQL Server and Active Directory to build a workflow that creates a System Center Configuration Manager Collection, creates a Deployment/Advertisement and updates an Active Directory group based on a SQL Server query or file being uploaded to a network.

ActiveBatch can be used to automate an employee "onboarding" process whereby a new employee is provisioned a virtual machine, and based on its successful completion, System Center Configuration Manager creates a new software package of application(s) the end user requires, assigns it to a distribution point and then creates a deployment to notify the end user that the install is available for download.

The *Create* Job Step Supports the creation of a wide array of System Center Configuration Manager Object types

**Create** (SCCM)

SCCM Server	SCCM.domain.net
User Account	<Missing>
Item	Collection
Collection Name	
Collection Type	
Limiting Collection	
Collection Rules	
Refresh Schedule	
Use Incremental Update	
Comment	

Collection dropdown options:

- Deployment Package
- Operating System Image
- Operating System Installer
- Driver Package
- Administrative Category
- Software Update Group
- Collection
- Collection Variable
- Computer Variable
- Driver
- Folder
- Package
- Program
- System

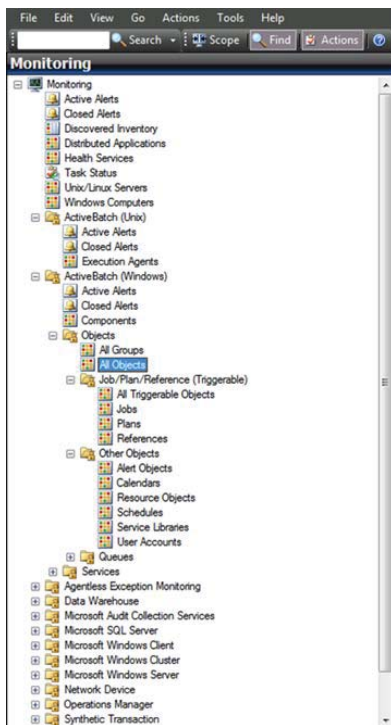
## Benefits

- Reduce your reliance on scripting for the automation of desktop client and desktop management processes.
- A single point of control for the automation and management of IT operational and administrative processes that include System Center Configuration Manager and dependent systems.
- Dynamically trigger System Center Configuration Manager processes based on an IT operational or administrative event, such as a file being uploaded, a database update or a WMI event.

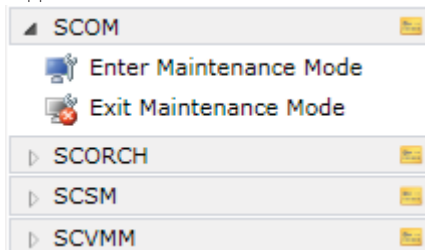
## ActiveBatch®

Improve Service Levels by Identifying and Resolving IT Process and Workflow Issues in Near Real-Time with ActiveBatch®

Monitor ActiveBatch Objects, Jobs, Plans, machines and services through the System Center Operations Manager interface



ActiveBatch: Refer to the ActiveBatch [Extension Compatibility Matrix Knowledgebase Article](#) for supported version information.



### Microsoft System Center Operations Manager: IT Boundaries Identified

IT Operational Groups require the ability to monitor the essential business processes and procedures that ensure that all components in the organization's environment are healthy. More and more, IT Operations Management are relying on Microsoft's Systems Center Operations Manager for improving service levels by being able to identify and resolve issues in near real-time that can affect the health of their systems and applications.

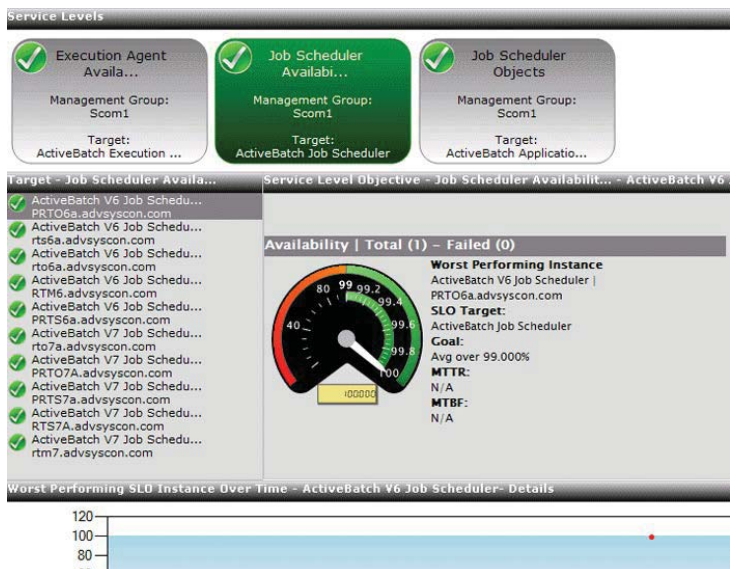
### Centrally Monitor the Performance and Health of ActiveBatch

