

BMC Control-M Workload Automation

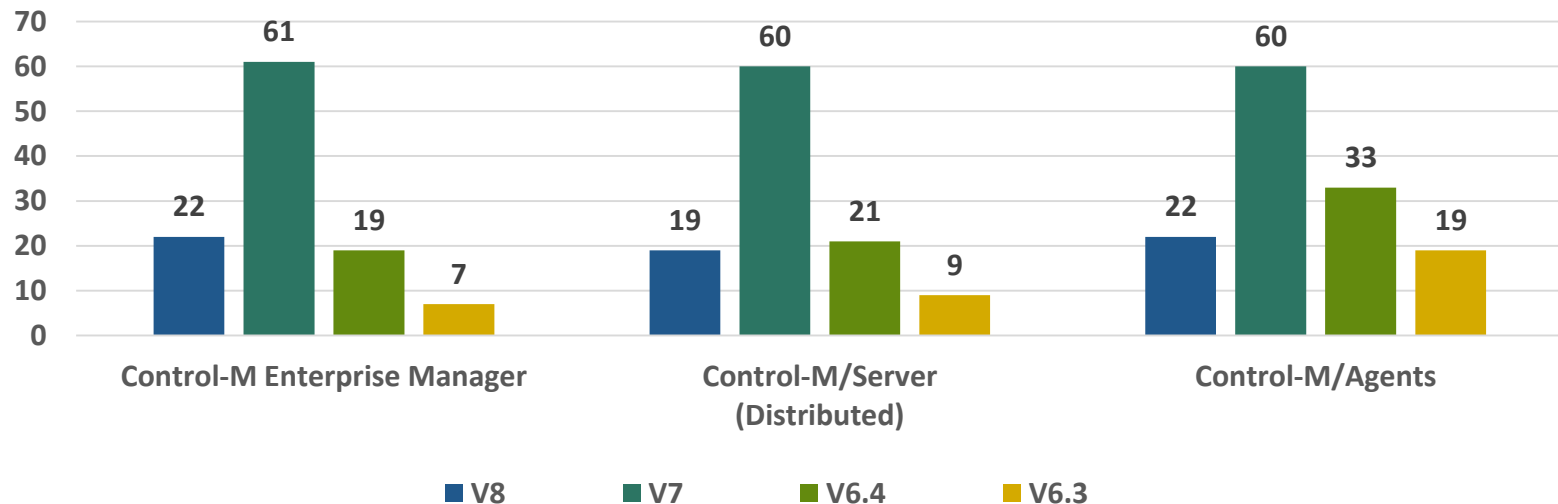
*City of London Customer Event
2014*

09:00 – 09:45	Control-M V8 the power of simple
09:45 – 10:00	Break
10:00 – 10:45	Consumerization of the IT workspace + big data be ready !
11:30 – 11:45	Break
10:45 – 11:30	Control-M V8 , Workload Change Manager, Self Service Live Demo
11:30 – 12:00	Control-M Roadmap

