

**Mark Tomlinson**

*Chief Technology Officer*

*Cloud Computing, IBM UK and Ireland*

# IBM PureSystems and Cloud

Accelerate your adoption of Cloud with expert integrated systems



Cloud adoption is one approach to dealing with the challenges faced by IT today

**Improves the agility & dexterity of business**

**Speeds delivery of product & service innovation**

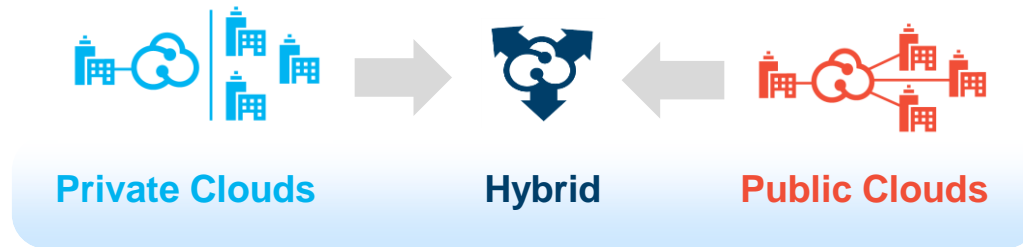
**Delivers IT without boundaries**

**Enables new business models & client relationships**

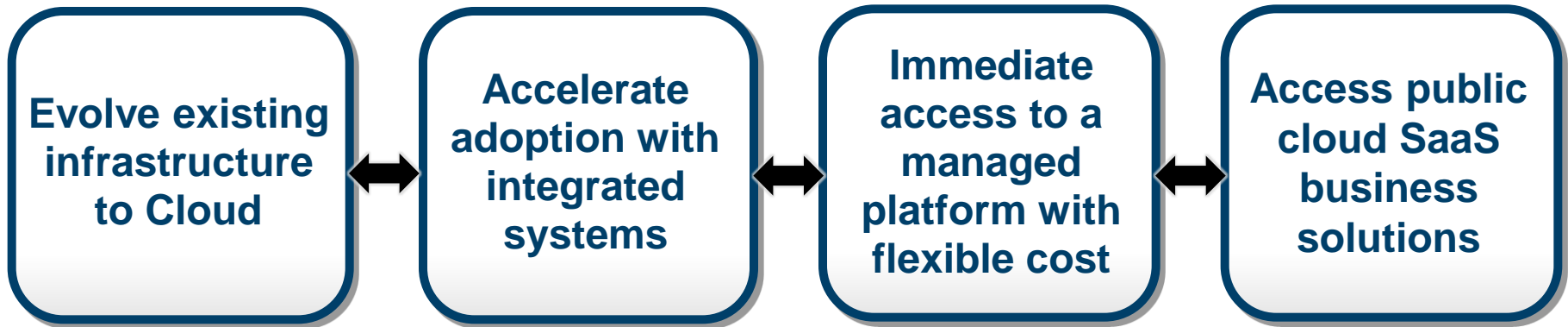


**Lowers Complexity & Changes the Economics of IT**

And the path requires flexibility in delivering, integrating, and consuming Cloud capabilities, enabled by open standards



Flexible business service delivery and consumption models



Common Cloud platform built on an open standards reference model



As enterprises move **beyond virtualisation** to higher value stages of Cloud, new requirements have emerged

Existing Requirements

Emerging Value

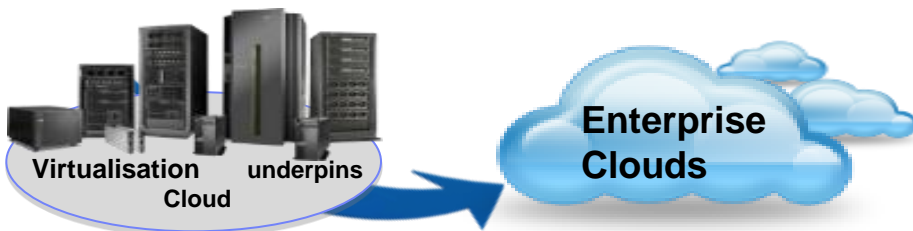
Standardisation → Business services based choice & control

