Amp Up Application Development With Workload Automation

Introduction

- Today's Speaker

Peter Kazmir
Principal Product Manager
Workload Automation
CA Technologies

- Webcast Logistics
  - One Hour
  - Recorded
  - Questions and Discussion Welcome
  - Copy of Slides Available

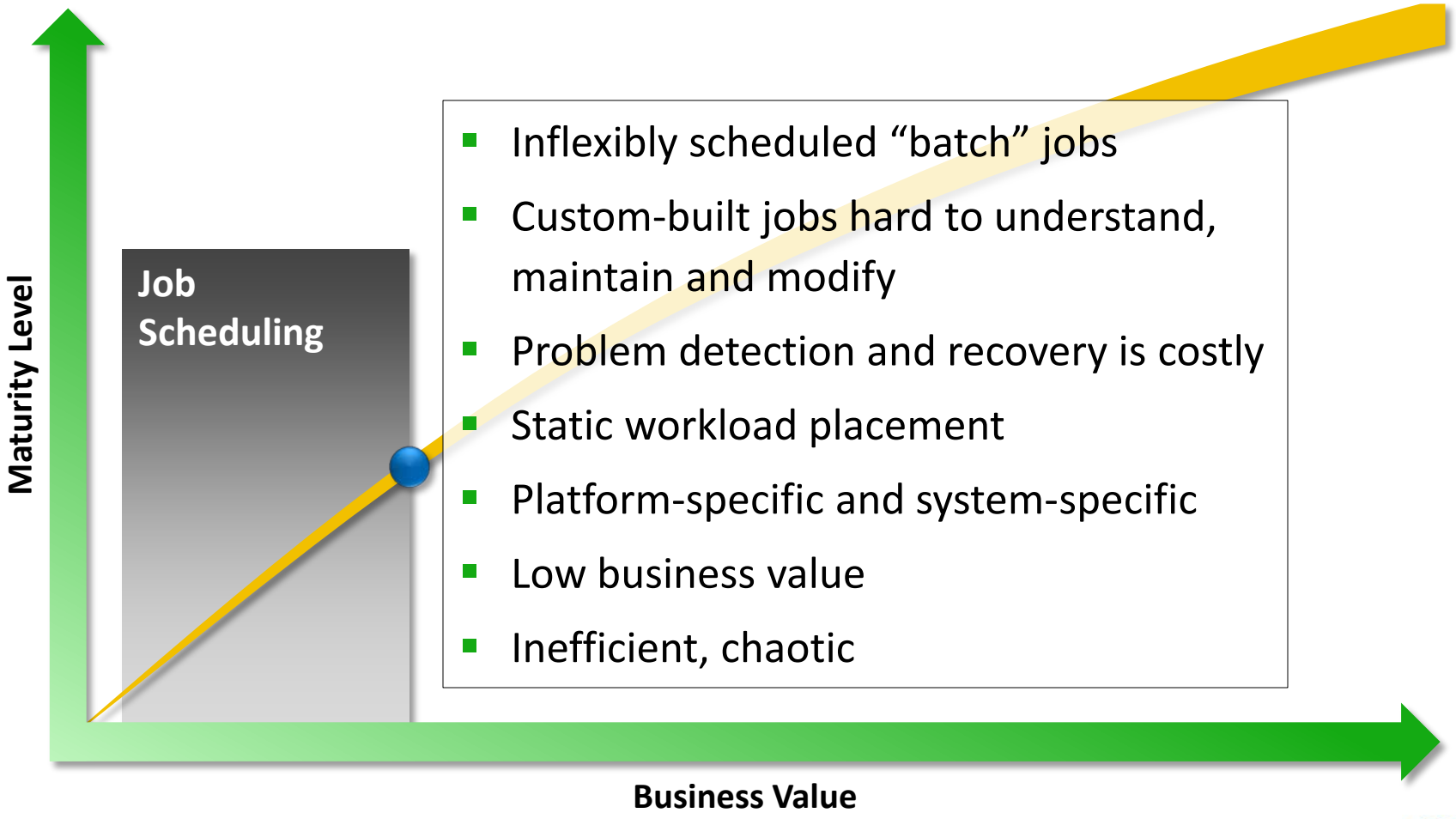
Copyright © 2013 CA. All rights reserved.