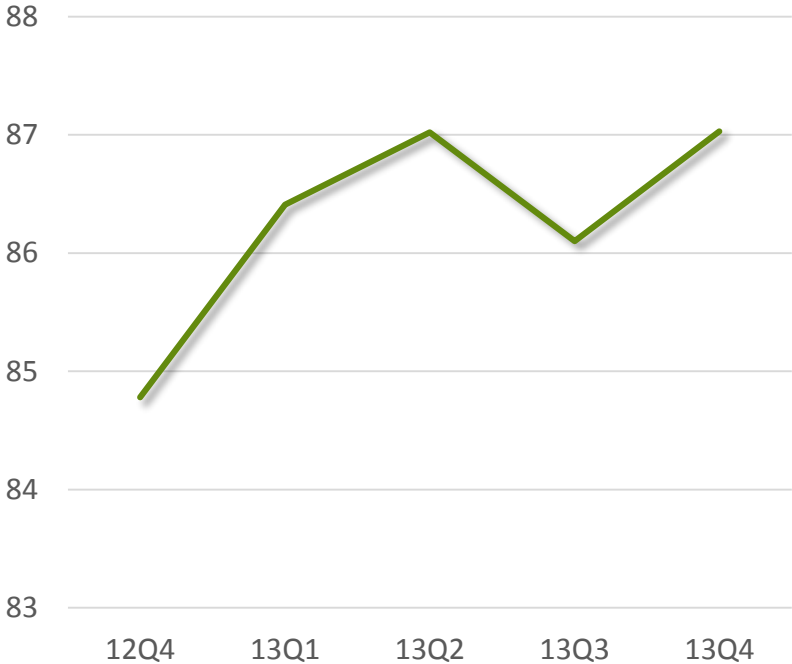




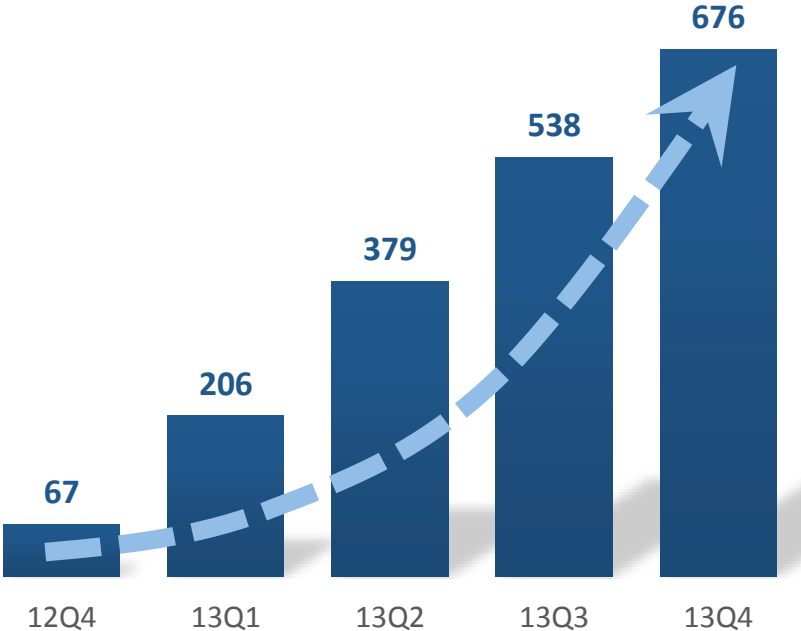
- ▶ 87% responded that workloads are expected to grow in the next 24 months
 - Top growth drivers are expected to come from new applications and business and transaction volume
- ▶ 83% of responders are either extremely or very satisfied (up 2 points from last year)
- ▶ What version(s) is currently in production in your environment?