Virtualised infrastructure → Workload awareness & optimisation

Automation → Built-in expertise

Individual cloud services → Integrated process transformations

Lifecycle management → Continuous delivery



Learned Cloud Requirements



**4,000+**

Successful Cloud Client Engagements

**200M+**

Daily Cloud Transactions

**80%**

Of IBM Major Clients are on Cloud Computing Roadmaps

## IBM's Cloud journey is based on evolving client requirements

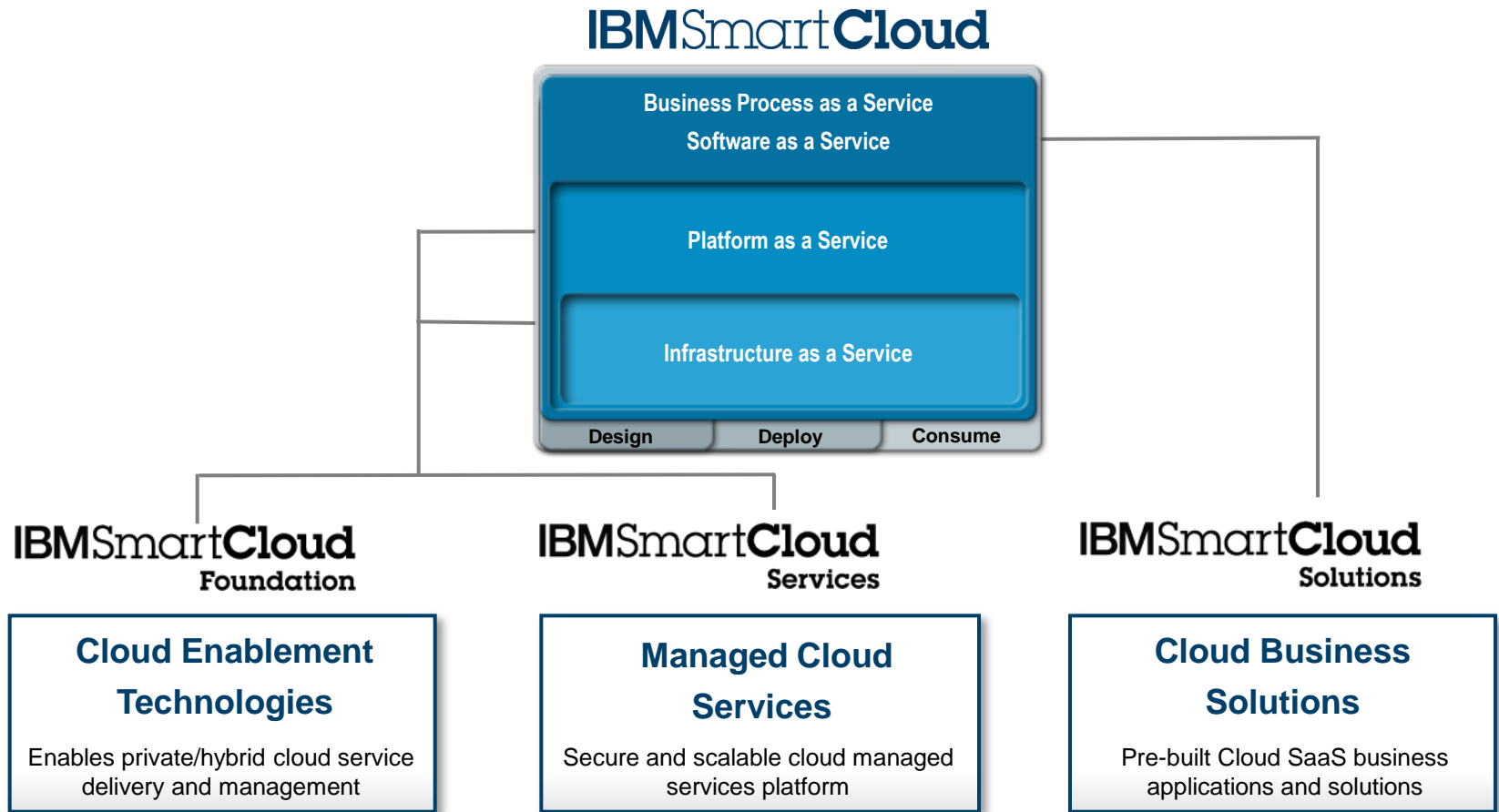
- Leveraging virtualisation & service management for workload optimisation
- Building upon SOA to enable enterprise process transformation
- Delivering built-in expertise to simplify IT lifecycle
- Supporting client choice and flexibility through an open, cloud operating environment
- Integrating technology and industry expertise to deliver business outcomes

