IBM Webcast

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Improving System Availability with
Tivoli Network Management and
System Automation

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Increasing System Automation can improve availability across the entire enterprise

Key Takeaways

1. IBM has provided leadership and best practices with System z Service Management Visibility, Control and Automation capability for years

2. An Enterprise-wide Integrated Automation solution provides much better availability and performance results than individual separate products

3. IBM's end-to-end System Automation capability addresses key business requirements, including reducing risk and decreasing costs, with improved productivity

IBM provides Visibility, Control and Automation to respond to changing priorities and to realize business potential

VISIBILITY

CONTROL

AUTOMATION

React with agility to competitive landscape

Execute with reduced risk & cost

Achieve desired business outcomes

Creating Integrated solutions across System z and distributed environment key to increasing availability

- Business success is directly dependent on the continuity of underlying services, applications, networks, and resources.

- Maintaining availability across heterogeneous environments requires *Visibility*, *Control*, and *Automation* across the entire enterprise stack.

- Individual point products that deliver snippets of solutions result in delays that drive up cost and time to repair.

- IBM delivers integrated availability management solutions that drive increased business value at every integration point.

IBM's System Automation Integrated Solution includes a number of key capabilities
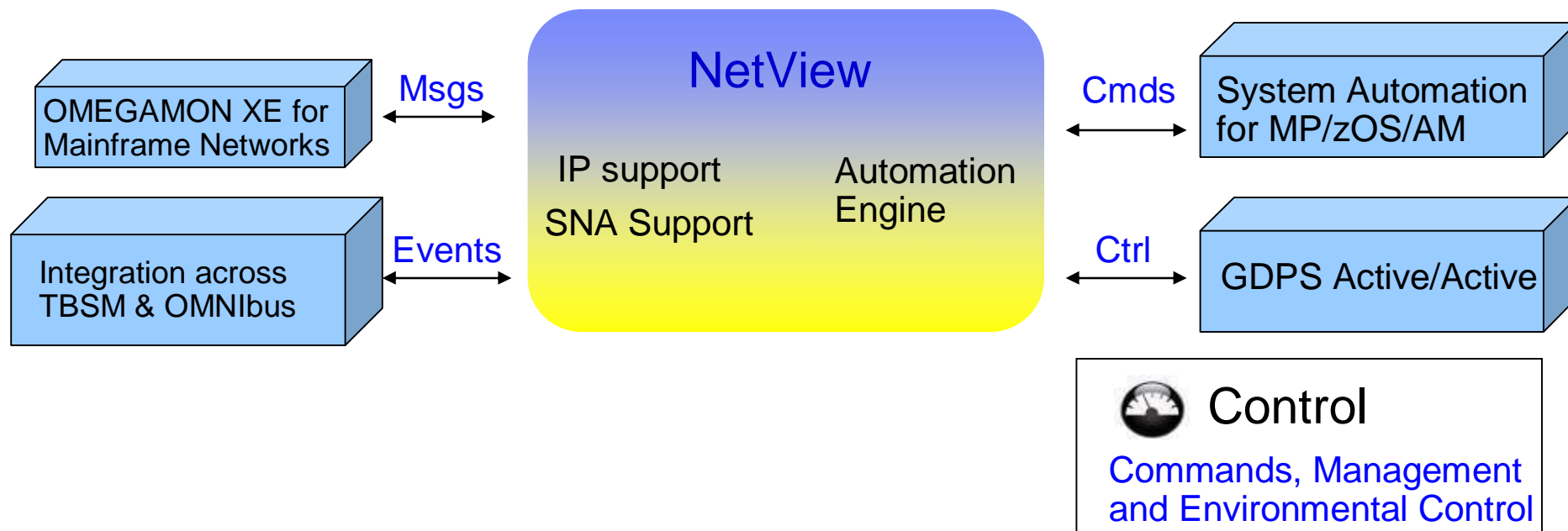
Visibility

Problem Determination, Management and Resolution

Automation

Application, network and system command and message automation

OMEGAMON XE for Mainframe Networks

Msgs

NetView

IP support

SNA Support

Automation Engine

Cmds

System Automation for MP/zOS/AM

Integration across TBSM & OMNIbus

Events

Ctrl

GDPS Active/Active

Control

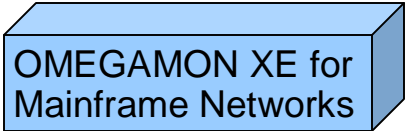Commands, Management and Environmental Control

NetView and OMEGAMON for MfN working together create single view of enterprise networks

NetView

Network <u>Availability</u>

OMEGAMON XE for Mainframe Networks

Network <u>Performance</u>

- Common user interface integrates TCP/IP data from both NetView and OMEGAMON XE for Mainframe Networks.

