Oracle University
JCS Benefits and features

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ORACLE EDUCATION RESELLER

Fast Lane
Enabling Digital Business

Java Cloud Service Overview

Objectives

After completing this lesson, you should be able to:

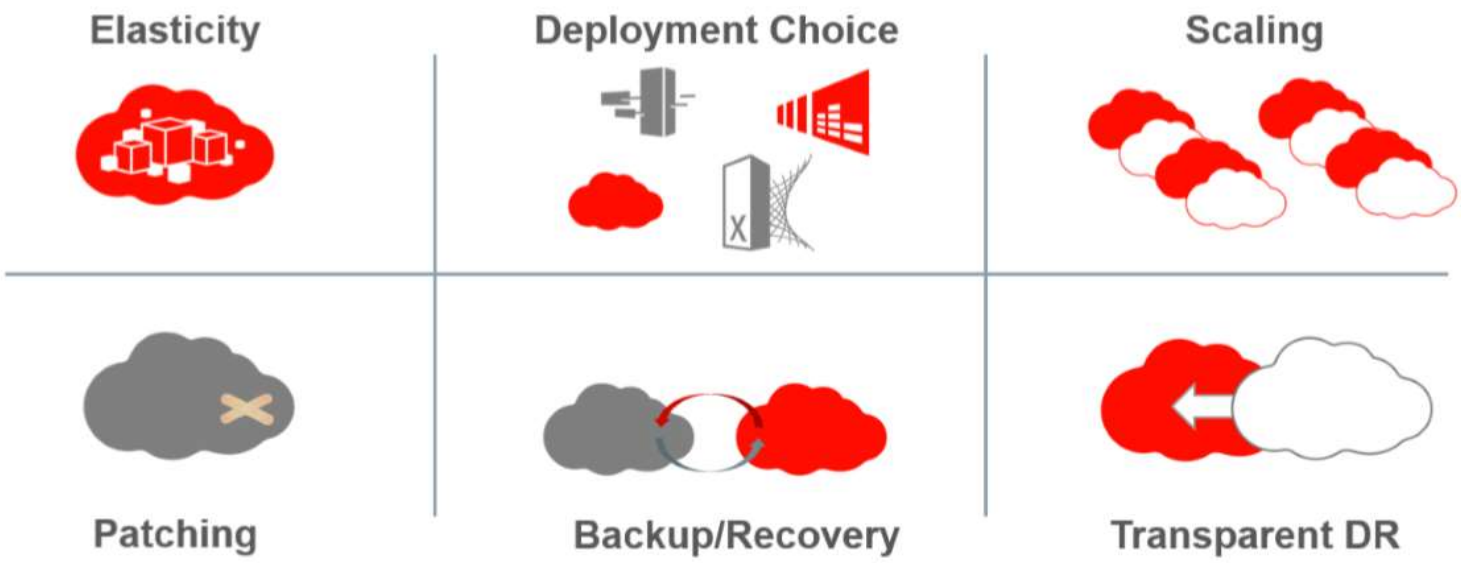
- Define the three types of Java Cloud Service
- Describe the methods and tools you use to interact with Java Cloud Service
- List the Java Cloud Service features
- Describe the Coherence option for Java Cloud Service

References

Title	Link
Oracle Java Cloud Service Concepts	>>>
Oracle Java Cloud Service Releases	>>>
Oracle Java Cloud Service Components	>>>
Oracle Cloud Services Agreement	>>>
Oracle Maximum Availability Architecture	>>>

Modern Requirements for Cloud Success

Maximizing options with robust requirements



Cloud Computing

- Delivers software functionality as remote services
- Relies on a shared infrastructure whose location and implementation are transparent to users
- Consolidates IT resources for multiple business units or organizations
- Strives to optimize resource utilization and reduce power consumption
- May also provide integrated metering and billing

Self Service

- Is a core pillar of any good cloud platform
- Provides a simple, intuitive web interface
- Avoids creating IT tickets to provision resources
- Hides the underlying details of the infrastructure
- Limits the rights or resource usage of different organizational units or applications
- Automates complex setup tasks

Infrastructure as a Service (IaaS)

IaaS focuses on compute, storage, and network virtualization technologies.

