

# Oracle Developer Cloud Service

Oracle Developer Cloud Service provides a complete development platform that automates software development and delivery cycles, and helps teams manage agile development processes. The integrated cloud-based platform includes issue tracking, agile development management, code versioning and review, continuous integration and delivery automation, as well as team collaboration features such as wikis and live activity stream. With an easy to use web interface and integration with popular development tools, Oracle Developer Cloud Service helps deliver better applications faster.

## INCREASING DEVELOPMENT AND DELIVERY AGILITY

Modern development teams aim to deliver better software in shorter cycles. Agile development methodologies help developers adopt to changing business requirements quickly and accelerate turnaround time for delivering working software to customers. Incorporating DevOps automation further helps the organization to streamline the delivery of the software to the customer, eliminating delays in provisioning and deployment of both infrastructure and software.

Oracle Developer Cloud Service provides an integrated platform that combines DevOps and agile features to help manage development teams, software, and infrastructure from a single location.

Through its cloud based architecture, integration of popular frameworks and utilities, and support for open standards that allow integration with other solutions, Developer Cloud Service makes it easy to improve the whole delivery cycle with features that address planning, coding, building, testing, releasing and deploying better software.

## Key Features

- Zero install – cloud and browser based
- Build and deployment automation
- Software and infrastructure management
- Git based version management
- Task tracking system
- Agile methodology and Sprint management tools
- In Browser peer code review process
- Wiki and code snippets
- Standard based interfaces to external systems
- Integration with multiple development tools

## FROM INCEPTION TO DEPLOYMENT IN ONE ENVIRONMENT

Oracle Developer Cloud Service supports a complete development lifecycle providing features for planning, coding, packaging, testing, releasing and deploying software. By adopting “infrastructure as code” practices, Developer Cloud Service extends support for a similar cycle for infrastructure platforms. Out of the box Developer Cloud Service provide such features as:

- **Task tracking system** – track issues, features, and tasks in a central repository. Adopt agile methodology and define and track epics and stories too. Prioritize and assign tasks to team member, estimate the effort, and target tasks for specific software releases, then track the progress through the development process.
- **Agile and sprint planning** – create agile boards supporting both Scrum and Kanban approaches and track the execution of development sprints, the tasks associated with them, and the load across team members. Leverage built in reports and charts to track team progress and KPIs.
- **Code versioning repositories** – Git based version management system helps teams to manage code revisions in central private or shared code repositories. In-browser ability to create branches and modify code along with context sensitive search capabilities further enhance code management tracking each change through the project timeline.
- **Code review process** – give managers and team members the opportunity to review and comment on code changes before they are merges with the rest of the project.
- **Build servers** - automate such tasks as compiling, packaging, and testing with support for a variety of popular build frameworks and utilities that work across multiple development languages. In addition leverage standard frameworks to automate infrastructure provisioning lifecycle too.
- **Tests Automation** – Integration with popular testing frameworks such as JUnit and Selenium enables automation of both logic and UI testing. Integration with popular code review solutions such as Sonarqube and Findbugs further ensure code quality.
- **Continuous Integration Engine** – orchestrate, schedule, and automate build job execution through graphical pipeline designer. Define triggers that will initiate build as well as dependencies between builds. Monitor execution and execution history from web dashboards.
- **Deployment automation** – automate deployment of code and infrastructure with ease to Oracle’s cloud services and other locations.

The integration between all the features help track tasks from their inception stages through their development, test, and all the way to the final deployment giving unique insight into the development process and helping improve development speed.

### Key Business Benefits

- Improved team collaboration
- Insight into development process progress
- Automated continuous integration and delivery
- Support multiple languages and build utilities
- Enhanced code management
- Integrated software and infrastructure management
- DevOps and Agile tooling in one platform
- Easy to get started with zero install

The screenshot shows the Oracle Developer Cloud Service dashboard. On the left, a dark sidebar lists various project management and development tools: Project, Code, Maven, Releases, Snippets, Merge Requests, Issues, Agile, Build, Deploy, Docker Registry, Wiki, and Administration. The main content area is titled 'RECENT ACTIVITIES - FRIDAY, MAY 18'. It lists several recent events: a failed build for 'UpdateDB', a successful build for 'QADBProvisioning', a branch deletion for 'fixEmp' in 'Flyway5.git', a system comment about a defect in 'Emp table', a closed review for 'Defect 41', and a system update for the same defect. To the right, there are sections for 'REPOSITORIES' (listing 'Flyway5.git', 'Tests.git', and 'Maven') and 'Docker' (listing an external Docker registry). The top right corner shows the user's email: shay.shmeltzer@oracle.com.

Figure 1. Centralized dashboard for all the development activities

## DEVOPS AUTOMATION FOR SOFTWARE AND INFRASTRUCTURE

Oracle Developer Cloud Service helps automate the DevOps cycle for both software and infrastructure with:

- **Customizable build servers** – Define build servers and the software stacks installed on them. Manage servers' lifecycle and allocations across teams.
- **Declarative build jobs configuration** – Declarative interfaces make it easy to define build steps and configurations that automate build tasks with a variety of popular build frameworks and utilities including Maven, Gradle, Ant, npm, browser, gulp, grunt and others.
- **Continuous integration pipelines** – Define continuous integration flows through visual pipelines. Monitor live execution of pipelines and build job execution history from a central location.

