



Control-M...As an Application Management Platform

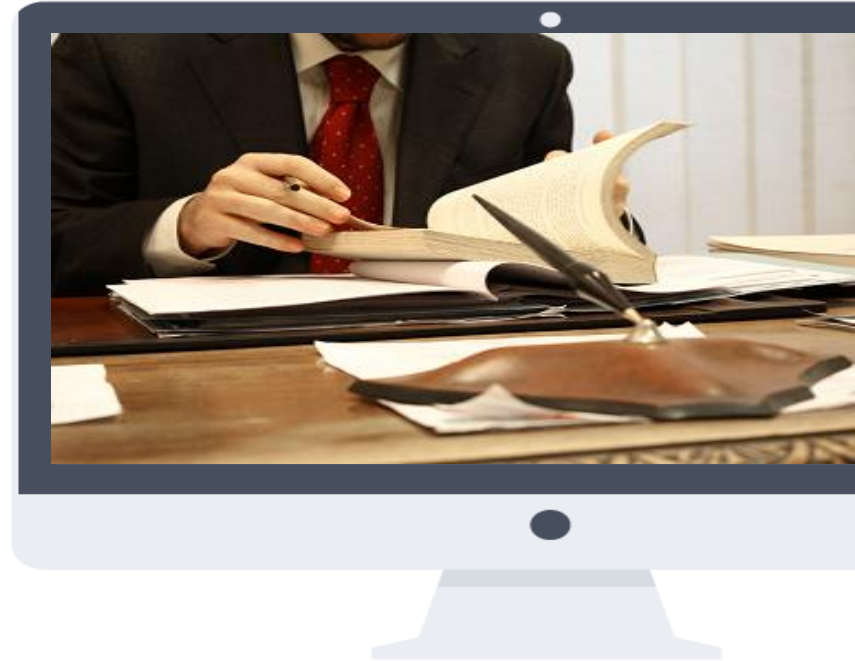
Zagreb – Lipanj 2015

Vedran Vesel, Imaves
Control-M stručnjak

Legal Notice

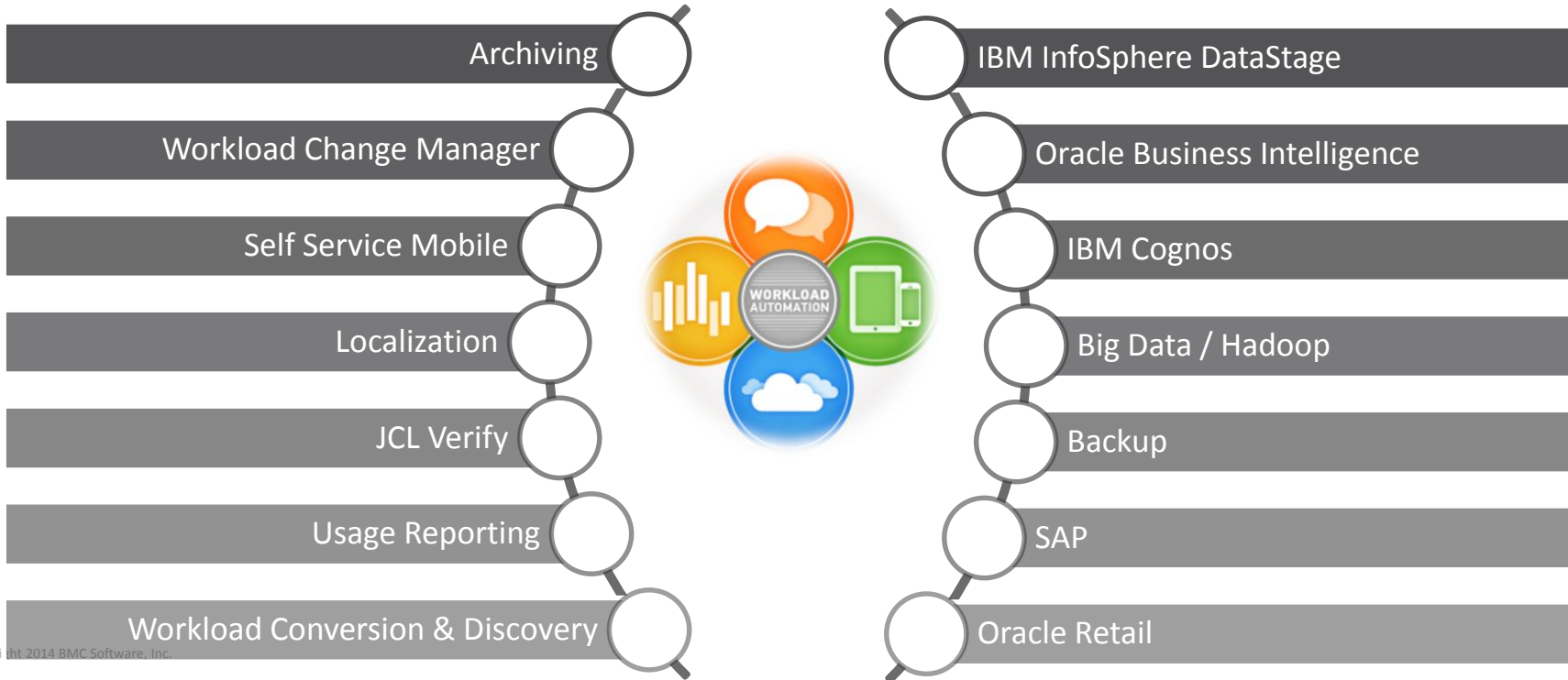
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BMC Control-M Workload Automation