The ActiveBatch Management Pack for Systems Center Operations Manager allows IT Operations staff to centrally monitor the performance and health of the ActiveBatch Job Scheduler, Windows, UNIX and Linux Execution Agents and other ActiveBatch Objects such as Jobs, Plans and Queues with other important IT systems and components. When an alert is raised for an ActiveBatch Job Scheduler or Execution Agent service or from a tagged object, timely alerts are raised that direct IT Operations members to the System Center Operations Manager console where detailed information is available for the rapid identification and resolution of issues that affect the health of your environment.

### Improve Efficiency In Identifying Failures or Interruptions

The ActiveBatch Management Pack for System Center Operations Manager allows each of the ActiveBatch objects to be monitored within the System Center Operations Manager Console by the Network Operations Center for improved efficiency and focus for identifying failures or interruptions faster through the System Center Operations Manager Console to determine when:

- ActiveBatch services are impacted for fast resolution
- Targeted ActiveBatch Objects, such as Jobs, Plans, and Queues have failed
- ActiveBatch performance is being impacted for efficiency and reliability



# ActiveBatch®

## Bring Runbook and Business Processes Together with the ActiveBatch® Extension for System Center Orchestrator

### Benefits

- Integrate IT operational processes with business processes.
- A Single View of runbook and business processes.
- Consolidate multiple scheduling solutions.
- Improved Productivity for developers and IT architects.
- Improved Reliable Execution of cross-departmental process types and workflows.

### Microsoft System Center Orchestrator: IT Boundaries Identified

Microsoft System Center Orchestrator is the runbook automation solution for System Center product suite and is geared towards automating datacenter and IT operational tasks and processes. For automation of business processes, IT departments typically implement disparate solutions for specific IT functions that support the business, such as a batch scheduling solution to pass data between key business applications or a tool for automating FTPs. However, these solutions do not provide direct integration with a runbook automation solution such as Orchestrator. The result is the inability to integrate IT operational and business processes when it becomes necessary to manage dependencies between systems and process types.

### Integrated Automation Power: Manage SCORCH and ActiveBatch Workflows

The ActiveBatch Extension for Orchestrator solves this problem by allowing System Center users to combine the runbook and IT infrastructure automation capabilities of Orchestrator with the workload automation and job scheduling capabilities of ActiveBatch. The Extension allows users to schedule, run and monitor Orchestrator runbooks from within ActiveBatch via a series ActiveBatch Job Steps that allow users to include the execution of Orchestrator runbooks within ActiveBatch workflows. This means users can manage both Orchestrator and ActiveBatch via the ActiveBatch GUI, thus simplifying the management, monitoring and integration of both runbook and business processes while reducing the time spent jumping between automation solutions.

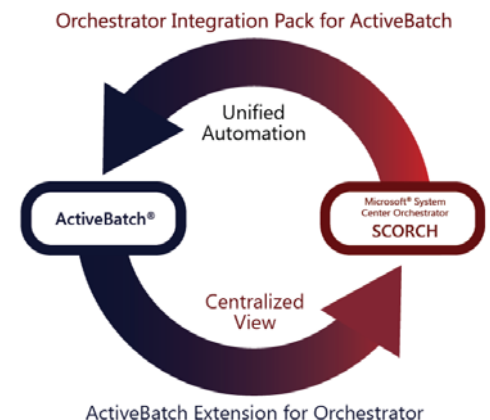
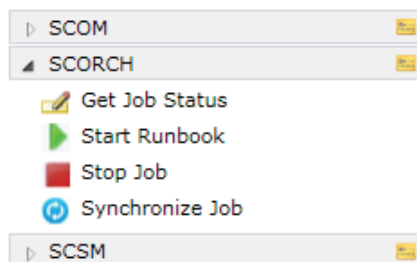
The ActiveBatch Extension for Orchestrator makes it easier to build the integration between these two automation solutions by eliminating the need to manage dependencies via manual handoffs or a custom built program. For example, job variables and parameters can be passed downstream within an ActiveBatch workflow and automatically passed into the Start Runbook Job Step for Orchestrator to be included as a job variable within the Orchestrator runbook. Alternatively, job variables and parameters can be designated within the Orchestrator Job Steps by simply selecting from an auto-populating drop-down menu from within the Job Steps as well.