*A history of sustained investment in key foundational Cloud capabilities*



**Deep  
Industry  
Expertise**

IBM SmartCloud provides a complete set of capabilities for every stage of cloud adoption



IBM PureSystems family is built for cloud  
*Flexible deployment options with IBM SmartCloud*

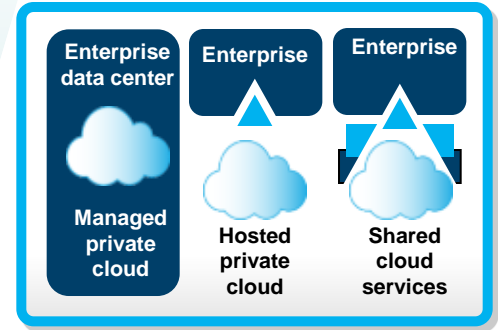
**Accelerate cloud deployments**  
*with expert integrated systems*



*Deploy cloud platforms into your existing infrastructure*

**IBMSmartCloud**  
Foundation

**PureSystems**



*Immediate access to managed services*

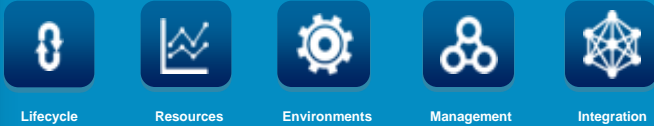
**IBMSmartCloud**  
Services

**IBMSmartCloud**

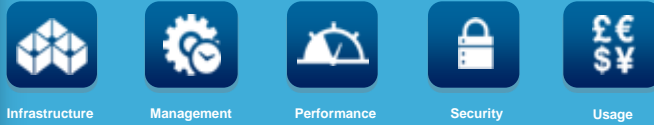
## IBM PureSystems family for Infrastructure- and Platform-as-a-Service

### IBMSmartCloud Foundation

#### Platform as a Service Technologies



#### Infrastructure as a Service Technologies



### PureApplication



**Application Platform System** configured with IBM middleware to accelerate deployment of your choice of applications

### PureData



**Data Platform System** delivering high performance data services to transactional and analytics applications

### PureFlex



**Infrastructure System** with flexibility - runs your choice of applications and middleware



- Simplified experience
- Built-in expertise
- Integration by design





# Accelerate IaaS cloud adoption using IBM PureFlex System & extend its capabilities with additional IBM SmartCloud Foundation offerings

A client's existing infrastructure + IBM SmartCloud Foundation

IBM PureFlex System

IBM PureFlex System + IBM SmartCloud Foundation

IBM SmartCloud Foundation

PureFlex

PureFlex

Extend with IBM SmartCloud Foundation

Extend with enhanced monitoring, security & provisioning, usage & accounting, development tooling, hybrid integration, control desk, etc.

E.g. IBM SmartCloud Entry, Provisioning or Orchestrator

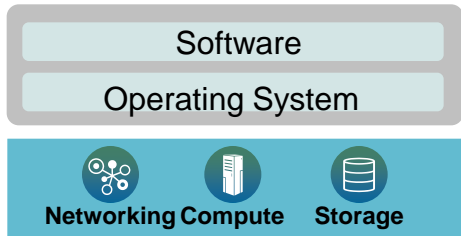
- Integrated hardware & virtualisation
- Multi-tenancy, isolation & resource pooling
- Fully integrated management
- Self Service Provisioning
- Cloud administration
- Image composition and library

