PureSystems

IBM

Dejan Podgoršek
IBM IDR SEE Mgr

Dan financijskih rješenja 2013.

7. ožujka 2013. DoubleTree by Hilton Zagreb

predavanje

predavac

The world is more dynamic than ever placing greater demands on IT systems.

Increased expectations

52% CAGR growth in self-service channels

Increased demands
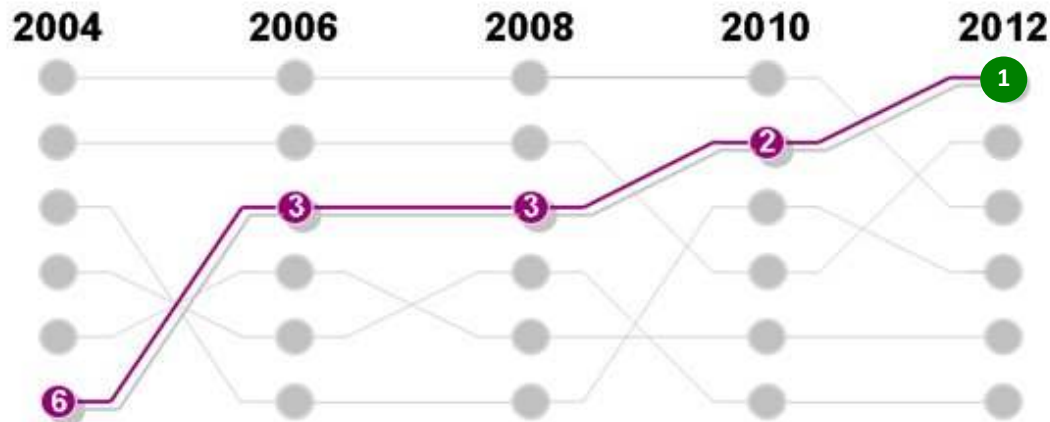
10x growth in digital data from 2007 to 2011.

Increased competition

2/10 of the world's largest companies in 2000 remain on that list today.

54% of surveyed enterprise IT budgets in 2010 were spent on ongoing operations and maintenance costs.*

Technology is the leading force for impacting business

2004   2006   2008   2010   2012

Factors impacting organizations:

1. Technology factors
2. People skills
3. Market factors
4. Macro-economic factors
5. Regulatory concerns
6. Globalization

Source: IBM CEO Study 2012

Speed Value

90%
view cloud as critical to their plans

Extended Reach

1Billion
Smartphones and 1.2 billion mobile employees by 2014

Responsiveness

20B+
Intelligent business assets

New Insights

2.7ZB
of digital content in 2012, up 50% from 2011

Clients struggle to overcome barriers of time, cost and risk

Typical IT Project Time and Budget

Phase	Time (days)	Budget
Specify/design	73 - 96	14% - 16%
Procure	57 - 112	19% - 21%
Implement	74 – 93	12%
Configure/test	74 – 80	10% - 11%
Cluster & HA	66 – 104	11% - 12%
Backup	44 – 108	10%
Tune	89 – 98	9% - 10%
Management	67 – 110	9 – 10%