- Integration function provides customers with a consolidated TCP/IP workbench

  – Allowing management of both TCP/IP availability and performance from the same user interface.

- Smart IP tracing to immediately learn where poor or unstable TCP/IP connections hamper application performance

New NetView V6.1 continues IBM's focus on enhancing Network and System Availability and ease-of-use

Latest Version in long history of NetView customer driven enhancements

- New Network / System / Job Logging capability for enhanced operator usability

- Faster, more effective Problem Determination and Problem Management for faster diagnosis

- Increased automation for enhanced systems availability

- New high availability support with GDPS Active/Active solution

NetView Enhanced Automation capability increases availability via consolidated message logging

- Provides centralized message logging and enhanced message attributes
- Enables easy integration with powerful Tivoli automation
- Proactively resolves issues without operator intervention

Netlog
Joblog
Syslog

Canzlog
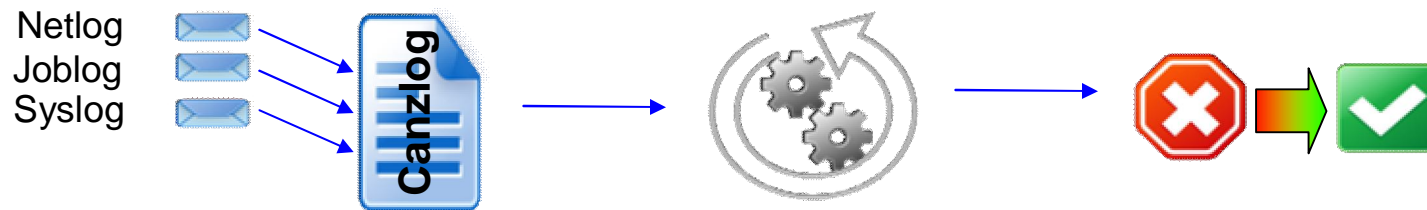
Customer Value

- Automatic capture of messages from multiple sources removing burden of understanding which messages are important
- Recording new message attributes to enhance automation capabilities, providing more control and flexibility

Business Value: 20 – 40% reduction in time to automate / resolve issues previously requiring operator intervention

Tivoli System Automation optimizes availability across multi-tier, composite application environments

End-to-end applications management, integrated operations management for multi-platforms

Key capabilities

- Single end-to-end point of control for resource automation throughout zEnterprise to reduce risk and assure service

- Central view and management of critical business processes

- Automated High Availability and Disaster Recovery to meet business service level requirements

