



# **IBM Entry Cloud Configuration for SAP Solutions on zEnterprise**

*New Cloud offering for z/OS*



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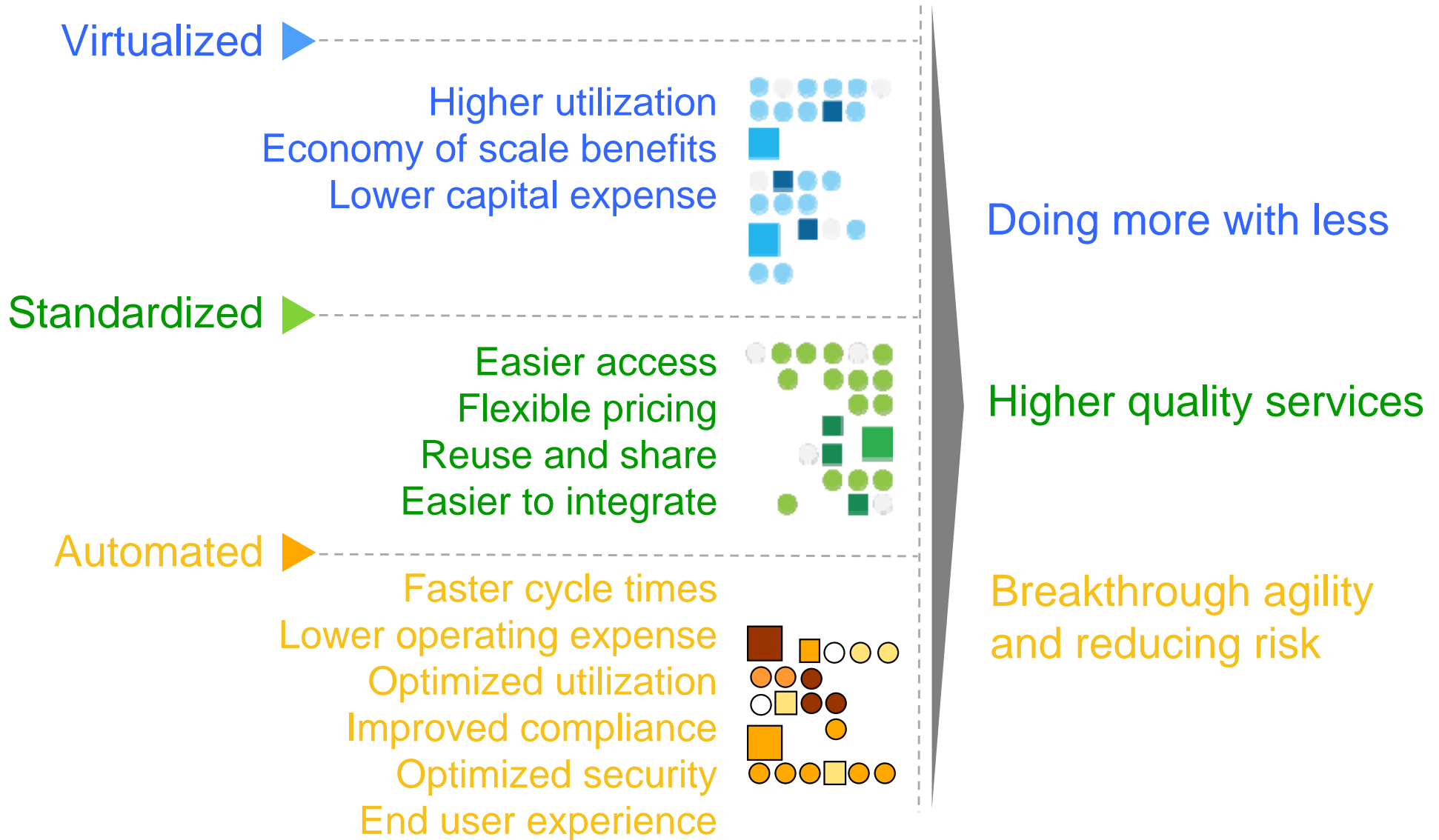
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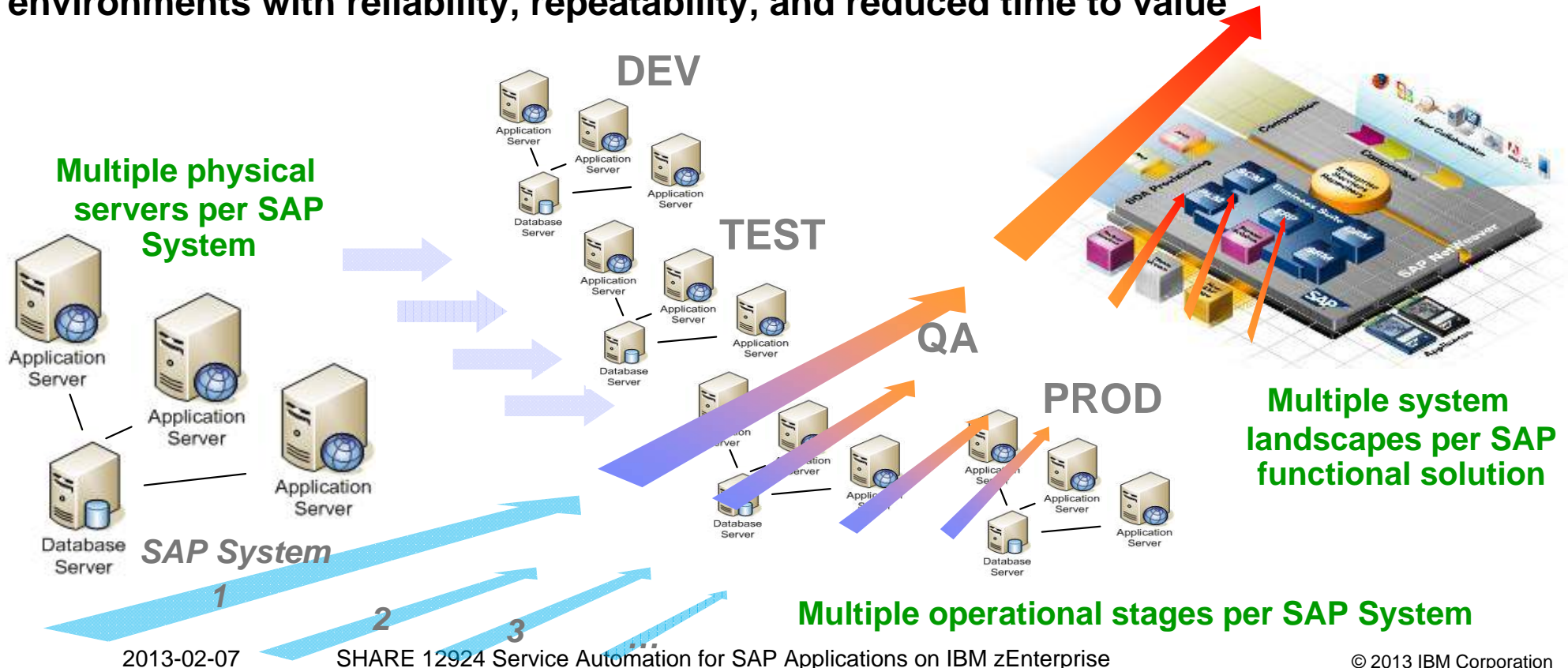
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# Cloud computing addresses these challenges