### Pass Parameters and Values from Orchestrator Back to ActiveBatch

The Extension for Orchestrator also supports the ability to pass parameters and values from Orchestrator back to ActiveBatch to act as a completion status and/or trigger to execute additional ActiveBatch Job Steps. This allows users to include Orchestrator runbooks as Job Steps within larger workflows that integrate an organization's IT and business processes.

Other Job Steps, such as the Stop Job and Synchronize Job, simplify the management of Orchestrator runbooks from within the ActiveBatch GUI by allowing the users to stop an executing Orchestrator job instance or synchronize with the completion of a running Orchestrator job instance. The Job ID can simply be selected by the user from an auto-populating dropdown menu or use the return value of from the Start Runbook Job Step.

ActiveBatch: Version 9 SP2 and above



# ActiveBatch®

## Manage IT Operational and Business Workloads From a Single Point of Control with the ActiveBatch® Integration Pack

### Microsoft System Center Orchestrator: IT Boundaries Identified

Microsoft System Center Orchestrator is the runbook automation solution for System Center product suite and is geared towards the automation of creating, monitoring and deploying resources within the datacenter. But when these datacenter tasks and functions become dependent on other cross departmental process types and platforms, the ability to manage dependencies and pass data becomes increasingly difficult. This is a result of IT organizations typically relying on separate solutions to automate IT functions that support the business, such as a batch scheduling solution to pass data between key business applications or a tool for automating FTPs. The end result is the inability to effectively integrate IT operational and business processes when it becomes necessary to manage dependencies between systems and process types.

### Manage Orchestrator and ActiveBatch Processes Within the Orchestrator Interface

The Integration Pack for Orchestrator allows System Center users to combine the runbook and IT infrastructure automation capabilities of Orchestrator with the workload automation and job scheduling capabilities of ActiveBatch. Orchestrator users can now manage both Orchestrator runbooks and ActiveBatch Jobs and Plans from within the Orchestrator interface, thus simplifying the management, monitoring and integration of runbook and business processes all from a single point of control. This allows IT organizations to increase productivity and more reliably automate IT operational and business workloads.

ActiveBatch: Version 9 SP2 and above



The Integration Pack for Orchestrator allows ActiveBatch Jobs and Plans to be accessed and triggered from within Orchestrator by adding the ActiveBatch category to the Activity pane within the Orchestrator Runbook Designer. This new category contains the following activities:

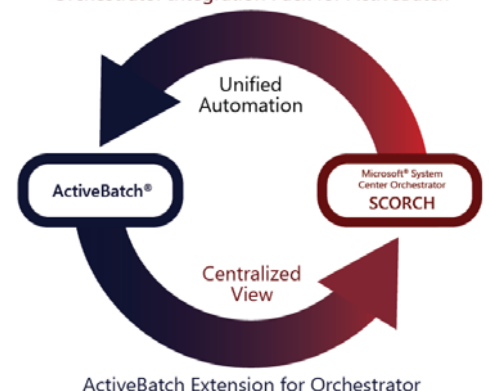
- Abort
- Pause
- Resume
- Synchronize
- Trigger

These activities provide an Orchestrator user with the ability to control ActiveBatch Job instances from within the Orchestrator Runbook Designer and use the completion of an ActiveBatch Job as a trigger for an Orchestrator Runbook. This is accomplished by allowing Exit Code and Instance Status to be automatically passed from ActiveBatch back to Orchestrator.

### Automatically Pass Parameters

In addition, runbook parameters can be automatically passed from Orchestrator into ActiveBatch as a job variable. The Integration Pack also consolidates the monitoring of runbooks by allowing users to view the log files from ActiveBatch Jobs and Plans from within Orchestrator, eliminating the need to have to view job information from two different interfaces.

