PureSystems

IBM

PureApplication

System, Service, Software

Building a Cloud Infrastructure on Premise

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Agenda

- PureApplication Systems Introduction
- Hybrid Cloud with PureApplication System & Service
- IBM Cloud Strategy and PureApplication

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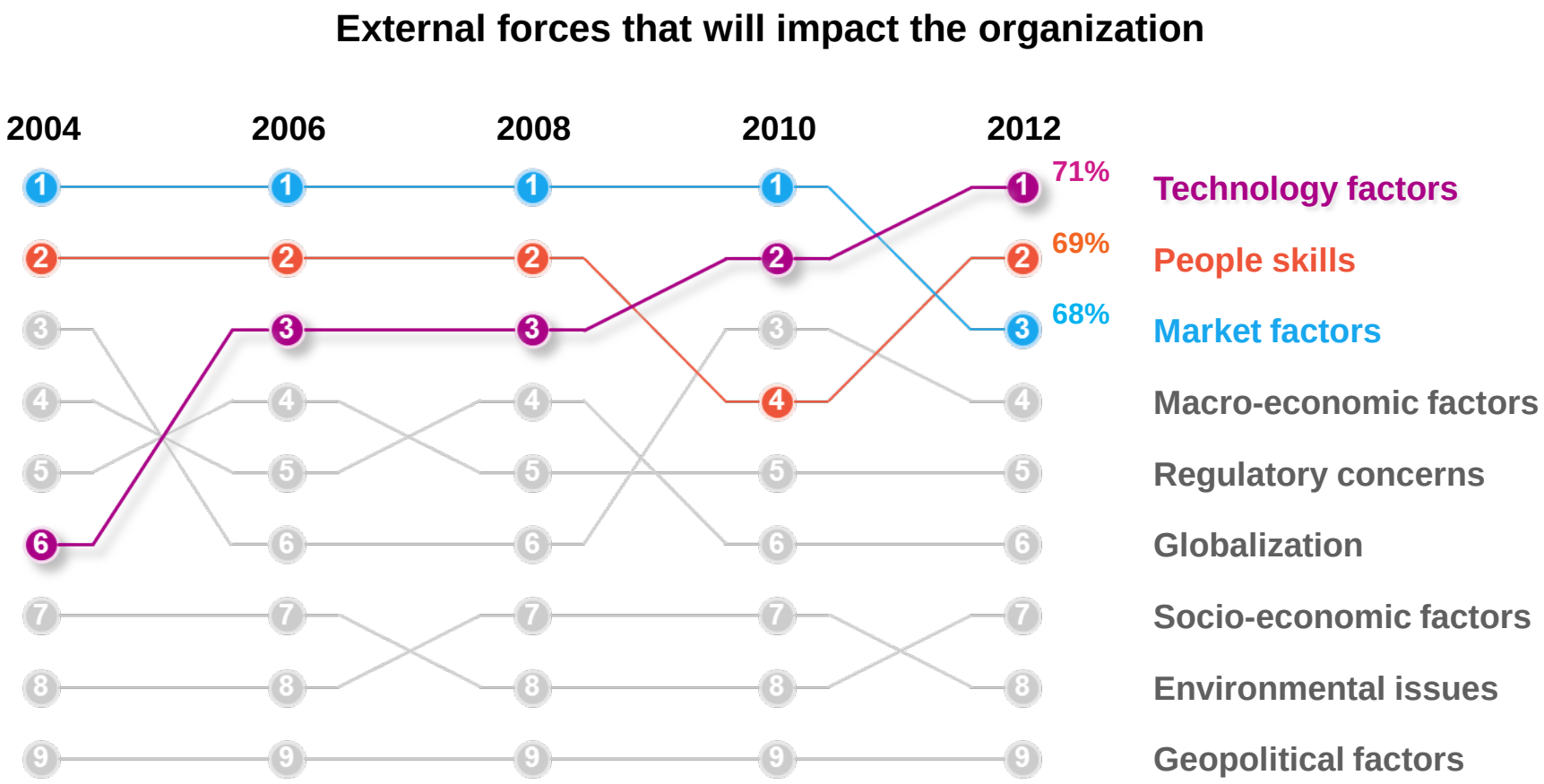
CEOs identify technology as the most important external force impacting their organizations



Source: Q1 "What are the most important external forces that will impact your organization over the next 3 to 5 years?"

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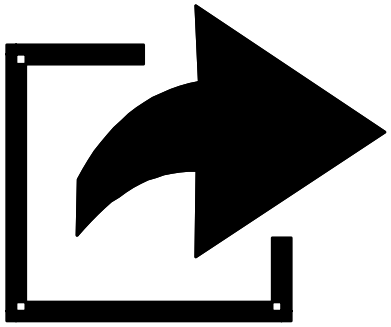
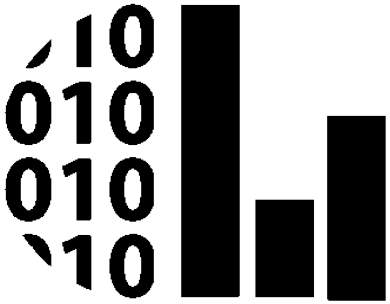
Three Market Shifts Are Driving IT Change

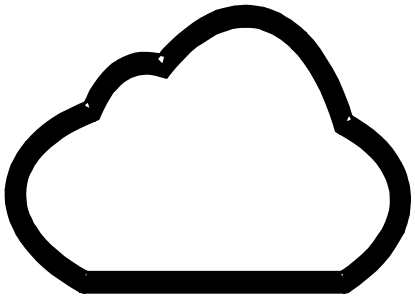
Application cycle time is shrinking



Social, Mobile, Analytics and Big Data applications emerge as required



Cloud is the new delivery model



Increasing the need for

Speed

- Very short cycle times
- Rapid iteration
- Real-time access
- Faster insight
- Immediate context
- Rapid scaling for unpredictable demand and large volume

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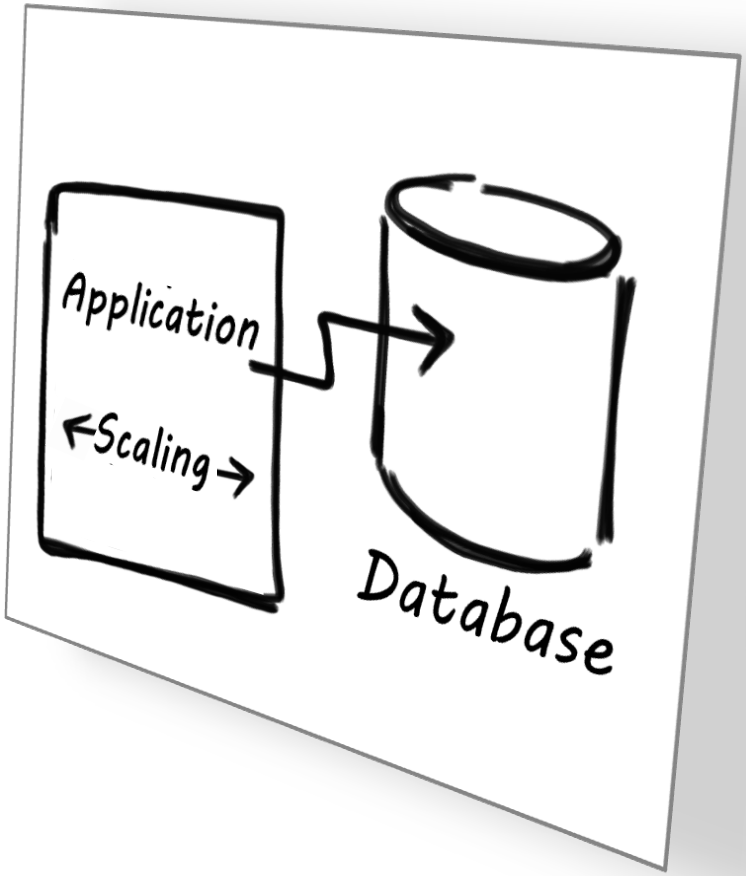
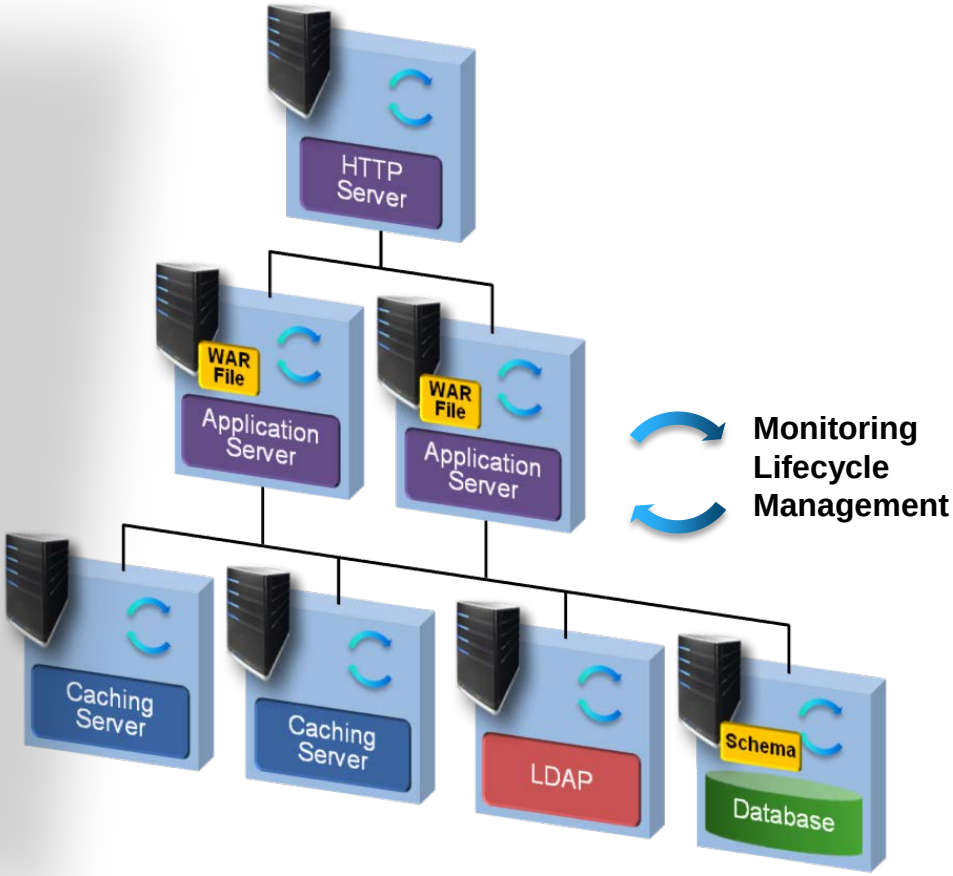
What the business wants…



