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Developer Cloud Service – An Overview

Product Mangement – Oracle Development Tools
October, 2015

JavaOne ORACLE

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Program Agenda

1. Challenges Facing Development Organizations
2. Developer Cloud Service Overview
3. Demo
4. Developer Cloud Service – A Use Case

Why Move to the Cloud?

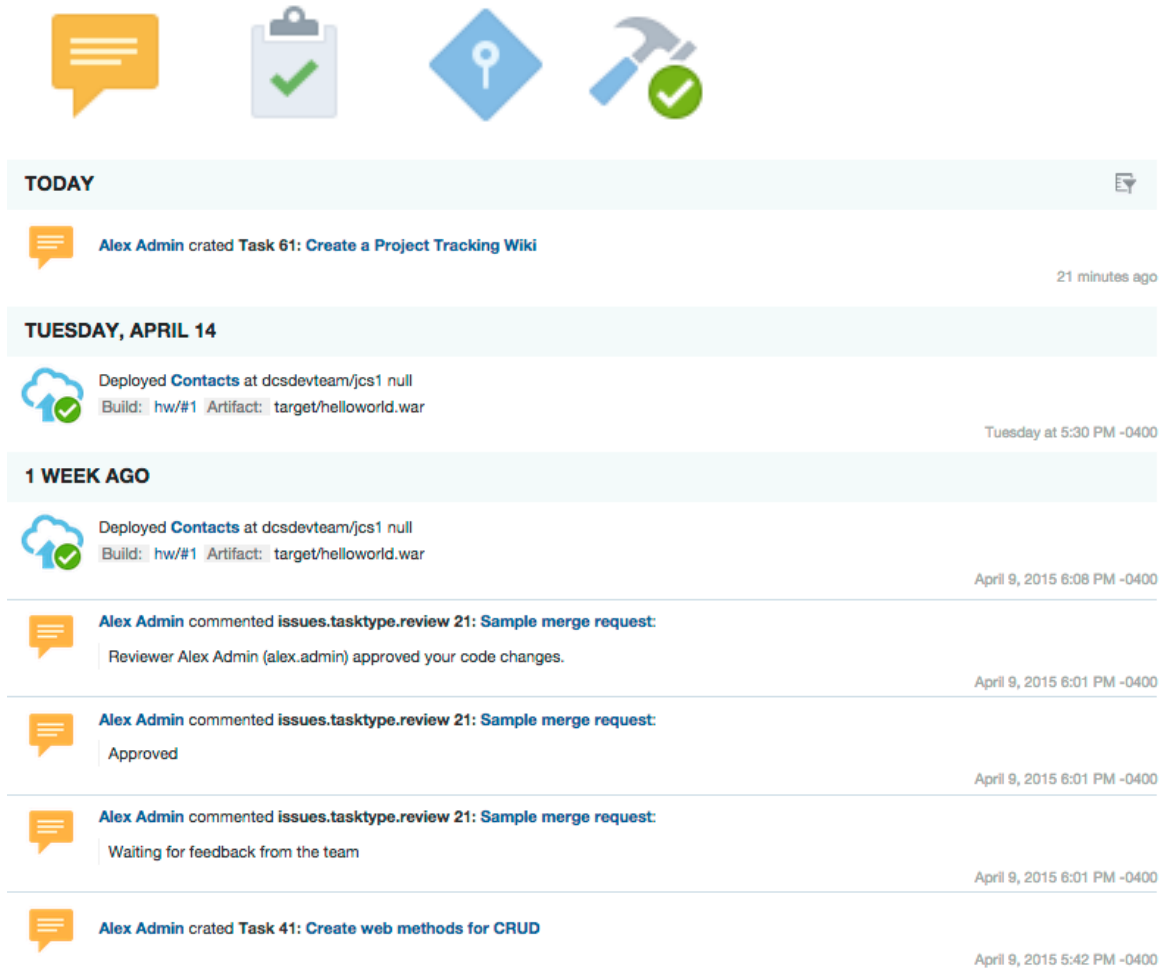
Better applications
developed faster
cheaper

Development Organization Challenges - Costs

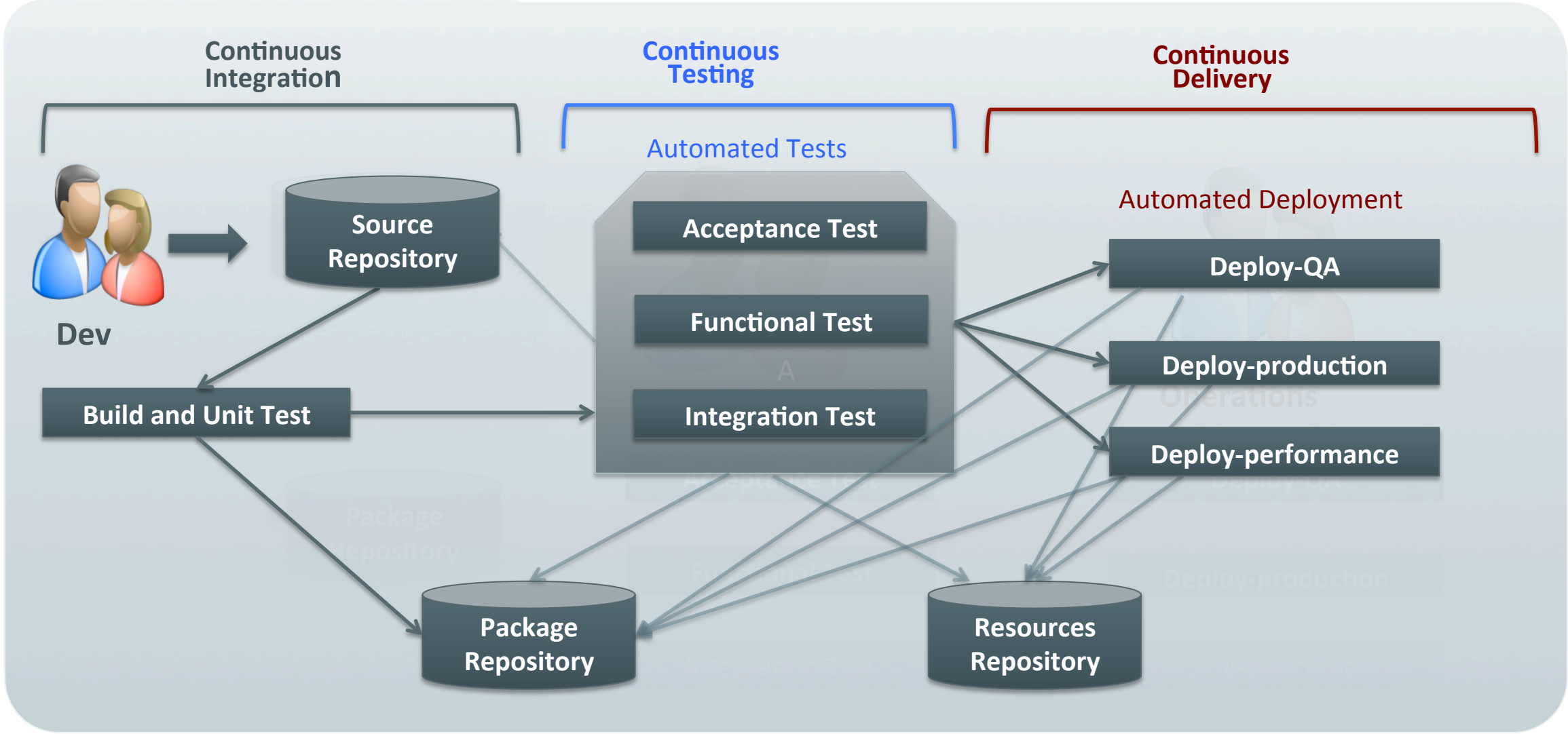
- Acquire hardware and software
- Setup and install components
- Connect components
- Configure IDEs
- Maintain and upgrade versions
- Connect to deployment platform