34% of new IT projects (US) **deploy late**

Top Causes of Project Delays

Hardware

Troubleshooting and tuning production environment

Integration, configuration and testing of the infrastructure — 45%

Installation, cabling and network access for the environment — 29%

Software

Integration, configuration and testing of applications — 41%

Integration, configuration and testing of middleware — 35%

Configuration, build and deployment of applications — 34%

From a commissioned study conducted by Forrester Consulting on behalf of IBM

Only 1 in 5 can allocate more than half their IT budget to innovation
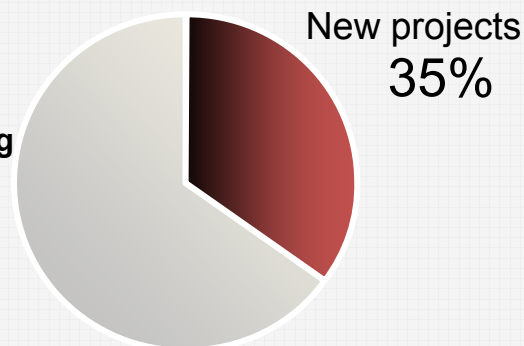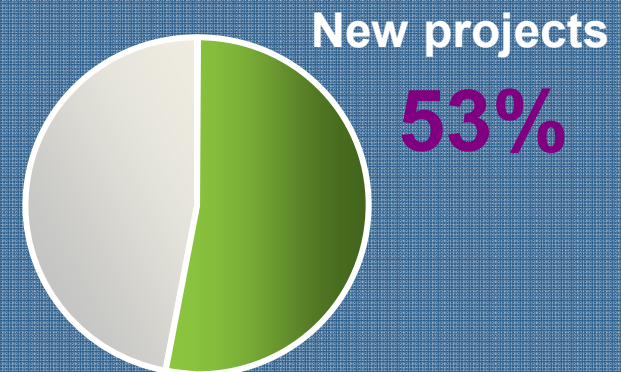
Least efficient data centers

Use of new technology:

43% first and fast technology adoption
1% move virtual machines to meet desired outcomes
21% use storage virtualization
3% use a storage service catalog (tiered storage)

Results:

New projects
35%

Maintaining existing infrastructure

65%

Most efficient data centers

Use of new technology:

86% first and fast technology adoption
58% move virtual machines to meet desired outcomes
93% use storage virtualization
87% use a storage service catalog (tiered storage)

Results:

New projects

53%

Maintaining existing infrastructure
47%

Source: 2012 IBM Data Center Study: www.ibm.com/data-center/study (http://www.ibm.com/data-center/study)

In the Cloud everything moves faster at lower cost…

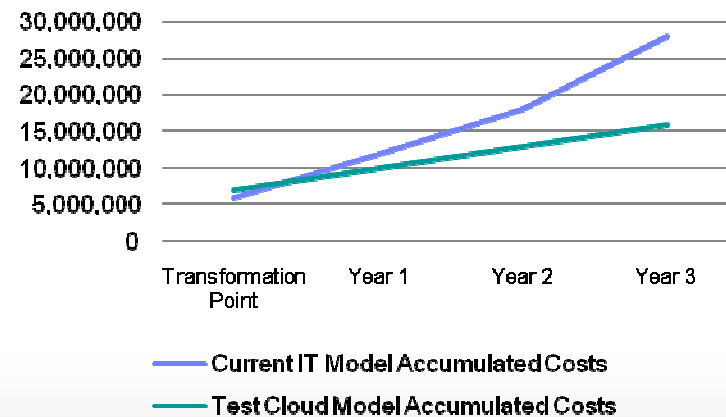| Value delivered	From traditional	To cloud
Design and release applications	Months	Weeks/Days
Test provisioning	Weeks	20 minutes
Change management	Months	Days or hours
Install database	1 day	12 minutes
Install of operating system	1 day	30-60 minutes
Service provisioning	Weeks/Days	Hours/Minutes

ROI analysis example – *Banking*

Payback Period (months)	*4.85*
Total Initial Investment for Test Cloud	$1,313,985.33
Net Present Value (NPV)	*$6,172,325.64*
Estimated ROI over 3 years	469.74%
Estimated avg. annual ROI	156.58%

Year 1 Savings by Category

Service Management driven sales

- Testing Productivity
- Provisioning Cost
- Sys. Admin Cost
- Software
- Hardware
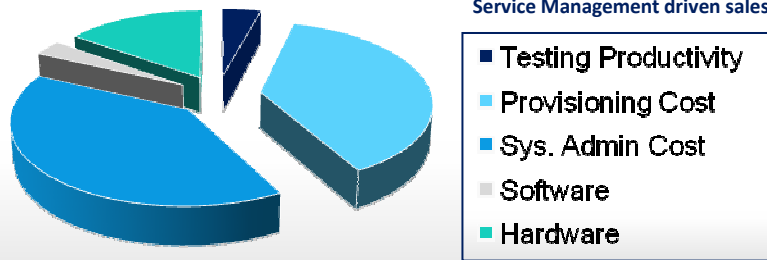
Cumulative Cost Comparison – With and without Cloud

- Current IT Model Accumulated Costs
- Test Cloud Model Accumulated Costs

* Source: IBM Cloud computing Paypack report 2009

What if a you could …

… **get up and running in hours**, *cutting months off deployment time of new application projects*

