



VITA APPLICATION INTEGRATION SERVICES (AIS)

OVERVIEW

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VIRTUAL SERVICES FAIR

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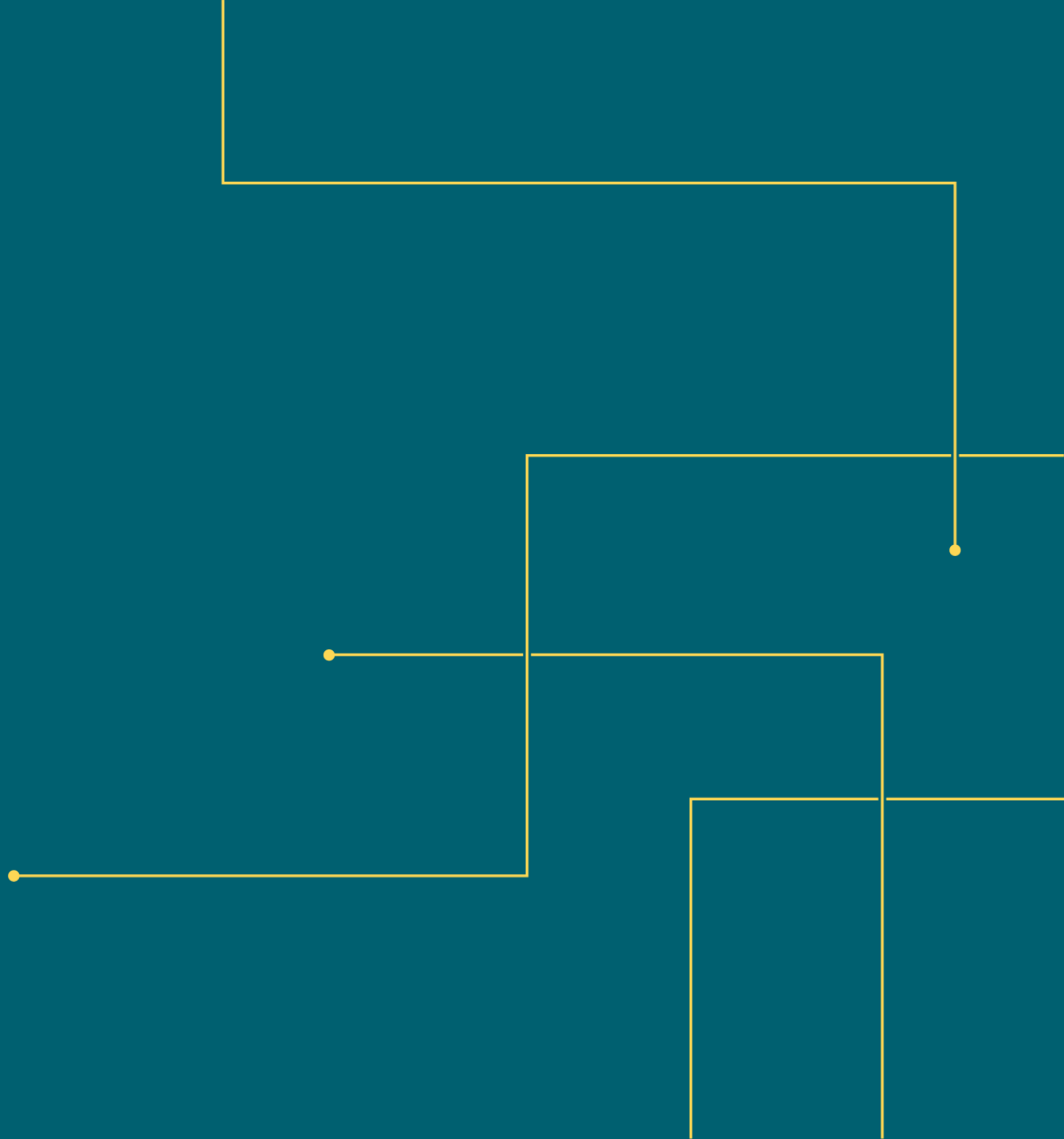
AGENDA

What is AIS?