Development Organization Challenges - Process

- Achieving build process agility
- Producing better applications
- Streamlining deployment
- Managing teams and developers
  - Tracking and reporting
  - Team communication
  - Workload management and prioritization



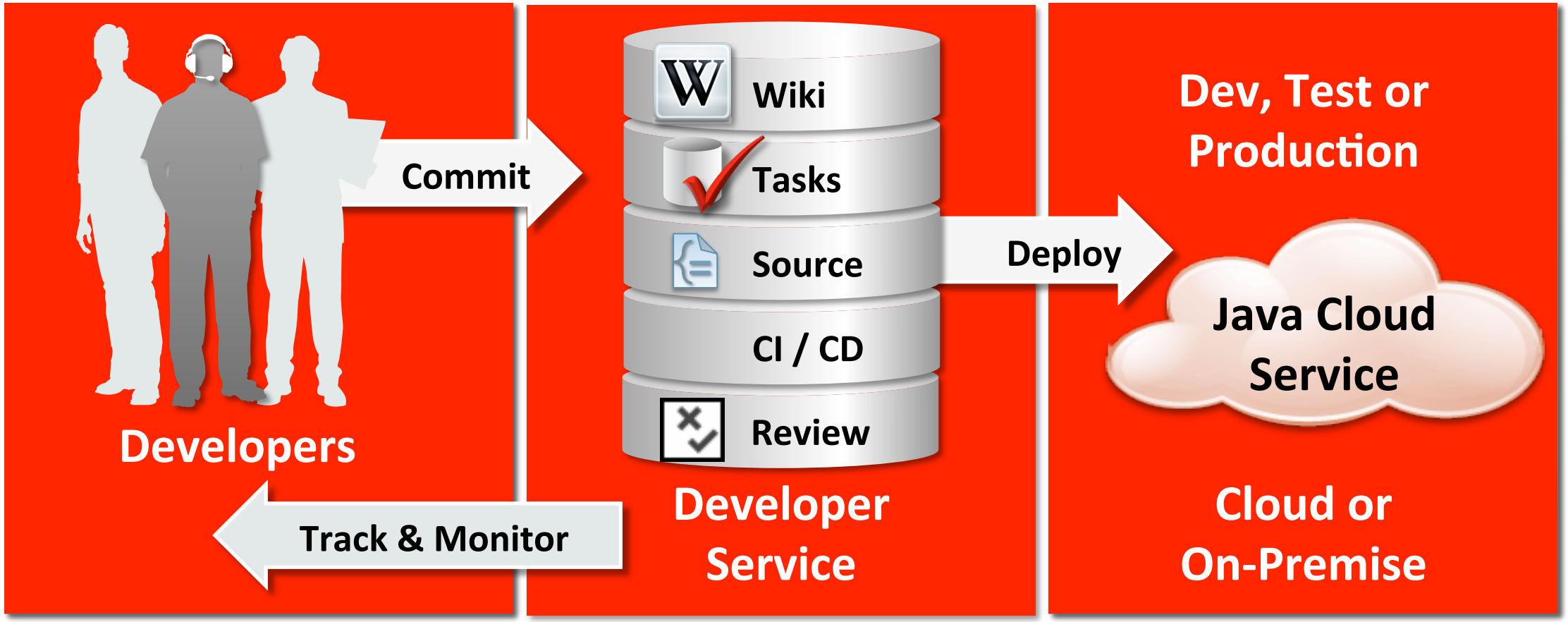
Modern DevOps



The Ideal Solution

- Integrated DevOps solution
- Quick startup time and easy provisioning
- Minimal maintenance costs
- Informative tracking of development activities
- Seamless deployment
- Flexible - cloud or on-premise

Developer Cloud Service: Bringing it All Together



Developer Cloud Service: What It Is

- Development Platform provided as a Service
- Application Lifecycle Management
- Team Collaboration & Management
- Delivery Management

