What is Continuous Integration?

Continuous Integration is a development practice that requires developers to integrate code into a shared repository at regular intervals. This concept was meant to remove the problem of finding later occurrence of issues in the build lifecycle. Continuous integration requires the developers to have frequent builds. The common practice is that whenever a code commit occurs, a build should be triggered.

Integration of Sonar Cube into the build process allows us to offer reports on duplicated code, coding standards, unit tests, code coverage, code complexity, comments, bugs, and security vulnerabilities.

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YOUR ORACLE
Hosting Solution

Summary

The key benefits of KnightWorks hosting include:

COMPLETE DEVOPS

- We can handle to development or we can support your developers
- Complete code management
- Version Control Repository - you can never loose your code including past versions
- GUI based Code Pushes - Full control who can push to what environment. le management approval for production pushes

ORACLE DATABASE

- Latest version of Oracle
- Oracle ODA hardware
- Experienced Oracle DBAs
- Refreshes from production of the test environment

HIGH AVAILABILITY

- Load Balancer across for multiple application server
- SLA's to guarantee uptime

SECURITY

- Robust Firewall security - threat detection
- Automated Code inspection for security issues
- VPN access for your team

DISASTER RECOVERY

- Oracle Cloud Backup
- Off site disaster recovery

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⊕
knightworkshosting.com

The cloud offers an opportunity for IT organizations to reduce costs, improve scalability and IT agility. **KnightWorks** Infrastructure as a service provides a cloud environment suitable for many different application workloads.

⊕ knightworkshosting.com

✉ support@knworks.com

📞 Office: (469) 298-9764

📞 Oncall: 214-563-6358

About KnightWorks Consulting, Inc.

KnightWorks Consulting was founded in 2000 as an IT consulting, hosting, and application design firm. **KnightWorks Consulting** offers you a comprehensive set of Internet services. These services include:

- Needs assessments
- System Design
- Programming
- Database design and support
- System Administration
- Hosting
- Follow-up support

Our customers include such large companies as International Paper and major claim processors in the insurance agency. All of have relied on **KnightWorks** to provide a high level of service and satisfaction.

Major Projects include:

- eLearning Systems
- Security Auditing
- Database relocation
- Claim system development
- Facebook Application hosting
- Cloud Gaming
- Hadoop Big Data Analysis
- AI Research with Google Tensorflow

KnightWorks Consulting Hosting Facilities

PRIMARY SITE: INTERNAP, PLANO TX

Convenient Location: Plano, TX Located in the heart of the Silicon Prairie as Dallas is sometimes called adjacent to many Fortune 500 companies with convenient access to highways, airports and hotels.

Power Density: Modular UPS units and high-efficiency cooling options enable power density of up to 18kW per rack.

Hybrid Hosting: Seamlessly connect colocation, hosting and cloud environments within the facility to lower bandwidth costs and maximize application performance.

Remote Management: View and manage your colocation environment remotely. Reboot servers, check power utilization and environmental temperature, and monitor bandwidth.

Resiliency: Designed for concurrent maintainability of generators, UPS and cooling modules, maximizing the uptime of your environment.

Carrier Diversity: Robust carrier neutral Meet-Me-Room, including alternative transit and local access options.

Low-latency Connectivity: Internap's multi-homed route optimized Performance IP™ provides links up to 10GB through multiple top-tier carriers. KnightWorks has 20M bandwith through our redundant firewalls.

On-Site Personnel: Data center engineers and technical support staff are on-site 24/7, proactively monitoring facility vitals.

Security: Closed-circuit television systems, 24/7 on-site security personnel and biometric, electronic and key card locks for increased security.

SECONDARY SITE: INTERNAP, SECAUCUS, N.J

Internap's data center located in Secaucus, N.J., is within easy access of the bridges and tunnels into Manhattan, the NJ Turnpike, the Secaucus Junction train station and the New York metropolitan area's three international airports. One of the most power dense facilities in the region, the New York Metro data center offers plenty of room to grow, utilizing a superior modular design to allow for enhanced flexibility and increased reliability.

Distance from Secaucus, NJ to Plano, TX

There are **1,357.71** miles from **Secaucus** and **Plano** and **1,547.19** miles by car.

Development Process (Devops)

The key benefits of the new process generally called "GitFlow" by industry experts is made possible by our dev ops process are parallel development, improved collaboration, release staging area, and support for emergency fixes. The workflow is illustrated below:
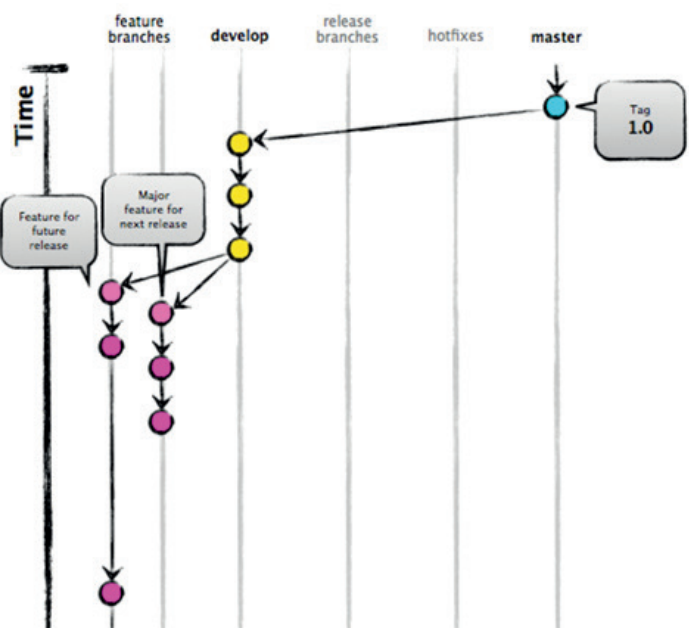
Parallel Development

One of the great things about "GitFlow" methodology is that it makes parallel development very easy, by isolating new development from finished work. New development (such as features and non-emergency bug fixes) is done in feature branches, and is only merged back into main body of code when the developers and testers are satisfied that the code is ready for release.

Collaboration

Feature branches also make it easier for two or more developers to collaborate on the same feature, because each feature branch is a sandbox where the only changes are the changes necessary to get the new feature working. That makes it very easy to see and follow what each collaborator is doing.

Release Staging Area

As new development is completed, it gets merged back into the develop branch, which is a staging area for all completed features that haven't yet been released. So when the next release is branched off of develop, it will automatically contain all of the new stuff that has been finished.

Support For Emergency Fixes

GitFlow supports hotfix branches - branches made from a tagged release. You can use these to make an emergency change, safe in the knowledge that the hotfix will only contain your emergency fix. There's no risk that you'll accidentally merge in new development at the same time.

To facilitate this we using Jenkins which is software that allows continuous integration. Jenkins is installed where the central build will take the very cumbersome process most people have in process today. The following flowchart demonstrates a very simple workflow of how Jenkins works.

Developers check their source code.

Jenkins will pick up the changed source code and trigger a build and run any tests if required.

The build out put will be available in the Jenkins dashboards. Automatic notifications can also be sent back to the developer.

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