# Complex IT landscapes create challenges for SAP customers

- Explosive growth in the number of SAP systems is resulting in landscape complexity and associated service quality issues
- Dependence on labor intensive processes result in long lead times for creation of new SAP systems, refreshes for development, and test
- SAP operational budgets are draining valuable resources needed for business value creating SAP application projects
- Need for improved productivity of Basis teams to implement and manage multiple SAP environments with reliability, repeatability, and reduced time to value



# Introducing: IBM Entry Cloud Configuration for SAP Solutions on zEnterprise

- A cloud enablement offering that combines technology and services to automate, standardize, and speed up day-to-day operations for SAP resulting in reduced operational costs and faster time to value.
- Summary:
  - Automation of specific DB2 tasks and workflow engine tasks
  - SAP service catalog
    - Automated cloning to provision a new SAP system
    - Create customized SAP system from an existing image
    - SAP database refresh
    - Create an additional SAP dialog instance
  - Services
    - Planning
    - Configuration
    - Automation code
    - Customization
    - Onsite implementation assistance
    - Training

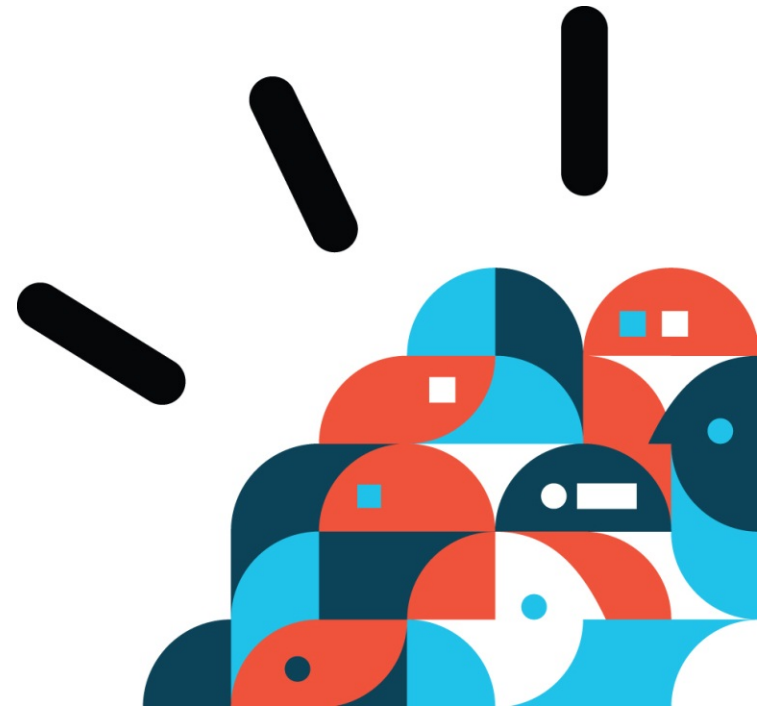
Available November 2012





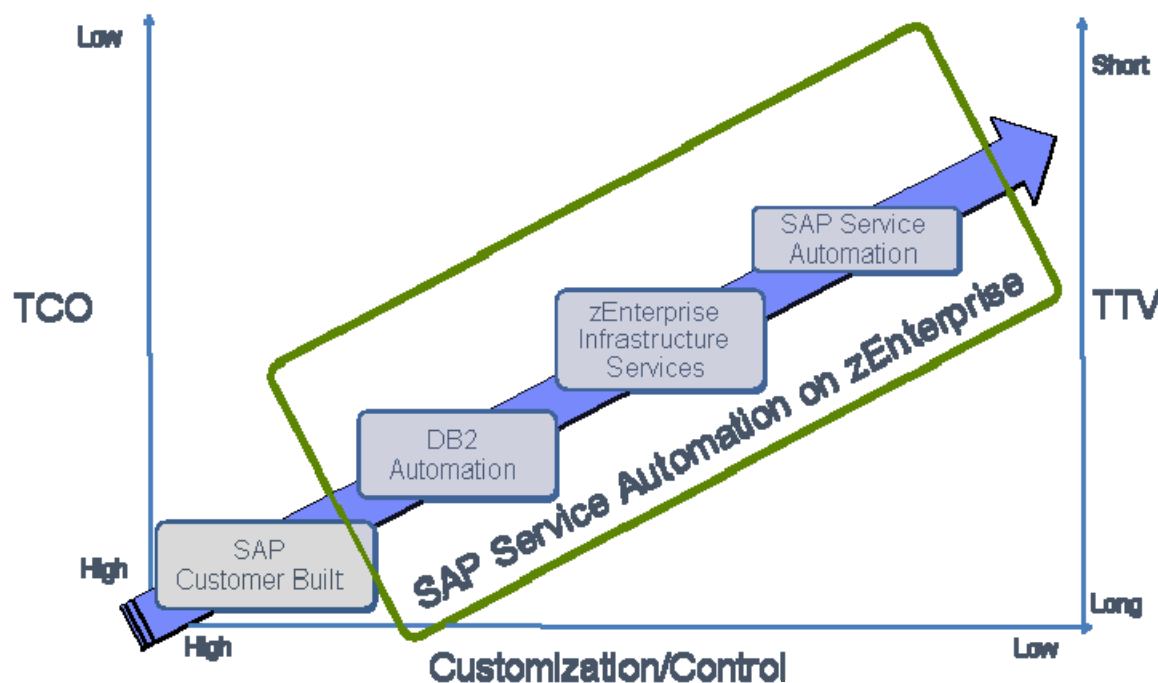
# Background

- **IBM SAP joint development team built a virtualized infrastructure with automation and management for SAP applications more than five years before it was called ‘Cloud’**
- **IBM provides enterprise private cloud services via IBM Entry Cloud Configuration on zEnterprise with a new offering under the “managed with cloud technologies” offerings for System z**
  - Customer self services provisioning with strong automation capabilities
  - DB2® for z/OS® services
  - SAP services
  - Makes use of DB2 Cloning Tool
  - Requires FlashCopy feature of DS8000



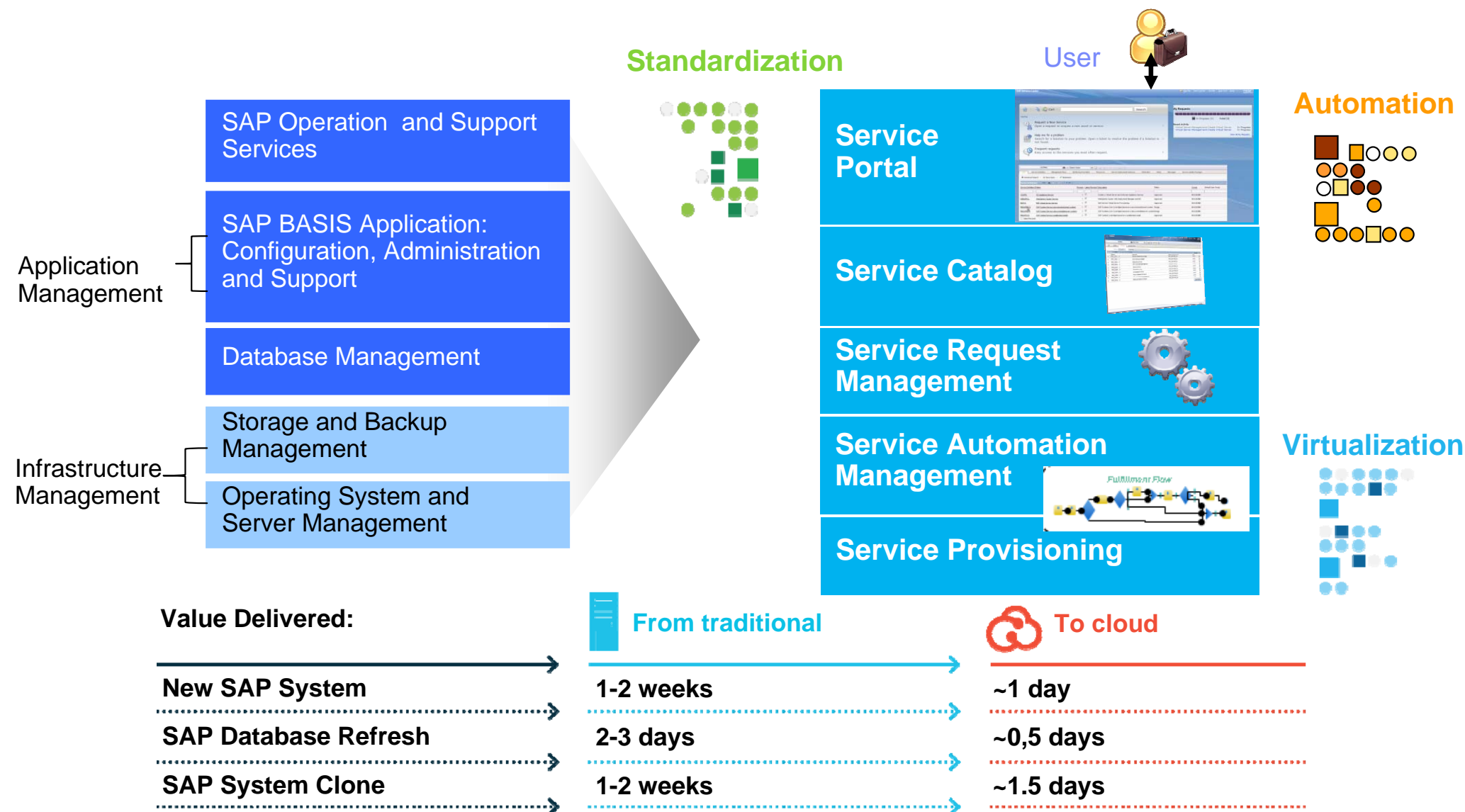
## IBM Entry Cloud Configuration for SAP solutions on zEnterprise provides automation to accelerate and standardize operations