Source Control Management

Issue Tracking

Continuous Integration

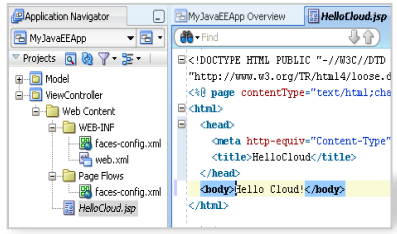
Wiki Collaboration

bit.ly/HOL10381

cloud.oracle.com

Launch Eclipse

Developer Cloud Service - Interfaces



Mylyn

JDeveloper, NetBeans and Eclipse

Web Dashboard

REST Interface

SSH to GIT

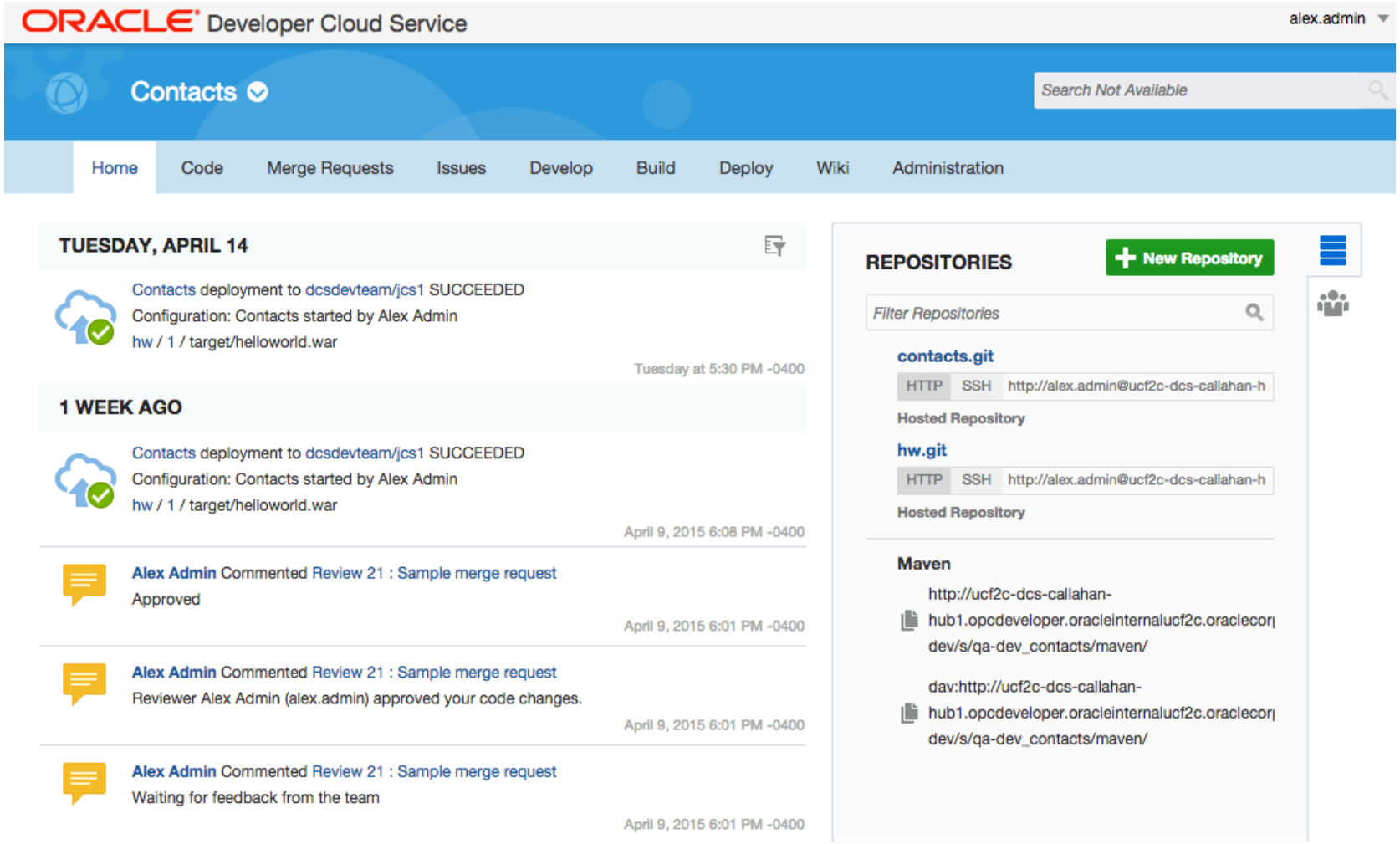
Mylyn