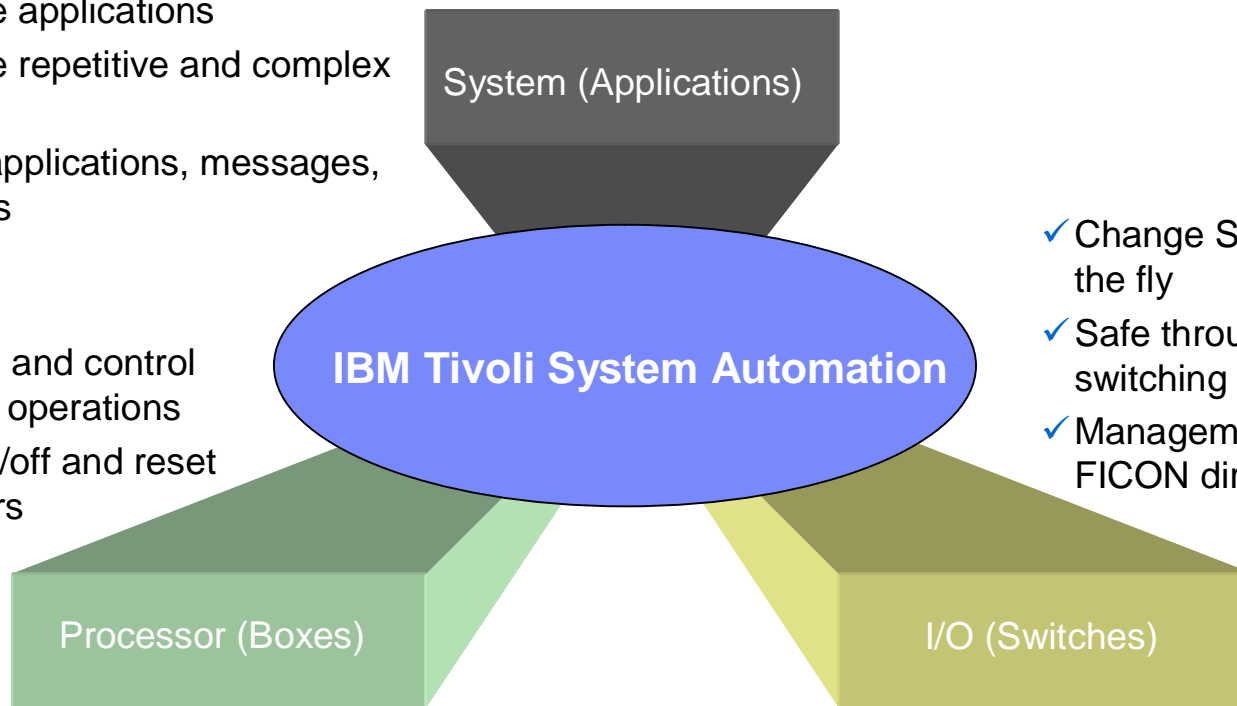- Contain costs with policy based automated, repeatable processes
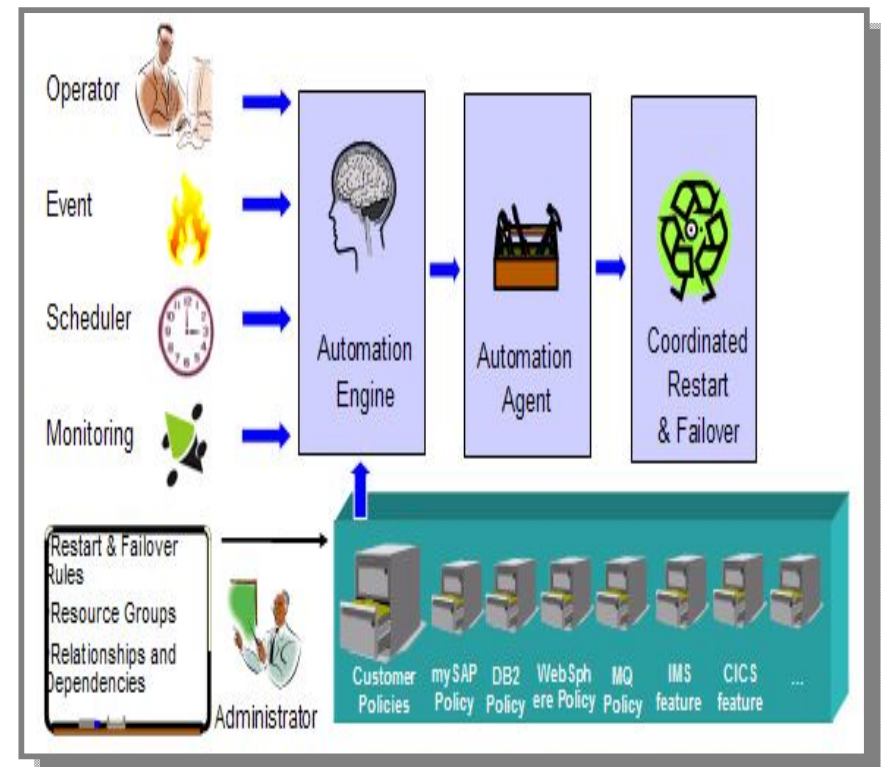
IBM System Automation on z/OS allows you to automate Hardware, IO, Applications and Services

✓ Automate applications

✓ Automate repetitive and complex tasks

✓ Monitor applications, messages, and alerts

System (Applications)