Service offerings

New services

Initiatives



- AIS are services that enable customers to optimize and integrate digital government applications.
- The enterprise services are based on a powerful compute architecture that is fully implemented at the QTS datacenter.
- Customers include: Departments of Medical Assistance Services, Behavioral Health and Developmental Services, Social Services, Transportation and Motor Vehicles.
- AIS is part of the overall portfolio of services provided by VITA.

- **Enterprise service bus (ESB)** - applications interact and exchange data in a flexible, dynamic and extensible infrastructure. (IBM Integration Business and App Connect Enterprise)
- **Business rules management (BRM)** - comprehensive decision automation solution provides extensive capabilities to analyze, automate and govern rules-based business decisions.
- **Application messaging (AM)** – enterprise messaging solution based on IBM MQ that securely and reliably connects applications, systems, services and files across multiple platforms.

- **AIS - Application server (AIS-APPSVR)** - accelerates application delivery with a highly reliable, secured and flexible Java Enterprise Edition (Java EE)-based runtime environment.
- **Mailing address verification (MAV)** - real-time address verifications utilizing the latest U.S. Postal Service data.
- **AIS Database (AIS-DB)** - provides customers with highly-available and secure database services based on Oracle RAC.

- The VITA Oracle private cloud (VOPC) service provides a virtualized compute platform for Oracle workloads.
- The service is run on high-performance IBM Power9 systems that are deployed as an on-premise private cloud in the QTS data center.
- Customers can virtualize Oracle workloads into secure environments specifically configured for each customer.

High performance compute for data intensive and mission critical workloads including Oracle RAC

Increased efficiency and lower operations costs due to the superior multi-threading (SMT8) technology of the new Power9 platform

Shared processor pools and vCPUs can be fine-tuned based on customer load. This results in Oracle licenses being deployed efficiently across the customer environment.

Highly secure workloads

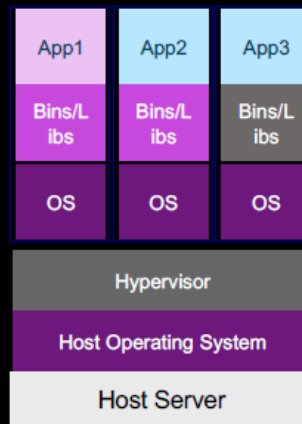
- Workloads are secure and isolated in customer dedicated virtual machines
- IBM Power Systems have security built in at all layers. Database layer is secured with data encryption in transit.
- Desktop/laptop Oracle client connectivity to databases is through CMAN (Oracle connection manager proxy)
- The service includes VITA guidance to assist the customer with security compliance

- The **VITA Secure Gateway (VSG)** service provides security and integration for Commonwealth of Virginia (COV) websites, applications and services.
- VSG is based on the IBM DataPower multi-channel gateways that deliver security, control, integration and optimized access to a full range of on-premise and cloud workloads.

- VITA AIS is leveraging the platforms at QTS for many cloud focused initiatives.
- OpenShift on Power is in implementation.
- CloudPaks and data analytics services being deployed on the Power9 infrastructure.
- Enhanced service offerings for Oracle workloads and data management
- IBM Cloud Pak for Integration (CP4I) and Automation (CP4A)

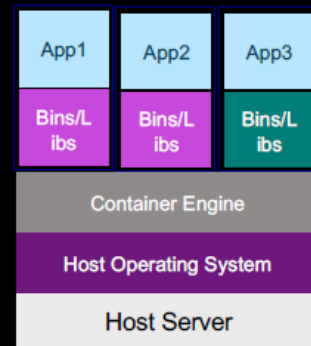
Containers and VMs Solve Different Problems

Full blown Guest OS
with virtual access to
host resources
through the Hypervisor



Virtual Machines

OS-based
virtualization via a
Linux process inside
of the Kernel



Containers

Containers are lightweight and provide better performance:

Portability: VM (Gigabytes) vs. Container (Megabytes), VMs are constraint to Hypervisor and hardware-emulation

Performance: Containers can boot and restart in seconds, compared to minutes for virtual machines. And no extra overhead of a hypervisor and guest OS makes containers consume less CPU and memory.

Management cost: Each VM requires a full functional operating system, and then extra management for them.