- **SAP System Clone** – Provision a fresh SAP system based on a new system copy
- **SAP System Copy** – Create a customized SAP system based on existing system
- **SAP System Refresh** – Copy DB content from PRD to Non-PRD including post processing
- **Create an additional Dialog instance** – Adding additional application server instances, e.g. for monthly closing



Note: TTV (time to value)

# IBM Entry Cloud Configuration for SAP Solutions on zEnterprise transforms traditional services into automated cloud services



Planned delivery times with IBM Entry Cloud Configuration on zEnterprise based on actual administrator experience. Individual results may vary.



## Solution scope – Details

### DB2 Automation

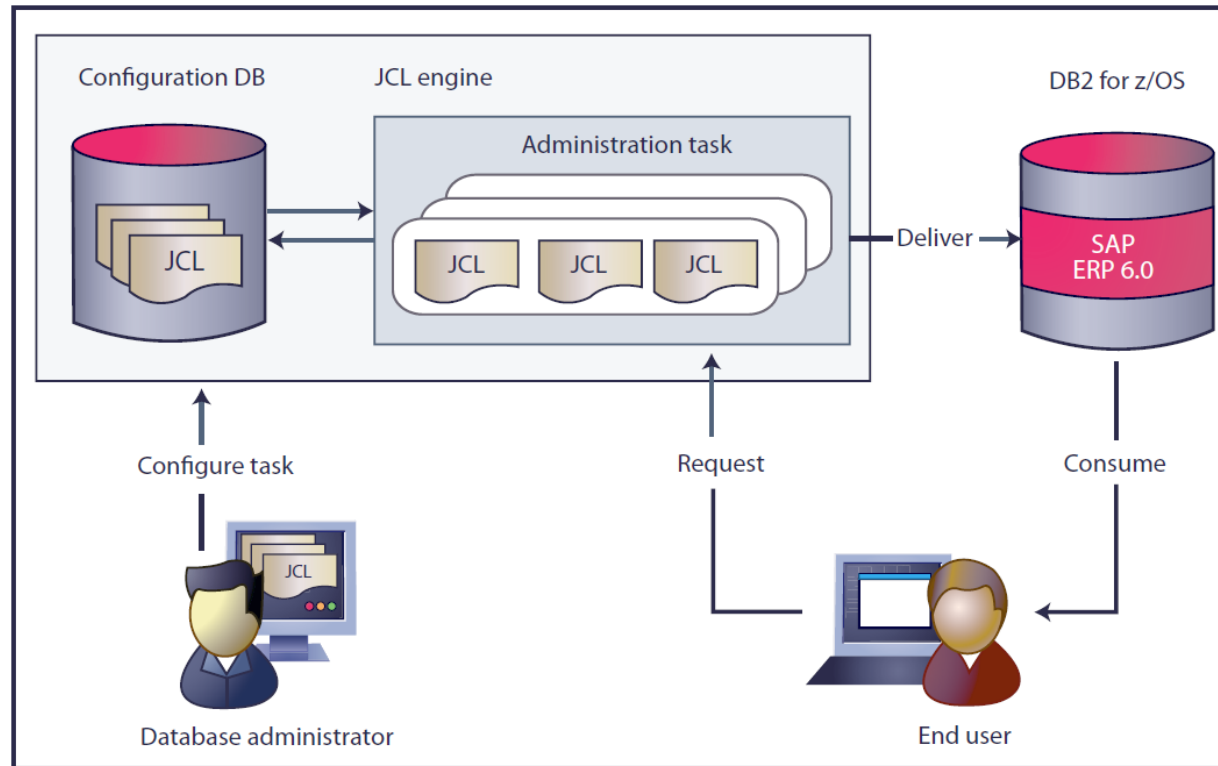
- **Introduce a Database on System z service catalog for building the following database use cases:**
  - Provide a DB2 subsystem on z/OS
    - Unattended, automated database installation
    - In addition automate de-provisioning of the database
    - Predefined SMS/ACS setup
  - Automated update of database libraries
    - Replace code and perform hold actions on subsystem
  - Clone database from backup
    - Restore an existing backup (offline, backup system) into a different DB2 subsystem
  - Automated backup/restore
    - Mainly used for clone use case, but also for recovery purposes

### SAP Services

- **Introduce a SAP service catalog for building the following SAP use cases.**
  - Create a fresh SAP System from scratch
    - Unattended SAP installation
  - SAP database refresh
    - Copy DB content from PRD to Non-PRD including post processing
  - Create a customized SAP system based on existing image
    - Provide a Non-PRD System
  - Create an additional SAP dialog instance (DI) to cover peak workload
    - Additional DI runs in same context

**Note:** IBM Entry Cloud Configuration on zEnterprise  
Requirements: z/OS 1.11, DB2 9 or DB2 10 for z/OS,  
DB2 Cloning Tool