Application Development is a Challenge

- Typically based on scripts
  - Custom-built: flexible but expensive and high in risk
    - Costly to code, test, maintain and support
    - Difficult to adapt to changing processes or requirements
    - Hard to enforce standards and security
    - Limited by application interfaces
    - Utilize system resources inefficiently
    - Require specialized knowledge
- Tools and processes can be impediments to developing efficient, business-oriented applications

Copyright © 2013 CA. All rights reserved.
ca technologies

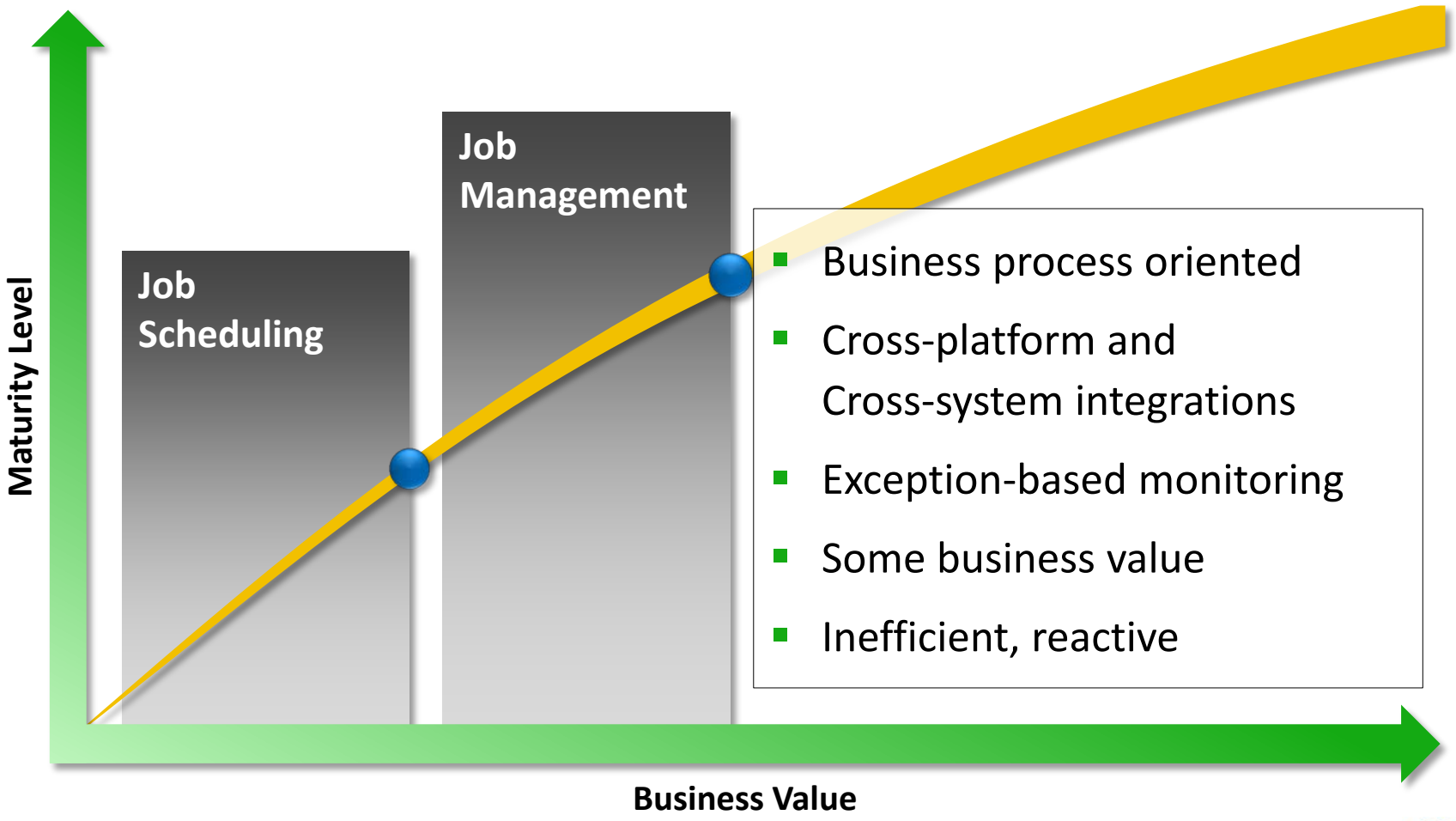
What is Workload Automation?



- Inflexibly scheduled “batch” jobs
- Custom-built jobs hard to understand, maintain and modify
- Problem detection and recovery is costly
- Static workload placement
- Platform-specific and system-specific
- Low business value
- Inefficient, chaotic