Workload Automation CXI



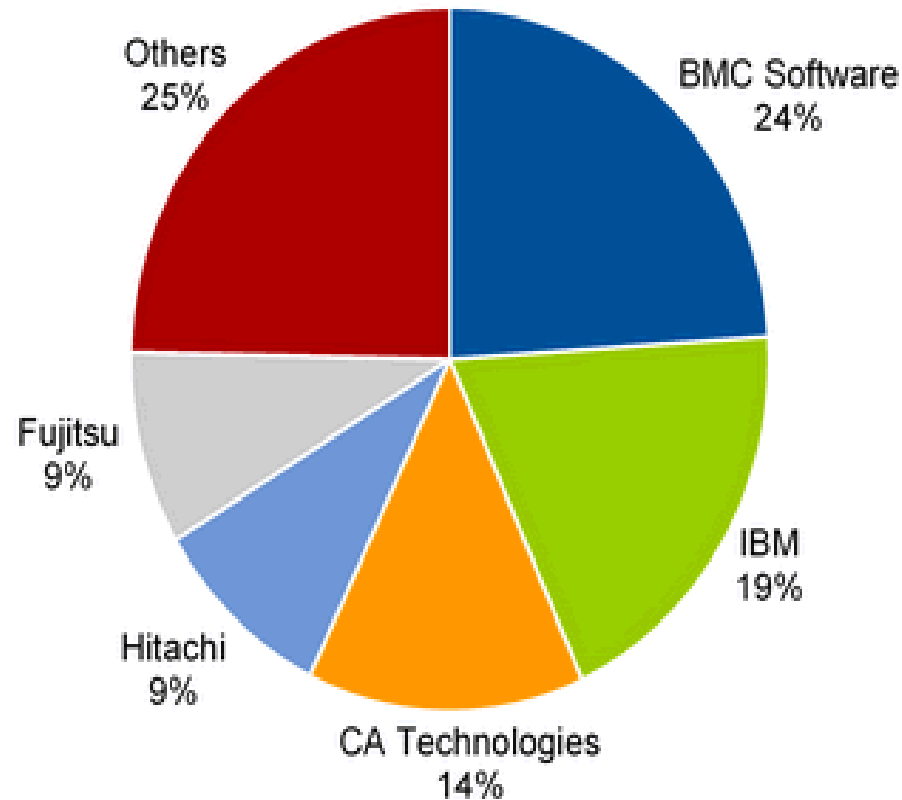
Control-M V8 Downloads



Market Share Leader in Workload Automation and IT Process Automation, 2013

BMC = \$233 Million

Workload Automation and IT Process Automation Market = \$960 Million



Gartner Research Inc., "SWOT: BMC Software, ITOM Software, Worldwide", Laurie F. Wurster, Ronni J. Colville, Colin Fletcher, Jarod Greene, 9 May 2014 / Based on new 2013 new licenses, updates, subscriptions and hosting, technical support, and maintenance

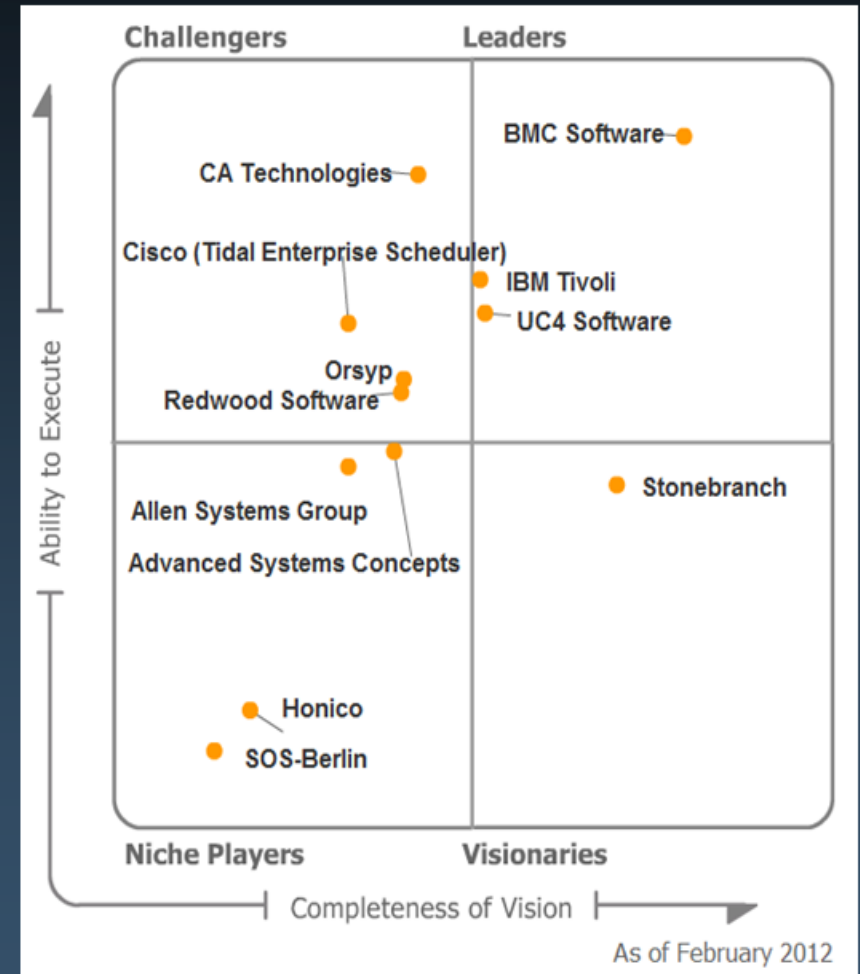
BMC Software Positioned as a Magic Quadrant Leader

Magic Quadrant for Workload Automation

Leaders in the workload automation market combine insightful understanding of the realities of the market, the ability to influence the market's direction, the ability to attract an industry following and the capacity to lead the market.

Leaders have the proven ability to deliver on their vision and to support their customers through periods of stability, as well as periods of change or economic hardship. The leaders control most of the market's business activities and are the primary influencers of market evolution.

Self-service capabilities, policy-driven workload management, predictive functionality, business impact analysis, and support for mobile devices and automation platforms are some areas of vendor differentiation.



