



DevOps Tools @Sandia

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DevOps Infinite Cycle



DevOps cycle



Endless Possibilities: DevOps can create an infinite loop of release and feedback for all your code and deployment targets.

Pic source: CollabNet

Continues Integration (CI)



Jenkins



- Jenkins is an open source automation system that supports building, deploying and automating projects.
- Jenkins is offered at SNL via the following:
 - 1. Enterprise Service (CEE) – Offered by 9321 Integration and compilation Engineering (ICE)
 - Email: ice-help@sandia.gov for more info
 - 2. Community Service – Jenkins
 - <https://jenkins.web.sandia.gov/>
- Jenkins wiki page
 - <https://snl-wiki.sandia.gov/display/middleware/Jenkins+-+Continuous+Integration+and+Continuous+Delivery>

Nexus – Repository Manager



- Nexus is a software asset repository management system that allows your maven builds to pull the last assets into your application.
- Community Service – Nexus @Sandia can be found at
 - <https://nexusoss.web.sandia.gov/>
- Maven, npm, pypi repositories; Anonymous pull!
- Nexus Wiki page
 - <https://snl-wiki.sandia.gov/display/middleware/Nexus+OSS+-+Asset+Repository+Management>
- npm Sandia Repository
 - <https://snl-wiki.sandia.gov/display/DC/New+Sandia+npm+registry>

Version Control Systems



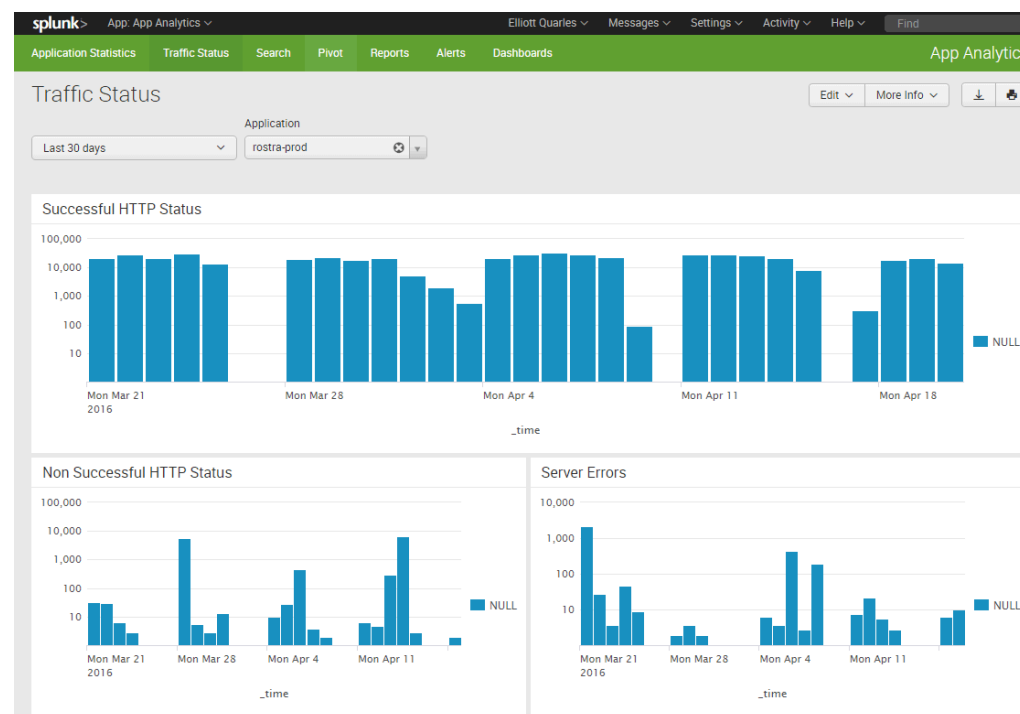
- GitLab: <https://gitlab.sandia.gov>
 - Wiki page: <https://snl-wiki.sandia.gov/display/HO/Gitlab+Community+Site>
 - Gitlab now natively supports an integrated Docker Registry
 - <https://snl-wiki.sandia.gov/pages/viewpage.action?pageId=227380892>
- TeamForge: <https://teamforge.sandia.gov>
 - Create SVN or Git repositories

