IBM Private Cloud Customer Use Case – Top Polish Bank Deployment

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IBM Cloud, defined...

IBM Cloud is an enterprise grade, full stack platform, purpose built for **data-intensive** AI workloads and **cloud-native** application suites, delivered on software definable infrastructure.
Customer Use Case

Deploying a Microservices Application on a Heterogenous Kubernetes Cluster

The advantages of microservices architecture is that it gives you the choice to select a platform which is best suited for a specific service.

Some services could be running on Intel platforms, whereas few other services can run on Power platforms.
Evolution of software engineering, scalability and agile development

- **Bare metal OS**
- **Virtualization**
- **Containerization**
- **Assembler / C programming**
- **C++, object language**
- **Java**
- **Script based (JS, Python, Frameworks)**
- **REST, JS**
- **Web-Based Client Server**
- **Standalone**
- **Agile**
- **DevOps (CI/CD)**
- **Waterfall programming**
- **Agile development**
Container-based virtualization provide **lightweight solutions** by abstracting Operating System, where multiple workloads share the kernel host operating system.

Traditional Virtualization provides hardware abstraction, allowing **multiple instances of Operating System on a single hardware**.

From virtualization to containerization...
Containerized Applications

Kubernetes, is an open-source system for management of container based applications that automates deployments, operations and scales containerized applications across cluster of hosts.

Adoption of containers + Orchestration = eg. Kubernetes

Change from monolithic applications to container management stack, embracing the agile approach for accelerating development, testing and deployment of applications and services.
Containerized Applications essentials

- **Faster development and deployment of applications**;
- **Auto-scalable** infrastructure;
- **Application-centric management**, maximum portability;
- A best fit for microservice-based-applications - each service is independently packaged and deployed as a container.
Containerized Applications essentials

- **Environment consistency** across development testing and production;
- Loosely coupled infrastructure, where each component can act as a separate unit;
- **Higher density** of resource utilization;
- **Predictable infrastructure** which is going to be created.
Competition advantages of IPC Containerization

- Open Kubernetes-based container platform
- Cloud Foundry for app dev and deployment
- DevOps toolchain integration

**Rapid Development**

- Integration capabilities to unlock and connect. Components like WebSphere, DB2 and MQ as container optimized versions where applications are built on top of it and can be connected via APIs
- Consistent experience across private/public

**Integration**

- Containerized versions of IBM Middleware.
- Secure access to public cloud services (AI, Blockchain) without extra investments
- Prescriptive guidance to optimize workloads
- Work with existing apps, data, skills, infrastructure

**Investment Leverage**

- Supports the deployment of applications that can span on and off premise environments securely.
- Core operational services including logging, monitoring, security
- Flexibility to integrate with existing tools and processes

**Management & Compliance**
Customer success story

**Project Scope**
A clearly articulated vision what project should achieve. In that case it was deployment IPC + migration first services to the conteners.

**Process to be change**
Processes, tools and technology to support the DevOps organization. Move from traditional approach to continuous integration.

**People**
Investing in trainings learn new methods of development. Understanding benefits of architecture and proper usage of that.

**Performance**
Mechanisms in place to plan and forecast workload, match capacity, and measure performance.
Thank you!

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