# Database Provisioning System – Operational Efficiency



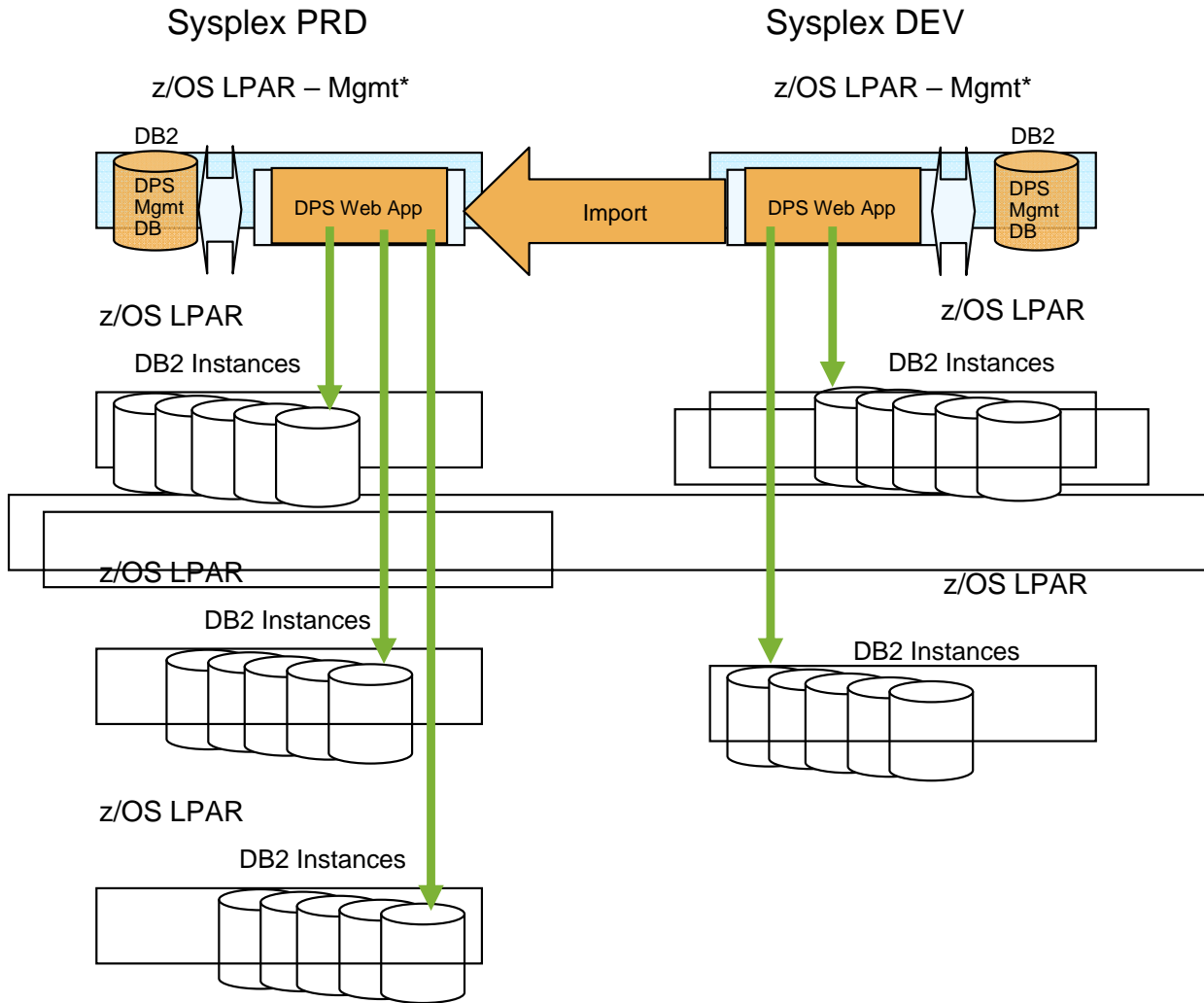
## Value Delivered:

	From traditional	To cloud
Install DB2	1 day	12 mins
Maintain database libraries	½ day	8 mins
Clone database	2-3 days	20-180 mins
Install operating system	1 day	30-60 mins
Prepare upgrade/provide SAP system	2-3 days	~40-200 mins
Add additional application server	1 day	10 mins

Objectives: Planned delivery times with IBM Entry Cloud Configuration on zEnterprise based on actual administrator experience. Individual results may vary.

# Database Provisioning System – Architecture Overview

## zEnterprise



DPS	Configuration and management Database + Web Application
z/OS LPAR – Mgmt	Management LPAR Not exclusively for DPS
	Provisioning and Lifecycle Management
Import	Import of meta data to support use case “SAP System Refresh”

## Screen Shots

# Database Provisioning System – Meta-data Management

DPS v.4

Tue Feb 28 13:33:22 CET 2012

User: admin

[Homepage](#) | [Workflows](#) | [Request Tracking](#) | [Resource Management](#) | [Configuration](#)
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## Database Provisioning System - DB2 Subsystems

[Switch to graphical view...](#)[Register database subsystem...](#)[Prepare new database subsystem...](#)[Add custom parameter...](#)[Delete custom parameter...](#)

Standard Parameters														Custom Parameters		
Action	Name	Current Request*	VCAT	Installed	LPAR	SMPE Group	Release	Service Level	IRLM Subsys Name	DDF Location	DDF Port	DDF Resync Port	LU Name	Owner (User ID)	Migration Mode	NUMLKS
1 <a href="#">Change</a> <a href="#">Delete</a>	FT01	-	FT01	No	COB3	DEV	none	none	IT01	COBFT01	5901	5101	IPXAC901	DPS User (user)	n.a.	1000000
2 <a href="#">Change</a> <a href="#">Delete</a>	FT02	-	FT02	Yes	COB3	DEV	V100	Y11300	IT02	COBFT02	5902	5102	IPXAC902	DPS User (user)	n.a.	1000000
3 <a href="#">Change</a> <a href="#">Delete</a>	FT03	-	FT03	No	COB3	DEV	none	none	IT03	COBFT03	5903	5103	IPXAC903	DPS User (user)	n.a.	500000
4 <a href="#">Change</a> <a href="#">Delete</a>	FT04	-	FT04	No	COB3	DEV	none	none	IT04	COBFT04	5904	5104	IPXAC904	DPS User (user)	n.a.	1000000