Users of an IaaS cloud service provision new servers (VMs), storage, and networks as needed.

Users are also responsible for configuring and maintaining the VM guest operating system, including the installation of other required software.

IaaS includes Oracle Storage Cloud Service and Oracle Compute Cloud Service.

Platform as a Service (PaaS)

PaaS services:

- Provide a complete platform to build, test, and deploy custom applications
- May or may not expose the underlying VMs and server software to users
- May target developers or business users

A PaaS provider:

- Provisions the OS and server software for users
- Often includes supporting services such as databases
- Offers high-availability, security, and maintenance features
- May include various development tools

Introducing Java Cloud Service

- A complete platform and infrastructure cloud solution for building, deploying, and managing Java EE applications
- Powered by the industry's #1 Java EE application server Oracle WebLogic Server
- Self-service application platform with advanced cloud tools

- Saves time and cost with simplified provisioning
- Reduces down time using automated patching, backup, and recovery
- Increases data and processing capacity on demand to scale for new business needs
- Optionally supports Oracle Coherence for caching and data grid functions and Oracle Traffic Director for load balancing
- Preconfigured for Oracle Database and Developer Cloud Services for complete cloud application management

Java Cloud Service: Three Options

- Full-featured Service
- Advanced tooling to manage the environment life cycle
  - Provisioning, Patching, Backup, and Restore
  - Scaling, Starting and Stopping

- Easy to enrich Oracle SaaS applications
- Tailor-made WebLogic Server for rapid extension deployment
- Ready marketplace with pre-built extensions, automated deployment

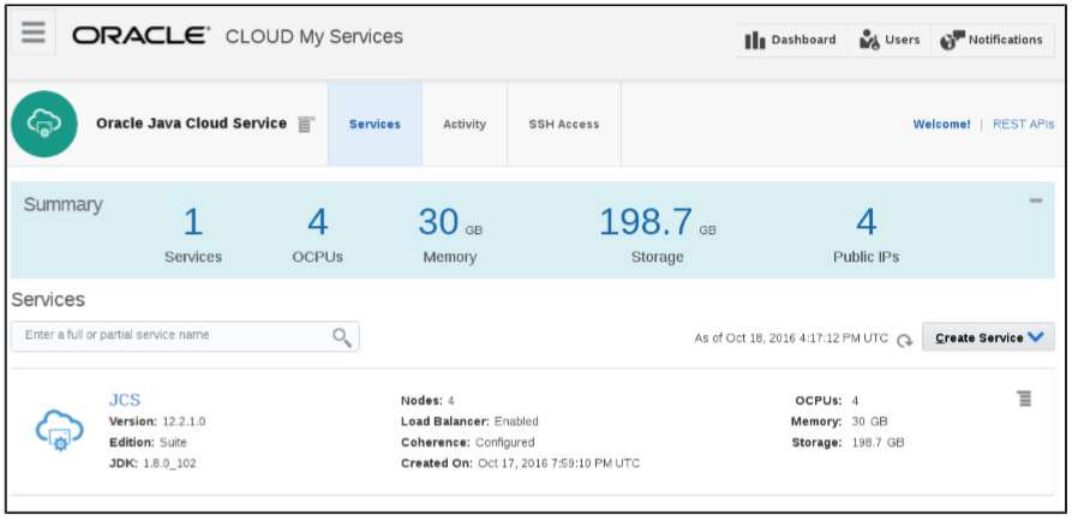
- Simple, hosted WebLogic Server instance