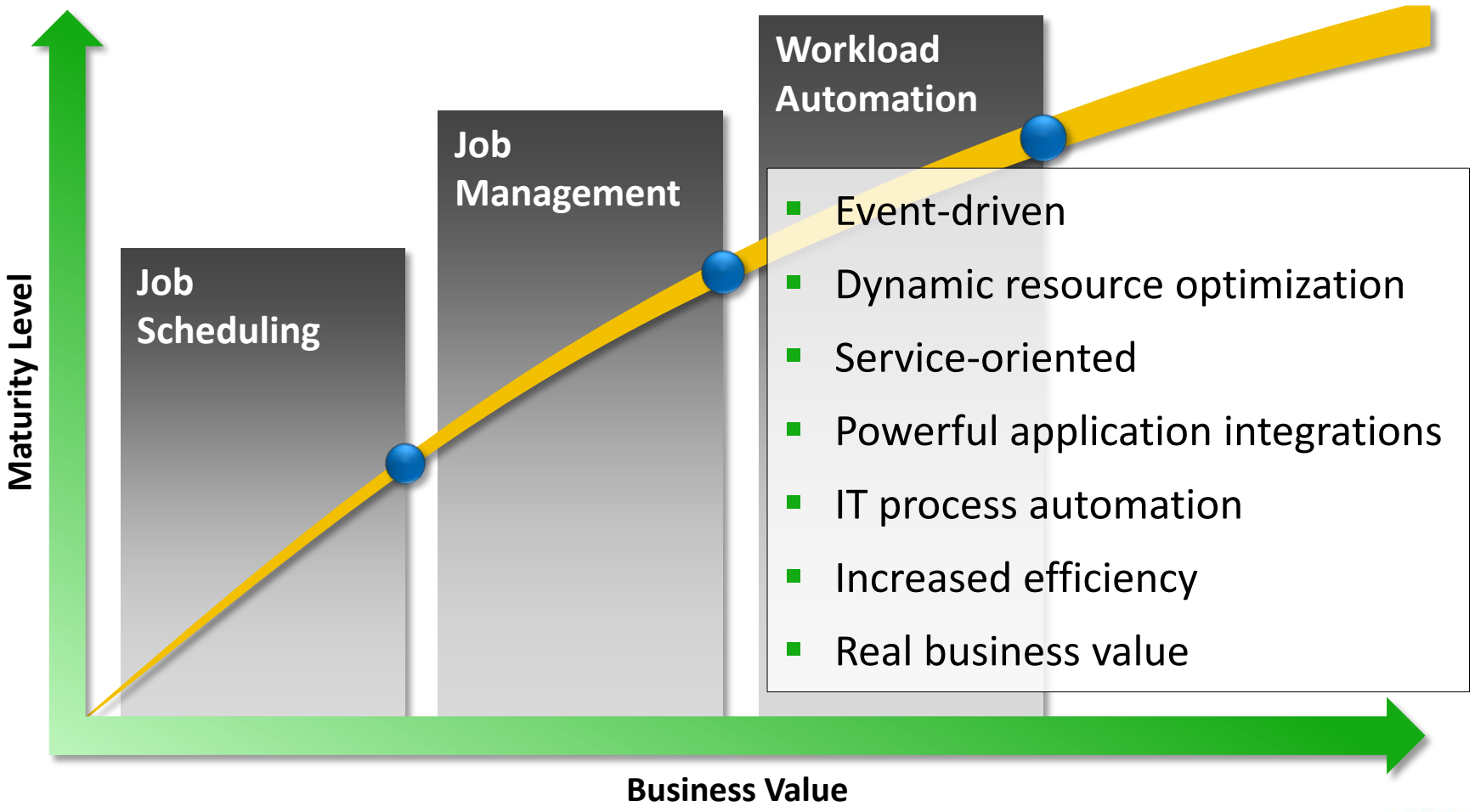
Copyright © 2013 CA. All rights reserved.

What is Workload Automation?



Copyright © 2013 CA. All rights reserved.

What is Workload Automation?



Copyright © 2013 CA. All rights reserved.

ca technologies

Power Without Chaos

- Advantages compared to job scheduling
  - Increased operational efficiency and resource utilization
  - Integration with process automation tools
  - Improved productivity
  - Reduced cost and risk
  - Increased availability of critical business services
  - Simplified cross-application job streams with SLA management and predictive analytics
  - Cross-enterprise integration and management across disparate environments
    - Mainframe, mini-computer, client-server, virtual and cloud environments

Copyright © 2013 CA. All rights reserved.
ca technologies

Power Without Chaos

Research by

Expanding Workload Tool Usage a Top Priority

61% of surveyed IT organizations' top priority for the next two years is expanding tool usage within the organization.

Source: Survey of 113 customers of CA Technologies Workload Automation
www.techvalidate.com/product-research/ca-workload-automation/facts/DA8-CDD-8AB

Copyright © 2013 CA. All rights reserved.