Gartner "Magic Quadrant for Workload Automation" by Milind Govekar, Biswajeet Mahapatra, 27 February 2012.

This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from BMC Software. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

Simple

BMC Control-M 8 User interface



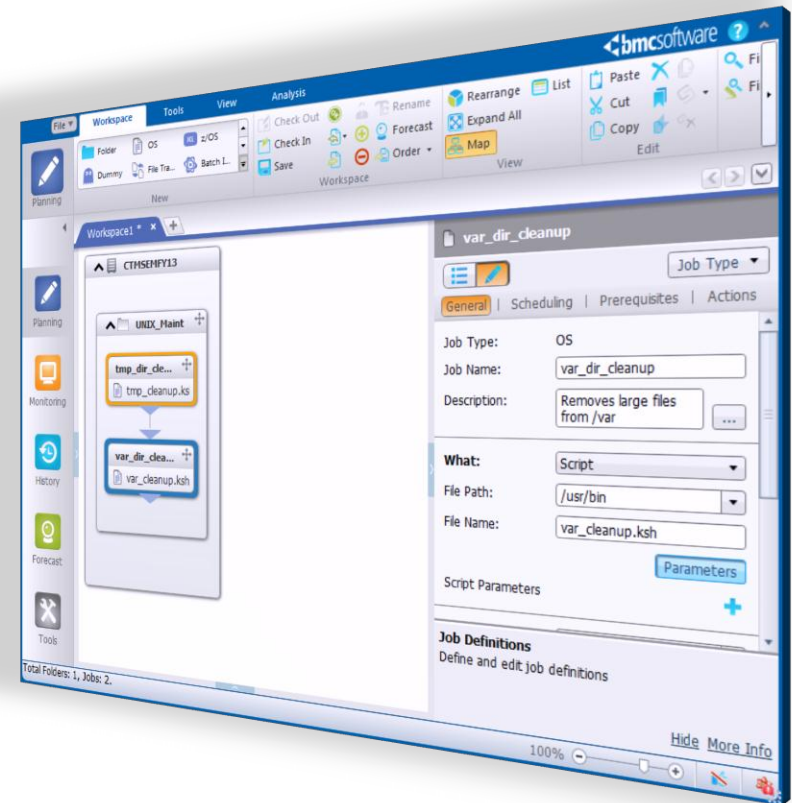
- ▶ Enable users to accomplish tasks quicker with less training
 - Single UI
 - Simplify (streamline) high-frequency activities
 - Extend collaboration
 - Consistency across all “domains”
- ▶ Preserve ALL core capabilities to maintain comfort level for existing users
- ▶ Evolve User Interface using modern technology
 - Windows Presentation Foundation
 - Vibrant colors, icons
- ▶ Reduce the overall TCO of the solution
 - Increased processing throughput reduces hardware footprint
 - Quicker and simpler installation and deployment options



- ▶ GA in December 2012
- ▶ More than 700 companies are evaluating or running V8 in production

▶ V8 Highlights

- Simplified user interface
 - Most commonly used functionality has been streamlined
- Virtual workspaces
- Up to x5 times more powerful
- Zero downtime agent upgrade



Single UI for most commonly used functions

[- Trial Version -] Control-M Workload Automation - [User: emuser, Environment: Default Naming Service, Server: 5JCZ0M1-723]

File Home Tools

Monitoring Alerts Service Monitor Order Monitor Actions

New

Monitoring - Home

Recent Viewpoints

Recent

All Active Jobs

All Viewpoints

View all possible viewpoints that are defined for me

Planning

Monitoring

History

Forecast

Tools

Get Started | myHomePage

Workload Automation 8.0

Welcome to Control-M Workload Automation 8

Videos

Start off with our Getting Started video modules

- [Control-M Workload Automation Overview](#)
- [Planning Jobs](#)
- [Monitoring Jobs](#)

Monitoring Jobs

Planning Jobs

Control-M Workload Automation 8

Domain Layout

The screenshot displays the BMC Control-M Workload Automation interface. The main window shows a domain layout for 'CTMSEMFY13' with a tree structure of 'AcquiredBilling' jobs. A 'Network Overview' chart is visible at the bottom. A secondary window is open, showing the configuration for 'AcquiredBilling_Job4'. The 'File' menu is open, highlighting 'Detach to Separate Window'. The job configuration window includes fields for Job Type (OS), Job Name (AcquiredBilling_Job4), Description, What (Command), Command (_Sleep 120), Host/Host Group, Control-M Server (CTMSEMFY13), Run As (Administrator), and Parent Folder (AcquiredBilling1).