What's required…



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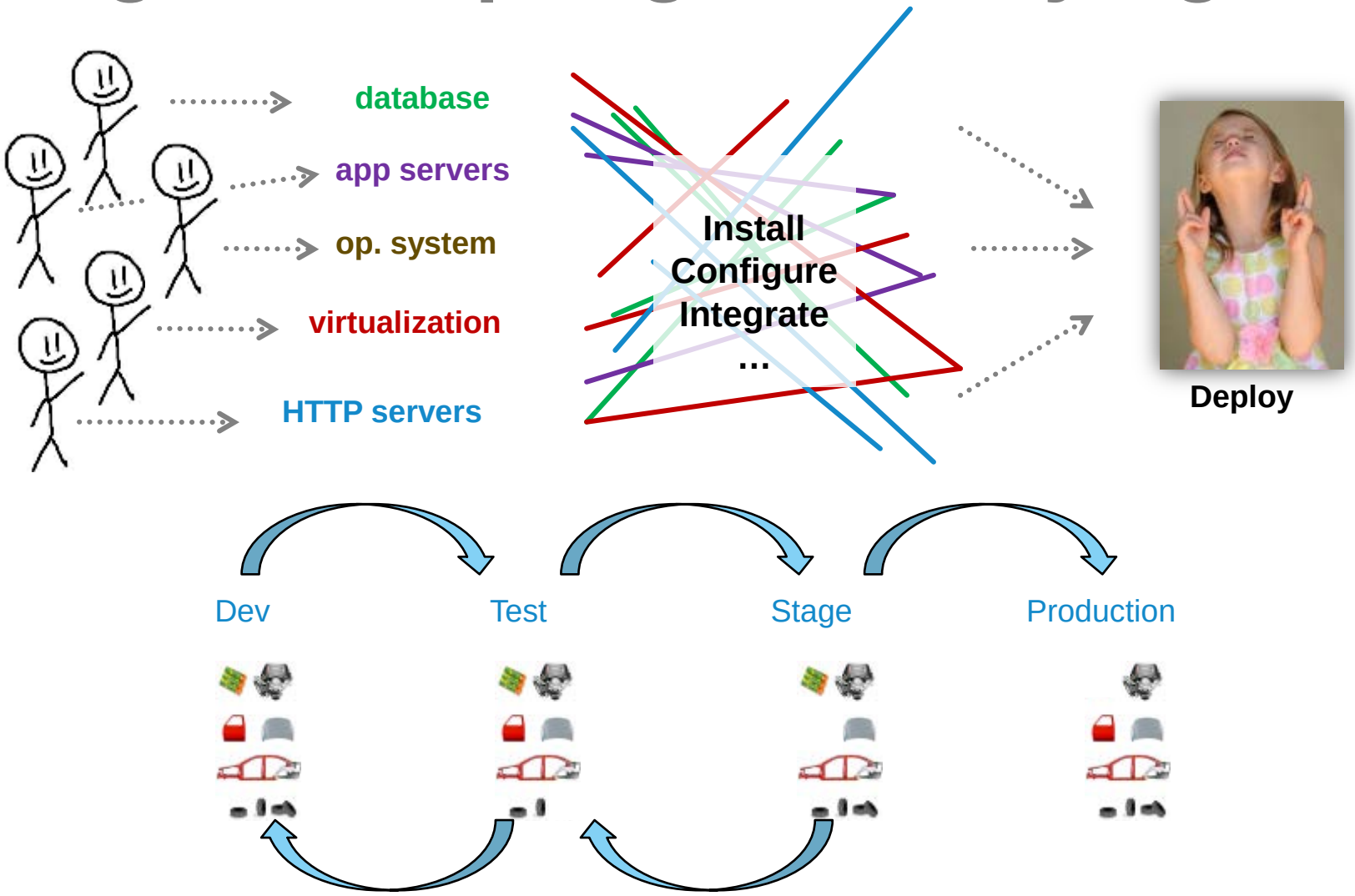
Images, Scripting and Praying



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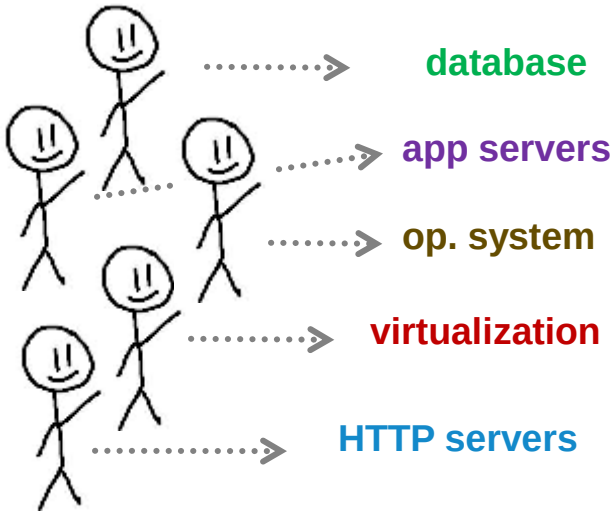
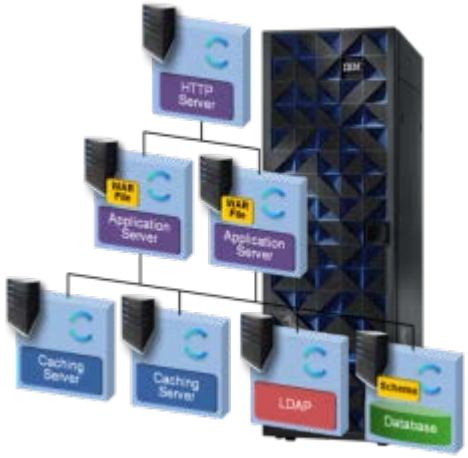
Repeatable deployments





Deploy

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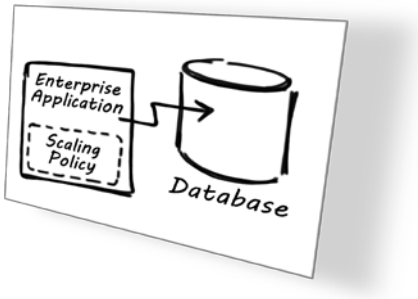
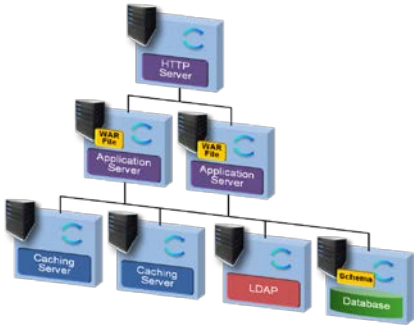
Driving built-in expertise with IBM's patterns of expertise