Java Cloud Service Main Use Cases

Accelerate, Innovate, and Migrate using Java Cloud Service

Java Cloud Service Feature: Provisioning

- Simply choose the shape and size:
  - Shapes specify Virtual Machine (VM) Oracle CPU (OCPU) and memory.
  - Select the initial cluster node size.
- Choose from popular versions: 11g or 12c
- Meet evolving technical and budgetary needs with popular Edition choices: Standard, Enterprise, Suite

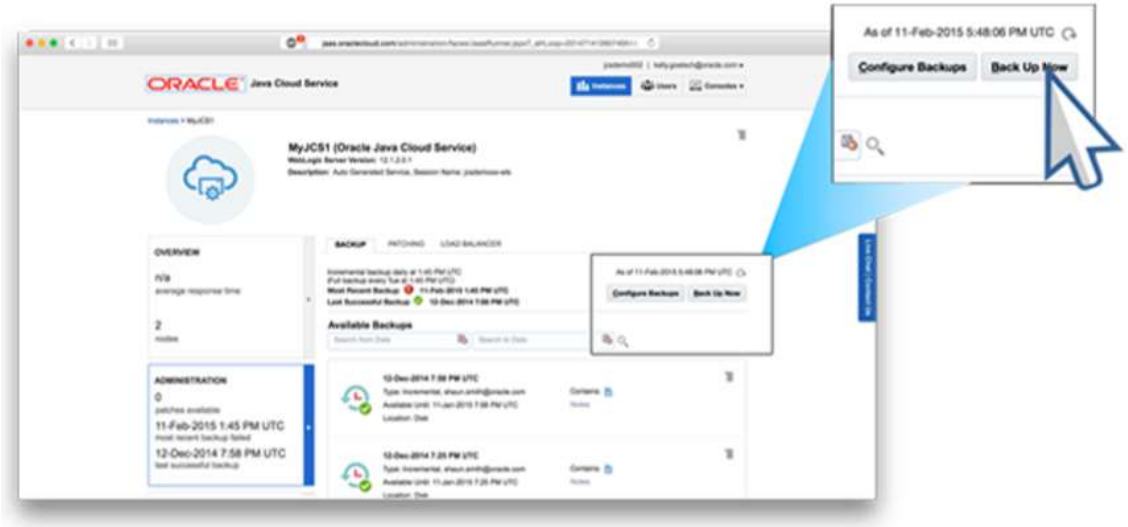


Java Cloud Service Feature: Patching

- Patching made simple - we handle the details
- You control patch timing - patch on demand
- Includes unified patching of JDK, WLS, JRF/ADF, and OTD
- Supports rolling patching, Patchset Updates (PSUs), and Patchsets (PS)
- Don't mess with backups! Full backup created before patching
- Patch PreCheck tool checks and identifies any potential issues
- Oracle Support will guide you for One-Off Patches.

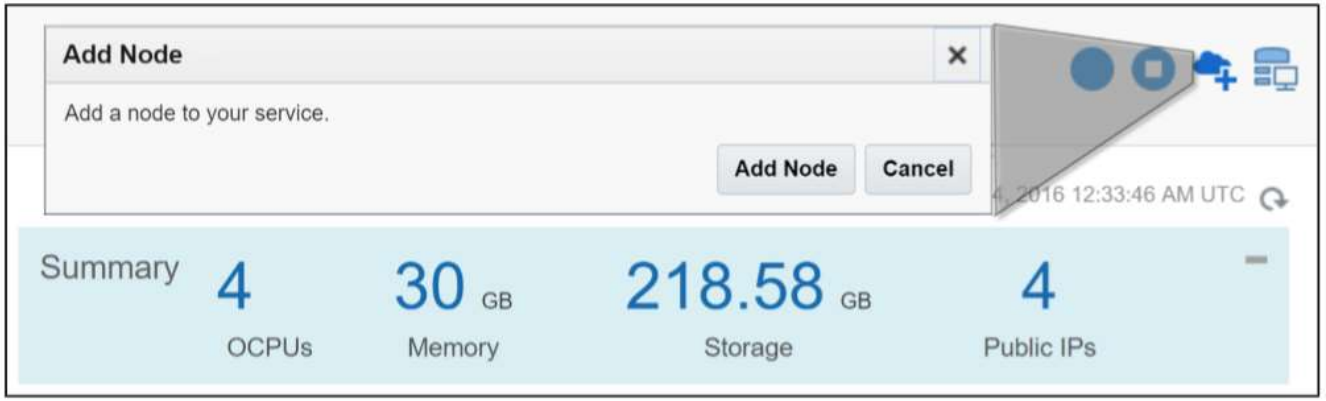
Java Cloud Service Feature: Backup / Restore