Control-M Workload Automation - [User: emuser, Environment: PROD, Server: CTMSEMFY13]

File Workspace Tools View Analysis

- Action Report
- Export List
- Print
- Print Preview
- Detach to Separate Window

Options Detach this tab to a separate window CTMSEMFY13

Help

About

Logout

Exit

Monitoring

History

Forecast

Tools

Network Overview

Total Folders: 1, Jobs: 59.

CHG1234567 - [User: emuser, Environment: PROD, Server: CTMSEMFY13]

File Workspace Tools View Analysis

- Folder OS z/OS
- Dummy File Tra... Batch L...

New

Workspace

- Check Out Validate Own
- Check In Export Load
- Save Import Unload

Rename Forecast

Rearrange Expand All

Map List

- Cut Copy Categorize...
- Paste Delete Save As Template
- Mass Create

Find Find And Update

AcquiredBilling_Job4

Job Type

General | Scheduling | Prerequisites

Actions

Job Type: OS

Job Name: AcquiredBilling_Job4

Description:

What: Command

Command: _Sleep 120

Host/Host Group:

Control-M Server: CTMSEMFY13

Run As: Administrator

Parent Folder: AcquiredBilling1

More

Job Definitions

Define and edit job definitions

Info

Total Folders: 1, Jobs: 59.

100%

Planning: Managing Job Flows

The screenshot displays the 'Control-M Workload Automation' interface. The title bar indicates '[emuser connected to ctrm-msmu]'. The main window is titled 'Planning - Home' and shows a list of 'My Workspaces'. The workspace 'Workspace1' contains several job flows, with 'RFC5678193 - Add Dev Windows Cluster to Netbackup' highlighted. The job flow details show a dependency on 'RFC5678193 - Add Dev Windows Cluster to Netbt' with a condition 'ion: Wait for dev Go Ahead before proceeding' and a start time of '6/14/2012 3:18:30 PM'. The overall time for this job flow is '6/14/2012 3:35:47 PM'. The interface includes a sidebar with navigation icons for Planning, Monitoring, History, Forecast, and a 'New' button. The top menu bar has 'File', 'Home', and 'Tools' options.

Control-M Workload Automation - [emuser connected to ctrm-msmu]

File Home Tools

Blank Workspace Folders Refresh

Workspace

New +

Blank Workspace Create new workspace

My Workspaces

Workspace1

RFC12345678 - Payroll Modifications for new lines of bu

RFC383838 - Add Australia to InCountry Processes

RFC5678193 - Add Dev Windows Cluster to Netbackup

RF3492008 - Rework Month-End Process

Training Job Flows for new AppDev folks

Test jobs for the new FTP Server

RFC5678193 - Add Dev Windows Cluster to Netbt

ion: Wait for dev Go Ahead before proceeding

Time: 6/14/2012 3:18:30 PM

Time: 6/14/2012 3:35:47 PM

Load Folders and Jobs

Other Workspaces

Building a Batch flow with V8

The screenshot displays the BMC Control-M Workload Automation V8 interface. The main workspace shows a flow diagram for a job named "Batch Impact Manager_Job#8". The flow starts with "HDFS_FW", which branches into "Hadoop_PIG" and "Java_MapRe...". Both of these lead to "File Transfer...", which then leads to "Batch Impac...". A tooltip "A valid Drag action" is visible over the "Batch Impac..." job icon.

The right-hand pane shows the configuration for "Batch Impact Manager_Job#8". The "General" tab is active, showing the following details:

- Job Type: Batch Impact Manager
- Job Name: Batch Impact Manager_Job#8
- Description: [Empty field]
- What: [Empty field]
- Service Name: [Empty field]
- Service must complete:
 - By 12:00 + 0 days
 - In 0 Hours 1 Min after order time
- Service Priority: 3
- Actions:
 - Percentile range: 3 Standard Deviations Of Job Runs (99.73%)
 - Average run time +/-: 100 Percentage
- Host/Host Group: [Empty field]