✓ Change Switch configuration on the fly

✓ Safe through system-integrated switching

✓ Management of ESCON and FICON directors

✓ Automate and control hardware operations

✓ Power on/off and reset processors

IBM Tivoli System Automation

Processor (Boxes)

I/O (Switches)

✓ Perform system IPL for z/OS, Linux, and VM

✓ Automate LPAR settings, e.g. weights and capping

Focusing on end-to-end System Automation assists with both regular and un-planned events

- *Protection against unplanned outages*

- *Management of planned outages*

- *Site failover of the entire business environment*

- *Disaster recovery and Alert escalation*

- *High availability for composite applications*

- *Integration with storage replication software*

- *Enterprise business continuity and automation*

Customers are using automation today to improve availability enterprise-wide

Use Case: Enterprise availability and performance
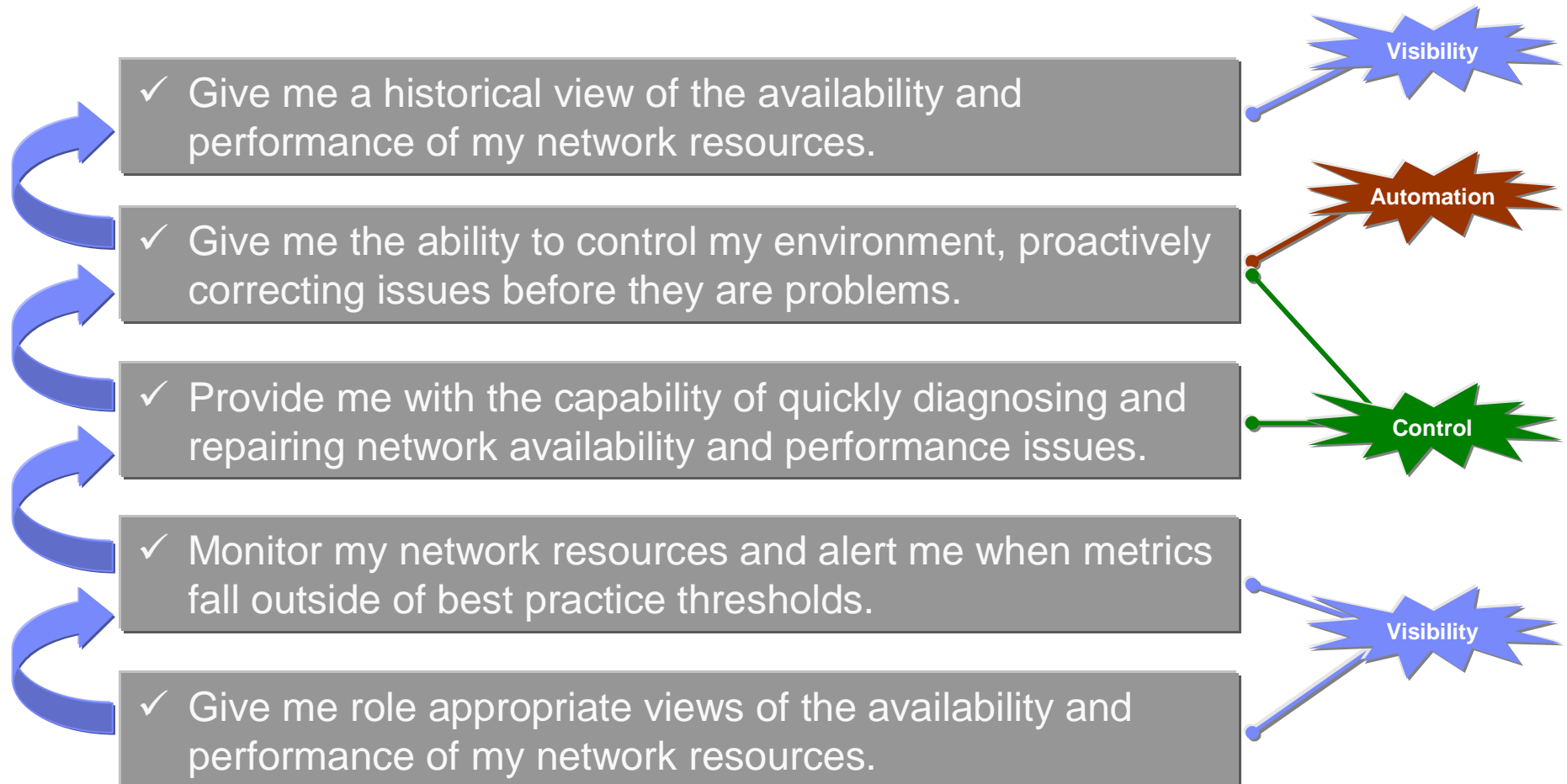
Customer Challenge:

- *Enterprise is composed of both distributed and z/OS assets*

- *Any interruption in the availability or performance of network resources can have significant impacts to business.*

- *Require solution that can quickly diagnose, resolve, and prevent network issues in a way that is both intuitive and consistent across heterogeneous resources.*

System Automation solution components focus on end-to-end Enterprise Availability

✓ Give me a historical view of the availability and performance of my network resources.

Visibility

✓ Give me the ability to control my environment, proactively correcting issues before they are problems.

Automation

✓ Provide me with the capability of quickly diagnosing and repairing network availability and performance issues.

Control

✓ Monitor my network resources and alert me when metrics fall outside of best practice thresholds.

✓ Give me role appropriate views of the availability and performance of my network resources.
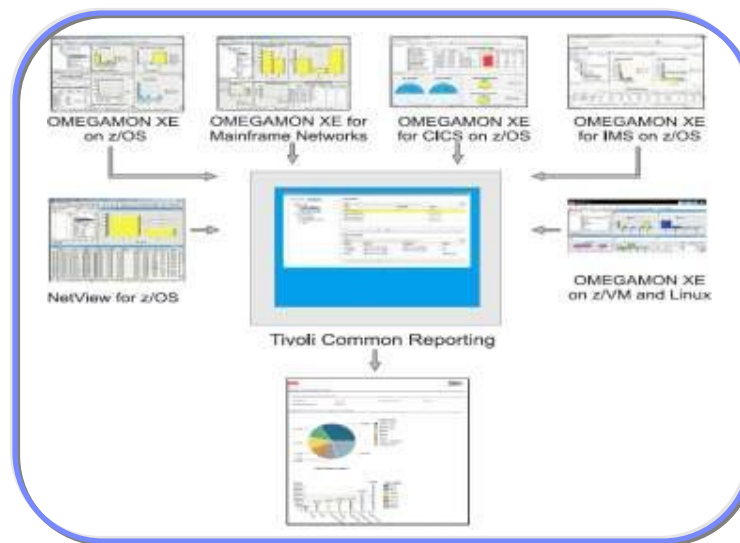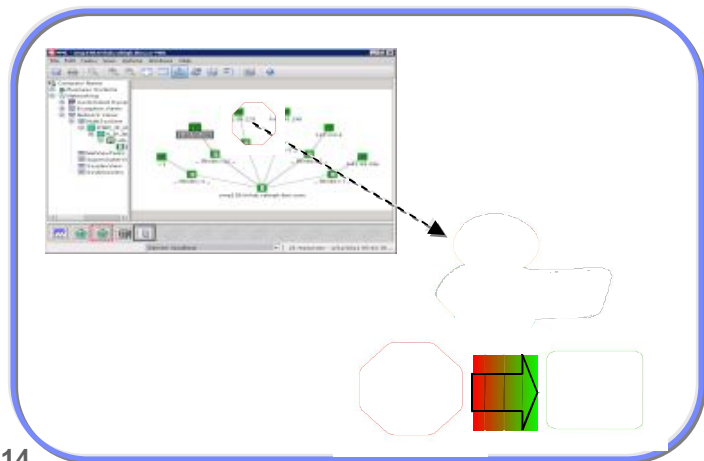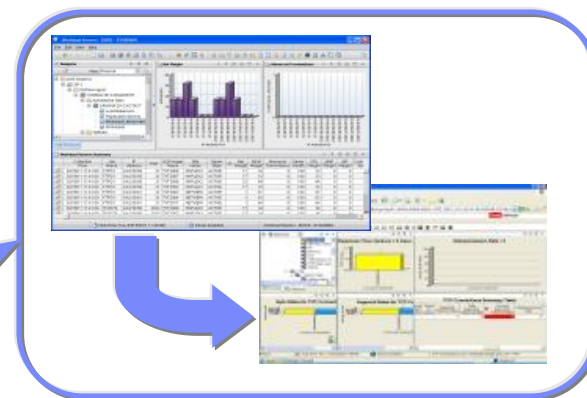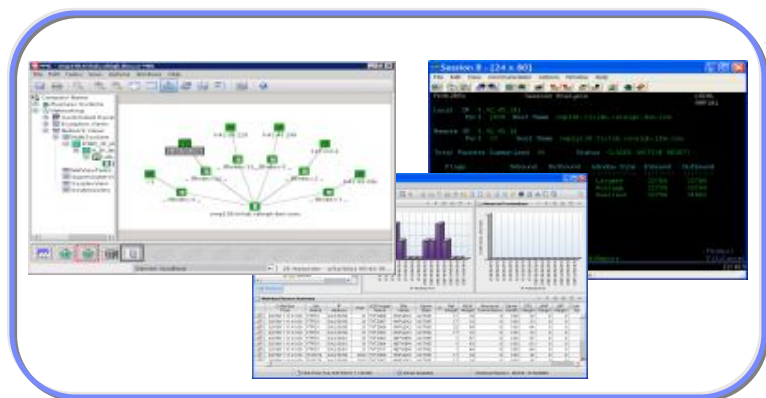
Visibility

