

2016-04-20 What is NDS Labs?

These are notes from a whiteboard discussion about the NDS Labs "big picture"

	NDS Labs "Test Drive"	NDS Labs "Developer"	NDS Share "Staging"	NDS Share
What is it used for?	<ul style="list-style-type: none"> • Exploration • Education/training • Comparative evaluation • Development (Explore what capabilities we can add to help developers addressing interoperability!) 	<- Merge? Development Prototyping	<- Merge? Alpha/beta testing	<ul style="list-style-type: none"> • Production releases <ul style="list-style-type: none"> ◦ From Labs as well as external resources (e.g. DataONE, NEON, Libraray archives, ...)
When is it used?	<ul style="list-style-type: none"> • Proposal stage • Demos/trials/test drives • Tutorials • Application development 	Post-proposal development and integration	Alpha/beta testing	Production deployments
What does it include?	<ul style="list-style-type: none"> • Functional services • Sample data 	Customized services Realistic but limited resources Fully-configured common services (e.g., iRODS federation, Shibboleth IdP, Swift storage)	Stable releases of integrated services Real users Real resources Real users Stable release	Actual scale resources SLA Security/Hardening
Analogy	<ul style="list-style-type: none"> • Trial installations, Test installations, Quick test instances 	Development VMs	Staging system	Production system

- Workbench/Test Drive: This is the current workbench service – supporting the ability to "test drive", demo, or trials services. This would be limited to services and configurations that are easily deployable via Kubernetes
- Developer: When users graduate from the Workbench, they are given access to real resources for development and integration. This might include services not easily available via Workbench such as a functioning iRODS preservation federation, Swift Object store, Shibboleth IdP, etc. Services wouldn't be started and stopped quickly – configuration options would be specified and services configured based on project requirements.
- Staging: When projects are ready for alpha/beta/rc testing, they would deploy their services to a staging environment. This would be limited-access, but on real resources (i.e., actual production configuration, but maybe not scale)
- Share: Once a project is ready for production deployment, it is moved to the "Share" environment. This could be hosted at AWS, GCE, TACC /SDSC/PSC/NCSA.

A note about Nebula

We spoke with the Nebula team about deploying "production" systems (services that need SLA/uptime guarantees). Nebula is currently not ready – for example, one compute node is failing, there's no UPS, the backend isn't parallel. Production services are currently running on VSphere/VMWare