Recent Releases



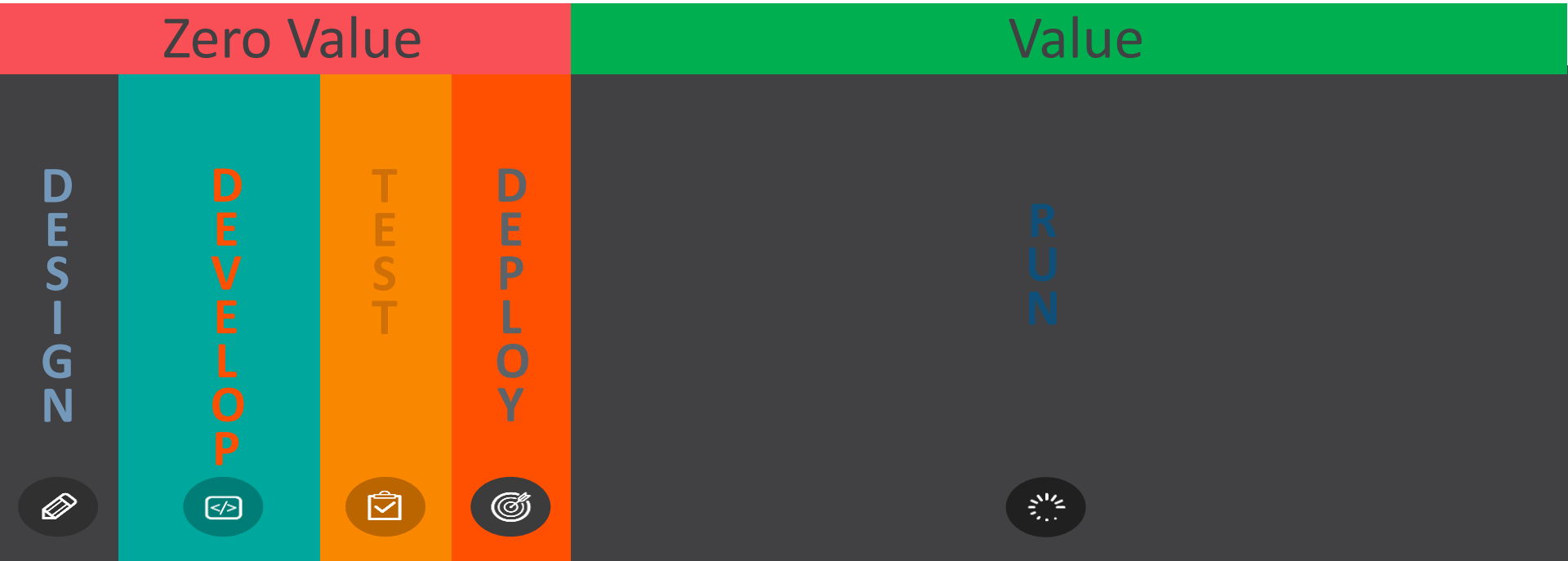
The Only Constant is Change

Very strong income performance well ahead of prior year

Delivered solid results in a challenging market



“Legacy” Application Lifecycle



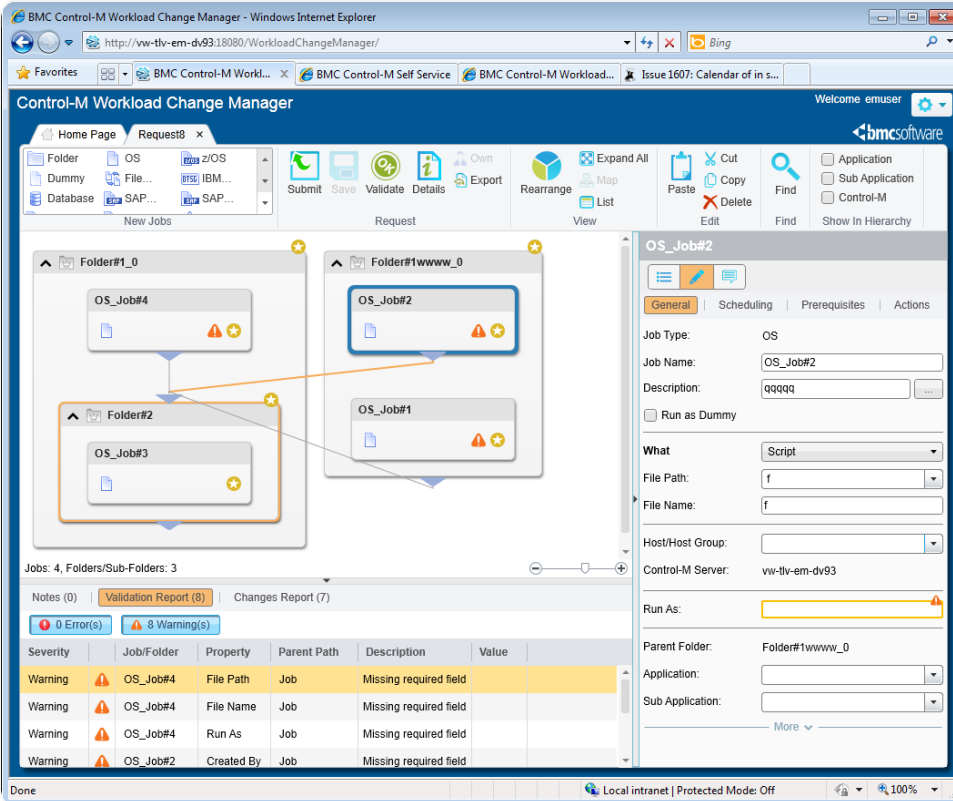
The Workload Change Request Lifecycle...



BMC Control-M
Workload Change Manager



Workload Change Manager : Functionality



The screenshot displays the BMC Control-M Workload Change Manager web interface. The main area shows a tree view of folders and jobs. A configuration panel for 'OS_Job#2' is visible on the right, showing fields for Job Type, Job Name, Description, File Path, File Name, Host/Host Group, Control-M Server, Run As, Parent Folder, Application, and Sub Application. A table at the bottom shows validation warnings for missing required fields.