What the business wants…



What's required…



What a pattern automates…

Patterns include:

- Application topology
- Pre-integrated across components
- Pre-configured & tuned
- Pre-configured monitoring & security
- Pre-installed on an operating system
- Lifecycle Management

- Expertise
- Repeatability
- Simplicity
- Agility
- Governance
- Elasticity
- Efficiency

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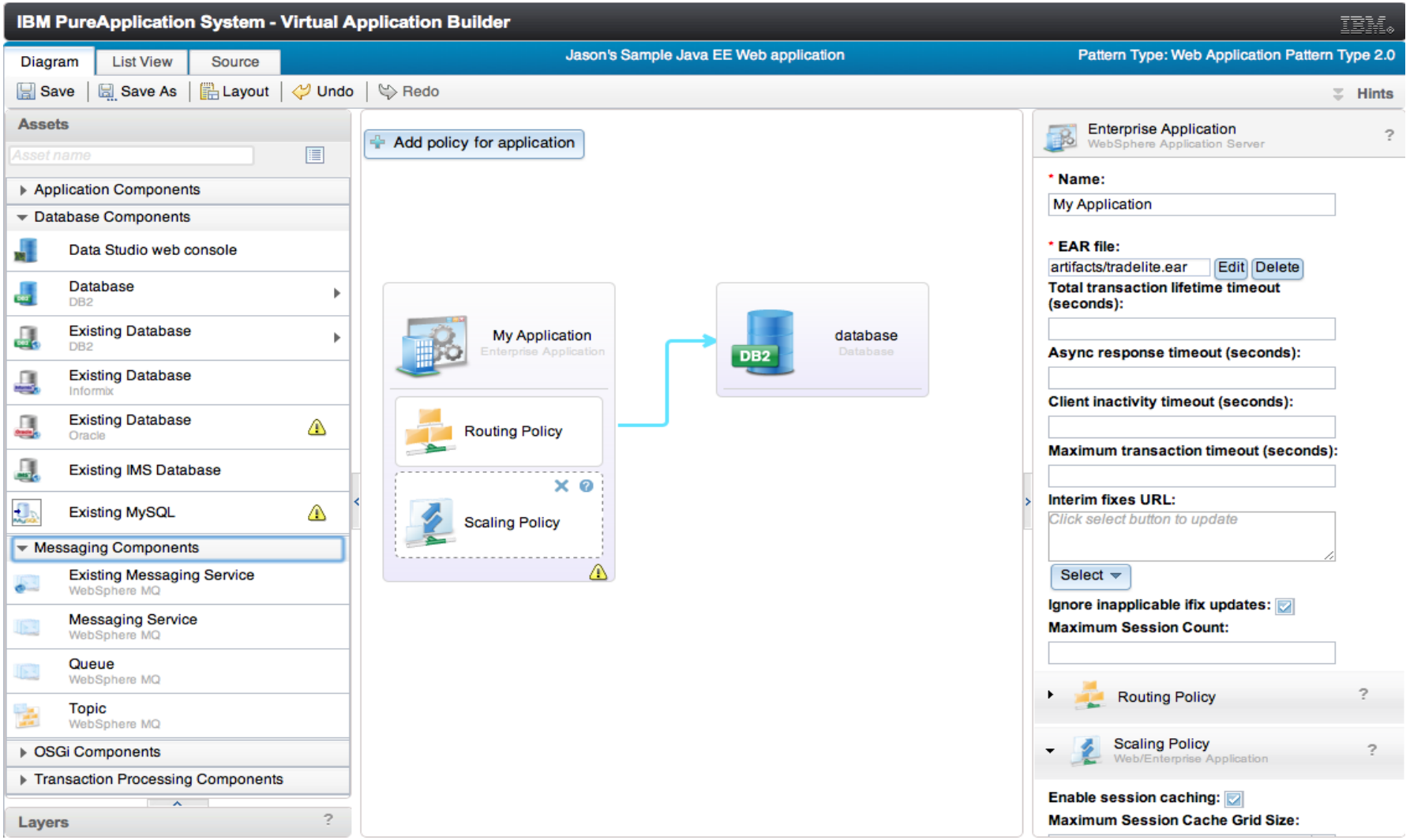
Patterns Make Deploying Scalable Web Application - Simple



Drag … Drop … Deploy

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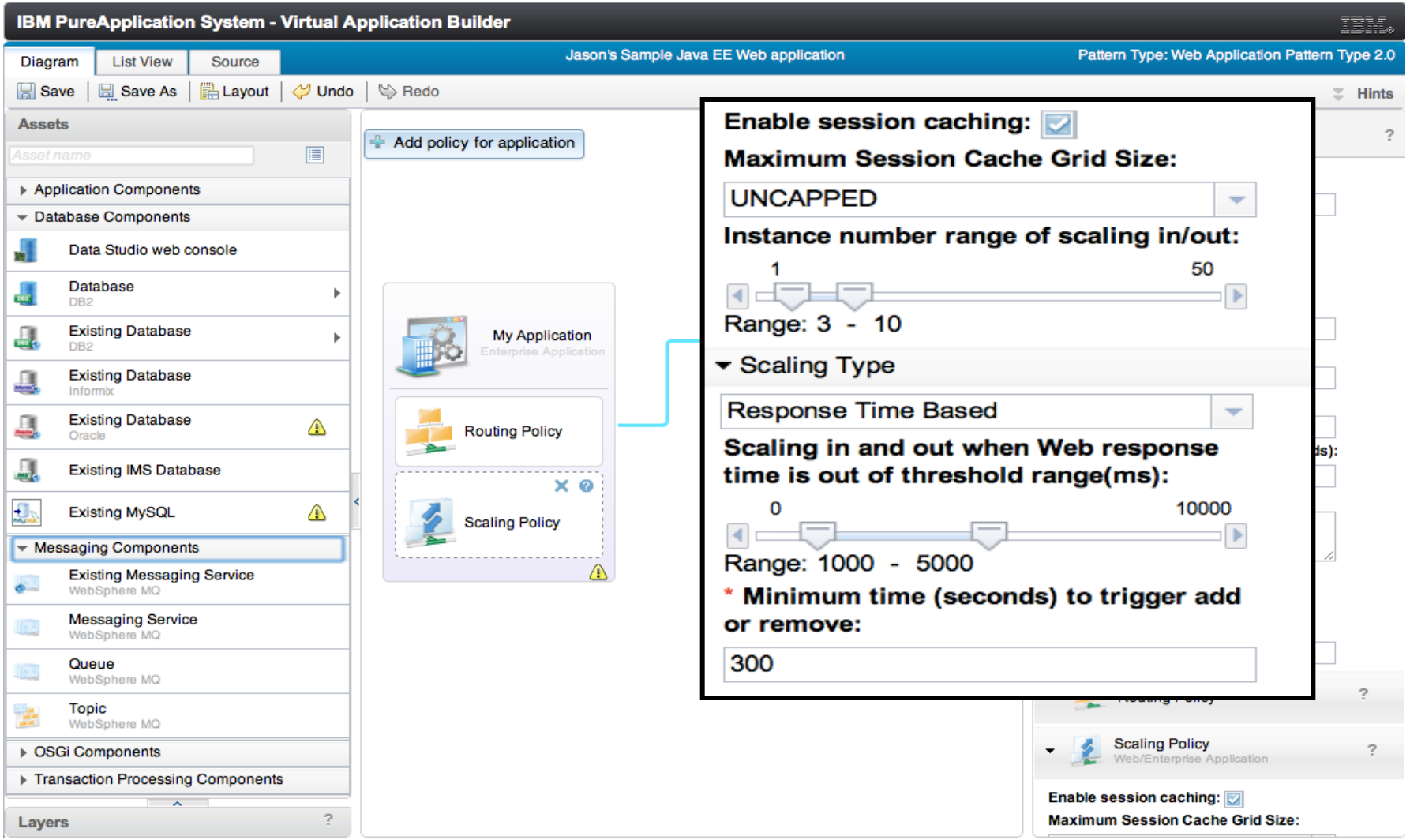
Setup Dynamic Auto-Scaling for Applications – in just few seconds