> That's
> **Agility**

… *deploy* **twice as many applications per square foot** *of data center space*

> That's
> **Efficiency**

… **free up time** *from procuring, supporting, testing & deploying assets*

> That's
> **Simplicity**

… **lower risk and costs** *with automated provisioning and seamless scalability with security and resiliency*

> That's
> **Control**

New announcements for the PureSystems family that change the economics of IT and accelerate time to value

PureFlex

Infrastructure

Delivering Infrastructure Services

PureApplication

Application Platform

Delivering Platform Services

PureData

New

Data Platform

Delivering Data Services

IBM PureFlex System: Integrated Infrastructure, built for cloud

Flexibility to run your choice of applications and middleware

Expert integrated:

- Flexible infrastructure
  - Compute (x86 & POWER)
  - Storage
  - Networking
  - Advanced **Flex System** technology
- Unified infrastructure management
- Built-in expertise - Infrastructure patterns

PureFlex

Infrastructure
_____

Delivering Infrastructure Services

200% increase
in performance of critical applications

66% faster
setup time

Days to minutes
for virtual machine deployment time

72% lower
systems costs over 3 years

IBM PureApplication System: A platform system built-for-cloud that simplifies deployment and management of applications

PureApplication

Expert integrated:

- Platform for applications
  - Application server
  - Database services
  - Compute
  - Storage
  - Networking
- Built-in expertise – Infrastructure, platform, and application patterns
- Platform management

Application Platform

Delivering Platform Services

Up and running in **less than 4 hours***

Deploy and automatically scale applications **in minutes****

Concurrent management of 100s of VM's on a single system*****

* Based upon testing of the IBM PureApplication System W1500-96 with time measured from powering on the system to when it is ready to support application deployments
** Based upon testing of the IBM PureApplication System W1500-96 with time and quantity measured for deployed applications within encompassed VMs.
*** Based upon testing of the IBM PureApplication System W1500-96 (1.5 TB Ram, 6.4 TB SSD, 48 TB HDD, 2.6GHz Sandy Bridge Processor) with time and quantity measured for deployed applications within encompassed VMs.

IBM PureData System: Optimized exclusively for data services

Optimized for data services:

- Transactional
- Analytics

Expert integrated:

- Data platform
- Infrastructure
- Unified platform management
- Built-in expertise

PureData

New

Data Platform

Delivering Data Services

Workload optimized performance

Fast time-to-value

Integrated management

Single point of support

Automated updates for faster maintenance

IBM PureData System

Meeting Big Data Challenges – Fast and Easy!

PureData
System for Transactions

For apps like E-commerce…

Database cluster services optimized for transactional throughput and scalability

PureData
System for Analytics

For apps like Customer Analysis…

Data warehouse services optimized for high-speed, peta-scale analytics and simplicity

Next generation Netezza appliance

PureData
System for Operational Analytics

For apps like Real-time Fraud Detection…

Operational data warehouse services optimized to balance high performance analytics and real-time operational throughput

Flexibility and Simplicity in acquisition

A continuum of value from fully configurable to integrated expertise

Flex System Building Blocks

Chassis
14 half-wide bays
for nodes

Compute Nodes
Power 2S/4S
x86 2S/4S
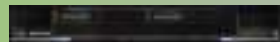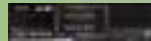
Storage Node
V7000
Expansion inside or
outside chassis
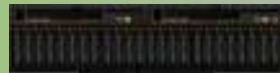
**Management
Appliance**
Optional

Networking
10/40GbE, FCoE, IB
8/16Gb FC

Expansion
PCIe
Storage

IBM PureFlex System

Pre-configured, pre-integrated
infrastructure systems with
compute, storage, networking,
physical and virtual management,
and entry cloud management with
integrated expertise.