Severity	Job/Folder	Property	Parent Path	Description	Value
Warning	OS_Job#4	File Path	Job	Missing required field	
Warning	OS_Job#4	File Name	Job	Missing required field	
Warning	OS_Job#4	Run As	Job	Missing required field	
Warning	OS_Job#2	Created By	Job	Missing required field	

- Web interface, easy and intuitive, for requesting or modifying batch processes
- Available items and features (job types, actions, etc) can be configured depending on the end user
- Site standards & naming conventions enforcement
- Follow-up for each request status, with optional email notification
- Tracks and audits all changes
- Integration with external Workflow and Change Management systems

Workload Change Manager : Benefits



Standardize the workload change request process

- Avoid mistakes that can lead to potential problems on business services
- Enforce the predefined standards and naming conventions
- Totally audited process



Accelerate the go-live of new business processes

- Avoid a manual, slow and error prone process
- Enable an easy development of batch workflows for developers and other users
- Immediate notification of the requests statuses



Save time for both the users requesting the change and the administrators

- Thanks to a intuitive interface for users and a total integration in the administrator console
- With an automatic update in the change management system, avoiding additional time needed to update it manually

Customer case

Itaú Unibanco accelerates change process by 80%

**80 %
Reduction**



- 400K daily jobs; over a million defined in total
- About 60,000 change requests monthly
- 15 schedulers dedicated to making changes
- Current process is Help desk ticket, email, phone
- Expect 80% reduction in tickets and time
- Addresses compliance, audit and security gaps

BIG DATA

- ✓ Boeing 787 generates an average of 500GB of system data a flight
- ✓ Airbus A380 is fitted with as many as 25,000 sensors capturing 8,000+ data points per second
- ✓ Airlines are looking to use emerging technologies, such as Hadoop and sophisticated data mining algorithms, to capture unstructured data

Operations

- Bag tracking data
- Ticketing data
- Scheduling data

Customer Loyalty

- 360 degree view of the customer
- 150+ variables about each customer
- Enhance customer value
- Cultivate high-value customers

Capturing sensor data

- Optimize maintenance
- Minimize downtime
- Forecasting the weather to optimize fuel loads
- Optimization of flight path / Trajectory corrections
- Flaps – Data
- Wingtips – Improved gas mileage
- System Data

Engine data – One cross-country flight

- GE jet engines collect information at 5,000 data points per second

$$\begin{array}{ccccccc} 20 \text{ TB} & \times & 2 & \times & 6 & \times & 28,537 & \times & 365 \\ \text{Info per engine} & & \text{Engines} & & \text{hours} & & \text{Commercial flights per} & & \text{Days per year} \\ \text{per hour} & & & & & & \text{day in the U.S.} & & \end{array}$$

$$= 2,499,841,200 \text{ TB}$$

Big Data – The Batch Challenge

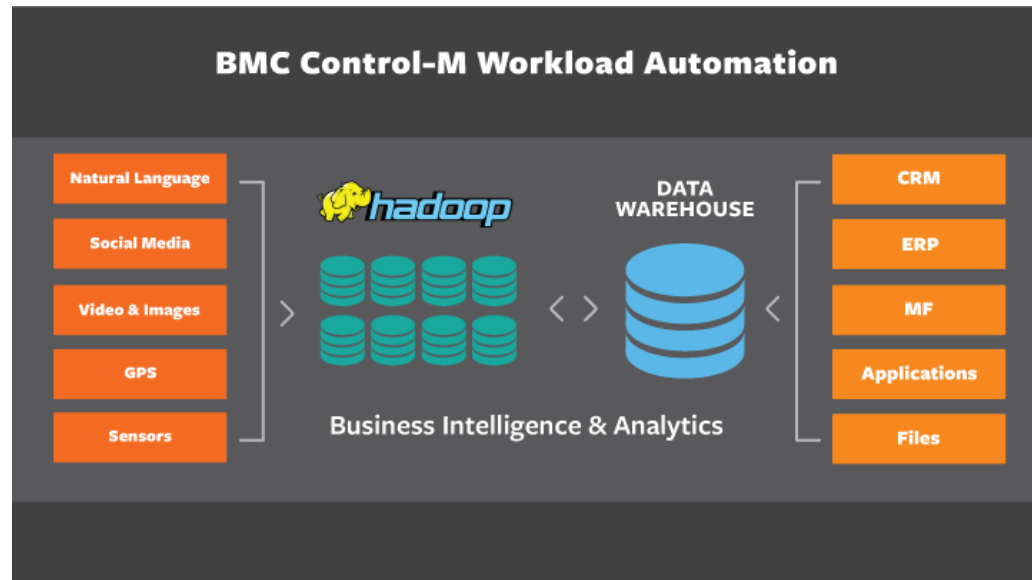
Nearly 100% of processing in Hadoop is batch

Scheduling tools available for Hadoop:

- Open source tools like Oozie, Spring, Azkaban
- Batch scheduling tools are “version 1” at best
- Batch jobs are hand-written scripts
- Tools are used for scheduling jobs – not creating and managing workflows

Be Ready for Big Data - Control-M for Hadoop

- Bringing Hadoop and the enterprise together
- Scale your Hadoop initiatives by leveraging state-of-the-art batch automation
- Native support for:
 - Pig
 - Hive, Hive 2
 - Map Reduce
 - Sqoop
 - Tajo
 - HDFS Actions
 - File Watcher
 - Kerberos