OR…. choose to write 100s of lines of proprietary code + incur CapEx for unused capacity reserved for peak loads

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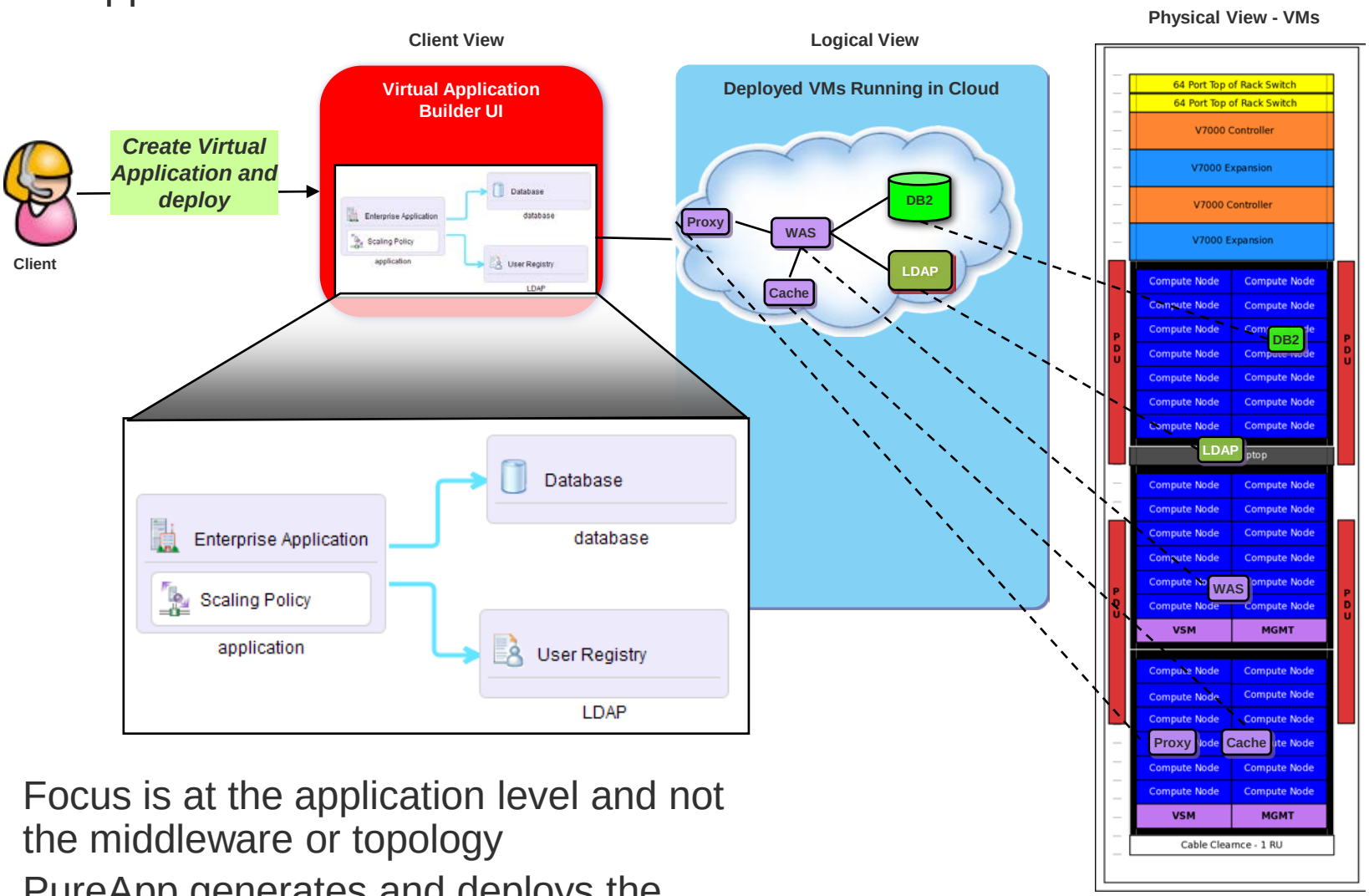
Virtual Application Views



Focus is at the application level and not the middleware or topology

PureApp generates and deploys the topology needed to run the application

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PureSystems PureApplication System Gen 2 (W2500 / W2700)

"Mini" – Intel & Power
32, 64, 96, 128 cores

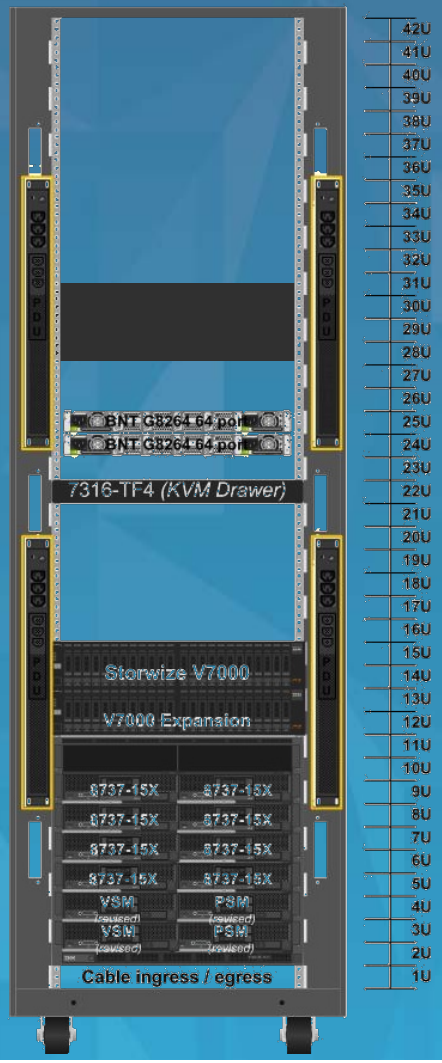
Top of Rack Switches
320 Gbps to DC

42U Rack

Storage:
- V7000
- 2.4 TB SDD
- 24 TB HDD

PDU:
- 4x30A 1ph

Compute:
- **Intel Ivy Bridge 2.6 GHz and**
- **Power 7+ 4.1 GHz**
- Memory: 16 GB / core



"Enterprise" – Intel & Power
32, 64, 96, 128, 160, 192, 224, 320, 384 cores

Top of Rack Switches
320 Gbps to DC

42U Rack

Storage:
- V7000
- 6.4 TB SDD
- 48 TB HDD

PDU:
- **4x60A 1ph or 4x60A 3ph**

Compute:
- **Intel Ivy Bridge 2.6 GHz and**
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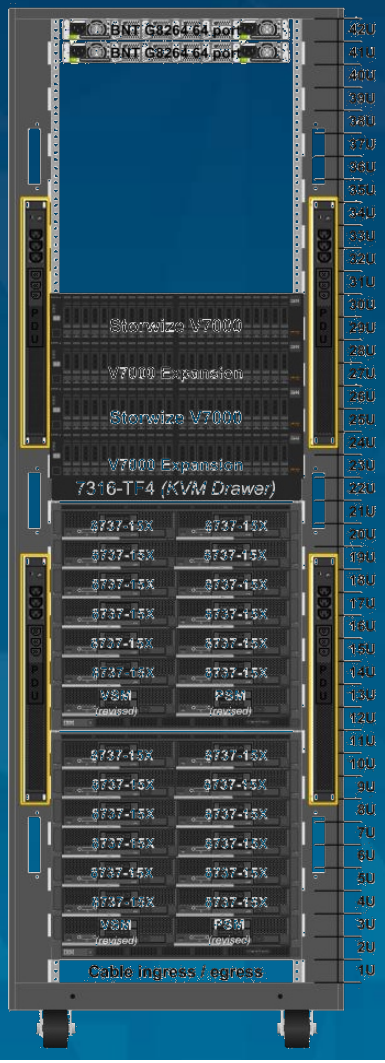
- **Memory 32 GB / core**