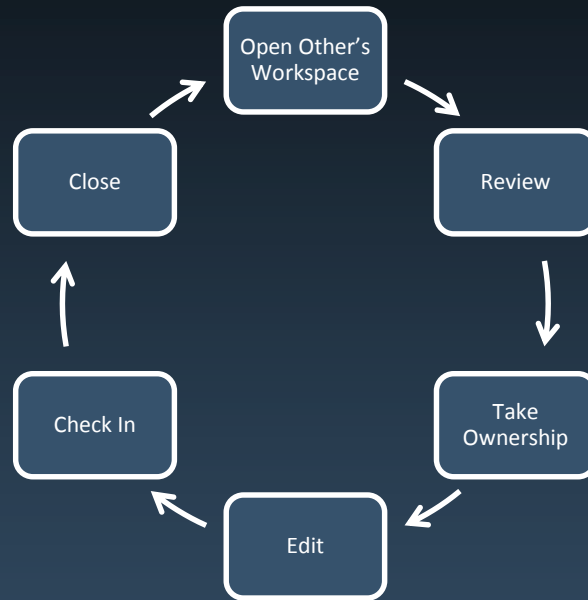
At the bottom left, a "Network Overview" section shows a small diagram. The status bar at the bottom indicates "Total Folders: 1, Jobs: 5." and a zoom level of 90%.

Virtual Workspace

Collaborate on workload definitions
and maintain control



Collaborate with Virtual Workspace



Tools		Workspaces
Workspace Name	Description	Owner
<input type="text"/>	<input type="text"/>	<input type="text"/>
RFC 2876428 - Removing old report jobs.	Working with the London reporting team to remove old reports.	npeart
Control-M admin test case 2	Testing new modules	emuser
Control-M admin test case 1	Testing new modules	emuser
RFC 2876461 - Renaming maint jobs to meet standards	Renaming maintenance jobs to adhere to the naming convention standards	gdanzig
RFC 2876123 - Finance server migration	Migrating all Finance reporting jobs to new servers	jcash
RFC 2876293 - Changing Users_Online service to use nodegroup	INC 26537 - Updating all Users_Online jobs to use a nodegroup to avoid high CPU.	rwaters
RFC 2876356 - New Billing workflow	Creating a new billing work flow. Collaboration with the Billing team.	rjohnson
RFC 2876380 - Adding new supply chain jobs	Collaborating with supply chain and oracle ERP team	lkilmister
RFC 2876912 - Adding file transfer jobs to the nightly payroll	Adding FTPs to for new bank transfers	lbelly

- ▶ Import/Export XML
- ▶ Resolution Dialog to correct issues on the fly

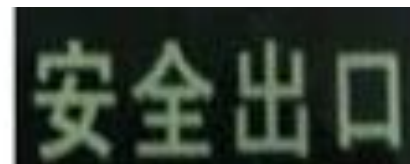
Severity	Message	Resolution	Version	Line Number	Column
Info	XML Schema verification passed			0	0
Conflict	Unknown Control-M Server: CTMEBC	Unresolved Conflict		0	0
Info	Import conflicts detected. Resolve them, before...			0	0

Importing from C:\CTM_Seminar\CALBROServices.xml

XML loaded, with 1 folders, 16 jobs, 0 SMART folders and 0 sub-folders

Continue Cancel

- ▶ Folder
- ▶ Sub Application
- ▶ Output
- ▶ Variables
- ▶ Host
- ▶ Order Method
- ▶ Workspace
- ▶ Check Out
- ▶ Check In
- ▶ Run As
- ▶ Prerequisites
- ▶ Actions



Monitoring Domain

The screenshot displays the BMC Control-M Workload Automation monitoring interface. The title bar indicates the user is 'emuser' in a 'PROD' environment on server '2008EESP2-64'. The interface includes a menu bar (File, Viewpoint, Tools, View, Analysis) and a toolbar with various job management actions such as Rerun, Hold, Free, Run Now, Kill, Set to OK, Confirm, Projection, React, Delete, Undelete, and External Programs. A search bar is located above the main job view.

On the left, a sidebar lists 'All Active Jobs' from OS_Job0 to OS_Job4. The main area shows a hierarchical tree of jobs. At the top, OS_Job0 and OS_Job1 are highlighted with blue boxes. Below them, OS_Job2, OS_Job4, and OS_Job5 are grouped with orange boxes. Further down, OS_Job3, OS_Job8, OS_Job9, OS_Job10, and OS_Job27 are shown. The hierarchy continues with OS_Job12 and OS_Job13, OS_Job20, OS_Job14, OS_Job15, OS_Job16, OS_Job17, OS_Job22, OS_Job18, OS_Job19, OS_Job23, and OS_Job28. Each job node includes a green checkmark icon and a lock icon.