Control-M for Hadoop

Supports all Apache Hadoop 2.x Distributions

cloudera

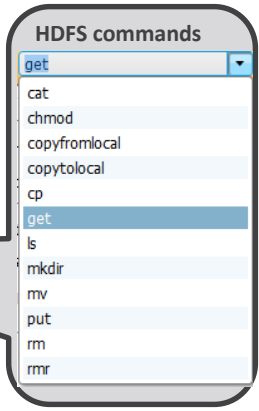
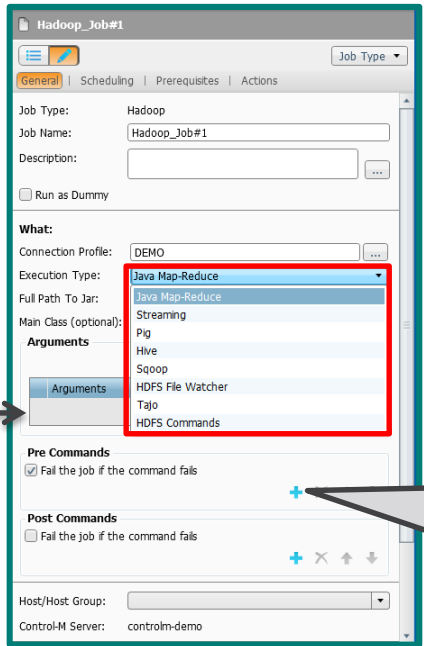
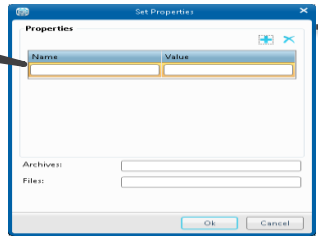
MAPR

Hortonworks

Pivotal

BigInsights

Program parameters



Integration for All Applications



Control-M Application Integrator



- **Build applications faster**
- **Reduce scripting effort**
- **Rapid deployment of new applications or application changes**
- **Minimize risk and downtime in case of job failures**

Applications & Platforms







BMC Control-M by applications

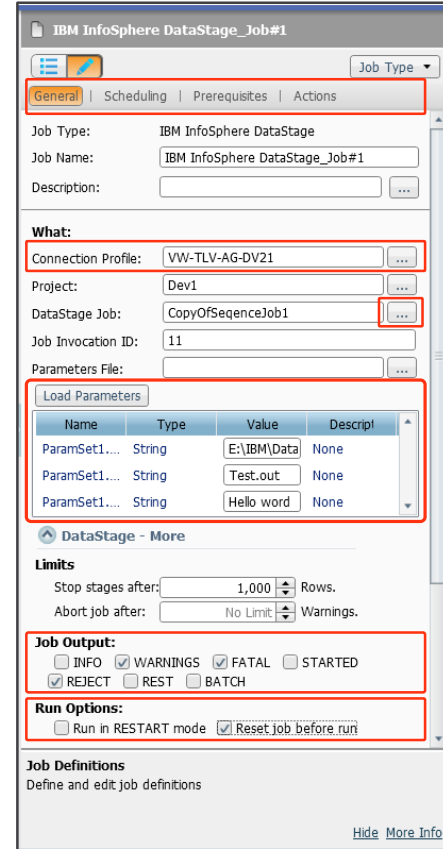
ERP <ul style="list-style-type: none"> • SAP • Oracle eBusiness Suite • PeopleSoft • Oracle Retail 	Business Intelligence <ul style="list-style-type: none"> • SAP Business Objects • IBM Cognos • Oracle Business Intelligence (OBIEE) 	Data Integration / ETL <ul style="list-style-type: none"> • Informatica • IBM InfoSphere DataStage • MS-SQL Integration Services (SSIS) • SAP Business Warehouse (BW) 	Database <ul style="list-style-type: none"> • Oracle • IBM DB2 / UDB • MS SQL-Server • Sybase • PostgreSQL 	Service Oriented Architecture <ul style="list-style-type: none"> • Web Services • Java/J2EE • Message Queues
Backup and Recovery <ul style="list-style-type: none"> • IBM Tivoli Storage Manager • Symantec NetBackup 	File Transfer <ul style="list-style-type: none"> • File Transfer Protocol (FTP) • Secured FTP (SFTP) • FTP Over SSL 	BMC Software <ul style="list-style-type: none"> • BMC TrueSight Operations Management • BMC Atrium CMDB • BMC Atrium Orchestrator • BMC BladeLogic • BMC Remedy 	Enterprise Management Console <ul style="list-style-type: none"> • TrueSight Operations Management • HP OpenView • IBM Tivoli 	Big Data / Hadoop <p>Distributions:</p> <ul style="list-style-type: none"> • Hortonworks • Cloudera • MapR • IBM BigInsights • EMC Greenplum/Pivotal <p>Projects:</p> <p>Pig, Hive, MapReduce, HDFS, Sqoop, Tajo, Streaming,</p>

BMC Control-M by platforms

Virtualization and Cloud Computing <ul style="list-style-type: none"> • Vmware • Amazon EC2 • BMC Cloud Lifecycle Management 	OS Platform <ul style="list-style-type: none"> • z/OS • iSeries / OS400 • VMS • Unisys • Tandem • Windows • Solaris • HP-UX • AIX • Redhat Linux • SUSE Linux • CentOS Linux 	Agentless scheduling <ul style="list-style-type: none"> • SSH • WMI
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Native application plug-ins

- 
Taking advantage of all CONTROL-M workload automation offerings
- 
Predefined connection profiles holding secured credentials
- 
Eliminate copy/paste or manually typing of job attributes
- 
Automatic load of input parameters, allow use of variables inputs
- 
Control level of details to include in job output for auto recovery
- 
Advanced controls including restart from point of failure



IBM InfoSphere DataStage_Job#1

Job Type: IBM InfoSphere DataStage
 Job Name: IBM InfoSphere DataStage_Job#1
 Description:

What:

Connection Profile: VW-TLV-AG-DV21
 Project: Dev1
 DataStage Job: CopyOfSequenceJob1
 Job Invocation ID: 11
 Parameters File:

Load Parameters

Name	Type	Value	Descript
ParamSet1...	String	E:\IBM\Data	None
ParamSet1...	String	Test.out	None
ParamSet1...	String	Hello word	None

DataStage - More

Limits

Stop stages after: 1,000 Rows.
 Abort job after: No Limit Warnings.