E.g. IBM SmartCloud Provisioning

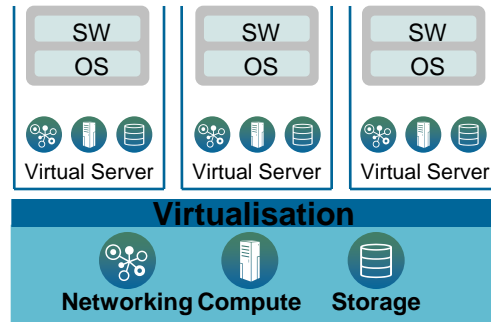
- Robust image lifecycle management and analytics
- Virtual System Patterns
- Virtual Application Patterns

# IBM PureFlex System: Designed for Cloud with resource pooling and automated provisioning expertise

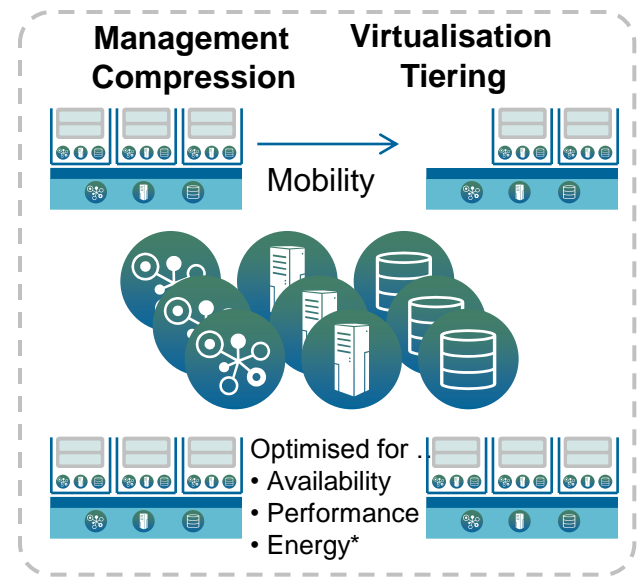
- **Manage Services** instead of components
- **System Pools:** resources acted upon as a group
- **Automatic** virtual machine placement & optimisation
- **Policy optimised** performance, utilisation or energy\* pooling



Systems



Virtual Systems



System Pools / Cloud

Manage a pool of system resources or a cloud as simply as managing a single system

# Leveraging built-in expertise for cloud

Simple, Rapid Deployment

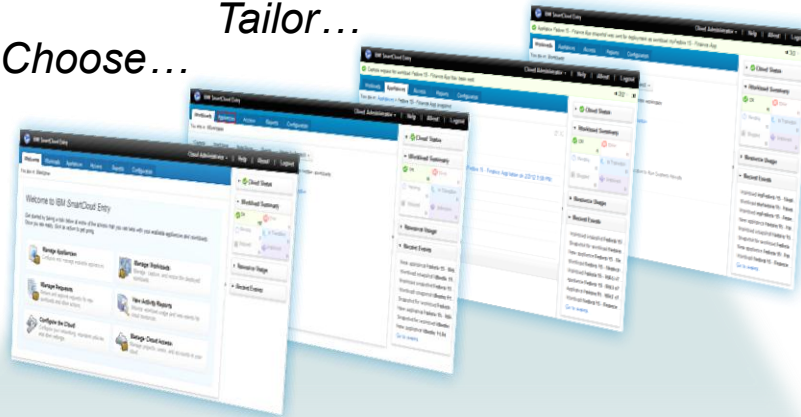
SmartCloud Entry...



Choose...

Tailor...

Deploy Workload...