Application Development: A Better Approach

- Pre-defined job types
  - Reduced coding, testing, maintenance and support
  - Increased standardization
  - Easier to implement security
  - Better access to application-specific functionality
  - Simplified, easier to understand job streams
- Job types to support all kinds of workloads
  - System automation
    - Basic system tasks, file transfers, monitors and triggers and command jobs
  - Application automation
    - Common tasks for specific applications like SAP or Oracle eBusiness Suite

Copyright © 2013 CA. All rights reserved.
ca technologies

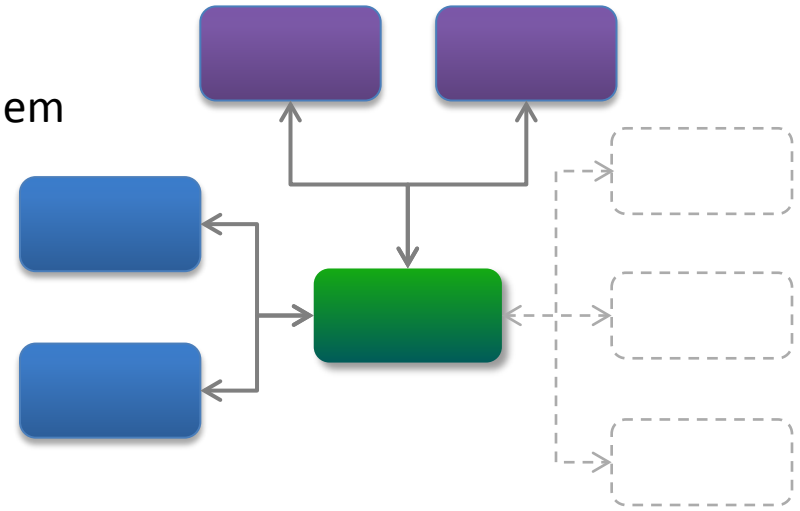
Workload Automation Agents

- Execute individual jobs
- Track output and capture return codes
- Provide services like security, communication, file transfer, logging, persistence, and local control
- Integrate natively with business applications and infrastructure services
- Support individual job types
- Typically installed on the systems where the work is happening – but don't have to be

Copyright © 2013 CA. All rights reserved.
ca technologies

Workload Automation Agents

- CA Workload Automation utilizes **System Agents**
  - Platform for **agent plug-ins** that support job types
  - Provides common services
  - Supports workloads on multiple platforms:
    - UNIZ
    - Windows
    - Linux
    - z/OS
    - z/Linux
    - USS
    - NonStop/Tandem
    - I5/OS
  - Includes plug-ins to perform basic system tasks



Copyright © 2013 CA. All rights reserved.

Workload Automation Agents

CA WA System Automation Job Types – Distributed Platforms

System Tasks	
Command Job	Execute any command or script on UNIX, Linux (including z/Linux), Windows, or i5/OS while capturing output, errors and return code
FTP	Upload or download data to or from an existing FTP server or another System Agent running as an FTP server
Secure Copy	Upload or download data to or from a remote server using encrypted SCP or SFTP protocol
SNMP Value Get	Retrieve the value of an SNMP variable
SNMP Value Set	Set the value of an SNMP variable
SNMP Subscribe	Subscribe to and monitor SNMP trap messages
SNMP Trap Send	Send SNMP trap messages
Wake On LAN	Send a command to start up or shut down a system using the WOL protocol

Copyright © 2013 CA. All rights reserved.

ca technologies

Workload Automation Agents

CA WA System Automation Job Types – Distributed Platforms

Monitoring	
File Watcher AE Only	Monitor for a file to be created, check to see if a file is larger than a given size, or wait for a file to change size
File Trigger	Monitor file activity: when a file is created, updated, deleted, expanded, shrunk, or to check for existence
Text File	Search a text file for a string, date/time stamp, number, or regular expression; for example, you can monitor a log file for an error message
Process	Monitor the status of a process; for example, wait for a process to finish running
CPU	Monitor the CPU usage of the local computer; for example, wait for CPU usage to drop below 80% or alert if CPU usage goes above 95%
Disk	Monitor the available or used space on a disk or partition
IP	Monitor an IP address or a specific remote port; for example, wait for the IP address to stop responding, or a port to be in use
Windows Event Log	Monitor the Windows Event log, watching for events that match criteria to occur
Windows Services	Monitor Windows services; for example, waiting for a service to enter a RUNNING state