Platform as a Service (PaaS) – Rostra



- Create your server and application environment in minutes...
 - Tomcat, Php, WildFly, WebLogic coming soon
- Rostra app: <https://web.sandia.gov/>
- Rostra Wiki : <https://snl-wiki.sandia.gov/pages/viewpage.action?pageId=213820998>

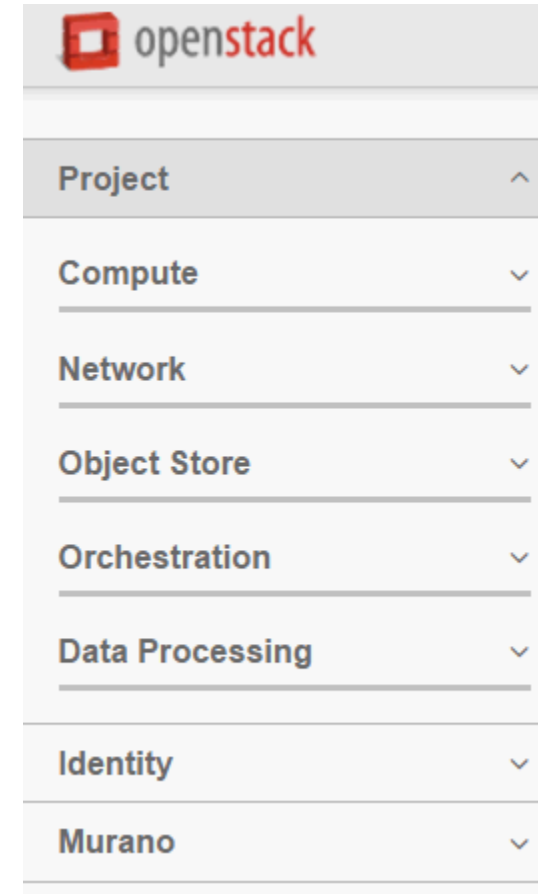
- Splunk captures, indexes and correlates real-time data in a searchable repository from which it can generate graphs, reports, alerts, dashboards and visualizations.
- Embedded on all Rostra servers



CEE Cloud – open stack



- CEE Cloud effort deploys DEVOPS platforms
 - Provided by Common Engineering Environment Steering Committee
- <https://cee-cloud.sandia.gov>
 - You do not need to be a Sys Admin to login
- Info url:
<https://computing.sandia.gov/cee>



myCloud – IaaS (for Sys Admins)



- myCloud is the enterprise cloud management system at Sandia
 - Provided by Enterprise Cloud Management Services (ECMS)
- <https://mycloud.sandia.gov>
 - You need to be a Sys Admin to login
- Info url:
<https://sharepoint.sandia.gov/sites/ECMS/SitePages/Home.aspx>

The screenshot shows the 'myCLOUD My Cloud Services' interface. At the top, there's a header with the 'myCLOUD' logo and 'My Cloud Services' text. Below this is a navigation bar with 'Catalog', 'My Resources', and 'myIT' tabs. The 'My Resources' tab is active, displaying a 'My Resources' section. On the right side of this section, there are links for 'Resource List', 'Activity Log', and 'My Requests'. Below these links is a table titled 'RESOURCE TYPE' with the following rows: 'Services' (0), 'Machines' (0), 'Storage' (0), 'Database' (0), 'Application Container' (0), and 'Custom' (0). The numbers in the table are displayed in orange circles.

RESOURCE TYPE	
Services	0
Machines	0
Storage	0
Database	0
Application Container	0
Custom	0

Avatar microservice



- **What is Avatar?**

- aSimple SNLID Thumbnail microservice
- Another community service
- i.e.: <https://avatar.web.sandia.gov/?user=ovenezu>



- Parameters: replace “ovenezu” with the userid of the person you wish to receive the thumbnail of
- The service will return an image. Even on failures, the default return will be the Sandia thunderbird logo.

Q&A forum for Developers

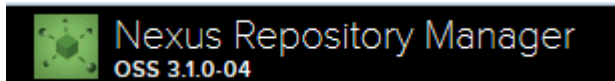


- SandiStack
 - Community service to ask question/s to DevOps
 - <https://sandistack.web.sandia.gov/>
- Mattermost embedded in GitLab for team communication
 - <https://mattermost.sandia.gov/login>

Expense Report Development Cycle



Jenkins



splunk>



DEMO – DevOps in action