Blue Text = Differences from Generation 1

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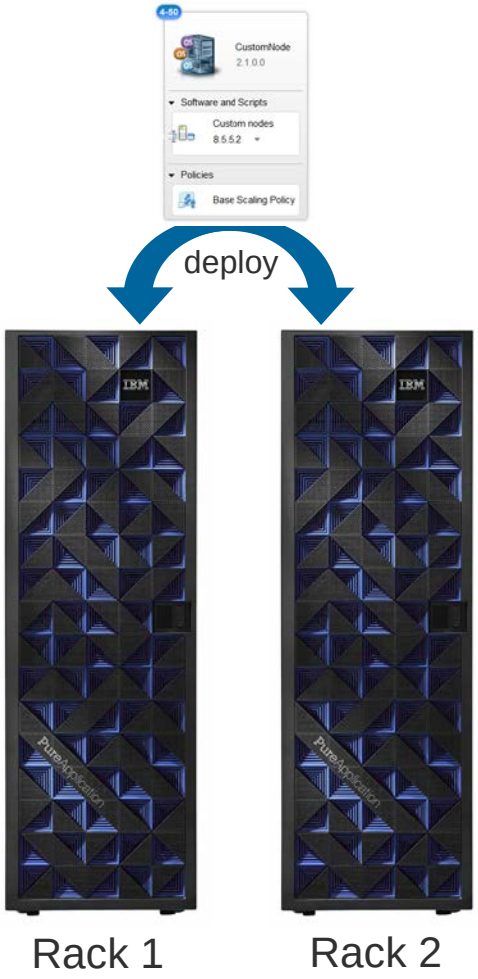
Achieve **high availability** for key applications by deploying **across multiple systems**



1. Build a pattern on any rack
2. Deploy the pattern across the racks, choosing where each image within the pattern should run
3. Consolidated view of pattern artifacts across the racks
4. A single view to monitor the status of the deployed pattern across the racks
5. Greater cost efficiency through finer grained replication on a workload by workload basis

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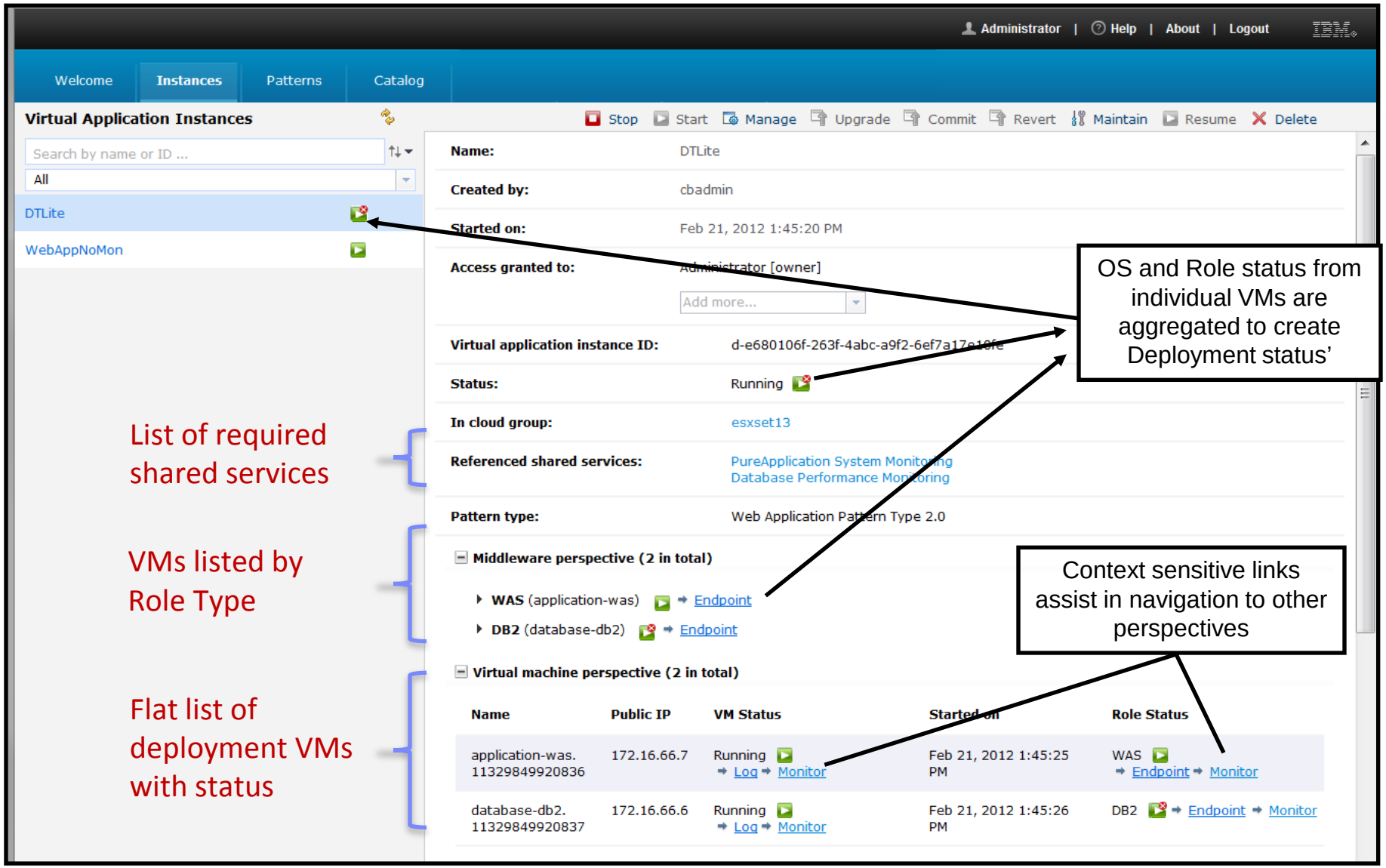
Application Instance Dashboard – Monitor links and status



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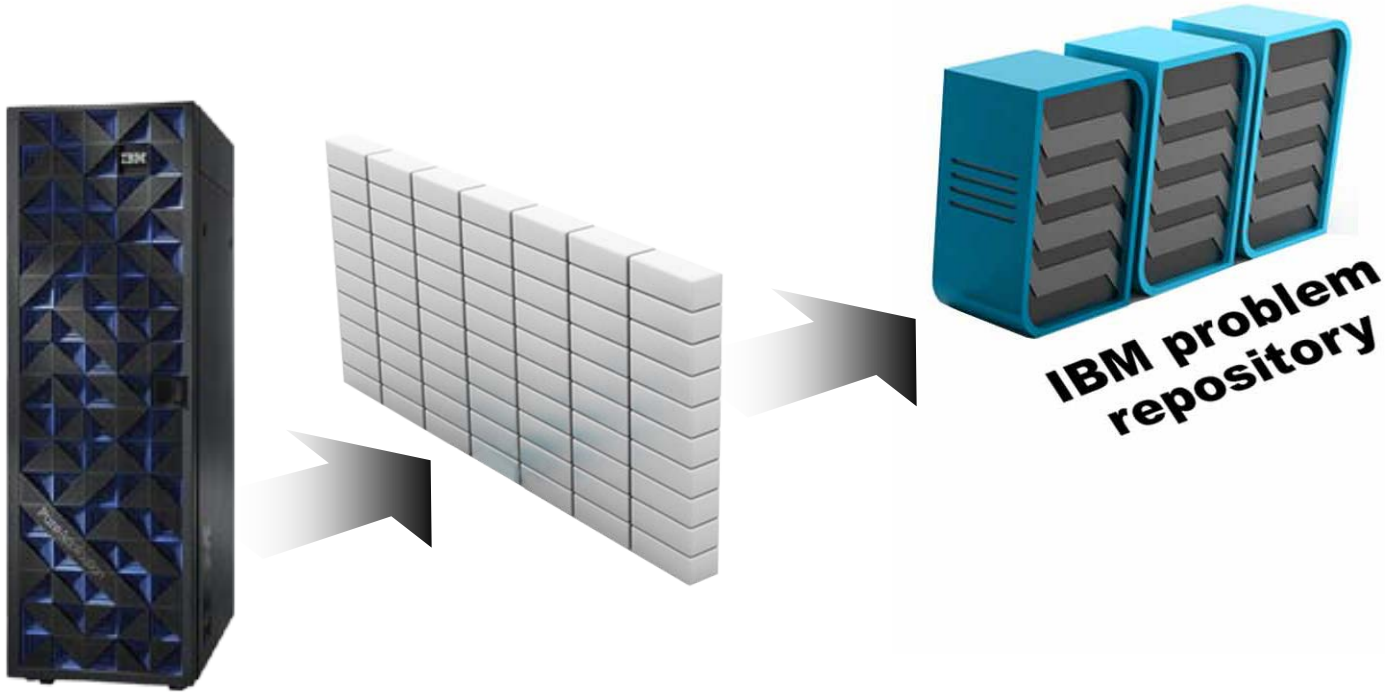
Call-home delivers **simplified system troubleshooting**

- Problem reporting
  - Automatic PMR generation based upon hardware events (compute nodes, network, storage, power & cooling)
  - Automatic log collection and upload
  - Collection of system configuration information
  - Report showing PMRs generated by call-home