- Coordinated backups with database and whole cloud stack - holistic backups
- You choose - scheduled or on demand
- Multiple depths supported: configuration/apps, logs, binaries, and database
- Configurable: Seven-day backup on local disk, older backups pushed to storage service



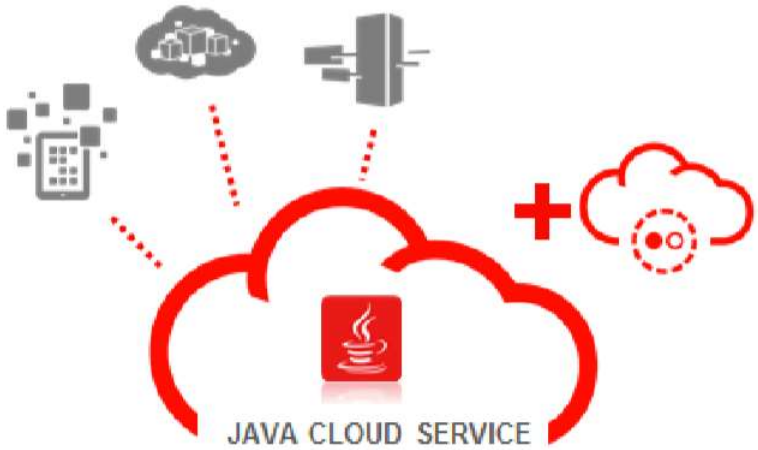
Java Cloud Service Feature: Scaling

- Fully-automated, on-demand – do it yourself without IT!
- Each managed server on separate virtual machine
- Zero downtime during scaling – keep customers happy
- Scale storage capacity and processing up/down on demand
- Rules to trigger scaling based on current workload



Oracle Coherence Option: Data Caching and Scaling

- Scaling applications' caching/data grid capacity in-memory to support growth
- Offload and protect shared cloud services and databases
- Delivery of data to cloud apps in real time
- Transparency and high-availability in the cloud's data grid tier