Job Output:

INFO WARNINGS FATAL STARTED
 REJECT REST BATCH

Run Options:

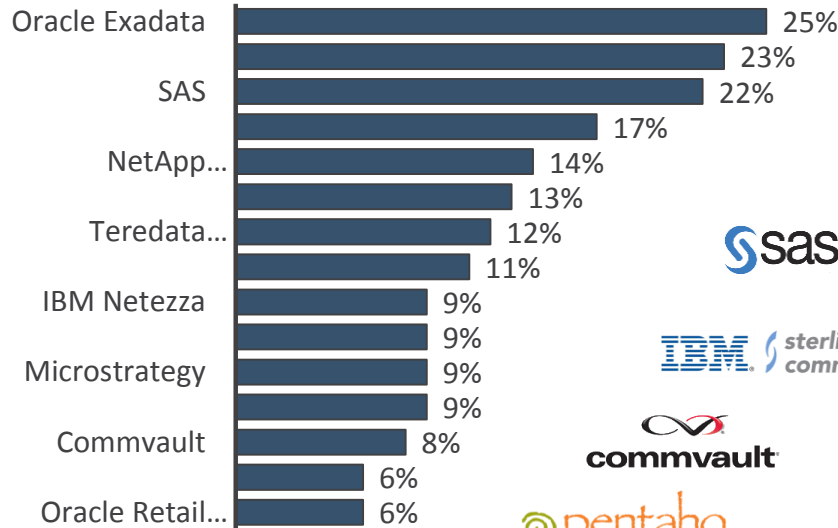
Run in RESTART mode Reset job before run

Job Definitions
 Define and edit job definitions

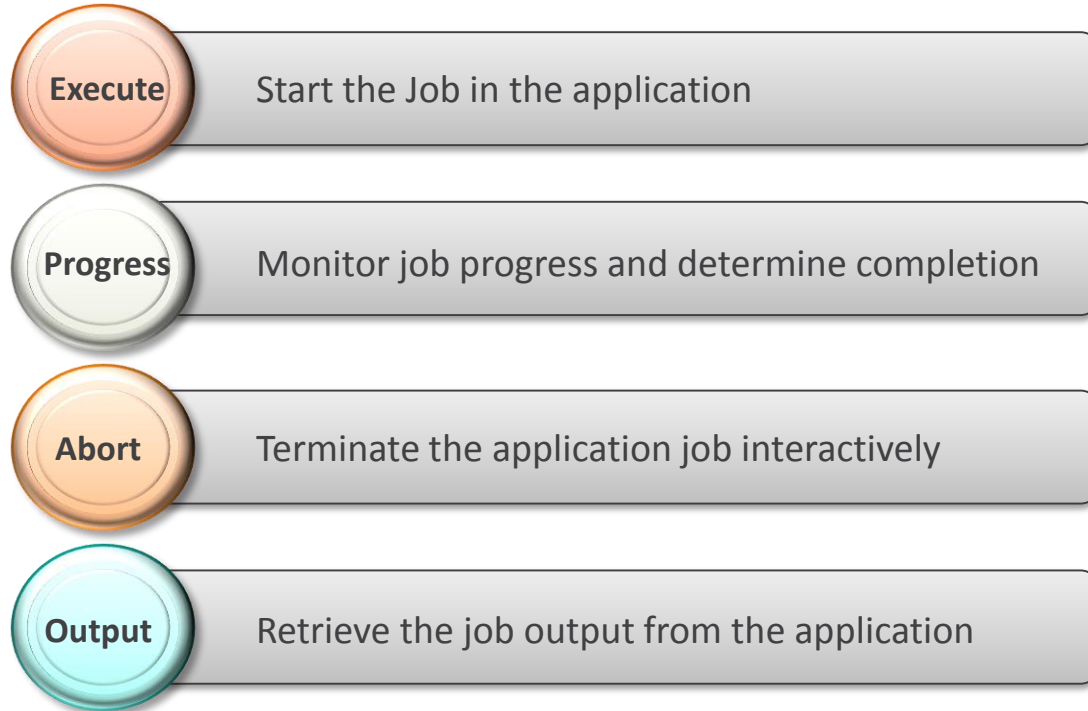
[Hide](#) [More Info](#)

Many other applications out there....