All the components work together to keep applications and services availability

Role appropriate views of the right data at the right time

Rapid problem diagnostics via common UI and drill down between products

Alert me when thresholds are breeched and enable me to automate corrective actions for the future

Consistent historical views of resource performance and availability data

OMEGAMON XE on z/OS

OMEGAMON XE for Mainframe Networks

OMEGAMON XE for CICS on z/OS

OMEGAMON XE for IMS on z/OS

NetView for z/OS

OMEGAMON XE on z/VM and Linux

Tivoli Common Reporting

Global Food & Beverage Org gained real ROI from implementing System Automation

Challenge

- Unplanned downtime of large SAP app hurting business.

- System processed close to $20B of business

- Wanted solution that would span across multiple platforms and automate recovery of application components in case of failure

Customer View of Solution

"IBM Tivoli System Automation products automates high availability of our application infrastructure.

The current solution extends automation to the hardware and network layer in addition to keeping the SAP components and DB2 database highly available.

In case of any unplanned outages, TSA automatically initiates recovery across the stack which saves us millions of dollars in terms of lost business.

Additionally we drive operational efficiencies by being able to manage the entire application from one management console"

Business Benefits

- Eliminated most unplanned outages saving $Millions of dollars of lost business in a year

- Quickly and efficiently respond to unplanned outages

- Better managed and executed planned outages by using TSA

- Predictable and reliable recovery of application components has saved overtime and other labor related costs

- Drove operator efficiencies and better usage of IT teams

- Better alignment of application management duties with IT teams skills and responsibilities

# Tivoli's System Automation components work together to provide an end-to-end solution

System Automation Solution:

- *IBM provides a solution that integrates both distributed and z/OS network monitoring and management,*

- *Easy and secure navigation across resources for efficient problem diagnosis and reduced time to repair network issues,*

- *Enabling automation to prevent future disruptions.*

Tivoli System Automation *High Availability* capability supports business continuity requirements

- Provides continuous availability of applications through a policy driven HA engine for failover of resources and components

- Manages business application high availability by
  - Fast detection of outage through monitoring
  - Sophisticated knowledge about application components and their relationships
  - Quick and consistent recovery of failed resources

- Reduces cost of ownership and makes it easy to manage complex application deployments (for e.g. multi-tiered SAP applications)

- Policy-based automation approach simplifies complex scripting requirements, reducing HA/DR complexity and speeding time to value
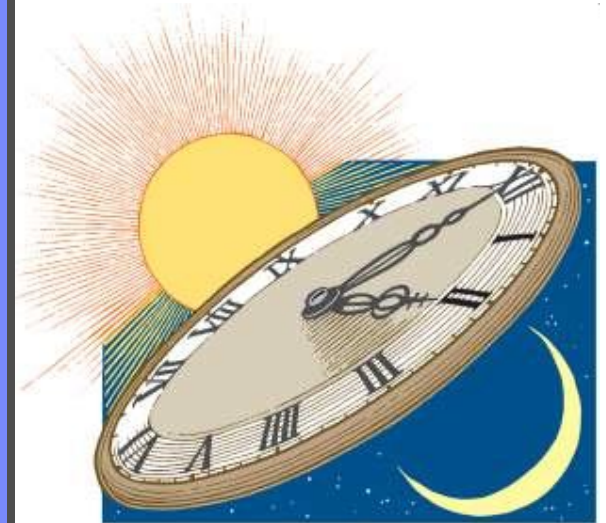
Achieving 100% uptime 24/7 requires Business continuity and continuous availability solution