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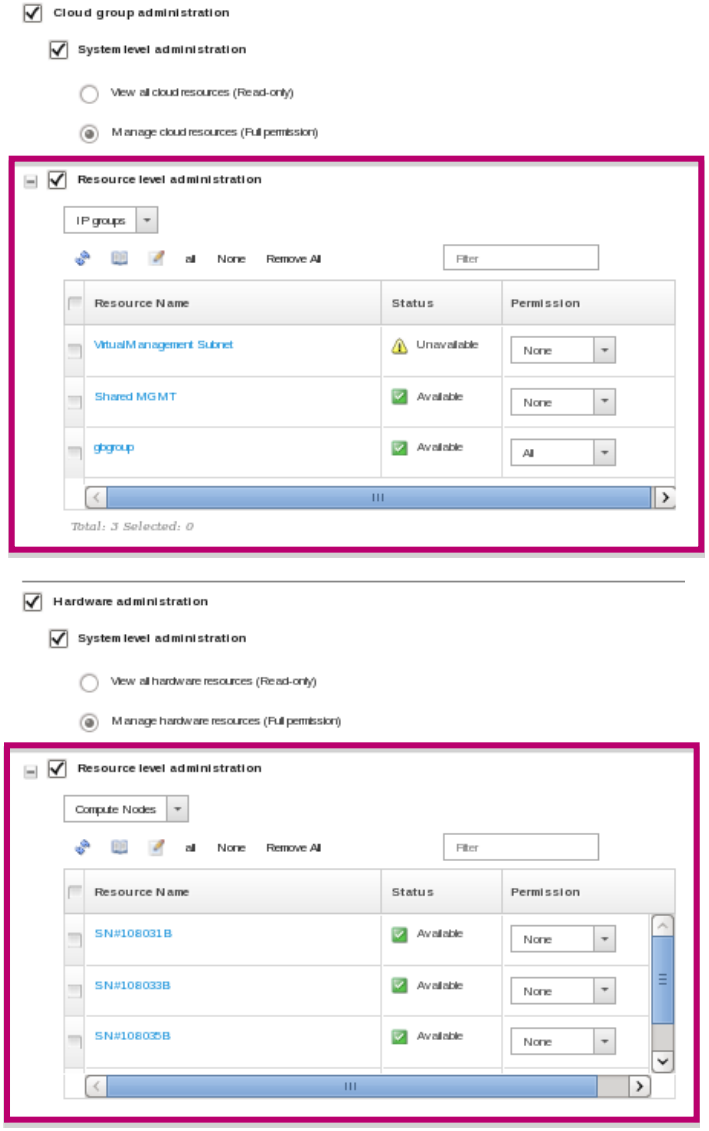
Security enhancements

- More granular access for administrating cloud and hardware resources at individual resource level
  - Security administrators can provide more granular access control for cloud and hardware resources
  - Allows limit on administrator access to only those resources that need to be managed at a particular time
  - Provides better separation of duties & responsibilities
  - Various access level (read, write, all, none) can be assigned to specific resources.

- Enhanced account policies for local user account (password length, expiration, etc.)



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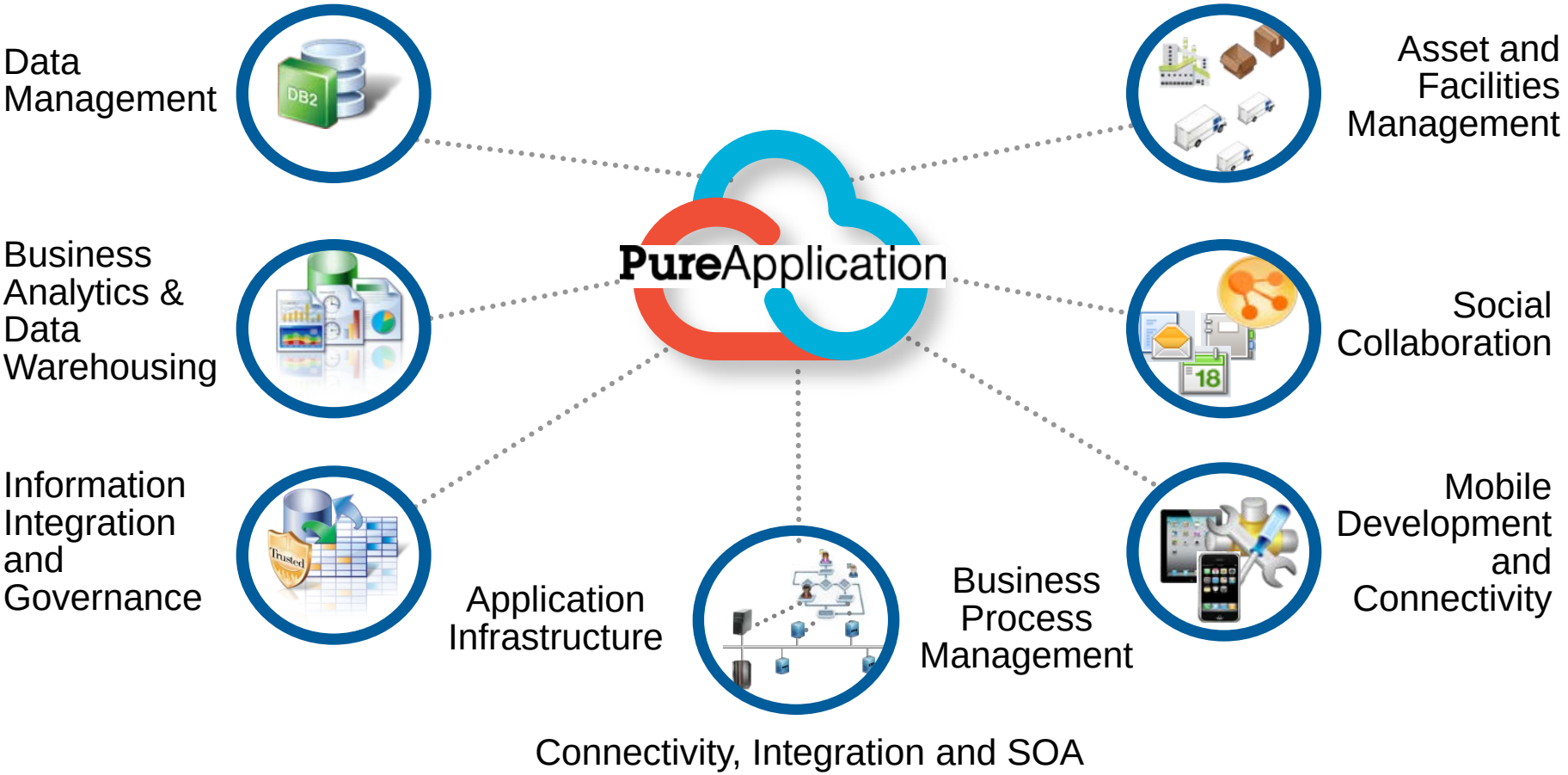
Application Deployment and Management Made Easy

More than 130 leading ISVs have optimized more than 155 applications as IBM PureApplication "Patterns of Expertise" to automate deployment, simplify management, and accelerate time to value



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We're Partnering across Key Industries to Bring Critical Applications onto PureSystems

Big Data
Data Management
Business Analytics & Data Warehousing
Information Integration & Governance

Mobile
Mobile Development and Connectivity

Social
Collaboration
Web Experience

New
- Smarter Process
- DB2 with BLU Acceleration
- Mobility

Partners

Banking
Energy & Utilities
Financial Markets
Insurance
Telecom
Government
Retail
Healthcare
Consumer Products

EcoLogic, esri, PriceLenz, SIEMENS, DASSAULT SYSTEMES, MONTRAN, NICE, Sopra group, fiserv., TEMENOS, DIASOFT, EARNIX, KANA, SAPIENS, MajescoMastek, silanis, EXIGEN insurance solutions, IDP, FIXFlyer, KINGLAND, OPENET, Red Bend Software, ALPHINAT, msi GLOBAL, amdocs, SUGARCRM, comviva, REFLEXIS, accelrys, INFOR, FIS, sube, SUNBAY, CROSSVIEW, nominum, In10s, Manhattan Associates, censof, FLASH networks, silverlake, hardis, EWELL, FUNDtech, AsiaInfo Linkage