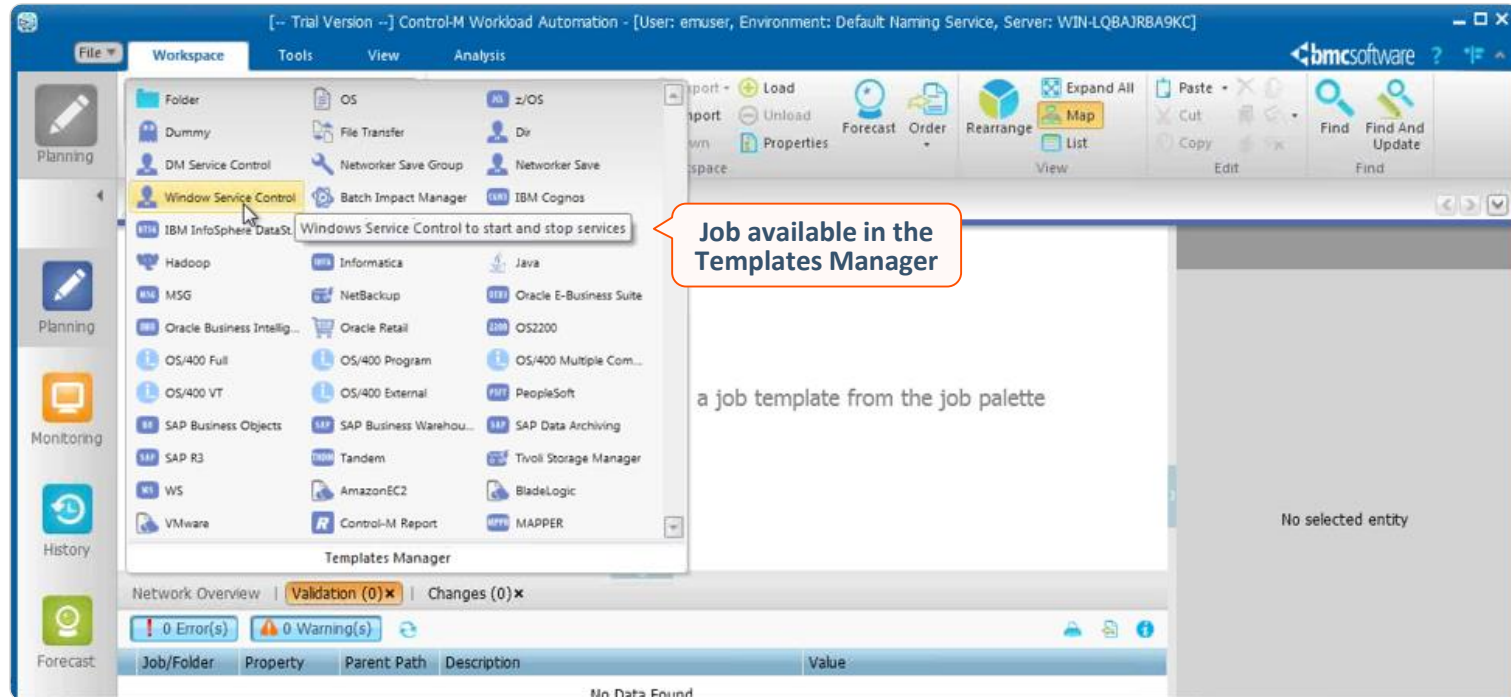
2014 Workload Automation Survey



Automation steps in a job



New Type of Job in Control-M



The screenshot displays the Control-M Workload Automation interface. The main window shows a list of job templates in the Templates Manager. A tooltip is visible over the 'Window Service Control' job, indicating its function: 'Windows Service Control to start and stop services'. A red callout box highlights this job with the text 'Job available in the Templates Manager'. The interface includes a menu bar (File, Workspace, Tools, View, Analysis), a toolbar with various actions like Load, Unload, Forecast, Order, Rearrange, Expand All, Map, List, Paste, Cut, Copy, Find, and Find And Update, and a sidebar with icons for Planning, Monitoring, History, and Forecast. The status bar at the bottom shows '0 Error(s)', '0 Warning(s)', and 'No Data Found'.