At the bottom of the window, the status bar shows 'Total Folders: 0' and 'Total Jobs: 49'. The zoom level is set to 70%.

Unique Order Flow

MYFOLDER [IOAZ.EM800E2.CTM.OPR.S]

- JOB1
NodeID: 2
- JOB2
NodeID: 3

NO_GROUP

JOB1 NodeID: 23	JOB1 NodeID: 18	JOB1 NodeID: 28
JOB2 NodeID: 22	JOB2 NodeID: 17	JOB2 NodeID: 27
JOB3 NodeID: 21	JOB3 NodeID: 16	JOB3 NodeID: 26
JOB4 NodeID: 20	JOB4 NodeID: 15	JOB4 NodeID: 25
JOB5 NodeID: 19	JOB5 NodeID: 14	JOB5 NodeID: 24

Order

Control-M: E82MF

Folder: MYFOLDER

Library: IOAZ.EM800E2.CTM.OPR.SCH

Jobs: All Jobs

Parameters:

- Ignore scheduling criteria
- Hold
- Order as independent flow

More ▾

Order Close

History Domain

Control-M Workload Automation - [User: emuser, Environment: PROD, Server: 2008EESP2-64]

File Tools

Control Resources Quantitative Resources Global Conditions Prefixes Manage Conditions Viewpoint Manager Workload Policy Monitor Define

History - home

History - Home

View Point: **All Jobs** ▾

Yesterday
View archived viewpoints of the previous day

All Days
View all available archived viewpoints

Sort By: Date ▾

2008EESP2-64	6/20/2012
2008EESP2-64	6/19/2012

History
Planning
Monitoring
Forecast
Tools

Forecast Domain

Control-M Workload Automation - [User: emuser, Environment: PROD, Server: 2008EESP2-64]

File Tools

Forecast
User Daily Definition
Forecast/BIM Rules
Calendars
Control Resources
Quantitative Resources
Global Conditions Prefixes
Conditions
Service Definitions
Workload Policies
Periodic Statistics

Forecast - Home

Date: 6/22/2012
What If Scenario: [dropdown]

Folders and Jobs

Folder: FY13LargeFlow
Control-M Server*: [dropdown]
Application: [dropdown]
Lib: [dropdown]
Job Name: [text]
Mem Name: [text]
Sub-application: [dropdown]
Mem Lib: [text]

Services

Advanced

Use: My checked out calendars
Job Run Time: My checked out
All checked out
Only checked in
 *Ignore global master load based only on the conditions defined in the CONTROL-Ms specified above)

Clear Open

Control-M Workload Automation - [User: emuser, Environment: PROD, Server: 2008EESP2-64]

File Tools

Tools Options

Tools

Tools - Home

Monitoring

- Alerts
- Service monitor
- Viewpoints
- Workload Policies Monitor

Planning

- Calendars
- Folders
- Periodic Statistics
- Services – Services definition
- Templates
- Workspaces

Communication

- Change Password
- Connectivity Troubleshooting
- Control-M Servers Communication Status

Production Control

- Conditions
- Control Resources
- Global Conditions Prefixes
- Quantitative Resources
- Workload Policies Definitions

Other Tools

- Control-M Configuration Manager
- Reports

Batch Impact Manager/Forecast

- Forecast/BIM Rules
- User Daily Definition

- ▶ Agent upgrades are difficult to accomplish when continuous operation is required or when there are many agents
- ▶ As of Control-M 8, Agents can be upgraded without having to reserve down time for workload automation services
- ▶ **UNIX**
 - Full implementation
 - Upgrade available from all supported versions
 - Same technology will apply to fix packs
- ▶ **Windows**
 - Upgrade to V8 in old (downtime) mode
 - V8 fix packs will support no downtime

**THE
WAY
FORWARD**



Assisted MIGration Offering

AMIGO FOR UPGRADES

This is a free service we offer all existing customers to pro-actively assist them with the upgrade of their software.

To use the service just raise a new issue at least one week before the upgrade, add the word AMIGO to the subject line and send us a copy of your upgrade plan if available.