150+ Patterns available on PureSystems Centre

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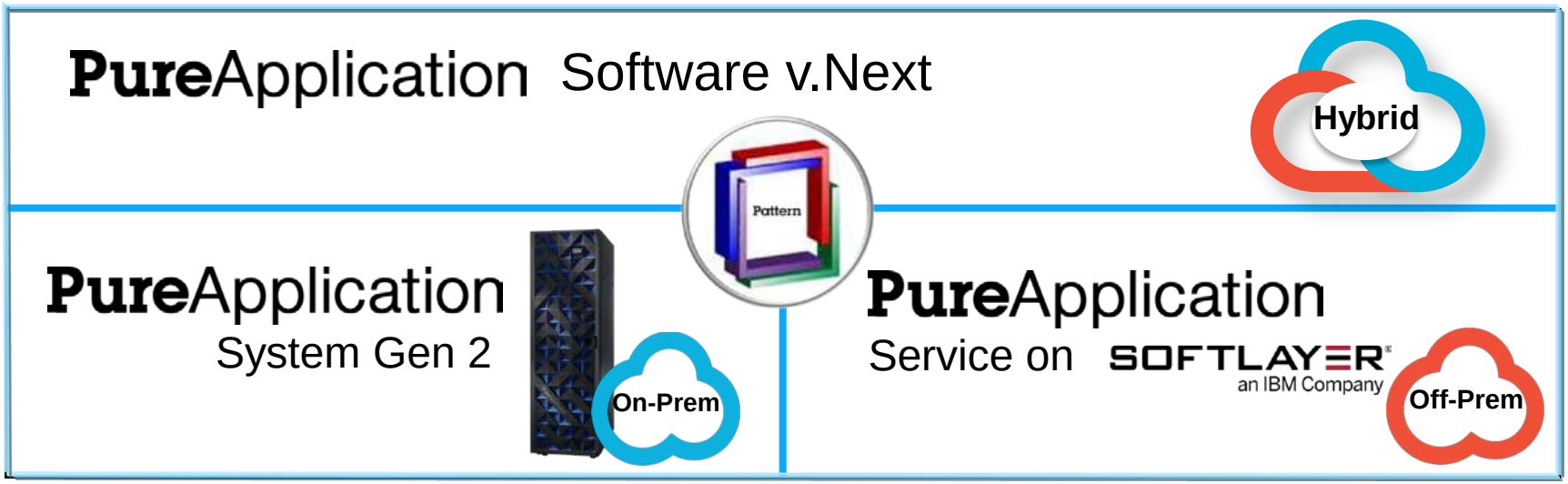
Hybrid Cloud Innovation

PureApplication

Investing in **PureApplication** capabilities **across a hybrid cloud** environment to help clients easily leverage and extend enterprise application investments



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SoftLayer at a Glance

SOFTLAYER®
an IBM Company

Global Leader		Unified architecture with common management and programming interfaces
Customers	21,000 in 140 Countries	• Robust, unified command-and-control interface • Combine bare-metal servers, public cloud instances and private cloud deployments into distributed hybrid architectures and manage from either single control pane and API • All deployed on-demand and provisioned in real time • Ideally suited to big data deployments, high I/O and latency-sensitive apps and broad spectrum of applications
Devices	100,000	
Data Centers	13	
Network PoPs	19	

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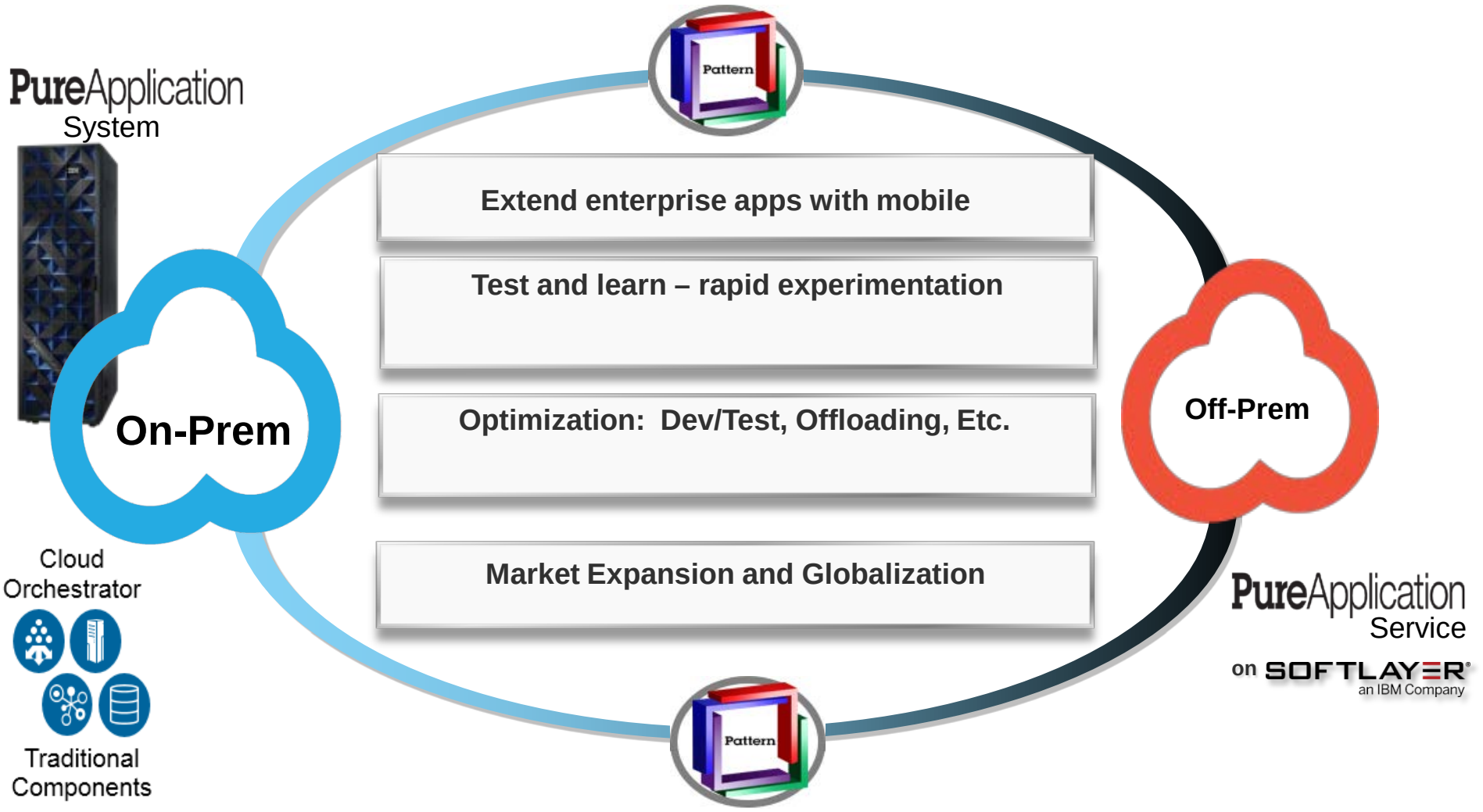
Patterns: Create Once – Deploy Anywhere



Today – seamlessly export / import with no change

Tomorrow – seamlessly manage

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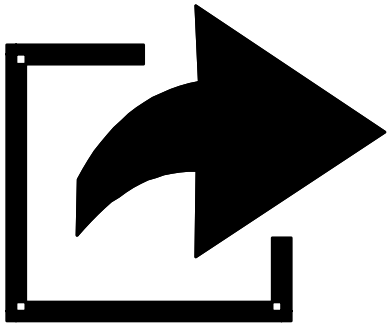
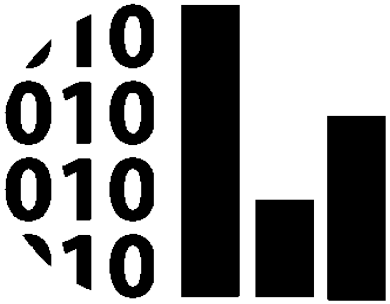
Three Market Shifts Are Driving IT Change

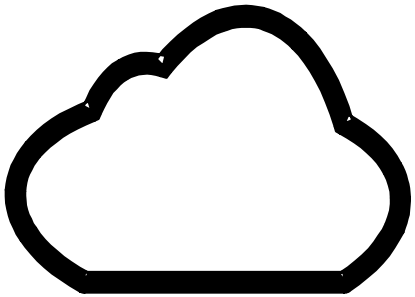
Application cycle time is shrinking



Social, Mobile, Analytics and Big Data applications emerge as required



Cloud is the new delivery model



Increasing the need for

Speed

- Very short cycle times
- Rapid iteration
- Real-time access
- Faster insight
- Immediate context
- Rapid scaling for unpredictable demand and large volume