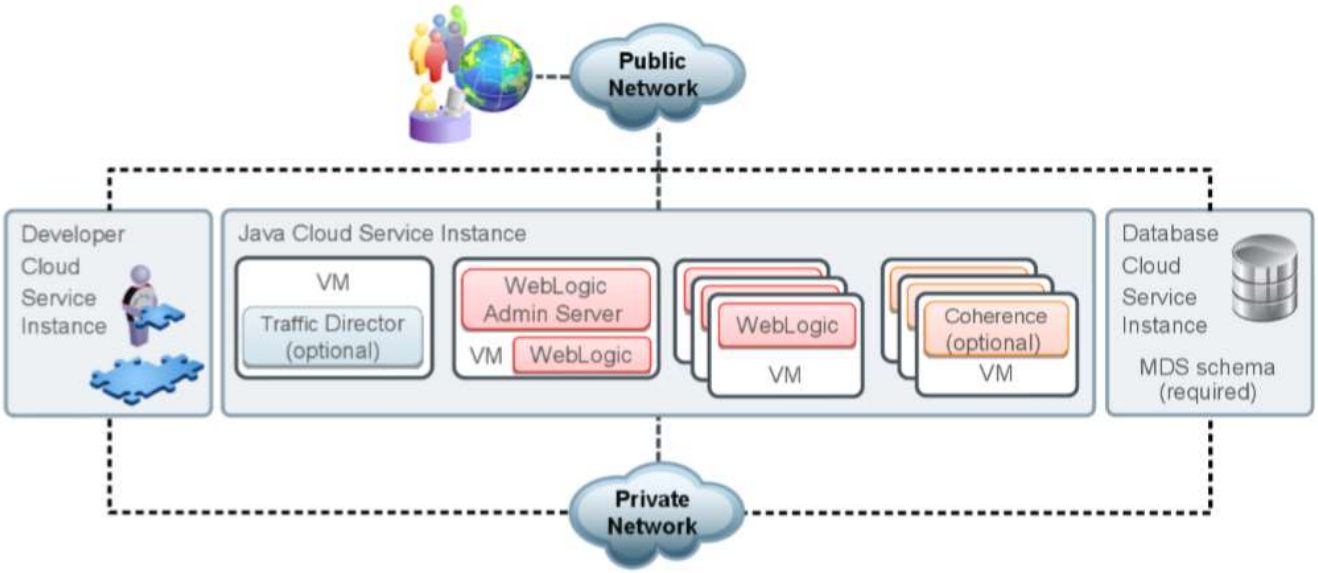
Oracle Coherence Option: Your Cloud Data Grid

- Scalable, fault-tolerant cloud infrastructure
- Reliable In-Memory key-value store
- Dynamically scalable
- Scale processing with data
- Entries can be:
  - Reliably processed in-place
  - Queried
  - Aggregated

Java Cloud Service Instance Topology

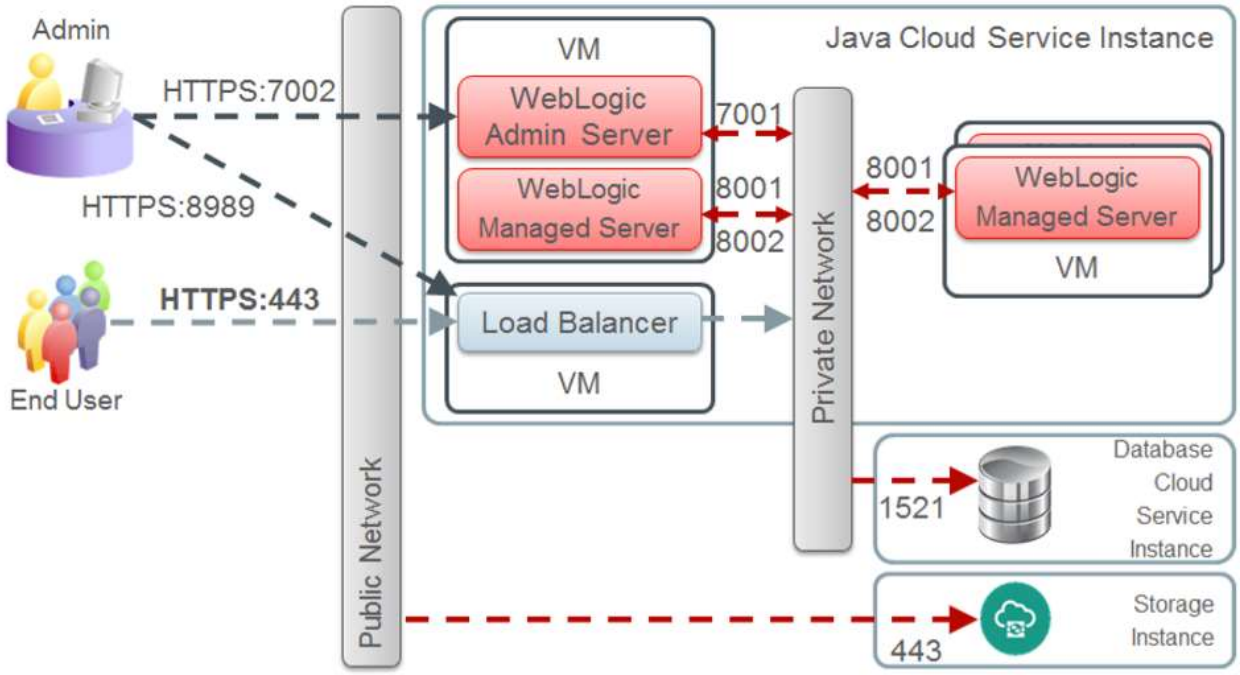
A typical topology includes WebLogic Server, Traffic Director, Coherence and a Database.