Based on the target date, the AMIGO representative(s) will setup a conference call to:

Introduce themselves; verify timeframes; place your company on a hotlist; walk you through a basic checklist; answer any questions and advise on Fix Packs, patches and PTFs.

WITH AMIGO IT'S A WIN - WIN SITUATION FOR BMC AND OUR CUSTOMERS

AMIGO minimizes downtime; makes is easier to keep abreast of the latest versions; familiarizes Support with your plans and environment; avoids after hours calls and strengthens our working relationships.

For Additional Information:

Big Data, Big Team: The Making of Control-M for Hadoop

Posted by Tom Ovea in Workload Automation on Oct 7, 2013 10:37:22 PM

In July 2012 I participated in a BMC Big Data Summit that took place in BMC headquarters in Houston, Texas. I met attendees from many of the BMC product lines and we discussed Hadoop and Big Data opportunities along with customer use cases, challenges and needs. I've described some of the Workload Automation use cases before in an article published in the Enterprise Systems Media magazine. This is the behind the scenes story of the team that made Control-M for Hadoop a reality.

Can You Ride an Elephant?

Posted by Tom Ovea in Workload Automation on Oct 25, 2013 12:21:10 AM

Big Data, Big Data, Big Data. Is that just another passing buzzword or is there to stay? What does it really mean? Is my data big enough to be managed by Big Data technologies?

Those are questions that many of us ask these days and there's a good reason for that. Just like the early days of cloud computing, when every one of us had a different idea in mind as to what it actually was, Big Data technologies are currently mistaken to be considered as only relevant for the petabyte club members. But the truth is that there are benefits of using Hadoop for example, even for smaller scales of data. Some of these benefits are also discussed in an interview with Mike Olson, Cloudera CEO.

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- Affordable Infrastructure:** You do not need to purchase expensive hardware or a high-end storage infrastructure for Hadoop. The idea is to use commodity hardware with locally attached storage. This hardware and storage can be physical or virtual. It can be on premises or hosted on a public cloud such as Amazon Elastic Compute Cloud (EC2) and you can dynamically add or remove resources to scale for changing processing levels.
- Rapid data processing:** Many of us are starting our journey with single-node Hadoop clusters in test environments but Hadoop is designed to run on multi-node clusters, which allow parallel and balanced data processing. Today, there are already companies such as the multicasting service Squidoo, that manage Hadoop environments with hundreds of nodes, each is capable of independently processing the pieces of data it holds, much faster than any single server can process, regardless of how many CPUs it has.
- Manage unstructured data:** Unlike traditional relational databases that rely on predefined data structures, Hadoop Distributed File System (HDFS) allows you store any format of data in an unstructured manner. These data can be videos, photos, music, streams of social-media content or anything else. It doesn't mean you do not need to plan ahead and figure out which business questions you want to answer, but it definitely means that when new questions arise, it will be much easier for you to make the adjustments that will allow you to answer them.
- Redundancy & High Availability:** Hadoop distributes each piece of data to multiple nodes in the cluster (number of copies is configurable) so if one of the nodes fails (which is more likely to happen due to the

Automate job scheduling to run more jobs faster

Control-M for Hadoop can help you manage your Hadoop jobs and run them faster. Control-M for Hadoop can help you manage your Hadoop jobs and run them faster. Control-M for Hadoop can help you manage your Hadoop jobs and run them faster.

BMC Control-M for Hadoop - 2 minute intro.mp4

Paused 00:55 / 01:25

Are you ready for BIG DATA?

Control-M for Hadoop can help!

Hadoop Timeline:

- 2005: Hadoop 0.1.0
- 2006: Hadoop 0.2.0
- 2007: Hadoop 0.3.0
- 2008: Hadoop 0.4.0
- 2009: Hadoop 0.5.0
- 2010: Hadoop 0.6.0
- 2011: Hadoop 0.7.0
- 2012: Hadoop 0.8.0
- 2013: Hadoop 0.9.0

Key Features:

- Competitive Advantage:** Discover new insights about customer behavior.
- Data Security:** Detect fraudulent activities.
- Cost Reduction:** Apply faster processing.

Real World Case Study:

Control-M for Hadoop can help you manage your Hadoop jobs and run them faster.

BMC Control-M for Hadoop

Control-M for Hadoop can help you manage your Hadoop jobs and run them faster.