Partners

Developer Cloud Service

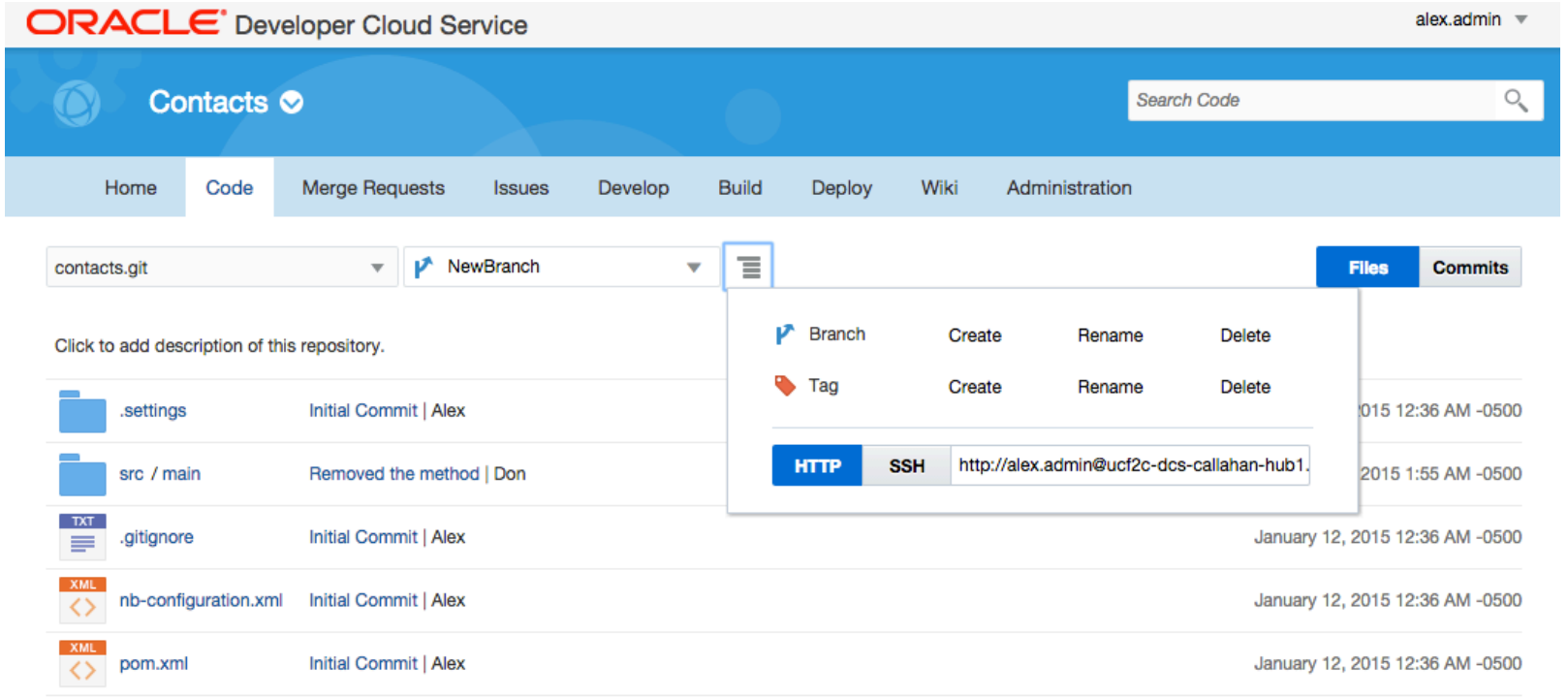
Manage Your Projects

- Activity Stream
- Git Repositories
- Maven Repository
- Team Members



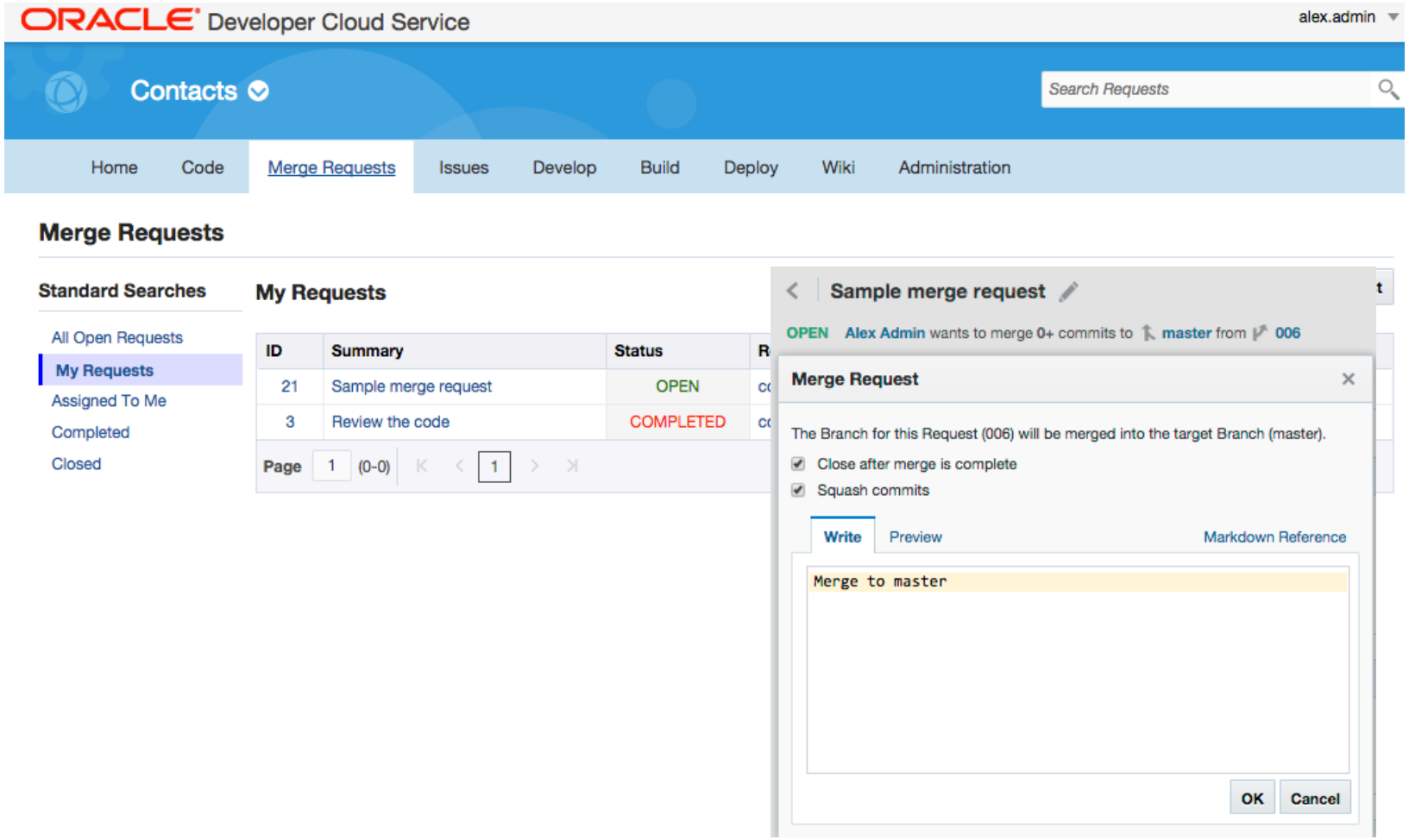
Version Your Code With Git

- Automatically provisioned
- Connect from any IDE
- Command line accessible
- Integrate with GitHub