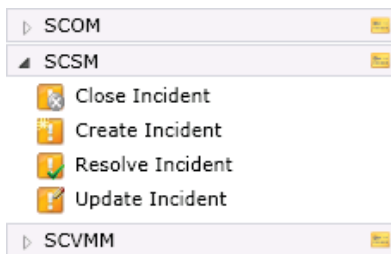
### Orchestrator Integration Pack for ActiveBatch





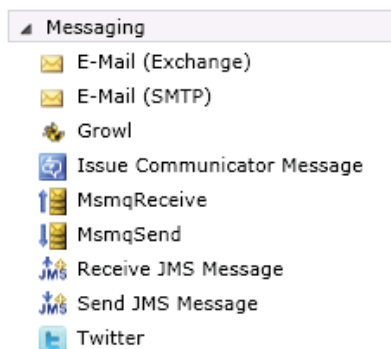
## ActiveBatch® and System Center Service Manager Provide Faster Time to Resolution and Improved Service Levels

ActiveBatch: Version 7 and above



### Incorporate ActiveBatch Alert Notifications

A key capability of the ActiveBatch-Service Manager interface is the ability to incorporate System Center Service Manager into the ActiveBatch alert notification mechanism. Each ActiveBatch object has a series of alerts associated with it. Each alert, in turn, can have one or more delivery methods, such as an email or social media alert via Growl or Twitter.



### Microsoft System Center Service Manager: IT Boundaries Identified

Time to resolution can have significant consequences on IT's ability to automate and run processes and workflows in real-time. ActiveBatch's ability to immediately create Incident Requests within System Center Service Manager, without outside or manual intervention, when key workflows and processes fail can easily assist in improving time to action and ultimately resolution.

### Automate the Creation of Incident Requests Without Scripting

ActiveBatch® offers a set of Job Steps, alert actions and event triggers in support of System Center Service Manager, to allow developers and workflow authors to create an incident request within Service Manager without having to write code or custom scripts when using ActiveBatch's templated and reusable Job Steps.

System Center Service Manager is an integrated platform for automating and adapting IT service management best practices by providing built-in processes for incident and problem resolution, change control and asset lifecycle management. With ActiveBatch, all IT workflow and process issues can be reported to System Center Service Manager and can take advantage of the Incident Management operations of System Center Service Manager. Incident Management is the help desk facility of System Center Service Manager and enables help desks to restore normal operation as quickly as possible, with the least impact on the organization.

### Easy Incident Management

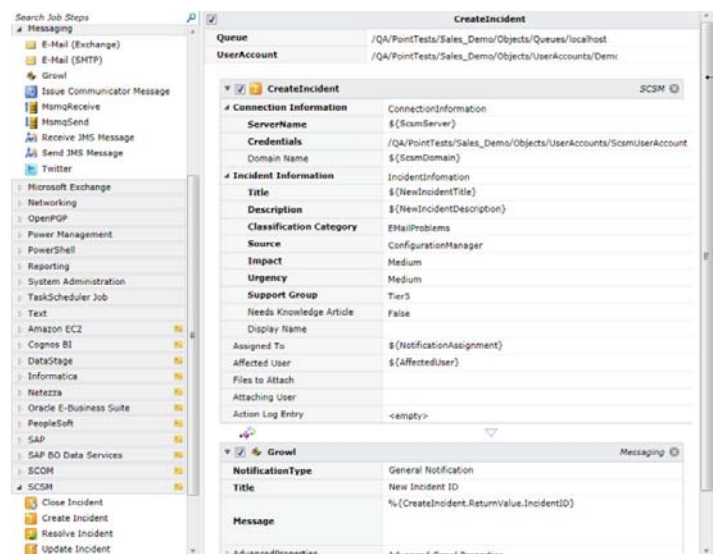
ActiveBatch provides a series of Job Steps which facilitate the creation, maintenance and resolution of System Center Service Manager incidents. Through direct use of the Job Steps, ActiveBatch customers gain an easier entry to incident management by letting ActiveBatch do the heavy lifting of directly interfacing with the Service Manager APIs.

### Use Case

If a critical ActiveBatch job fails or the connection to an Execution Agent goes down during a peak processing period, a System Center Service Manager incident can be automatically generated and assigned, thus removing complexity and shortening the time to resolution to minimize the impact on the organization.