The screenshot shows the Continuous Integration and Delivery (CI/CD) dashboard. At the top, there are two cards: 'Build Queue' (showing a single job 'UpdateDB (QADBSetup)' with a progress bar at 21%) and 'Job Statistics' (a pie chart showing 25% Failed, 25% Success, 25% Test Failed, and 25% Building). Below these are tabs for 'Jobs' and 'Pipelines'. The 'Jobs' tab is active, showing the 'UpdateDB (QADBSetup)' job. The 'Pipelines' tab shows a pipeline named 'QADBSetup' with 1 step. The pipeline diagram shows a sequence of steps: 'Start' → 'QADBProvisioning' (green) → 'UpdateDB' (blue) → 'DBTests' (orange). A feedback loop from 'DBTests' goes back to 'UpdateDB'. The 'DBTests' step is highlighted with a red border, indicating it is the current step in the pipeline. There are also 'Auto Start' and settings icons for the pipeline.

Figure 2. Continuous Integration and Delivery Dashboard

## ENHANCED TEAM COLLABORATION

Communication between team members is an essential component to successful development teams. Oracle Developer Cloud Service helps team member share their knowledge and track project progress with:

- **Activity stream** – Live dashboard shows the latest activity in the project. See exactly who did what and when.
- **Wiki** – create web pages that contains information that needs to be shared among team members. Add attachments to create a repository of team knowledge.
- **Snippets** – share commonly used code pieces among team members.
- **Code review** – Team members can request code review from their peers to help them create better code. The team members can comment on the code to share their advice and practice peer programming approach.

## DEVELOPMENT PROCESS MANAGEMENT

Keeping track of the execution of project tasks helps deliver applications on time with the right scope defined. Oracle Developer Cloud Service enables teams to adopt agile development methodology with:

- **Task tracking system** – track, prioritize, and assign tasks to team members. Provide estimates on development time and complexity to better plan development cycles.
- **Agile dashboards** – Track team's backlog and development sprints with support for both Scrum and Kanban boards. Track and update the status of tasks in a sprint with a view of ownership and status.
- **Reports** – see the activity of various team members in charts and reports. Track progress and monitor past performance to improve planning of future development sprints.

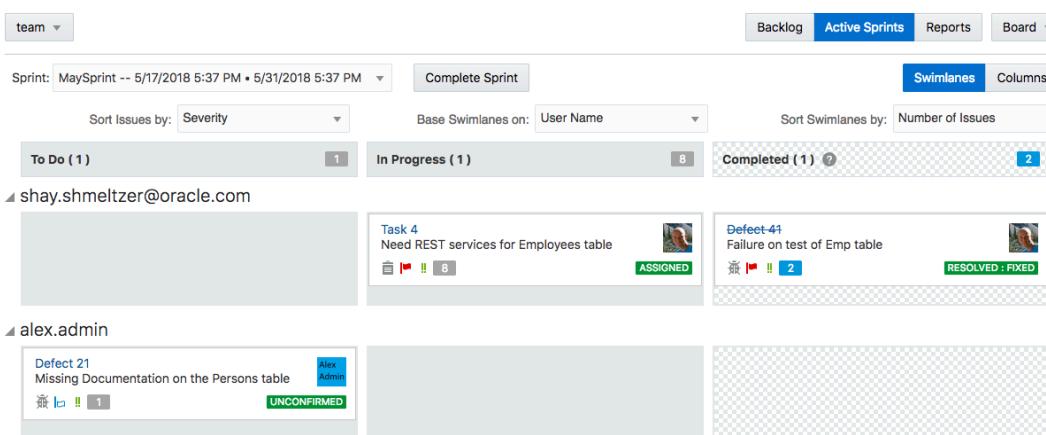


Figure 2. Agile methodology dashboard for development progress tracking

## SIMPLE TO PROVISION AND INTEGRATE

The cloud-based architecture of Oracle Developer Cloud Service enables team to get started and provision environments for projects in minutes. With a comprehensive web interface, all the operations related to the development and delivery cycle are available from anywhere.

In addition to supporting code operation from any Git client, built in integration is available in popular IDEs such as Eclipse, NetBeans, and Oracle JDeveloper to allow developers to directly interact with the task tracking system directly from inside their IDE.

Oracle Developer Cloud Service supports open interfaces to integrate with existing solutions that development teams might be using. Through open standards such as Webhooks, REST and SSH Oracle Developer Cloud Service interface with external tools to notify them of events in the development lifecycle, and to accept input into its code and task repositories.

Oracle Developer Cloud Service supports defining build procedures for multiple development languages and environments supporting a variety of popular build frameworks such as Maven, Ant, Gradle, npm, Grunt, Gulp, Bower and more. Support for standard infrastructure command interfaces for Docker, Kuberentes, and Terraform helps automate environment provisioning. In addition, unique support is offered for both the Oracle Cloud Infrastructure and the Oracle Platform Service Management command lines to streamline cloud operations in the Oracle ecosystem.

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## Integrated Cloud Applications & Platform Services

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