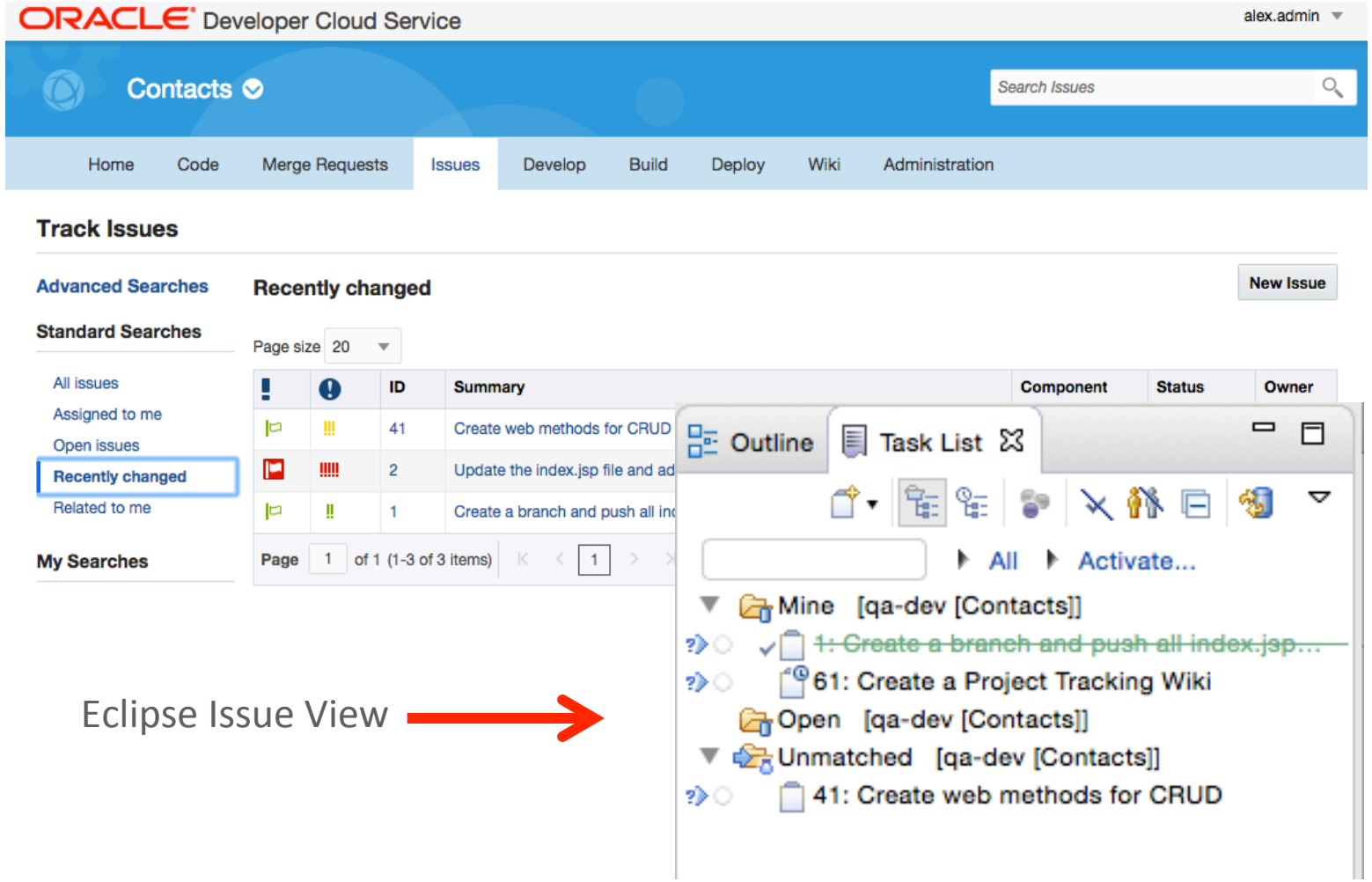
Review Peers Code

- Create Code Reviews
- Invite Team Members
- Collaborate on Reviews
- Accept / Reject / Iterate Reviews
- Comment on Code
- Merge Code
- Merge Conflict Resolution



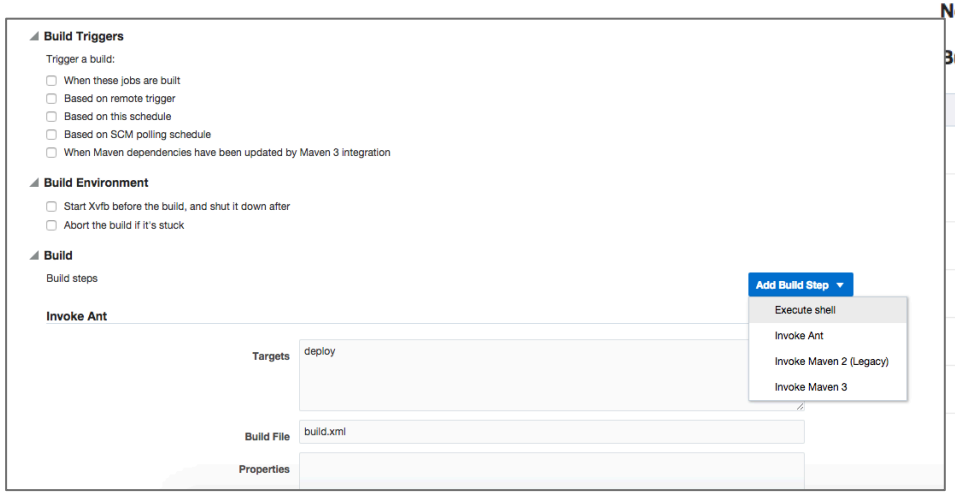
Track Project Issues

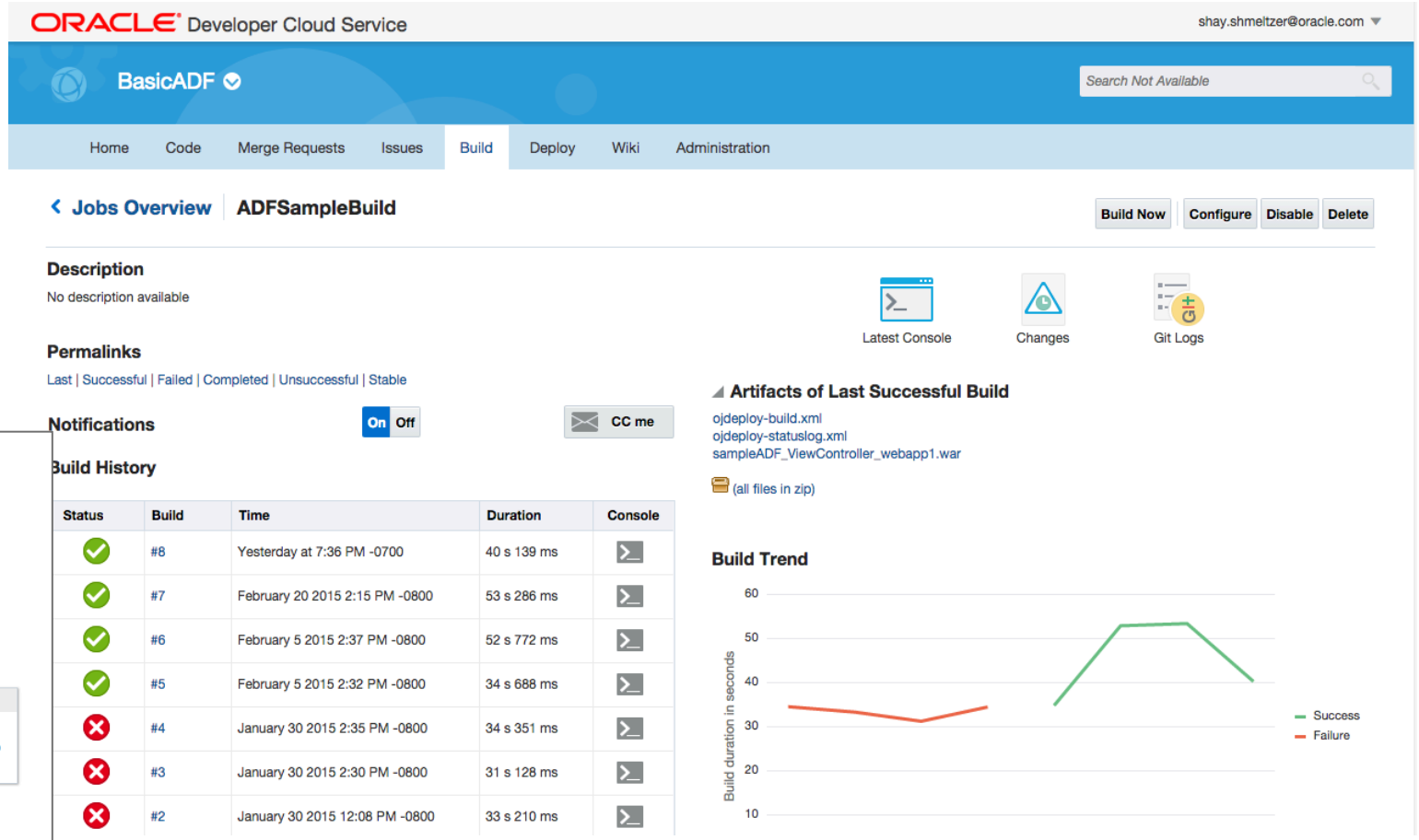
- Track Requirements/Bugs/ERs
- Assign to team members
- Integration with MyLyn in IDEs