Developer Cloud Service performs Continuous Integration and Continuous Delivery.



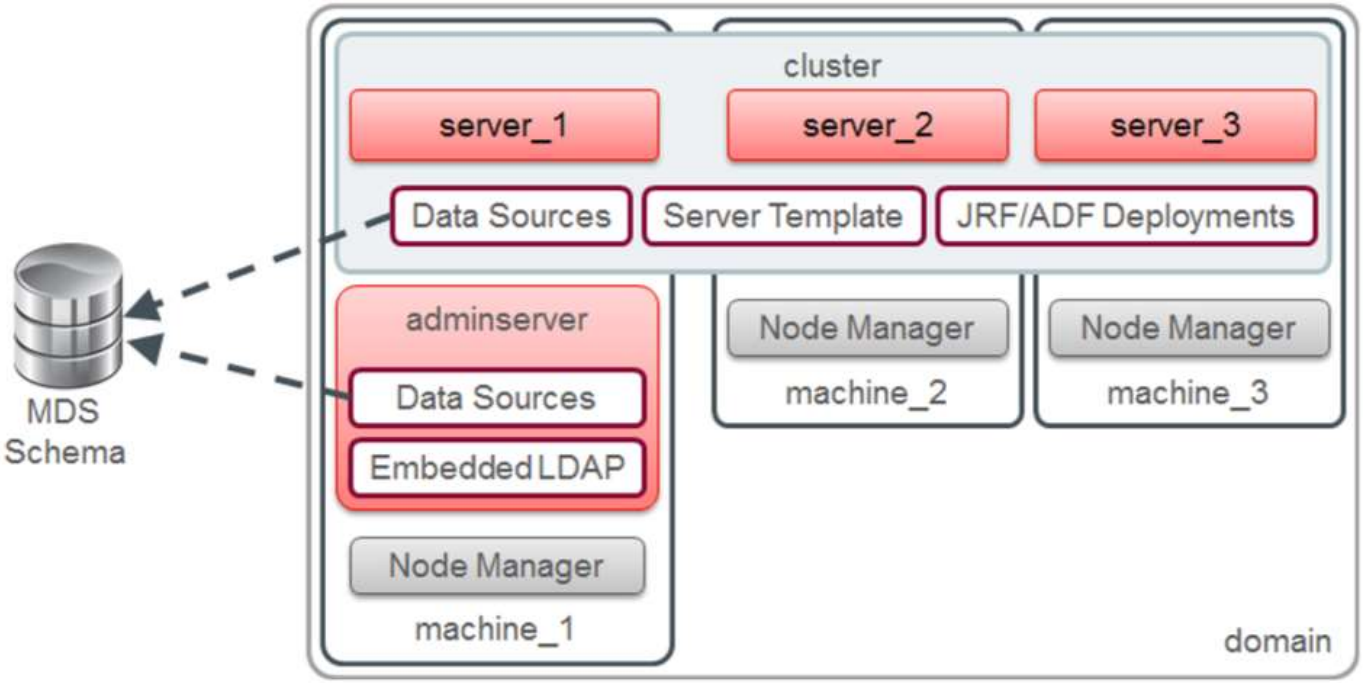
Java Cloud Service: Default Ports

Typically access is provided to default ports for internal and external connectivity