IBM PureApp&Data Systems

Pre-configured, pre-integrated
platform systems with middleware
designed for transactional web
applications and enabled for cloud
with **integrated expertise.**

IBM PureSystems Centre

http://www-01.ibm.com/software/brandcatalog/puresystems/centre/

http://www.ibm.com/developerworks/expert/try.html
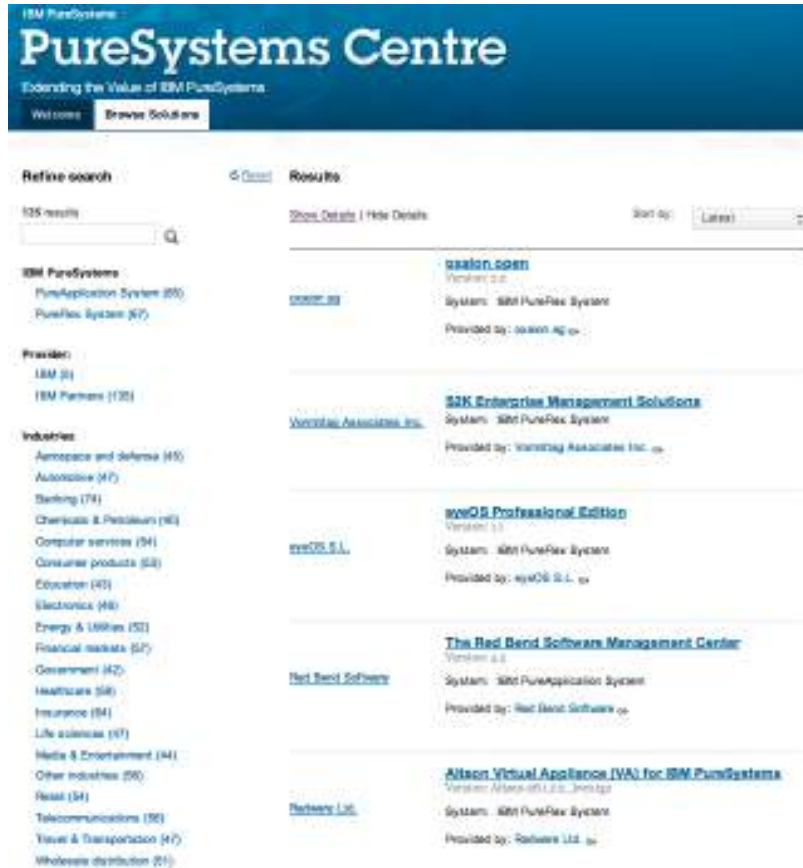
- Optimized solutions from 100+ leading ISV partners

- Search by solution area, industry or system.

- Gain access to ISV application patterns for trial and production.

- Certified through

Premier Business Partner IBM

Ready For PureSystems

- All of your existing AIX, IBM i, Linux and Windows applications will run on PureSystems
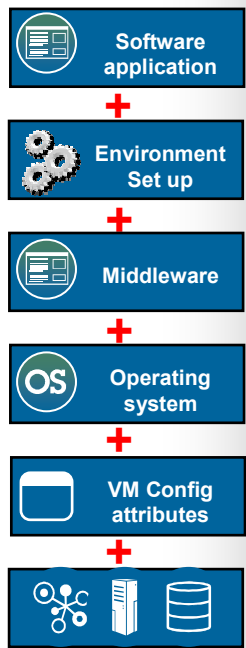
IBM PureSystems Centre

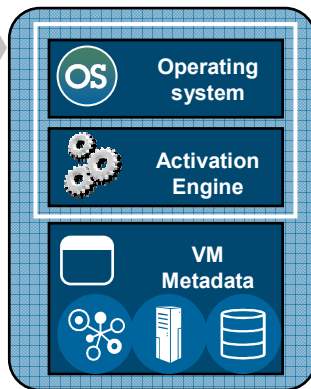# How to enable applications for IBM PureFlex System
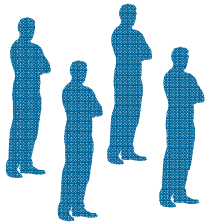
SW Architect