Automate Project Builds

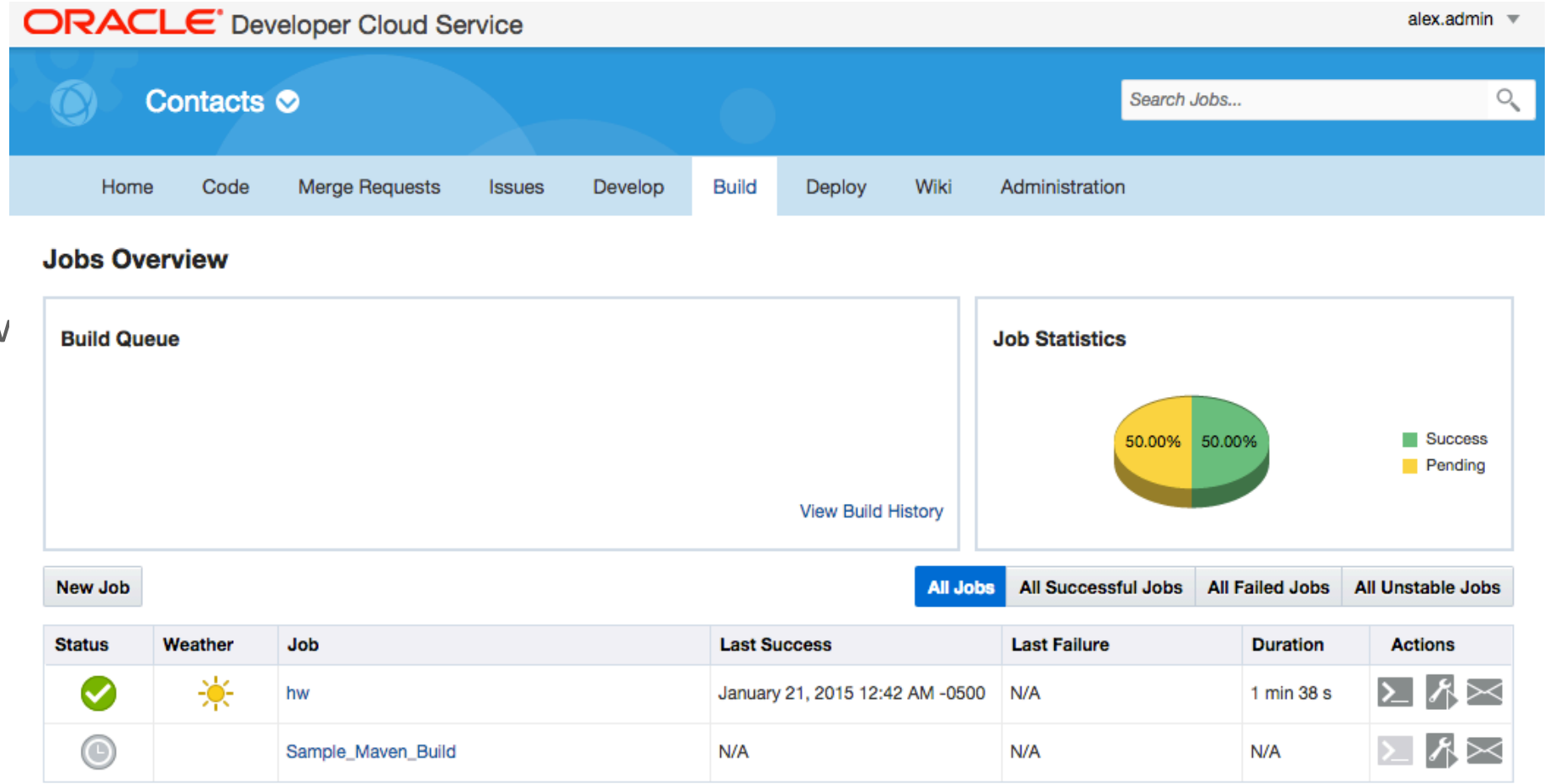
- Maven
- Ant
- Event based automation
  - Code check-in





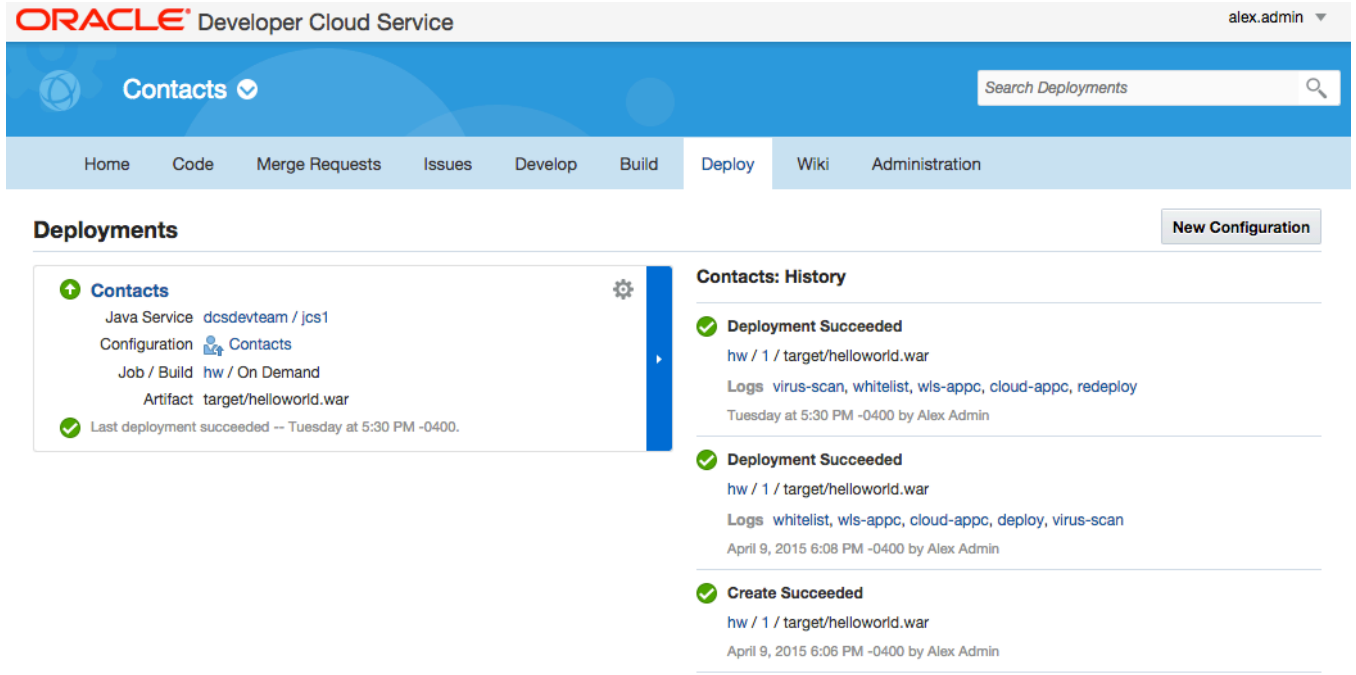
Continuous Integration / Continuous Delivery