Java Cloud Service: Default Domain Configuration

The default domain includes a first machine with the Administration Server and Managed Server

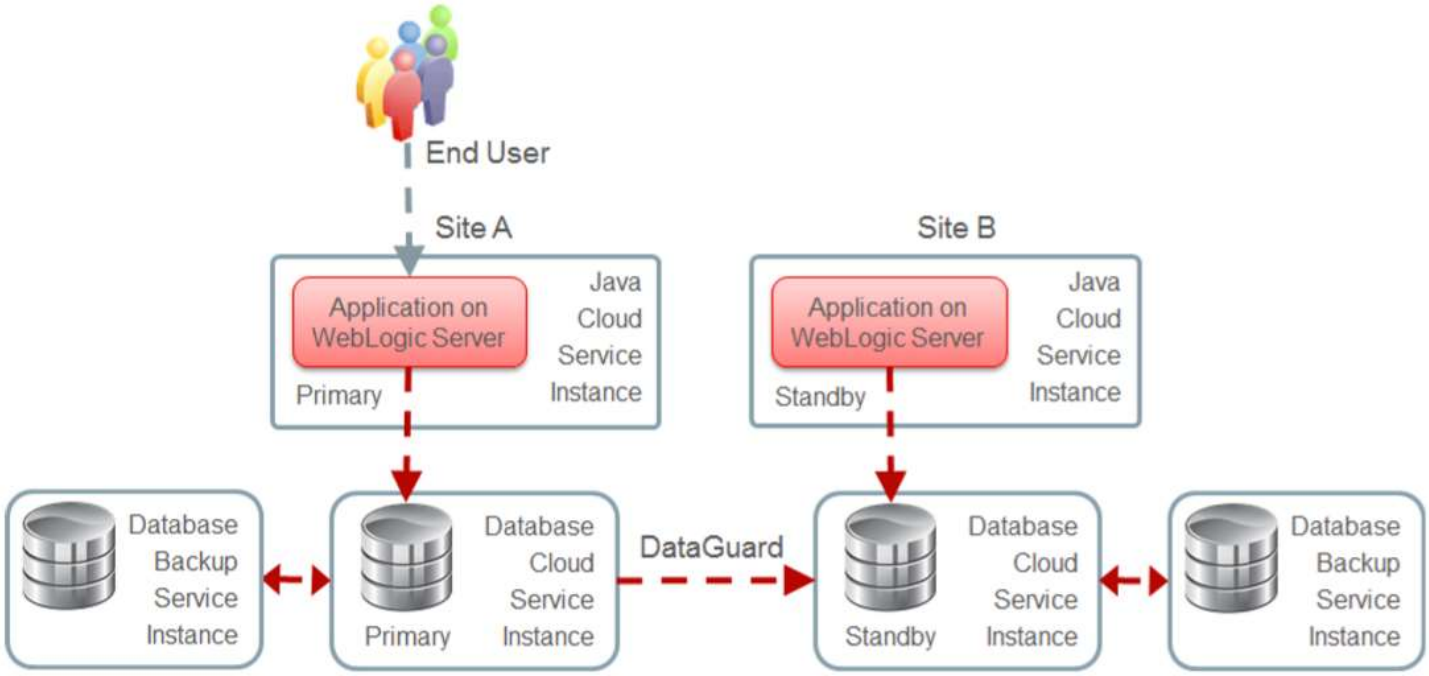


Java Cloud Service: Avaliability

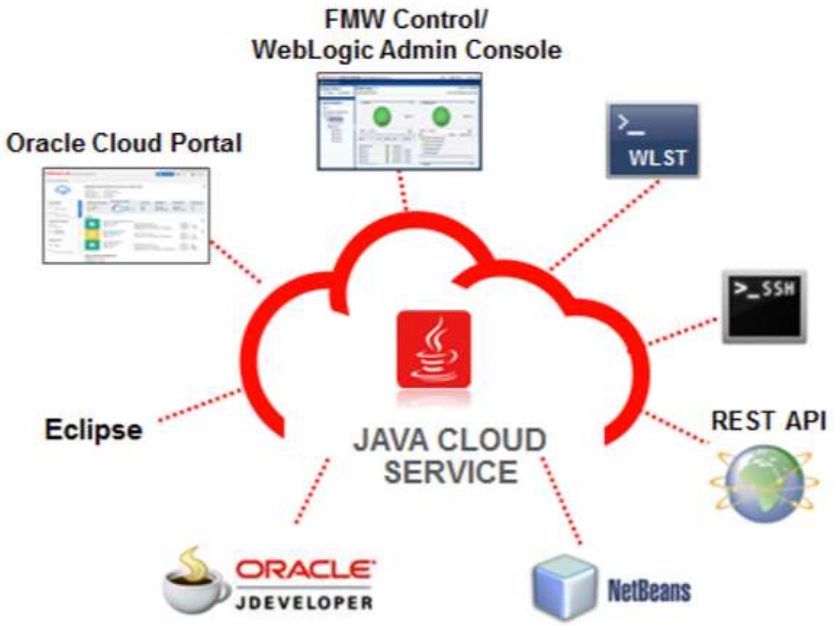
- Service Availability is defined by Oracle in Cloud Service Policies and Cloud Service Agreements
- The Oracle Cloud Service policies can be found at: http://www.oracle.com/us/corporate/contracts/cloud-services/
    - Oracle Public Cloud Hosting and Delivery Policies
    - Oracle PaaS/IaaS Public Cloud Services Pillar Document
    - Oracle Online Cloud Services Agreement
- For Java Cloud Service, the Target Uptime is 99.5%.
    - The high availability strategy includes deploying the services on resilient computing infrastructure, component and power redundancy with backup generators and may incorporate redundancy in one or more layers including network infrastructure, program servers, database servers and/or storage.
    - Disaster Recovery between data centers is described in whitepapers: http://www.oracle.com/goto/maa

Java Cloud Service: Avaliability

Ensuring service availability includes replicated instances between cloud sites.



How You Interact with Java Cloud Service



- Oracle Cloud Portal
- WebLogic Admin Console
- Fusion Middleware Control
- Traffic Director Admin Console
- Public REST APIs
- Command Line Interface
- SSH or VNC to VM
- Standard IDEs

Speaking of Development Environments…

- Oracle Developer Cloud Service is:
  - A complete, integrated development platform - as a Service