Job available in the Templates Manager

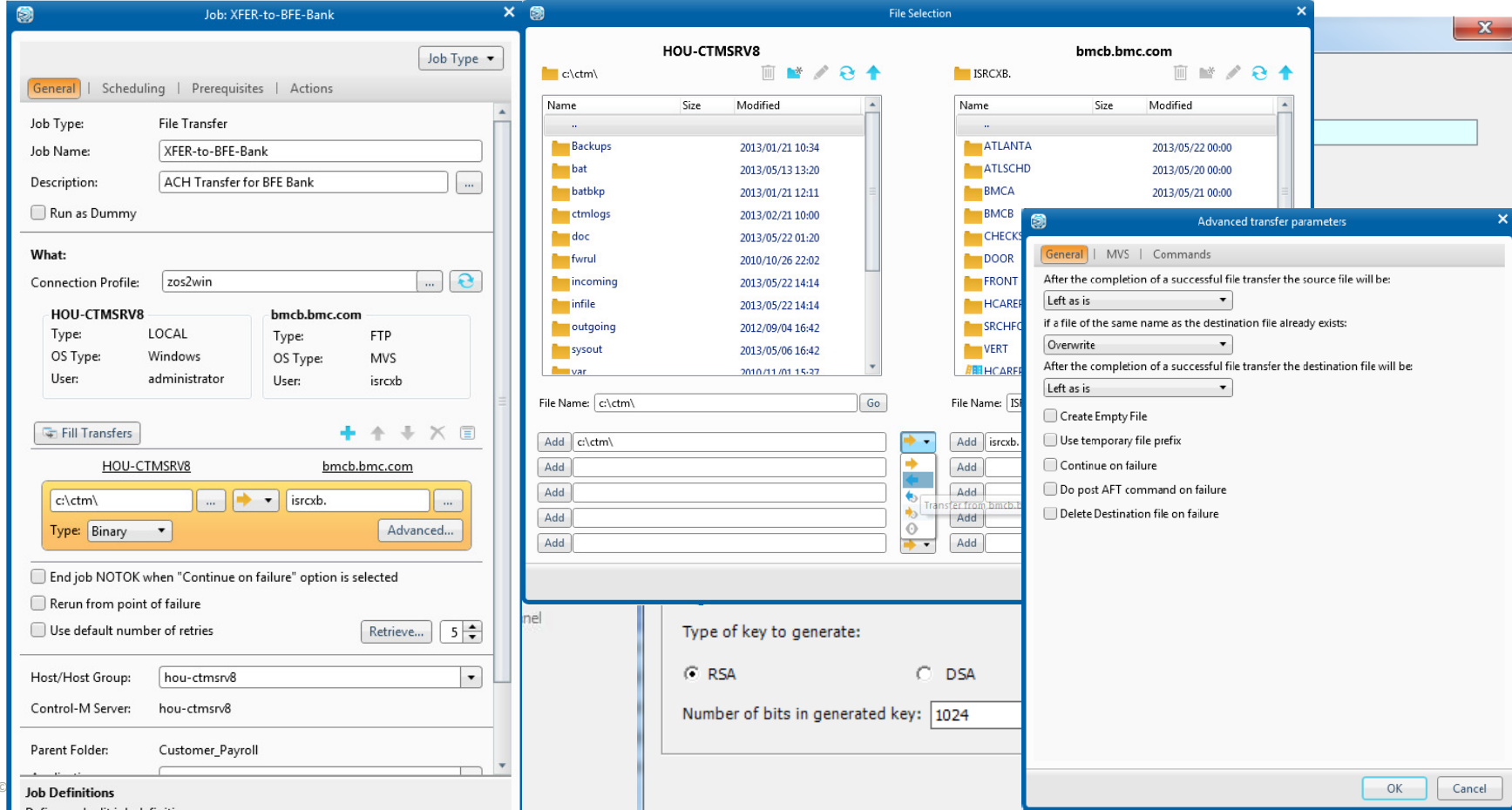
a job template from the job palette

No selected entity

Advanced File Transfer



Control-M Control Module for Advanced File Transfer



Job: XFER-to-BFE-Bank

Job Type: File Transfer
 Job Name: XFER-to-BFE-Bank
 Description: ACH Transfer for BFE Bank

Connection Profile: zos2win

What:

Source	Type	OS Type	User
HOU-CTMSRV8	LOCAL	Windows	administrator
bmcb.bmc.com	FTP	MVS	isrcxb

File Selection:

HOU-CTMSRV8

Name	Size	Modified
Backups		2013/01/21 10:34
bat		2013/05/13 13:20
batbkp		2013/01/21 12:11
ctmlogs		2013/02/21 10:00
doc		2013/05/22 01:20
fwrul		2010/10/26 22:02
incoming		2013/05/22 14:14
infile		2013/05/22 14:14
outgoing		2012/09/04 16:42
sysout		2013/05/06 16:42
var		2010/11/01 15:27

bmcb.bmc.com

Name	Size	Modified
ATLANTA		2013/05/22 00:00
ATLSCHD		2013/05/20 00:00
BMCA		2013/05/21 00:00
BMCB		
CHECK		
DOOR		
FRONT		
HCARE		
SRCHFC		
VERT		
HCARE		

Advanced transfer parameters

After the completion of a successful file transfer the source file will be:
 Left as is

If a file of the same name as the destination file already exists:
 Overwrite

After the completion of a successful file transfer the destination file will be:
 Left as is

Create Empty File
 Use temporary file prefix
 Continue on failure
 Do post AFT command on failure
 Delete Destination file on failure

Type of key to generate:

RSA DSA

Number of bits in generated key: 1024

Control-M for SAP 8.0

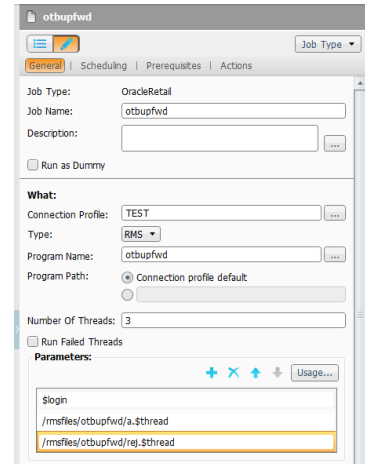


- **Recent**
 - XBP 3.0 certification
 - Conversion
- **Future**
 - SAP NetWeaver Process Integration (PI)
 - Financial Closing Cockpit (FCC)
 - Solution Manager
 - System Copy

Oracle Retail

New

- Oracle Retail Merchandising System (RMS)
- Oracle Retail Price Management (RPM)
- Release 13.x and higher