- Build status by job
- Create new jobs
- View build history
- Save views
- Executor active view



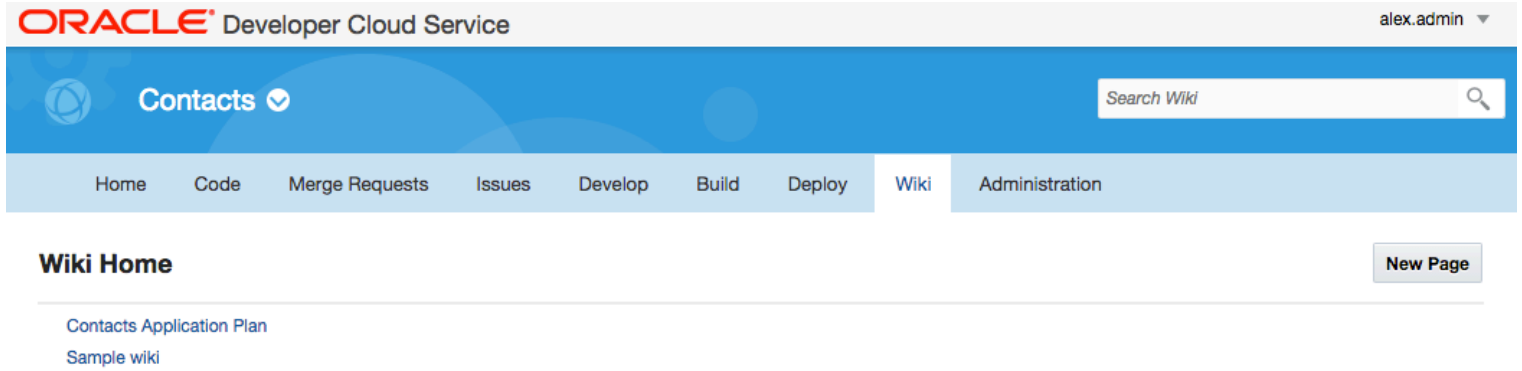
Simplified Application Deployment

- Create deployment configurations
- Start/Stop a deployment
- Redeploy/Un-deploy applications
- In the cloud or on-premise deployment



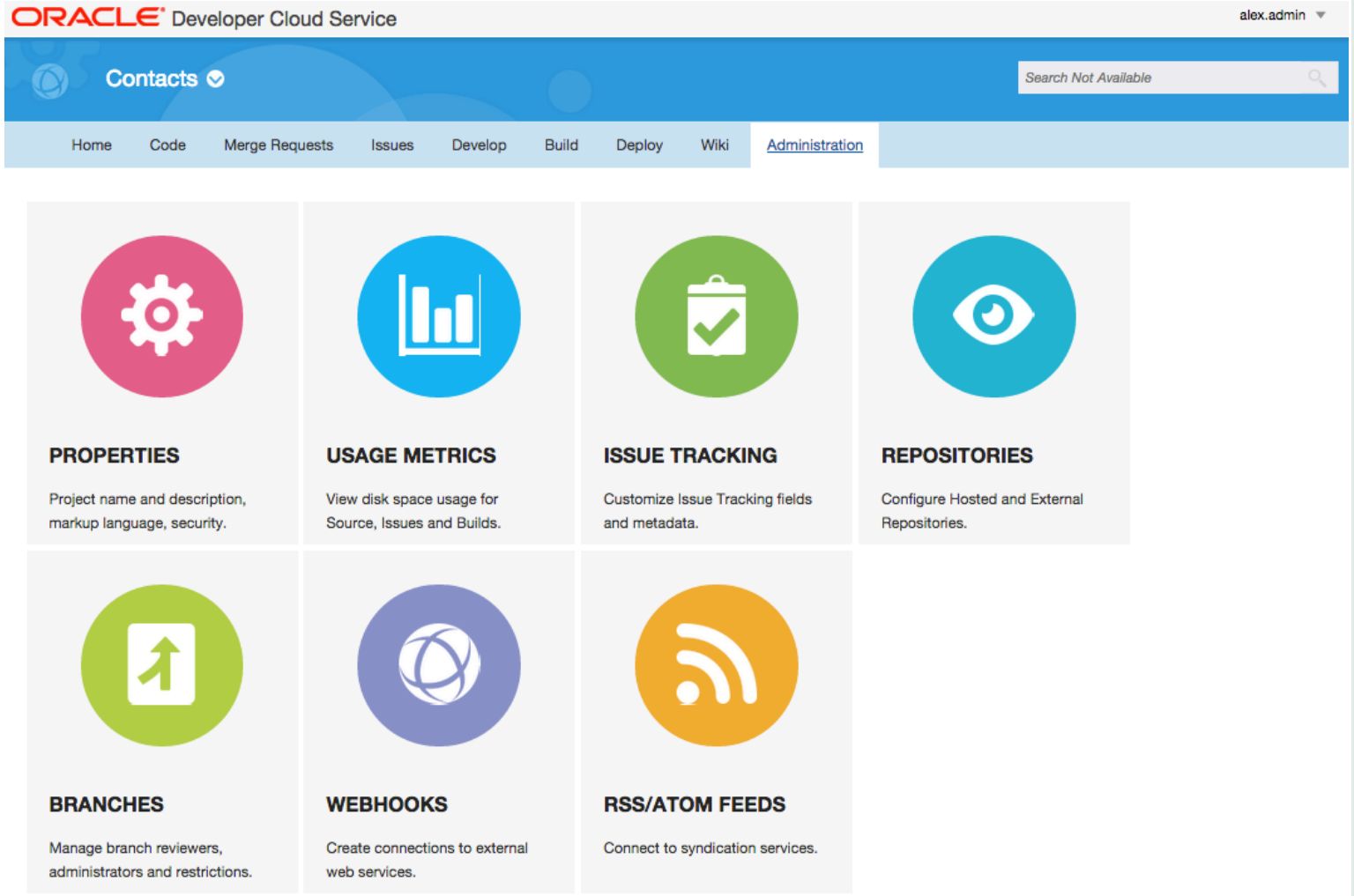
Share Information Through Wikis

- Create a new project wiki
- Collaboration through project specific wiki
- Content management
- Wiki markup of choice