IBM Virtual Appliance Factory
with Image Construction and Composition Tool
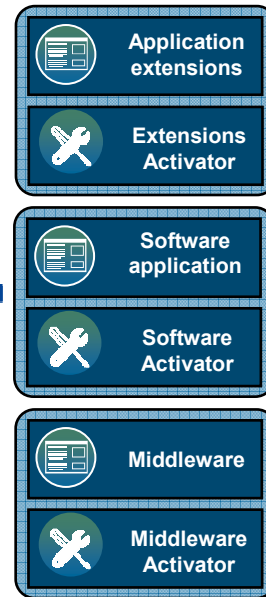### *Capture once, deploy with consistency and ease*
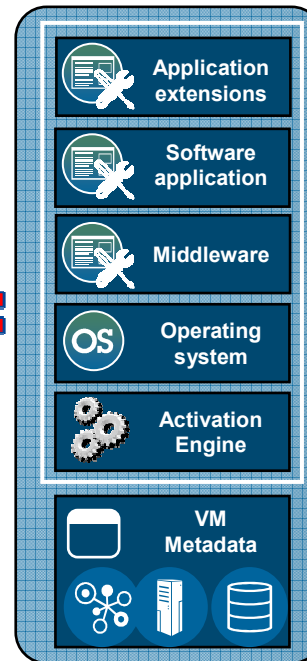
Traditional Workload Deployment Components

- Software application
- +
- Environment Set up
- +
- Middleware
- +
- Operating system
- +
- VM Config attributes
- +

Build Base Virtual Image

- Operating system
- Activation Engine
- VM Metadata

+

Add bundles that contain product software and activators

- Application extensions
- Extensions Activator

- Software application
- Software Activator

- Middleware
- Middleware Activator

=

Capture

- Application extensions
- Software application
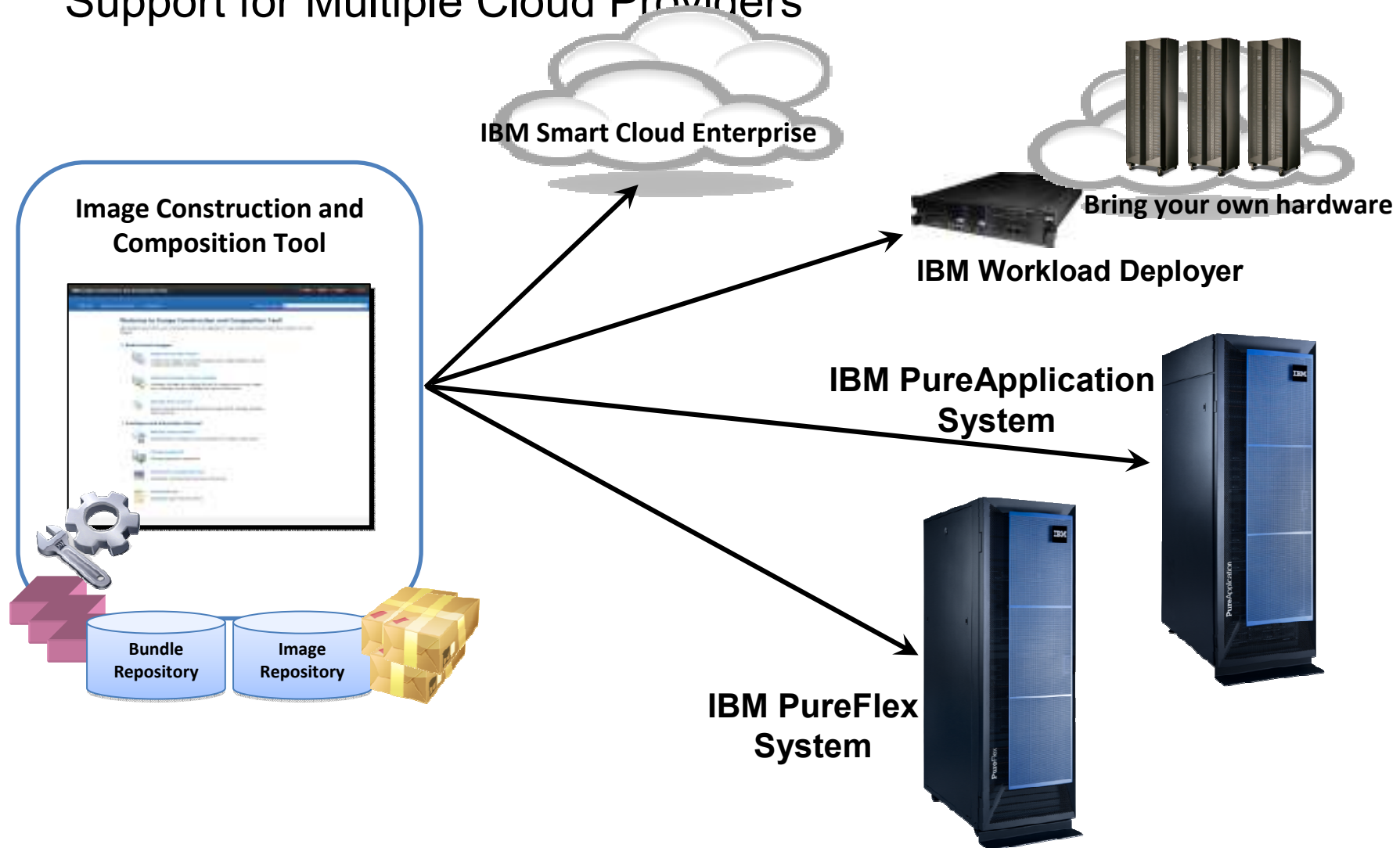- Middleware
- Operating system
- Activation Engine
- VM Metadata