# Database Provisioning System – Meta-data Management (2)

**DPS v.4**
Tue Feb 28 13:37:09 CET 2012
User: admin

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 [Request Tracking](#) | 
 [DB2 Subsystems](#) | 
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Logout

### Database Provisioning System - Add Custom Database Parameter

Parameter Name\* (without #)

Default Value

Maximum Length

Remarks  
 \* The following parameter names are reserved and can't be used:  
 [BEGIN, DATASHARING, DDFLOCATION, DDFLUNAM, DDFPORT, DDFRPORT, DELLOG, DPSHLQ, DSNZPARM, DUMPID, END, ENDRBAD, GROUPNAME, HLQ, HLQPRE, INSTALLED, IRLMGRP, IRLMID, IRLNMN, JOBNAME, LIBRARY, LIBTEMP, LIB\_ID, LPAR, MODE, NAME, NEWLOG, NUMLKS, OWNER, POOL, PROD, PUTLEVEL, REL, RELEASE, RESERVED\_RID, RESERVED\_USER, SERVICELEVEL, SLGROUP, SOURCECSI, SOURCEHLQ, SOURCETLIB, STARTRBAD, STATSINT, TARGETCSI, TARGETHLQ, TARGETTLIB, TARGETUNIT, TOMCATHOME, USER, VCAT, VERS, WLMPREFIX]

User: admin
Logout

														Custom Parameters				
														Owner (User ID)	Migration Mode	DSMAX	NUMLKS	
														01	DPS User (user)	n.a.	20000	1000000
2	<a href="#">Change</a>	FT02	-	FT02	Yes	COB3	DEV	V100	Y11300	IT02	COBFT02	5902	5102	IPXAC902	DPS User (user)	n.a.	20000	1000000
3	<a href="#">Change</a> <a href="#">Delete</a>	FT03	-	FT03	No	COB3	DEV	none	none	IT03	COBFT03	5903	5103	IPXAC903	DPS User (user)	n.a.	20000	500000
4	<a href="#">Change</a> <a href="#">Delete</a>	FT04	-	FT04	No	COB3	DEV	none	none	IT04	COBFT04	5904	5104	IPXAC904	DPS User (user)	n.a.	20000	1000000



# Database Provisioning System – Request Tracking

DPS v.4
Tue Feb 28 13:46:39 CET 2012
User: admin  
Logout
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Database Provisioning System - Show latest request per DB2

Filter: -- choose a filter --

Request ID	Request Type	Version	Status	DB2 Instance	Requestor	Start Time	End Time	Elapsed Time	Backup ID
8	Uninstall a DB2 Subsystem	V100	finished	FT01	admin	2012-02-24 10:28:21	2012-02-24 10:29:45	00:01:24.003	
7	Install a DB2 Subsystem	V100	finished	FT02	admin	2012-02-24 10:27:21	2012-02-24 10:35:51	00:08:29.551	
6	add DS Member	V910	finished	FSA0	admin	2012-02-23 14:29:02	2012-02-23 14:34:25	00:05:23.441	

48:24 CET 2012 User: admin  
Logout

POST PROCESSING

Request Parameters
Request ID: 7  
Request Type: Install a DB2 Subsystem  
Request Status: 0  
DB2 Subsystem: FT02  
DB2 Version: 10  
Started: 2012-02-24 10:27:21.0  
Ended: 2012-02-24 10:35:51.0

Workflow Details (click to show/hide)

Step	Job Name	Template Name	Status
1	DPS0007A	DSNSTODB	finished
2	DPS0007B	DELETE	finished
3	DPS0007C	COMPRPL	finished
4	DPS0007D	DSNLBS	finished
5	DPS0007E	DSNTJMV	finished
6	DPS0007F	DSNTJRW	finished
7	DPS0007G	DSNTJIN	finished
8	DPS0007H	DSNTJUZ	finished
9	DPS0007I	DSNTJID	finished
10	DPS0007J	DSNTJIE	finished
11	DPS0007K	DSNTJIF	finished
12	DPS0007L	DSNTJEX	finished
13	DPS0007M	SETDDF	finished
14	DPS0007N	DSNSTADB	finished
15	DPS0007O	DSNTJTC	finished
16	DPS0007P	DSNTJTM	finished
17	DPS0007Q	DSNGRANT	finished
18	DPS0007R	DSNTJSG	finished
19	DPS0007S	DSNTJRT	finished
20	DPS0007T	DSNTEJL	finished
21	DPS0007U	ADBCHKPT	finished
22	DPS0007V	ADBBIND	finished
23	DPS0007W	DSNTJCL	finished
24	DPS0007X	DSNSTODB	finished
25	DPS0007Y	DSNSTADB	finished

JCL Parameters Details (click to show/hide)

Parameter Name	Value
DATASHARING	NO
DDFLOCATION	COBFT02
DDFLUNAM	IPXAC902
DDFPORT	5902
DDFRPORT	5102
DPSHLQ	DPS4
DSNZPARM	DSNZPARM
GROUPNAME	FT02
HLQ	FT02
HLQPRE	FT02
IRLMNM	IT02
LIBRARY	DPS1.DSN.D100P110
LIBTEMP	FT02.DSN.D100P110
LPAR	COB3
NAME	FT02
OWNER	USER
REL	V100
SERVICELEVEL	Y11300
SLGROUP	DEV
STATSINT	30
TOMCATHOME	/COB3/local/nardell/dps/apache-tomcat-6.0.33
USER	DPSADM
VERS	10
WLMPREFIX	FT02