Administer Your Projects

- Manage Project Properties
- Analyze Usage Data
- Customize Issue Tracking
- Configure Git Repositories
  - Hosted & External
- Manage Branches
  - Administrators & Restrictions
- Create Connections to External Web Services
- Connect to Syndication Services



Developer Cloud Service

Simplify Development

- Automated Provisioned Env
- Preconfigured & Integrated
- Automated Builds & Deployments
- Web based administration

Collaborate & Manage

- Integrated team source repository
- Continuous integration with breakage notifications
- Task/Defect tracking with activity stream and notifications

Deploy Automatically

- Deploy into Java Cloud Service automatically
- Workflow ensures build & test

Integrated With IDEs

- JDeveloper
- Eclipse
- NetBeans

Developer Cloud Service

DEMO

Source Control Management

Issue Tracking

Continuous Integration

Wiki Collaboration

Case Study

Team Overview – DevCS Development Team

- Distributed team of > 145 developers
- Thousands of lines of code
- Scrum methodology running 2 week sprints
  - Each sprint delivers production ready builds
- Uses Developer Cloud Service to manage all Development Operations (DevOps)

Source Management

- 27 Git repositories
- 1 Project for Developer Cloud Service
  - Represents many Git repositories for each product component and/or sub-component
  - Issue tracking spans project
- Logically separate code represents a component and has it's own Git repository
  - Versioned and branched independently

Merge Process – Merge Requests

- New features / bug fixes occur on a feature branch created by a developer
- Once feature / bug fixes are complete, merge request is created with target of master on component repository
- Default reviewers on a component repository feature branch
- Developer can add additional reviewers
- Code is reviewed
  - Iterated over based on reviewer comments -> Approved/Rejected
- Merge is initiated on Approved code
  - Every check-in that's merged initiates a build

Build Process

- Builds (In addition to check-in builds) – Development
  - 2 times a day an integration build is initiated
    - Builds all Git repositories for a consistent stripe in time
    - Build is deployed to VMs running in Cloud (Development Staging Env.)
    - Downstream job is initiated running functional test (selenium suite tests) against env.
- Builds – Production Candidates
  - Master is branched every 2 weeks and a Build is initiated
  - Deployed to a Production Candidate VM in Cloud
  - Selenium Tests run against Production Candidate VM in Cloud
  - Manual QA against Production Candidate VM
  - If all tests pass, branch may be deployed to customer production environment

Metrics Overview

- Many feature branch builds occur on every developer merge
- 2 integration builds/day
- 2 Week Development Sprint
  - 1 automated production release build every 2 weeks
- ~1,000 transactions/day
  - Transactions include commits, builds, code review activity, merges, tasks, etc…
- 145 Developers
- 27 Git repositories
- 1 Maven repository

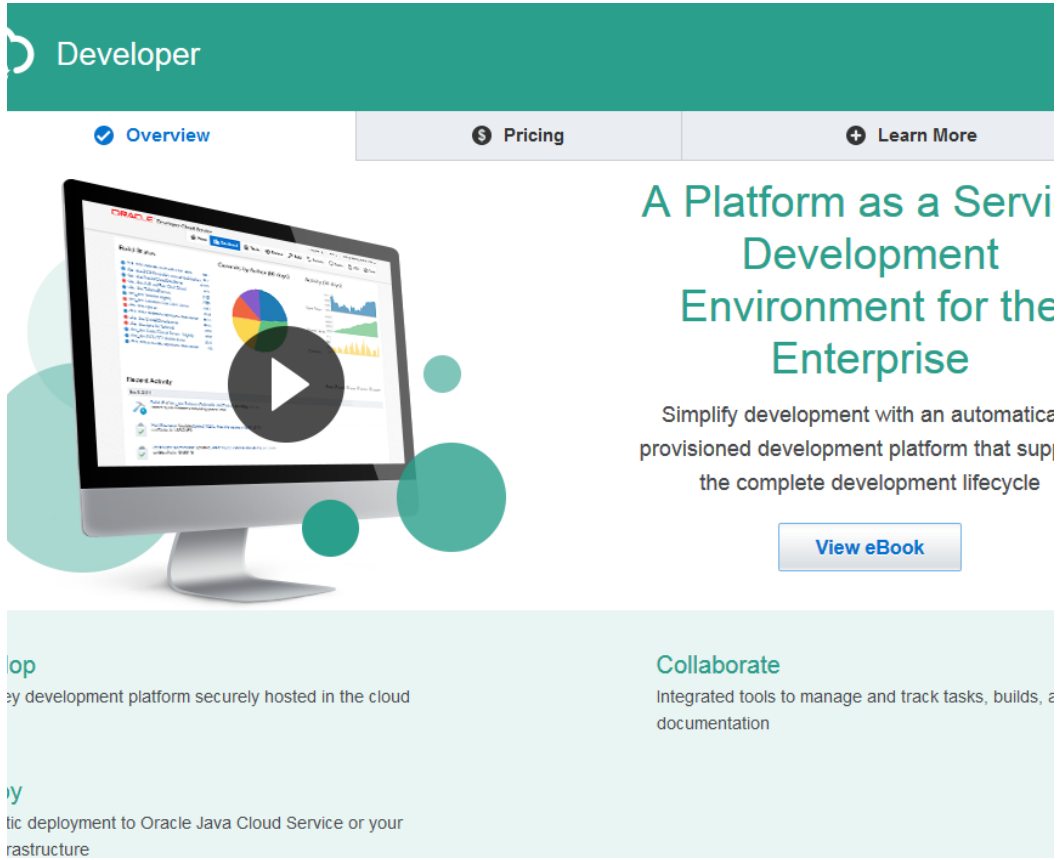
Summary

Developer Cloud Service Value Proposition

- Eliminate setup and startup time
- Reduce maintenance costs
- Leverage integrated ALM solution
- Extend code accessibility
- Improve team collaboration
- Simplify team management
- Streamline cloud deployment
- Produce better applications faster

Get Started Today

cloud.oracle.com/developer_service



- Tutorials
- Videos
- eBook
- Whitepapers
- Documentation
- Forums

Learn More

What	When	Where
HOL - Improved Development Lifecycle, Team Collaboration, and DevOps in the Cloud	Mon, 5:00	Hotel Nikko – Mendocino I/II
Oracle Cloud Platform for Rapid Applications Development and Integration in the Cloud	Tue, 12:15	Moscone South 302
Development Operations in the Cloud: A Use Case and Best Practices	Tue, 5:30	Parc 55 – Powell I/II
HOL - Improved Development Lifecycle, Team Collaboration, and DevOps in the Cloud	Wed, 2:45	Hotel Nikko – Mendocino I/II
DevOps for Mobile in the Cloud	Thu, 12:00	Moscone South 304

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