Store in Image Repository, ready to be deployed using VMControl, Flex System Manager, IBM SmartCloud Entry, etc

Support for Multiple Cloud Providers

IBM Smart Cloud Enterprise

Image Construction and Composition Tool

Bring your own hardware

IBM Workload Deployer

IBM PureApplication System

Bundle Repository

Image Repository

IBM PureFlex System

Virtual Application Pattern

IWD in work

A Virtual Application represents a collection of application components, behavioral policies and their relationships
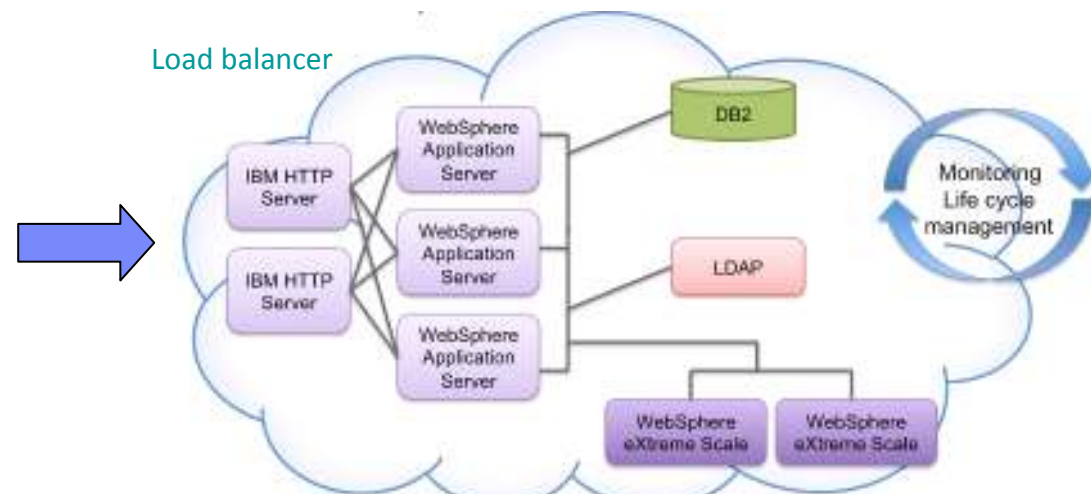
Core components of the pattern include web applications, databases, queues, connections to existing resources, business process models, batch jobs, mediations, etc.

Core policies of the pattern include high availability, SLAs, security, multi-tenancy, isolation, etc.