# Database Provisioning System – Request Tracking

DPS v.4

Tue Feb 28 13:46:39 CET 2012

User:

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Database Provisioning System - Show latest request per DB2

Filter: -- choose a filter --

Request ID	Request Type	Version	Status	DB2 Instance	Requestor	Start Time	End Time	Elapsed Time	Backup ID
8	Uninstall a DB2 Subsystem	V100	finished	FT01	admin	2012-02-24 10:28:21	2012-02-24 10:29:45	00:01:24.003	
7	Install a DB2 Subsystem	V100	finished	FT02	admin	2012-02-24 10:27:21	2012-02-24 10:35:51	00:08:29.551	
6	Install an add. DS Member	V910	finished	FSA0	admin	2012-02-23 14:29:02	2012-02-23 14:34:25	00:05:23.441	

Request Phases

PREPARE

EXECUTION

Request Parameters

Request Number	7
Request Type	Install a DB2 Subsystem
Request Status	0
DB2 Subsystem	FT02
DB2 Version	10
Started	2012-02-24 10:27:21.0
Ended	2012-02-24 10:35:51.0

Workflow Details (click to show/hide)

Step	Job Name	Template Name	Status
1	DPS0007A	DSNSTODB	finished
2	DPS0007B	DELETE	finished
3	DPS0007C	COMPRPL	finished
4	DPS0007D	DSNLIBS	finished
5	DPS0007E	DSNTIJMV	finished
6	DPS0007F	DSNTIJRW	finished
7	DPS0007G	DSNTIJIN	finished
8	DPS0007H	DSNTIJUZ	finished
9	DPS0007I	DSNTIJID	finished
10	DPS0007J	DSNTIJIE	finished
11	DPS0007K	DSNTIJIF	finished

JCL Parameters Details (click to show/hide)

Parameter Name	Value
DATASHARING	NO
DDFLOCATION	COBFT02
DDFLUNAM	IPXAC902
DDFPORT	5902
DDFRPORT	5102
DPSHLQ	DPS4
DSNZPARM	DSNZPARM
GROUPNAME	FT02
HLQ	FT02
HLQPRE	FT02
IRLMNM	IT02



# Database Provisioning System (DPS) – Sample screen shots

DPS v.4

Mon Feb 13 09:21:07 CET 2012

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## Database Provisioning System - Request Details

### Request Phases

PREPARE

EXECUTION

POST PR

### Request Parameter

Request Number 221  
 Request Type Install a DB2 Subsystem  
 Request Status 0  
 DB2 Subsystem FT02  
 DB2 Version 9  
 Started 2012-02-10 14:39:50.0  
 Ended 2012-02-10 14:46:38.0

### Workflow Details(Click to show/hide)

Step	Job Name	Template Name	Status
1	DPS0221A	DSNSTODB	finished
2	DPS0221B	DELETE	finished
3	DPS0221C	COMPRPL	finished
4	DPS0221D	DSNLBS	finished
5	DPS0221E	DSNTIJMV	finished
6	DPS0221F	DSNTIJIN	finished
7	DPS0221G	DSNTIJUZ	finished
8	DPS0221H	DSNTIJEX	finished
9	DPS0221I	DSNTIJID	finished
10	DPS0221J	SETDDF	finished
11	DPS0221K	DSNSTADB	finished
12	DPS0221L	DSNTIJTC	finished
13	DPS0221M	DSNTIJTM	finished
14	DPS0221N	DSNGRANT	finished
15	DPS0221O	DSNTIUSG	finished
16	DPS0221P	DSNTEJ1L	finished
17	DPS0221Q	ADBCHKPT	finished
18	DPS0221R	ADBBIND	finished
19	DPS0221S	DSNTEJ2A	finished
20	DPS0221T	DSNTUCL	finished

### JCL Parameter Details(Click to show/hide)

Parameter Name	Value
BSDSHLQ	#HLQ#L
DATASHARING	NO
DDFLOCATION	COBFT02
DDFLUNAM	IPXAC902
DDFPORT	5902
DDFRPORT	5102
DPSHLQ	DPS4
DSNZPARM	DSNZPARM
GROUPNAME	FT02
HLQ	FT02
HLQPRE	FT02
IRLMNM	IT02
LIBRARY	DPS1.DSN.D910P102
LIBTEMP	FT02.DSN.D910P102
LPAR	COB3
NAME	FT02
OFFLOAD	YES
OWNER	USER
REL	V910
SERVICELEVEL	Y11200