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents

CA WA System Automation Job Types – Mainframe

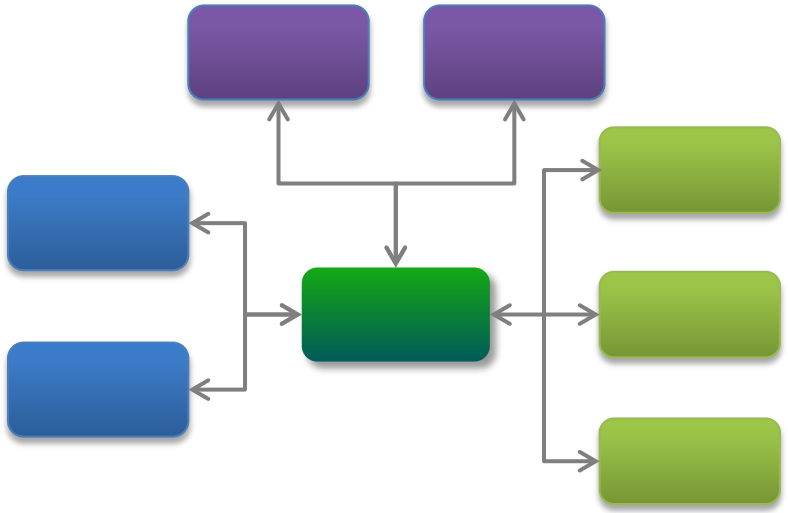
z/OS System Tasks	
Batch Job	Execute and monitor regular z/OS jobs
Manual Job	Create dependencies on z/OS jobs submitted outside of the scheduling manager
Data Set Trigger	Monitor z/OS data set activities and return successfully if the defined activity is detected; activities include data set creation or updates and data set notifications such as a successful FTP transfer

Copyright © 2013 CA. All rights reserved.

ca technologies

Workload Automation Agents
Beyond the CA WA System Agent

- Agent Plug-Ins
  - Extensibility for the System Agent
    - Application services and Java
    - Web services
    - Database services
    - Specific applications like SAP, PeopleSoft and Oracle eBusiness Suite
  - Require a locally-installed and licensed System Agent



Copyright © 2013 CA. All rights reserved.

Workload Automation Agents
CA WA Java and Application Services Job Types

Java/Application Services	
HTTP	Perform a task via an HTTP GET or POST action and capture the resulting output
POJO	Instantiate a class to create a Java object and invoke a method on it; can be used to execute custom Java code on the local system
RMI	Utilize Remote Method Invocation (optionally with Remote Object Activation) to call a method on a remote server and store the method's output
JMS Publish	Send a message to a queue or publish a message to a topic on a Java Message Service server such as Apache ActiveMQ, IBM WebSphere or Oracle Weblogic
JMS Subscribe	Consume messages from a queue or topic on a Java Message Service server; for example, wait for a specific message to be delivered
Session Bean	Access a session bean on an application server, invoke a method on the bean, and return the results; stateful and stateless session beans are supported
Entity Bean	Create, update the properties of, or remote an entity bean, which is a type of Enterprise Java Bean that represents persistent data maintained in a database
MBean Create Instance	Create an MBean on a Java Management Extensions (JMX) server
MBean Remove Instance	Remove an MBean from a JMX server
MBean Attribute Get	Retrieve the value of an MBean attribute
MBean Attribute Set	Change the value of an MBean attribute
MBean Operation	Invoke an operation on an MBean
MBean Subscribe	Monitor an MBean for one or more notifications

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents
CA WA Web Services Job Types

Web Services	
WS Doc/Literal	Execute an operation with in a web service and pass parameters (including serialized Java objects) to the operation using “document/literal” style binding
WS RPC/Encoded	Execute an operation within a web service and pass parameters (including serialized Java objects) to the operation using “RPC/encoded” style binding
Process Automation Process Execution	Directly execute a CA Process Automation process
Process Automation Start Request Form	Submit a Start Request Form to execute a CA Process Automation process; the Start Request Form sets the values for the current execution of the process

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents
CA WA Database Job Types

Databases	
DB Monitor	Monitor a database table for added or deleted rows; checks at intervals
DB Trigger	Monitor a database table for added, changed (in general or matching a specific trigger) or deleted rows; for example, wait for a row where dept=75 to be deleted
DB Stored Procedure	Invoke a procedure or function stored within a database; criteria can be added to test the procedure's output
SQL	Execute a SQL statement and capture the output; criteria can be added to test the statement's output

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents
CA WA SAP Job Types

SAP	
R/3	Schedule an R/3 job on your SAP system
Job Copy	Schedule an SAP Job Copy job that runs a copy of a specified R/3 job
BW Process Chain	Run a sequence of background processes on an SAP system; some SAP processes trigger events that start other processes, these are run as job steps
BW InfoPackage	Transfer data from any supported data source into an SAP Business Warehouse system
Data Archiving	Store information described in an SAP Archiving Object into a data archive
Batch Input	Utilize a Batch Input Session to import large amounts of data from external systems into SAP
Event Monitor	Trigger or monitor for an SAP event
Process Monitor	Monitor an SAP process for a specified condition

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents
CA WA Oracle eBusiness and PeopleSoft Job Types

Oracle E-Business Suite	
Single Request	Run and monitor a single job defined in your Oracle E-Business Suite system; various attributes can be set to manage the output, set parameter values and control how the job is run
Request Set	Run and monitor a request set program defined in Oracle
Copy Single Request	Run a copy of an existing single request defined in Oracle; the original definition's value can be overridden during the run

PeopleSoft	
PeopleSoft	Run and monitor different types of jobs defined in your PeopleSoft system; various attributes can be set to manage the output, set parameter values and control how the job is run

Copyright © 2013 CA. All rights reserved.