Great advantage to use containers in:

DevOps / CI & CD

Software Upgrades / Platform Refresh

Batch computing

App Modernization / Microservices

Lightweight PaaS

Infrastructure Optimization

Kubernetes



Horizontal
Scaling



Intelligent
Scheduling



Service Discovery &
Load Balancing



Automated
Rollouts &
Rollbacks



Self-Healing



Secret &
Configuration
Management



Run existing apps

Continue to run your apps, where they are.



Modernize existing apps

When apps need to move, IBM has the most experience, tools, and experts to move them



Building new apps

New apps are automatically ready for hybrid-cloud deployment, using the best of open source, fully supported



Run existing apps

WebSphere Application Server

WebSphere ND | WebSphere Base | Liberty Core
Mobile Foundation

JBoss Enterprise Application Server



Modernize existing apps

IBM Modernization & Developer Tools

Included with all components

- Transformation Advisor
- WebSphere Migration Toolkit
- Enterprise Dev tools & extensions for local IDE's

Supported when used with Cloud Pak for Applications, no charge

Build new Cloud Native apps



Red Hat Runtimes

- JBoss® EAP
- JBoss® Web Server
- Eclipse Vert.x
- Spring Boot
- Open Liberty
- Thorntail
- OpenJDK
- Node.js

IBM Runtimes

- WebSphere® (traditional)
- WebSphere Liberty
- Mobile Foundation
- Loopback & Express (Node.js)

Accelerators for Teams

Derived from kabanero.io open source

Equipping teams with content, tools, architectures and methods so they can focus on business problems from day 1

Red Hat OpenShift Container Platform

IBM Cloud Pak for Integration

Modernize integration with a simple, easy, and cost-effective solution that leverages the right mix of integration capabilities and styles to support your digital transformation initiatives.