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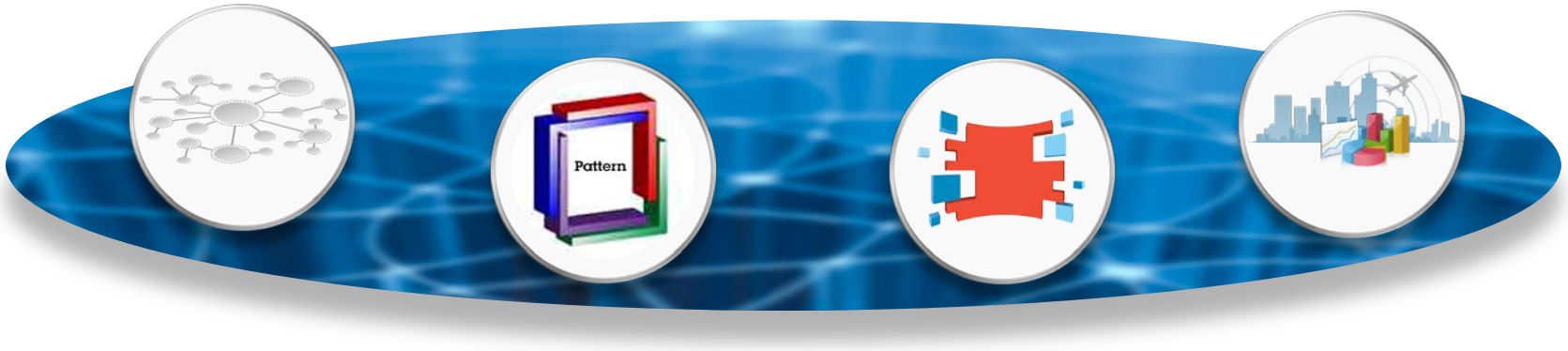
A True Composable Business Requires Multiple Services



Infrastructure Services | **Defined Patterns Services** | **Composable Services** | **Business Services**

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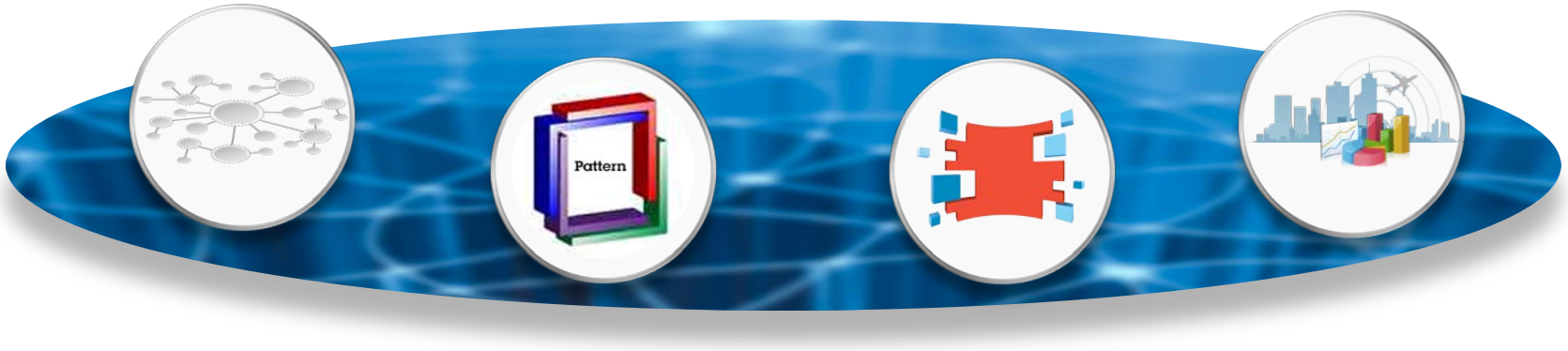
A True Composable Business Requires Multiple Services



Infrastructure Services

Defined Patterns Services

Composable Services

Business Services

SOFTLAYER®

PureApplication

BlueMix

SaaS

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The Future is a Composable Business Facilitated by Cloud

Systems of Record

- Traditional focus of Internal IT
- Highly available, scalable, and managed transactional systems
- Apps and DBs that store business records and automate standardized processes (e.g. HR, CRM)
- Less agile and extensible

On premise

Next Generation Architectures

Delivered by Hybrid Cloud

Systems of Engagement

- Complement and unite Systems of Record
- Typically add context via social and mobile components
- Adaptable to changing requirements
- Offer an engaging user experience
- Development process is usually agile and iterative with a quick time to value

Data & Transaction Integrity

Smarter Devices & Assets

On or off Premise (may be public)

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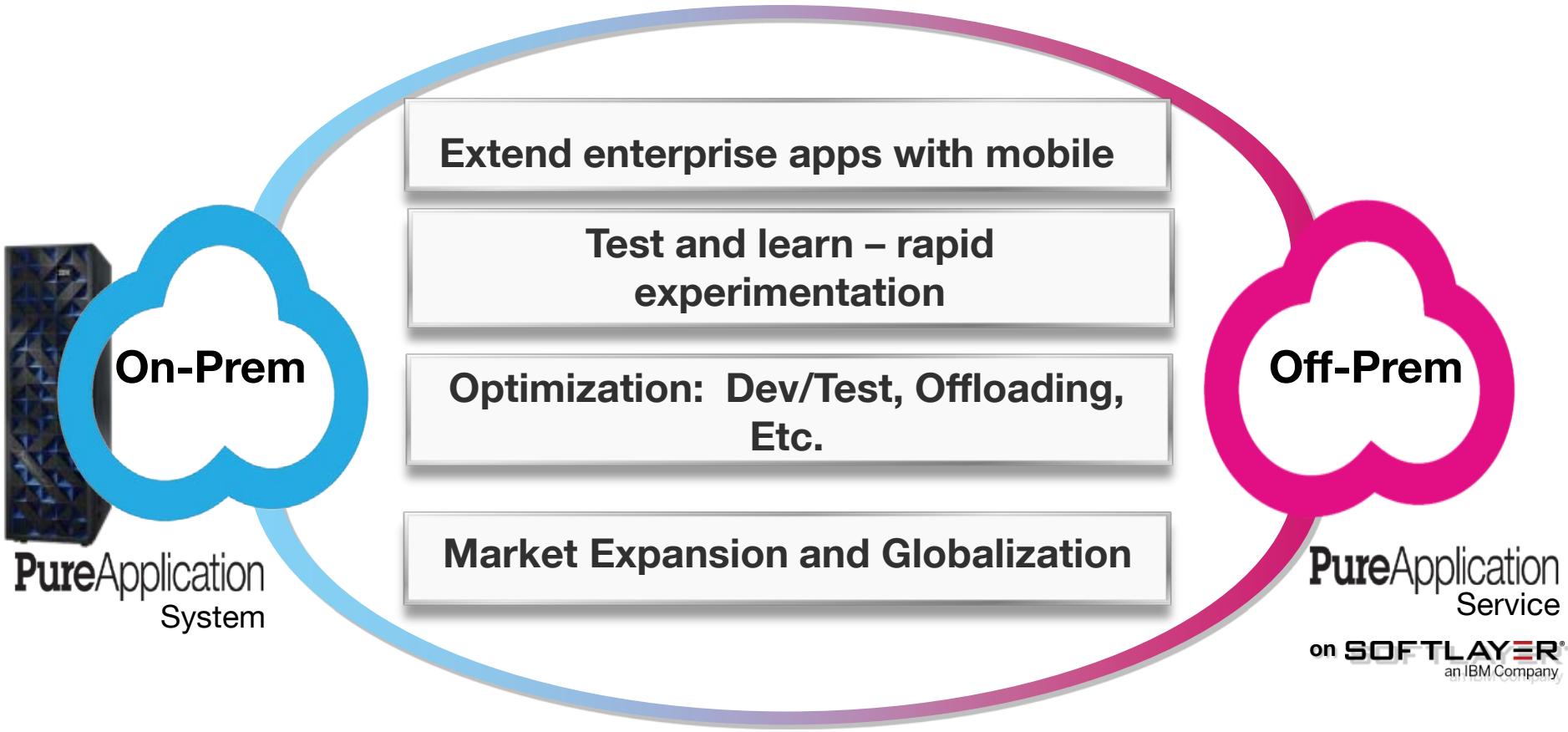
Using Hybrid Cloud Options Together Strategically



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Video

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Thank You

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