Workload Automation Agents

CA WA Microsoft SQL Server, Informatica and Micro Focus Job Types

Microsoft SQL Server	
MS SQL Server Agent	Run, control and monitor a job defined in your Microsoft SQL Server Agent system, including SSID packages. Supports step-level monitoring, start and restart.

Informatica PowerCenter	Coming Soon!
Informatica	Run, control and monitor a job defined in your Informatica PowerCenter system. Supports task-level monitoring, start and restart.

Micro Focus	
Micro Focus	Run, control and monitor a mainframe JCL or COBOL program utilizing the Micro Focus Net Express JCL engine in a Microsoft Windows environment

Copyright © 2013 CA. All rights reserved.

ca technologies

Workload Automation Agents
CA WA Remote Execution Agent

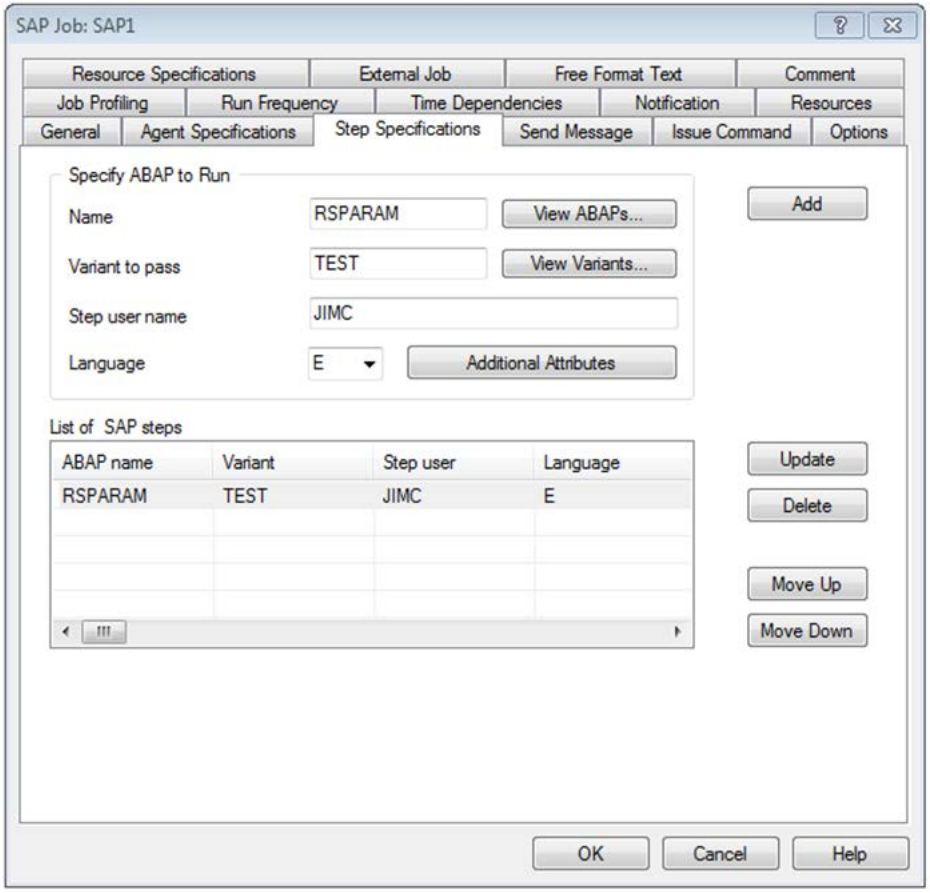
Remote Execution	
Remote Execution	Execute any command or script on a *remote* UNIX, Linux, HP Integrity NonStop (Tandem), or OpenVMS system through Secure Shell (SSH2) or Telnet.

- Useful for supporting systems not natively supported by the System Agent or for supporting systems that run only few or occasional jobs
- Because the command is run through SSH2 or Telnet, functionality is limited compared to command jobs run locally through the System Agent

Copyright © 2013 CA. All rights reserved.

Streamlined Experience

Interactive application integrations



- Enforce standards and security
- Select values instead of looking them up
- Reduce dependence on custom scripts
- Increase productivity and reduce risk

Copyright © 2013 CA. All rights reserved.

ca technologies

CA Workload Automation
HDFC Bank Creates Superior Customer Experience

HDFC Bank offers a wide range of commercial and transactional banking services and treasury products to wholesale and retail customers in India. It was one of the country's first private banks when it started in 1994 and now has more than 1,725 branches and 4,232 ATMs in 779 Indian cities.

Challenge

Quality customer service is essential in the transaction-intensive financial services sector. HDFC Bank wanted ensure a responsive and consistent service while maintaining Profitability.