Virtual Application Pattern
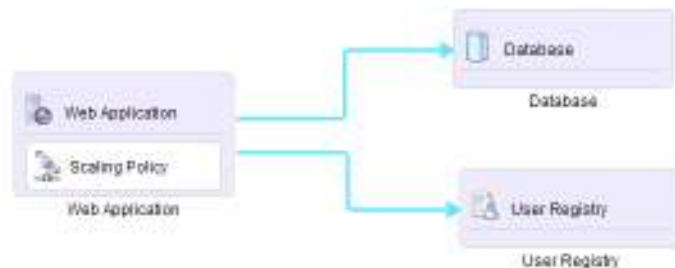
Virtual Application Instance

Load balancer

Initial instance = 3
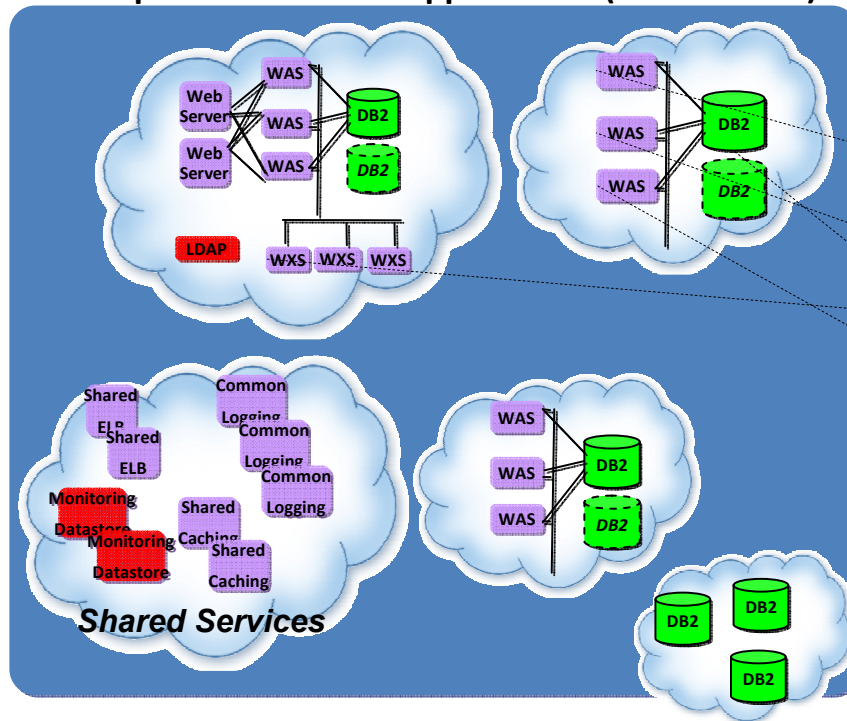
WAS cluster configured with session replication

Consolidate through patterns

Virtual application patterns allow more dense:

packing of applications in server space
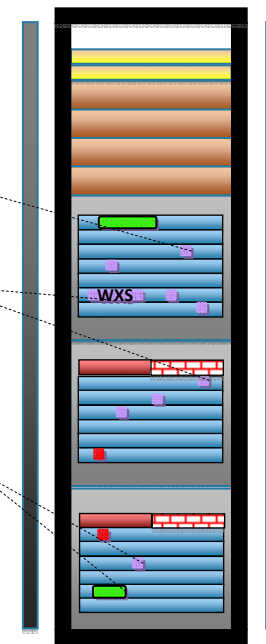
Due to shared services & smart placement algorithms

allocation of applications to admins

Due to improved efficiency in management

Multiple Consolidated Applications (Virtual View)

Multiple Consolidated Applications (Physical View)

Typical IT Project Time and Budget

Phase	Time (days)	Budget
Specify/design	73 - 96	14% - 16%
Procure	57 - 112	19% - 21%
Implement	74 – 93	12%
Configure/test	74 – 80	10% - 11%
Cluster & HA	66 – 104	11% - 12%
Backup	44 – 108	10%
Tune	89 – 98	9% - 10%
Management	67 – 110	9 – 10%

PureFlex

Infrastructure

Delivering Infrastructure Services

PureApplication

Application Platform

Delivering Platform Services

PureData

New

Data Platform

Delivering Data Services

Value delivered

	To cloud
Design and release applications	Weeks/Days
Test provisioning	20 minutes
Change management	Days or hours
Install database	12 minutes
Install of operating system	30-60 minutes
Service provisioning	Hours/Minutes

From a commissioned study conducted by Forrester Consulting on behalf of IBM

The perfect storm is forming

90% of business are expected to adopt or deploy cloud model in next 3 years

Innovate without boundaries

http://www.ibm.com/cloud-computing

IBM has invested in PureSystems innovation