## Leveraging Built-in Expertise



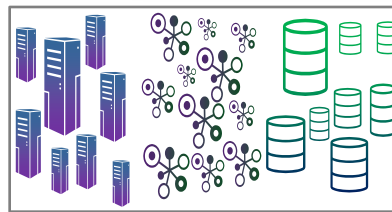
PureFlex

**Image Library of Available Workloads**



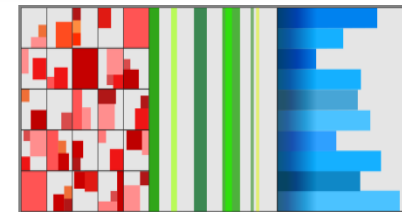
Automatically Captured & Cataloged

**System Pools**



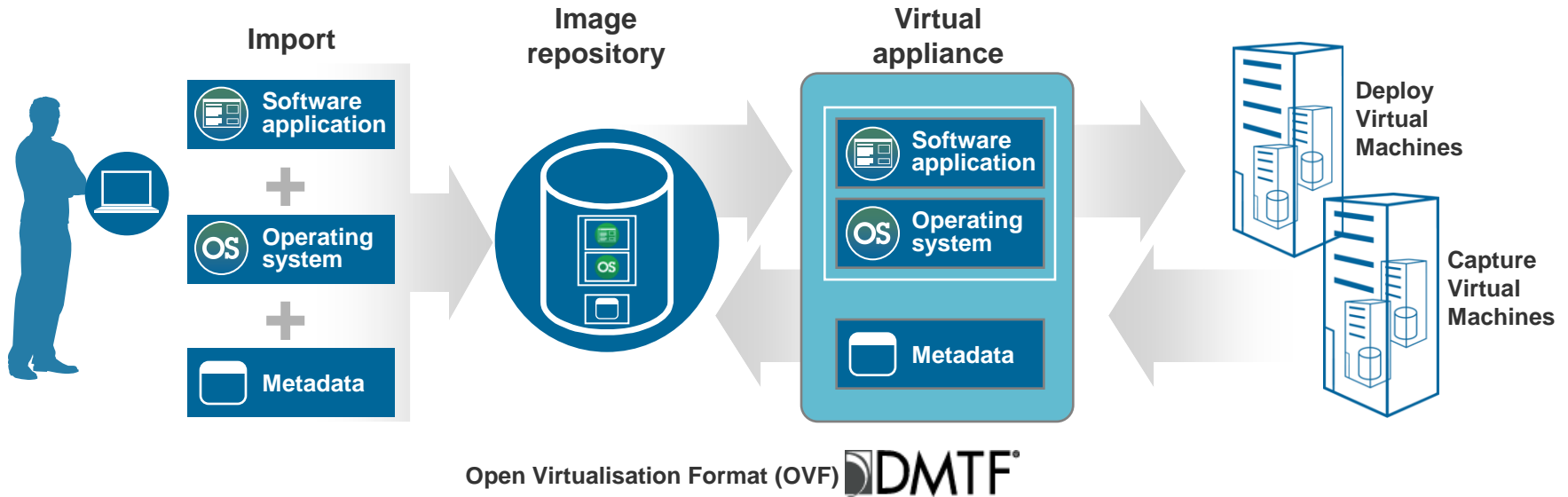
Compute, Network & Storage Resources Dynamically Discovered

**Policy Driven Optimisation with Built-in Expertise**



Optimised Assets Compute, Network & Storage

# Virtualisation expertise to enable new application and service delivery models



- Discover and manage heterogeneous image repositories
  - *Import, capture and catalog new VMs from existing systems*
- Simplified virtual image deployment and customization
  - *Dynamically provision virtualised server, storage and network resources*
- Leading “Ready for PureFlex System” application providers supporting virtual appliance service deployment
  - *Leverage open standards packaging for interoperability*



# Accelerate PaaS cloud adoption using IBM PureApplication System & extend its capabilities with IBM SmartCloud Foundation offerings

Existing infrastructure +  
Middleware/Platform Services +  
IBM SmartCloud Foundation

## IBM PureApplication System

IBM PureApplication System +  
IBM SmartCloud Foundation



E.g. IBM SmartCloud Entry, Provisioning or Orchestrator



- Integrated hardware, middleware/platform services and virtualisation
- Multi-tenancy, isolation & resource pooling
- Integrated management
- Self Service Provisioning
- Cloud Administration
- Image Composition, Manipulation & library
- Rapid, Scalable Provisioning
- Virtual Systems & Application Patterns

- Eg. IBM SmartCloud Orchestrator
- Advanced automation and orchestration across heterogeneous systems and applications
  - Hybrid cloud support
  - Run book automation