Control-M Roadmap

—

Control-M v9.0



V9: Coming Soon

Promotion
between
environments

Dynamic
Scheduling

Automatic
Agent & Client
Upgrade

High
Availability

Gantt View



V9: High Availability

Business Continuity

Hot Standby & automatic failover*

Manual failover and fallback

DB replication for PostgreSQL deployments

Unified Control-M Solution

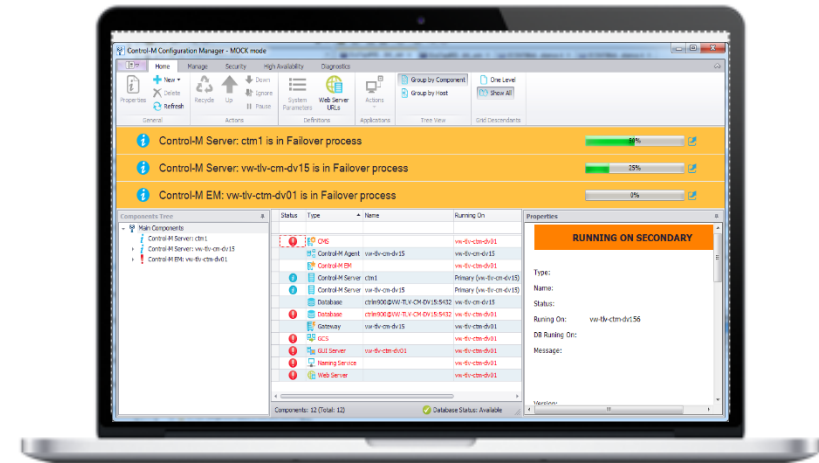
Installation wizard

Central management and Monitoring via CCM

Reduced Cost and Risk

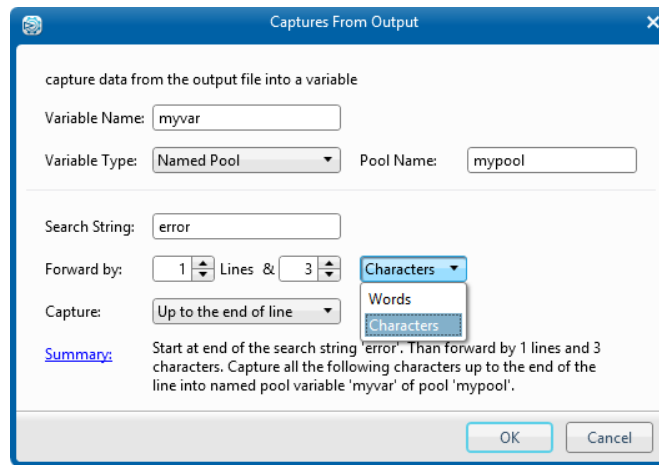
Lower TCO (by eliminating 3rd party solutions)

Pause mode (Quiese)

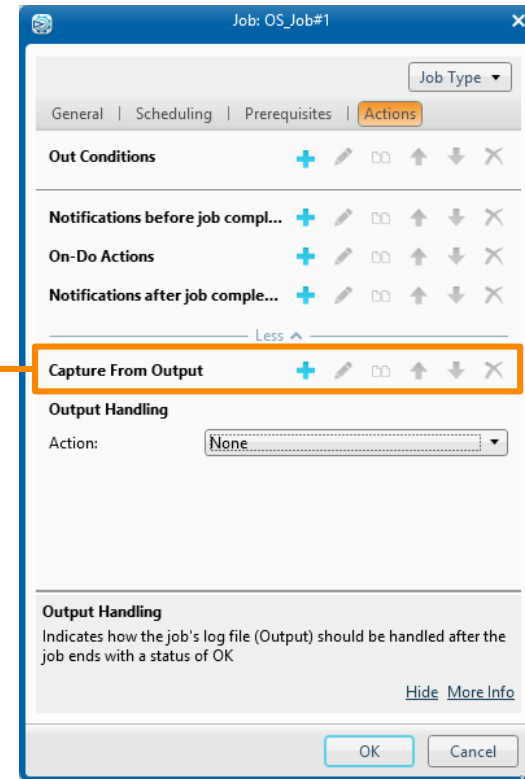


V9: Dynamic Scheduling

- Capture data from jobs output
- Use variable pools to share data between jobs



Prototype Image Only



Prototype Image Only

V9: Highlights

Planning

- Promotion between environments
- Global Calendars
- Export job definitions to Visio
- Order jobs in a different server

Monitoring

- Dynamic Scheduling
- Gantt View
- New Day simplification
- Capacity Threshold Alerts
- Runtime estimation in jobs flow
- Bookmarks

Management

- High Availability
- Automatic Agent & Client Upgrade
- Mass update of agent properties
- SSL Management
- NFS Support
- IPV6

*Some of the new capabilities are available for priced add-ons only

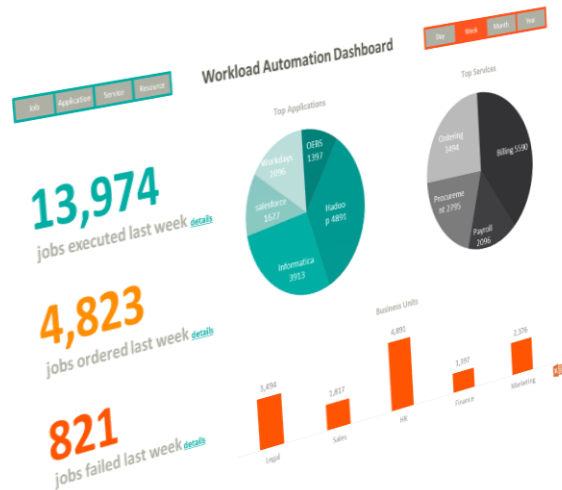
Transferring Files – The Next Generation

- **Extending our offering to capture additional use cases**
 - Enhanced monitoring, reporting and auditing
 - End-to-end visibility
 - Agent to Agent communication (P2P)
 - Transferring files to/from external business partners
 - Built-in file transfer server
 - Automatic conversion from MFT products and scripts

* This add-on is separately chargeable



BMC Control-M Workload Analytics



Showback

- Show how many jobs have been executed for a specific application, business unit or node

SLA

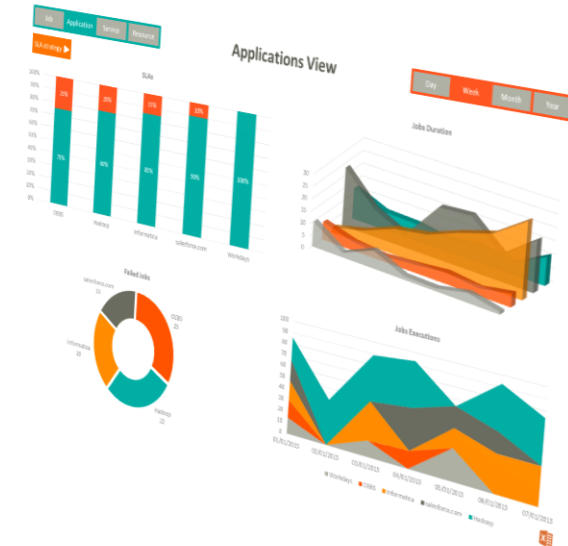
- See your workload automation historical SLAs and identify trends before a business risk occurs

Files

- Understand data transfer load and review file statistics by node, applications and locations

Proactive Maintenance

- Get deeper insight into jobs execution, calendars, users and more



Our commitment...



remaining focused on customers.



Hvala na pažnji!

Bring IT to Life.™