  - Complete application lifecycle management
  - Agile team management
  - An entitlement with Java Cloud Service

Oracle Management Cloud

- Provides a comprehensive IT management infrastructure for both Oracle and non-Oracle hardware and software
- Offers insight into the health of all the components in your enterprise or private cloud
- Supports Application Performance Monitoring, Log Analytics, IT Analytics Cloud, Infrastructure Monitoring, Orchestration and Compliance services
- Designed for flexibility and customization

Java Cloud Service On-Premise

- If you want to use public cloud, but cannot for geography, political, or other reasons
- Provides the same public experience, but on-premises
- Runs on Oracle Cloud Machine in your data center
- Oracle Cloud Machine
  - Operates Oracle IaaS and PaaS Services in an on-premises environment
  - Compute and Storage Services
  - Database Cloud Service
  - Java Cloud Service
  - Additional Cloud Services on the roadmap

Additional Resources

Additional resources are available at http://cloud.oracle.com/java

Summary

In this lesson, you should have learned how to:

- Define the three types of Java Cloud Service
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- Describe the Coherence option for Java Cloud Service

Oracle Cloud Versions
Applies to Oracle Products: • Oracle Java Cloud Service: **17.1.4** • Oracle WebLogic Server: **12.2.1** • Oracle Coherence: **12.2.1** • Oracle Traffic Director: **12.2.1**

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