Solution

HDFC Bank deployed CA Service Desk Manager, CA Workload Automation AE and CA NSM which enabled **real-time monitoring** of the bank's IT infrastructure, **simplified** change management and **reduced manual operational errors**

Results

- **600** operational tasks eliminated
- **40** operational hours saved daily
- **Higher quality** products and customer service
- **High standards** of corporate governance and regulatory compliance

Copyright © 2013 CA. All rights reserved.

CA Workload Automation
Real Results

Results from ROI Studies of customers that have implemented CA Workload Automation Solutions

40% - 50%
Incremental Revenue from Applications Availability

17.5% - 22.5%
Improved Staff Productivity

4.5% - 5.5%
Reduced Application Development Costs

22.5% - 27.5%
Reduced Compliance Costs

22.5% - 27.5%
Reduction in New Server Purchases

12.5% - 17.5%
MIPS Saved (Mainframe)

Copyright © 2013 CA. All rights reserved.

CA Workload Automation
Our Clients

10 of 11
TOP BANKS

7 of 8
TOP TELECOM

10 of 11
TOP PHARMA

7 of 8
TOP AERO AND DEFENSE

7 of 8
TOP GEN MERCHANDISE

3 of 4
TOP SPECIALTY RETAILERS

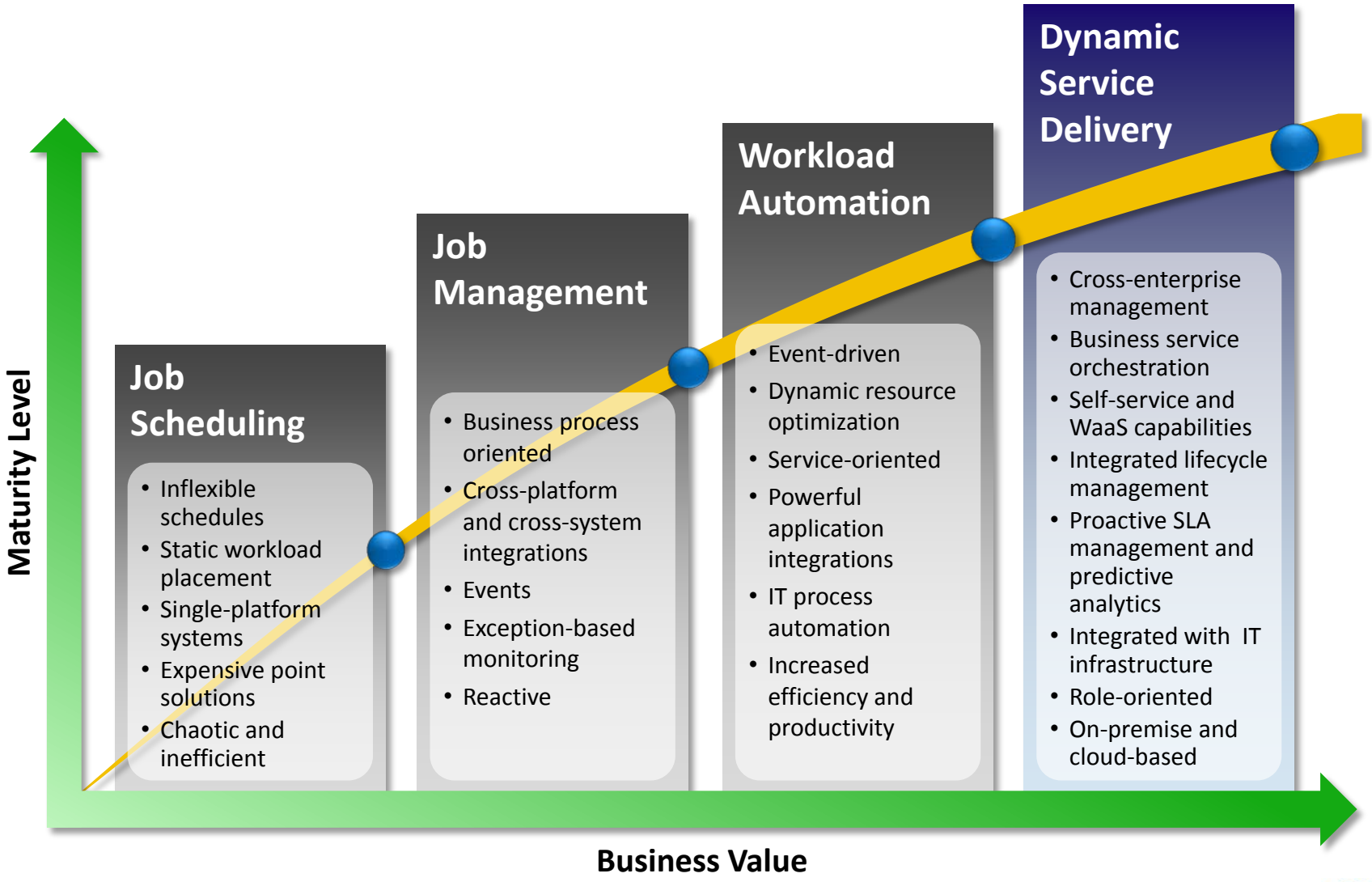
Copyright © 2013 CA. All rights reserved.