# Value Proposition

## *Customer benefits*

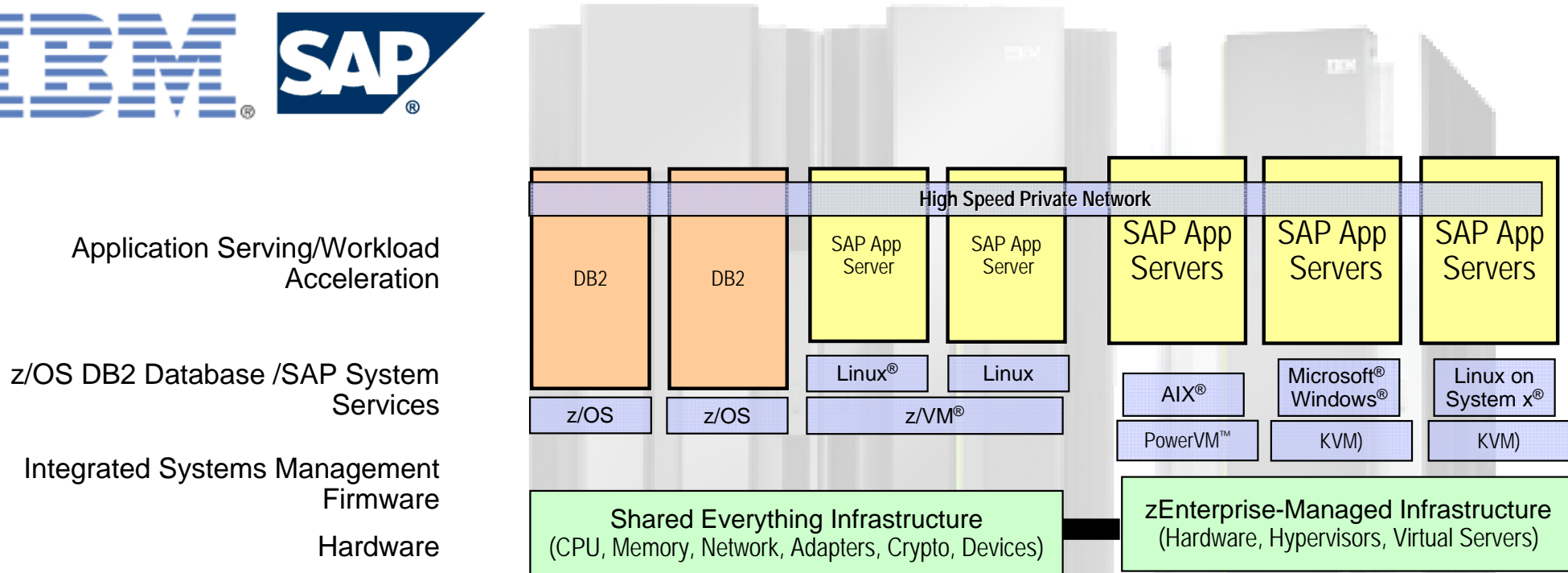
- **Standardization and automation of repetitive SAP administrator tasks – reduced risk/cost of operational errors**
- **Consolidate SAP applications and database workloads under a single simplified management system – consolidation**
- **Support rapid business growth with more flexible delivery of high value services for SAP systems and data operations – agility to meet business demands**
- **Increased SAP applications and data availability – reduced planned down time of SAP applications**
- **Simplified and comprehensive database and SAP systems Life Cycle Management – simplification**
- **Reduced dependency on DB2 for z/OS and z/OS skills**
- **Introduces a real world scenario for PaaS on z/OS platform**

## IBM Services

- **This offering is not available as an orderable product**
- **Code delivered through IBM Services**
- **IBM Services engagement will provide → 2 weeks**
  - Onsite implementation services
  - Install code
  - Customize and configure automation scripts and JCL
  - Train personnel on use of this technology
- **IBM Support and Service services to provide Q&A, fixes etc. → yearly contract**

# IBM zEnterprise System and SAP

*Ability to integrate a complex multi-platform business process into single management domain with comprehensive platform management*



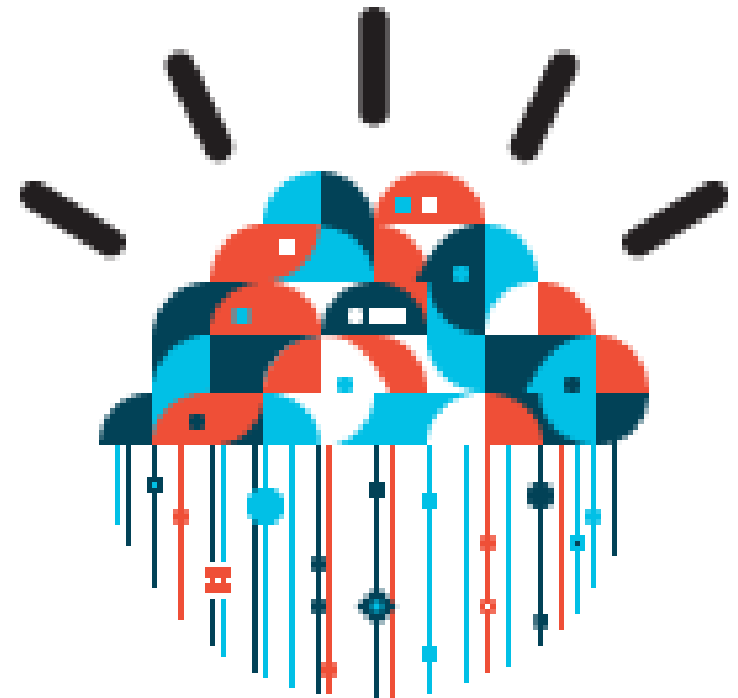
**zEnterprise BladeCenter® Extension (zBX) not required – external application servers also supported**



# An ideal solution to enable a private enterprise cloud for SAP applications

**zEnterprise brings together the benefits of enterprise computing and cloud computing in a single system**

- Enable clients to address the pain and cost of explosive growth in the number of SAP systems
- Provide an enterprise computing foundation with the scale, security, and resiliency required for delivery of critical SAP services
- Provide a centrally managed set of resources supporting a single integrated system for rapid and efficient provisioning of SAP services
- Leverage cloud computing efficiency and the flexibility of fully virtualized resources to reduce payback period and increases ROI of your SAP infrastructure investment



# Thanks!



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- **Jim Elliott – Consulting Sales Specialist – System z; zChampion**  
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