## IBM enables workload optimisation with Patterns of Expertise

**Application Patterns:** Proven best practices and expertise learned from decades of client and partner engagements

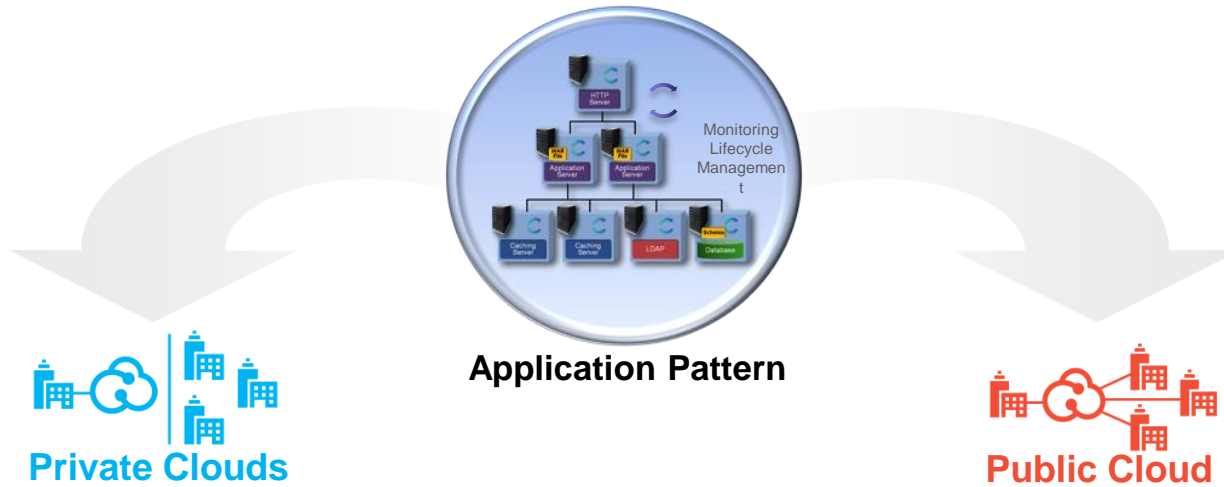
- Pre-defined architecture of an application or Cloud service
- Captures best practices for complex tasks
- Optimised into a deployable form for private or public cloud
- Repeatable deployment with full lifecycle management



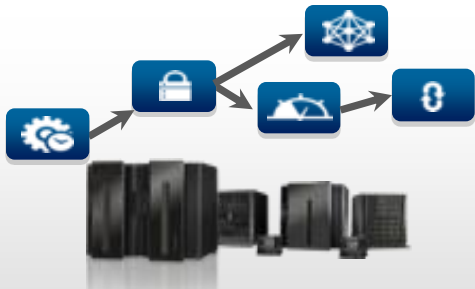
***"Patterns are the magic here. Customers are capturing expertise in patterns. It's a new pride of ownership."***

***Richard Doherty, Envisioneering Group***

# IBM's pattern technology is common across deployment options



Deploy patterns to your existing infrastructure with SmartCloud Foundation



IBMSmartCloud Foundation

Deploy patterns to PureApplication System



PureApplication

Deploy patterns to SmartCloud Application Services



IBMSmartCloud Services

## With the broadest open ecosystem....

- Over 245 optimised solutions from 170 leading ISV partners
  - Delivering applications including analytics, mobile, commerce and more.
  - PureSystems Centre** is the gateway to IBM and certified partner expertise  
[ibm.com/puresystems/centre](http://ibm.com/puresystems/centre)
- 60+ partners committed to PureData System\*
- developerWorks** enables the developer ecosystem  
[ibm.com/developerworks/puresystems](http://ibm.com/developerworks/puresystems)





Clients are accelerating their adoption to cloud with PureSystems

**Managed Services Provider**

**PureFlex**

**Business Need**

Provide customers with all-inclusive **cloud** services, with fast time to delivery.