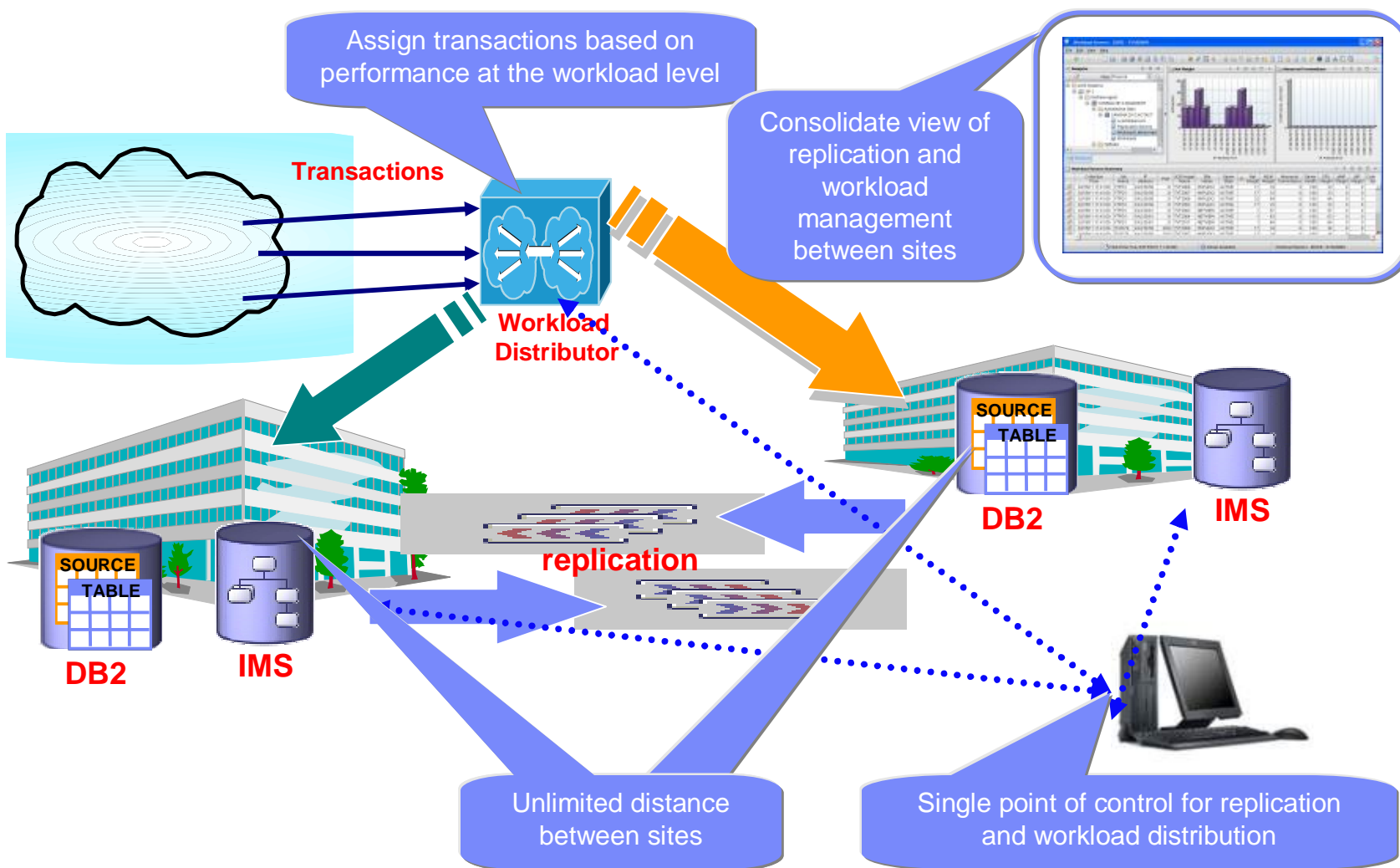## Customer Challenge:

- **Business continuity objectives have evolved from a failover model, in which service interruption is tolerated, to a continuous availability model, in which uninterrupted services is the expectation.**

- **When services are down, even for a limited time, revenue is lost.**

- **Need to ensure near instantaneous recovery of service availability, regardless of the outage.**

System Automation with GDPS supplies Business continuity and continuous availability

✓ Give me a consolidated view into the health of my continuously available environment.