Broadest integration capabilities

Unified experience, operational efficiency & reuse

—

Deploy where needed

Container-based architecture with common enterprise services

—

Enterprise-grade

Secure, scalable



API Lifecycle – IBM API Connect



Application & Data Integration – IBM App Connect Enterprise



Enterprise Messaging – IBM MQ



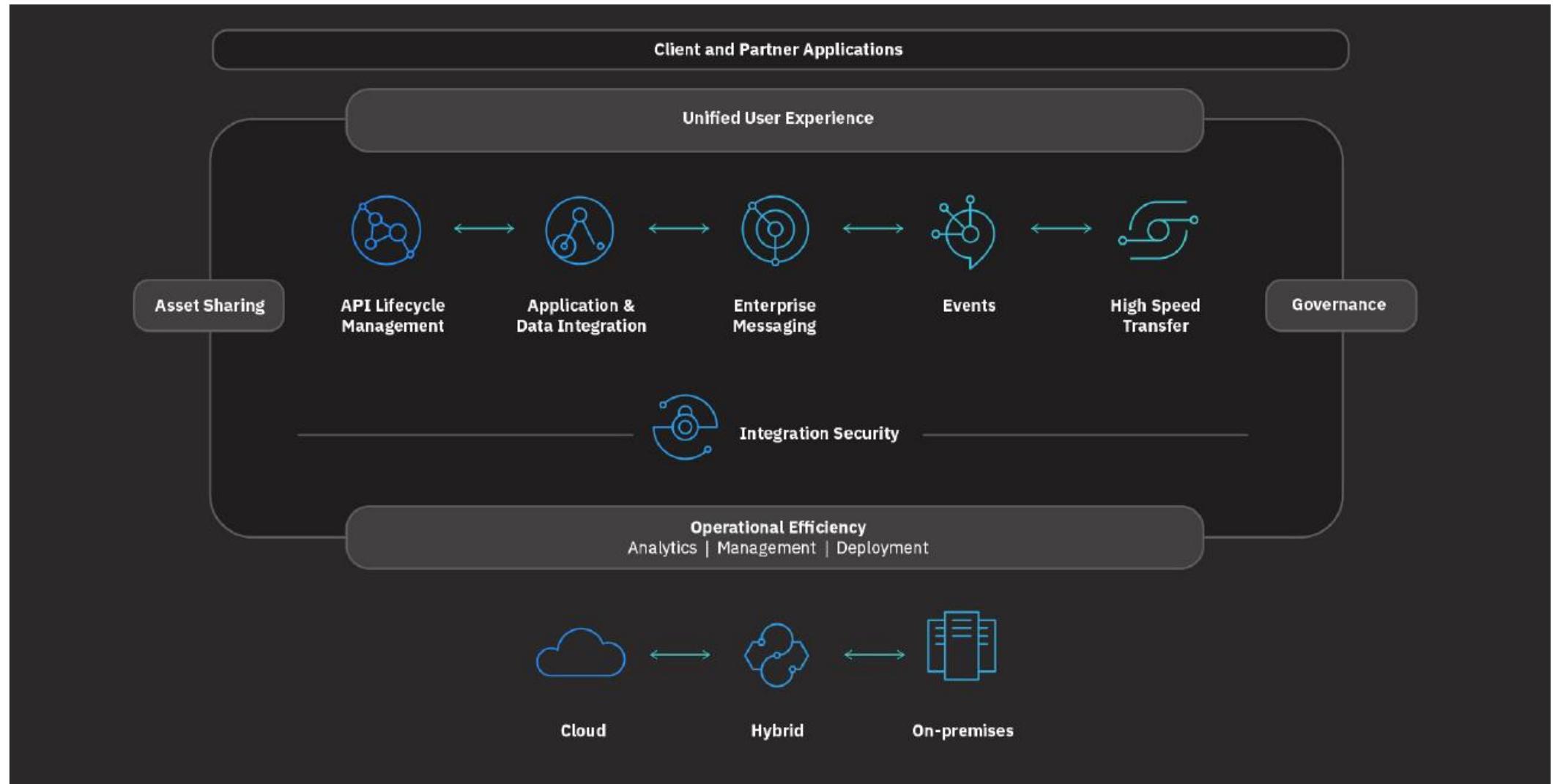
Events – IBM Event Streams



High Speed Transfer – IBM Aspera



Integration Security – IBM DataPower



VITA SERVICE TALKS

Let's continue the conversation



LET'S CONTINUE THE CONVERSATION

VITA is offering customers an opportunity to expand upon the discussions that were started today. These service talks will either be one-on-one (agency/supplier) or in open group settings and will provide agencies the opportunity to ask more detailed questions about the services and how they can be applied to their organizations.

PLEASE VISIT THE VITA WEBSITE, VIRTUAL SERVICES FAIR PAGE, FOR INFORMATION ON JOINING THE GROUP SESSIONS AND SIGNING UP FOR 1:1 SESSIONS:

[HTTPS://WWW.VITA.VIRGINIA.GOV/TECHNOLOGY-SERVICES/SERVICES-FAIR/](https://www.vita.virginia.gov/technology-services/services-fair/)



The following VITA service talks have a capacity of 500 attendees:

- **Cloud services**
 - Tuesday, Nov. 9: 9 – 10:30 a.m.
 - Tuesday, Nov. 16: 1 – 2:30 p.m.
- **Messaging services**
 - Thursday, Oct. 21: 1 – 2:30 p.m.
 - Thursday, Nov. 4: 9 – 10:30 a.m.
- **Voice and data services update**
 - Monday, Oct. 25: 1 – 2:30 p.m.
 - Monday, Nov. 15: 9 – 10:30 a.m.

Questions can be submitted in advance by emailing businessreadiness@vita.virginia.gov. Please include the topic in the subject line. For example: Question for messaging service talk

One-on-one service talks are available first come, first served. Please coordinate with your team and sign up your agency for one session only.

- **Application integration services (AIS)**
 - Wednesday, Oct. 27: 9 – 10:30 a.m.
 - Wednesday, Nov. 10: 1 – 2:30 p.m.
- **ePen**
 - Thursday, Oct. 28: 9 – 10:30 a.m.
 - Wednesday, Nov. 3: 1 – 2:30 p.m.
- **Box**
 - Monday, Nov. 1: 9 – 10:30 a.m.
 - Friday, Nov. 12: 9 – 10:30 a.m.
- **Robotic process automation (RPA)**
 - Tuesday, Oct. 26: 9 – 10:30 a.m.
 - Monday, Nov. 8: 1 – 2:30 p.m.