**Why PureFlex System?**

*“BM PureFlex addresses our need for a fully integrated and optimised infrastructure that radically simplifies computing”*

George Fok  
Managing Director, PCCW

**Government Agency**

**PureApplication**

**Business Need**

Rapidly create a highly responsive **private cloud** computing environment for analytics workloads related to national security

**Why PureApplication System?**

- Meets extreme peaks and troughs inherent in their analytics workloads
- Reduced costs across the lifecycle

# ISVs & Managed Services Providers are seeing value in PureSystems

**Business Need:** Solution hosting with a high level of performance while continuing to provide easy-to-use IT services to their customers

**Solution:** IBM PureFlex provides an x86 infrastructure with IBM software that is ready for Platform as a Service (PaaS) Cloud and allows Enfo to reduce their VM Ware licensing costs.

**Managed Service Provider**

**Business Need:** XAUAT is a high-tech institution that needed a cloud computing system, simple management, automisation, energy efficiency and integration services from a top IT vendor

**Solution:** ECData and IBM presented a joint solution that included **IBM PureFlex**, Power & Storage, technical support discussions and a POC



**Independent Software Vendor**

**Business Need:** Effectively and quickly deploy the PriceLenz solution while maintaining a high level of quality

**Solution:** Optimise their solution on the IBM PureApplication System to increase performance & slash deployment time from **3 weeks to 8 minutes**



**Independent Software Vendor**

**Business Need:** Deliver Ready for PureSystems solution in SaaS model using a cloud-ready platform with fully integrated server, storage and network

**Solution:** The cloud-ready platform allows DynaFront to offer customers usage-based pricing while simplifying system management and billing



**Software Solution and Consulting Company**

# eCommerce client scenario

## Flexible deployment options for different workloads

IBMSmartCloud  
Services

IBMSmartCloud  
Foundation

PureSystems

IBMSmartCloud  
Solutions



Login & browse catalog

Manage shopping cart

Order confirmation

Credit card management

Client Churn Analysis

Real Time Fraud Detection

Client Sentiment Analysis

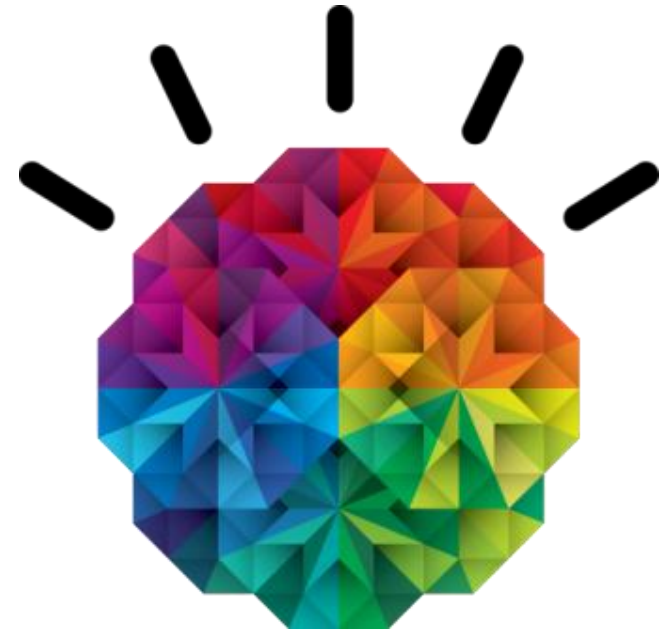
- Standardized services
- Managed Service approach

- Cloud enable core services
- Tailor and differentiate

- Harness data, drive insights
- Accelerate new services

## Discover the value and begin your journey with IBM PureSystems

- Visit [ibm.com/puresystems](http://ibm.com/puresystems) to learn more
- Find out more about PureExperience
- Join the conversation about this new category of computing:
  - Twitter: @IBM PureSystems
    - Hashtag: #IBMPureSystems or #expertintsys
  - YouTube Channel: expertintegratedsys
  - Blog: expertintegratedsystemsblog.com
- Developers – Get started today with our no charge trial offerings!  
[ibm.com/developerworks/puresystems/try](http://ibm.com/developerworks/puresystems/try)
- Explore PureSystem partner solutions  
[ibm.com/puresystems/centre](http://ibm.com/puresystems/centre)





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