Beyond Workload Automation

- Dynamic Service Delivery
  - Cross-enterprise management and control
  - Business service orchestration
  - Adaptive to changing environments and processes
  - Integrated lifecycle management
  - Proactive service level management and advanced predictive analytics
  - Provides Workload as a service and self-service capabilities
  - Fully integrated with your IT infrastructure
  - Role-oriented user experience
  - Available both on premise and via the cloud
- Deliver what you need when you need it

Copyright © 2013 CA. All rights reserved.

Beyond Workload Automation



Copyright © 2013 CA. All rights reserved.

ca technologies

CA Workload Automation Agents and Job Types

System Tasks

- Command
- Remote Execution
- FTP and Secure Copy
- SNMP
- Wake On LAN
- z/OS
  - Batch Job
  - Manual Job
  - Data Set Trigger

Monitoring

- File Watcher/Trigger
- Text File
- Process
- CPU
- Disk
- IP
- Windows Event Log
- Windows Services

ERP Integrations

- SAP
  - R/3
  - Job Copy
  - BW InfoPackage
  - BW Process Chain
  - Batch Input (BDC)
  - Data Archiving
  - Process Monitor
  - Event Monitor
- Oracle E-Business Suite
  - Single Request
  - Request Set
  - Copy Single Request
- PeopleSoft PeopleTools

Application Integrations

- MS SQL Server Agent
- Informatica PowerCenter
- Micro Focus

Database Integrations

- DB Monitor
- DB Trigger
- DB Stored Procedure
- SQL Query

Java and Web Integrations

- J2EE Applications
  - HTTP
  - POJO
  - RMI
  - JMS Publish
  - JMS Subscribe
  - Entity Bean
  - Session Bean
- Web Services
  - Document/Literal
  - RPC/Encoded
  - Process Automation
- MBean (JMX)

Copyright © 2013 CA. All rights reserved.

This Presentation Is For Informational Purposes Only

Copyright © 2013 CA. All rights reserved. IBM, System z, zEnterprise, zSeries, z/OS, z/VM, RACF, CICS, IMS and DB2 are trademarks of International Business Machines Corporation in the United States, other countries, or both. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries. All trademarks, trade names, service marks and logos referenced herein belong to their respective companies.

This presentation was based on current information and resource allocations as of July 2013 and is subject to change or withdrawal by CA at any time without notice. Notwithstanding anything in this presentation to the contrary, this presentation shall not serve to (i) affect the rights and/or obligations of CA or its licensees under any existing or future written license agreement or services agreement relating to any CA software product; or (ii) amend any product documentation or specifications for any CA software product. The development, release and timing of any features or functionality described in this presentation remain at CA's sole discretion. Notwithstanding anything in this presentation to the contrary, upon the general availability of any future CA product release referenced in this presentation, CA will make such release available (i) for sale to new licensees of such product; and (ii) to existing licensees of such product on a when and if-available basis as part of CA maintenance and support, and in the form of a regularly scheduled major product release. Such releases may be made available to current licensees of such product who are current subscribers to CA maintenance and support on a when and if-available basis. In the event of a conflict between the terms of this paragraph and any other information contained in this presentation, the terms of this paragraph shall govern.

Certain information in this presentation may outline CA's general product direction. All information in this presentation is for your informational purposes only and may not be incorporated into any contract. CA assumes no responsibility for the accuracy or completeness of the information. To the extent permitted by applicable law, CA provides this presentation "as is" without warranty of any kind, including without limitation, any implied warranties or merchantability, fitness for a particular purpose, or non-infringement. In no event will CA be liable for any loss or damage, direct or indirect, from the use of this document, including, without limitation, lost profits, lost investment, business interruption, goodwill, or lost data, even if CA is expressly advised in advance of the possibility of such damages. CA confidential and proprietary. No unauthorized copying or distribution permitted.

CA does not provide legal advice. Neither this document nor any CA software product referenced herein shall serve as a substitute for your compliance with any laws (including but not limited to any act, statute, regulation, rule, directive, policy, standard, guideline, measure, requirement, administrative order, executive order, etc. (collectively, "Laws")) referenced in this document. You should consult with competent legal counsel regarding any Laws referenced herein.

Copyright © 2013 CA. All rights reserved.

Questions?
Thank you!

peter.kazmir@ca.com

ca technologies