Visibility

✓ Automatically redirect workloads from one environment to another based on system performance and availability.

Automation

✓ Provide me with the ability to leverage previously idle capacity to more efficiently assign workloads.

Control

✓ Enable me to locate continuous availability environments where my business requires, regardless of distance.

✓ Support my business shift in disaster recovery objectives from failover to a continuous availability model.

IBM's GDPS can provide continuous availability across geographically remote sites

Assign transactions based on performance at the workload level

Transactions

Workload Distributor

Consolidate view of replication and workload management between sites

SOURCE TABLE

DB2

IMS

SOURCE TABLE

DB2

IMS

replication

Unlimited distance between sites

Single point of control for replication and workload distribution

System Automation with GDPS can provide 100% availability

High Availability
System Automation Solution:

- *IBM provides an integrated solution that ensures near continuous availability*

- *Performance decisions are based on workload priorities*

- *Recovery objectives are measured by minutes rather than days,*

- *Ensuring that business critical applications remain available regardless of external impacts.*

Business success is directly dependent on the health of underlying IT systems, applications, and networks

3

- The complexity of today's enterprise environments demands solutions that integrate across all aspects of the enterprise stack, whether distributed or z/OS.

- IBM Tivoli is in the unique position to deliver solutions at all levels of the enterprise stack, including automation

- IBM Tivoli NetView and System Automation are core of system and network availability integration, providing Visibility, Control, and Automation across the entire IT stack.

Learn more about the individual capabilities of IBM's System Automation Solution

IBM Tivoli NetView for z/OS	http://www-01.ibm.com/software/tivoli/products/netview-zos/
IBM Tivoli Network Manager	http://www-01.ibm.com/software/tivoli/products/network-mgrproductline/
Tivoli Application Dependency Discovery Manager	http://www-01.ibm.com/software/tivoli/products/taddm/
Tivoli Workload Scheduler	http://www-01.ibm.com/software/tivoli/products/scheduler/
Tivoli Netcool/OMNIbus	http://www-01.ibm.com/software/tivoli/products/netcool-omnibus/
Tivoli Business Service Manager	http://www-01.ibm.com/software/tivoli/products/bus-srv-mgr/
IBM Tivoli Monitoring	http://www-01.ibm.com/software/tivoli/products/monitor/
Tivoli OMEGAMON XE for Mainframe Networks	http://www-01.ibm.com/software/tivoli/products/omegamon-xe-mainframe/
Tivoli System Automation for z/OS	http://www-01.ibm.com/software/tivoli/products/system-automation-zos/
IBM Geographically Dispersed Parallel Sysplex	http://www-03.ibm.com/systems/z/advantages/gdps/index.html

Learn more about IBM's entire Tivoli System z portfolio at upcoming Pulse Conference

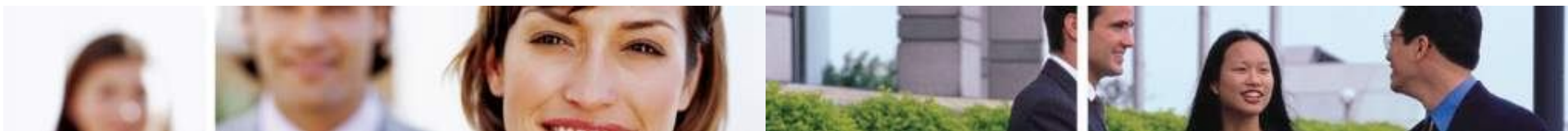Pulse 2012
Optimizing the World's Infrastructure

Location:

MGM Grand Hotel

Register at:

http://www-01.ibm.com/software/tivoli/pulse/

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