### ActiveBatch® Workflow for Microsoft System Center Service Manager

As displayed in the ActiveBatch Integrated Jobs Library





## Reduce Costs, Maximize Resources and Improve Operational Flexibility and Efficiency with ActiveBatch®

### Benefits

- Increase IT Service Levels through advanced automation capabilities.
- Meet Service Level Agreements (SLAs).
- Improve Resource Allocation and utilization.
- Lower IT and Operational Costs.
- Improve ability to meet IT and business policy-based goals

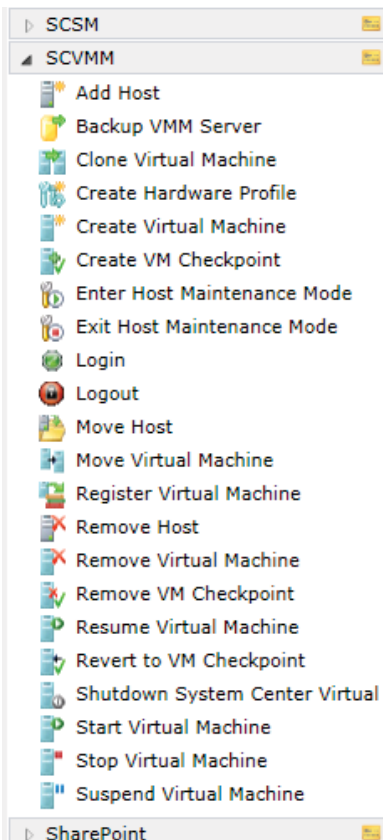
### Microsoft System Center Virtual Machine Manager: IT Boundaries Identified

With new pressures on IT organizations to improve service delivery and resource utilization, datacenters are increasingly relying on virtual machines to achieve these goals. To address these issues, IT managers are relying on Microsoft's Systems Center Virtual Machine Manager for rapid provisioning of virtual machines by making it possible to quickly create and consolidate machines and servers within a virtual environment.

### Automatically Provision and Manage Virtual Machines

The ActiveBatch® Extension for Microsoft Systems Center Virtual Machine Manager 2012 allows IT Operations to create, provision, clone and distribute virtual machines across Hyper-V, VMware and other virtual systems using templated Job Steps from within the ActiveBatch Integrated Jobs Library. By scheduling or using events within ActiveBatch, a systems administrator can automate the provisioning and management of virtual systems, such as whether to add or delete a host or virtual machine, create snapshots and/or checkpoints, clone virtual machines and establish maintenance modes for specific machines.

ActiveBatch: Version 7 and above



### Just In Time Resource Provisioning and Optimization Via Intelligent Automation

ActiveBatch also provides Intelligent Automation to automate the provisioning of virtual machines without the need to manually insert System Center Virtual Machine Manager Job Steps within each workflow. Using Scheduling Analytics and the Smart Queue, new System Center Virtual Machine Manager instances can be provisioned to ensure the correct amount and combination of System Center Virtual Machine Manager machines are available before workflow execution or on-demand to meet an increase in workloads. These capabilities ensure SLAs are being met and deliver cost savings with just in time resource provisioning and optimization.

**Scheduling Analytics:** Proactively provision virtual resources in advance of workflow execution by combining historical analysis and workload forecasting to ensure adequate resources are reserved for the successful execution of workflows whose completion is critical to addressing policy-based SLAs.

**Smart Queue:** Automatically provision virtual resources on the fly in real-time to ensure that workflows that are currently executing have adequate resources to successfully complete.

CreateVirtualMachine	
Queue	/QA/PointTests/Sales_Demo/Objects/Queues/localhost
UserAccount	/QA/PointTests/Sales_Demo/Objects/UserAccounts/DemoUser1
<div style="border: 1px solid gray; padding: 5px;"> <p><b>CreateVirtualMachine</b> <span style="float: right;">SCVMM</span></p> <p><b>Connection Information</b> ConnectionInformation</p> <p><b>ServerName</b> \${ScvmmServer}</p> <p><b>Credentials</b> /QA/PointTests/Sales_Demo/Objects/UserAccounts/ScsmUserAccount</p> <p><b>Authentication Mechanism</b> Default</p> <p>Proxy Authentication Negotiate</p> <p>Connection Port 0</p> <p><b>VirtualMachine</b> \${VirtualMachine}</p> <p>Path \${VMPATH}</p> <p>Virtual Machine Template</p> <p>Virtual HardDisk Drive</p> <p>Hardware Profile \${HardwareProfile}</p> <p>Host Name</p> <p>Deploy to Most Suitable Host True</p> </div>	

# ActiveBatch® Migration Tools and Services

## ASCI Migration Tools

Advanced Systems Concepts, Inc. provides a suite of automated migration solutions for common, platform-specific scheduling tools such as Windows Task Scheduler and Unix cron. These migration solutions can be part of your ActiveBatch implementation to eliminate the time and expense of manually converting SQL Server or Task Scheduler jobs into ActiveBatch. Below is a list of our automated migration tools:

### cron

The ActiveBatch Migration Tool for cron exports existing crontab files where they are converted into an XML format to be imported into ActiveBatch.

### Task Scheduler

The ActiveBatch Migration Tool for Task Scheduler allows users to convert Task Scheduler jobs into ActiveBatch as ActiveBatch Objects. This Migration Tool works for both Task Scheduler 1.0 and 2.0 by exporting and converting Task Scheduler 2.0 XML files or Task Scheduler 1.0 .job files into an XML format for uploading into ActiveBatch.

Alternatively, customers can use ActiveBatch to access existing Microsoft Task Scheduler jobs via ActiveBatch's Integrated Jobs Library without the need to migrate them directly into ActiveBatch.

### SQL Server Agent

The ActiveBatch Migration Tool for SQL Server enables users to seamlessly convert SQL Server Agent jobs into ActiveBatch Objects without the need for manual intervention. The Migration Tool converts SQL Server jobs into T-SQL scripts, parses them and then converts them into an XML file for uploading into ActiveBatch.

# ActiveBatch® Migration Tools and Services

## ASCI Migration Services

Advanced Systems Concepts Professional Services Group can assist customers in migrating from legacy job schedulers such as CA Technologies, IBM and BMC via a combination of consulting, proven conversion methodologies and migration tools to ensure a smooth and reliable migration. Advanced Systems Concepts Professional Services Group has migration tools for systems such as IBM Tivoli, CA Autosys and CA 7 and others.

### CA AutoSys

The ActiveBatch Migration Tool for CA Autosys exports existing JIL files, parses and converts them into XML files for importing into ActiveBatch as ActiveBatch Objects. All Autosys objects associated with these jobs, including date/time schedules, event triggers, etc., are automatically converted and uploaded into ActiveBatch as ActiveBatch Objects.

### CA Workload Manager

The ActiveBatch Migration Tool for CA Workload Manager takes definition files and converts them into XML files to be uploaded into ActiveBatch as ActiveBatch Objects.

### Cisco Tidal

The ActiveBatch Migration Tool for Cisco Tidal extracts Tidal Jobs directly from the Tidal database and converts them into an XML format for uploading into ActiveBatch. Tidal objects, such as Groups, date/time schedules, event triggers and job variables, are also converted and imported into ActiveBatch as ActiveBatch Objects.

### IBM Tivoli

The ActiveBatch Migration Tool for IBM Tivoli leverages Tivoli's composer utility program to output Tivoli files, parse those files and then convert them into XML format for uploading into ActiveBatch. All Tivoli objects associated with these jobs, such as date/time schedules and event triggers, are converted and imported into ActiveBatch as ActiveBatch Objects.

# ActiveBatch® Extensions

ActiveBatch Extensions offer incremental functionalities that integrate third-party applications and technologies with existing functions that are part of the Integrated Jobs Library and Service Library.

## ActiveBatch Extensions Include:

Amazon EC2	Microsoft System Center Operations Manager (SCOM)
Hadoop Ecosystem	Microsoft System Center Orchestrator (SCORCH)
IBM Cognos BI	Microsoft System Center Service Manager (SCSM)
IBM InfoSphere DataStage	Microsoft System Center Virtual Machine Manager (SCVMM)
IBM Netezza / PureData Systems	Oracle Enterprise E-Business Suite
Informatica Cloud	Oracle PeopleSoft
Informatica PowerCenter	SAP NetWeaver BW
Microsoft Azure	SAP BusinessObjects Data Services
Microsoft Dynamics AX	ServiceNow
Microsoft SharePoint	Teradata
Microsoft Team Foundation Server	VMware
Microsoft System Center Configuration Manager (SCCM)	

# ActiveBatch® Add-Ins

Advanced Systems Concepts offers additional ActiveBatch capabilities that customize and enhance the use of the Enterprise Job Scheduling and Workload Automation system to meet specific requirements.

## ActiveBatch Add-Ins Include:

Host Based Execution Agent Licensing for Virtual Machine Host Management Packs	Mobile Interface
<ul style="list-style-type: none"><li>• Microsoft System Center Operations Manager</li><li>• Nagios</li><li>• Zenoss</li></ul>	Non-Cluster Failover Package
	Self-Service Portal for Business Users
	Web Console
	Web Services ENV

# Contact Us

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