

NDS Labs Project GUI Requirements

This page captures basic requirements for the NDS Labs GUI.

Scenario:

An NDS Labs pilot project has been approved and compute and storage quotas allocated. The **project administrator** has been sent credentials to access the NDS Labs project administration GUI

Definitions:

- Service: An individual Kubernetes service
- Stack: A named set of related services (e.g., clowder services)
- Endpoint: A publicly accessible endpoint for a service (e.g., NodePort)

Project Admin GUI Use cases:

Prerequisites:

Project admin has credentials to access the NDS Labs GUI

Use cases

Login

- If the project admin enters a valid username/password, they are logged in for the duration of a session or until they hit logout.
- If an invalid username or password are entered, an error message is displayed.

Logout

- Selecting "logout" terminates the session. The user must re-login to make changes to the system.

View list of available services

- A list of available services is displayed ordered by name
- The admin can search the list of services or add/configure a service

Search list of available services

- The admin can search the list of available services by name or keyword (tag)

Add service or set of services (stack) – configuration wizard

- The admin selects the "add" button next to a service
- The admin is prompted to complete a configuration workflow:
 - The system displays descriptive information about the selected service
 - The system displays a list of required (pre-selected) and optional dependencies
 - The admin can select or deselect optional dependencies
 - The system displays volume requirements.
 - The system displays project storage quota and available space
 - For each required volume, the system displays the minimum recommended storage (default). The user can specify storage allocation for each volume.
 - If a volume exists for this service, the user is prompted to reuse or reinitialize the existing volume
 - Confirmation
 - The system displays a complete list of required and optional dependencies, volumes and allocations
 - Finish
 - The selected services are added as a "stack" to the inactive part of the namespace with status "not started"

Configured services:

- For each service stack, the system displays the following:
 - A table of services grouped by "stack" name
 - Start/stop/remove
 - Endpoint URL
 - Service and stack status
- From this interface, the project admin can start, stop or remove a stack
- From this interface, the project admin can add optional services to an existing stack

Start/stop service

- The project admin can start or stop a service stack. The stack status is displayed as services are started.
- The admin is prompted to confirm stopping a service stack.
- If the service is stopped, the endpoint URL is no longer available

Add/remove optional services from stack

Precondition:

- Stack is stopped

Primary flow:

- The project admin can add or remove optional services from an existing stack

Alternative flows

- The project admin cannot remove required subservices of optional services (e.g., you cannot remove Rabbit without first removing Image Preview in Clowder)

Remove stack

- The project admin can remove a stack.
- They are prompted to confirm removal
- They are prompted to remove or retain allocated storage for the stack.

Save stack

- (Tentative) The project admin can save the stack configuration.

View stack status

- The project admin can view the status of a running stack

Endpoints

- The project admin can view the list of available endpoints for a service stack.
- The project admin can remotely access or share service endpoint URLs.

Logs:

- Tentative: The project admin can view logs for a service

Console

- The project admin can access the console of running stack services.

Assumptions/Questions

- A service can only be deployed once in a given a project? (or stack) but may be restarted/reconfigured.
- How can we support deploying multiple versions of the same service?

UI Mockups

Express Setup

Sign In to Access NDS Labs

← → ↺ 🏠

Q

NDS Labs

Sign In

Namespace

TERRA

Password

☒ Remember me

Sign In

Beginner Stack Configuration

← → ↺ 🏠

Q

NDS Labs

Express Setup

Expert Setup

👤

▼

Welcome to StackMaster

Stacks

Add Stack

A **stack** is a group of related software services that can be deployed to your namespace.

Be sure to name your stacks appropriately so that you can identify them.

You can choose to deploy however many stacks you would like!

Most importantly: have fun; make science!

DATA

Beginner Stack Configuration

← → ↺ 🏠

Q

NDS Labs

Express Setup

Expert Setup

👤

▼

TERRA

Account Settings

FAQ

Help

Logout

Welcome to StackMaster

Stacks

Import Stack

Add Stack

Clowder

Clowder with Text-Search

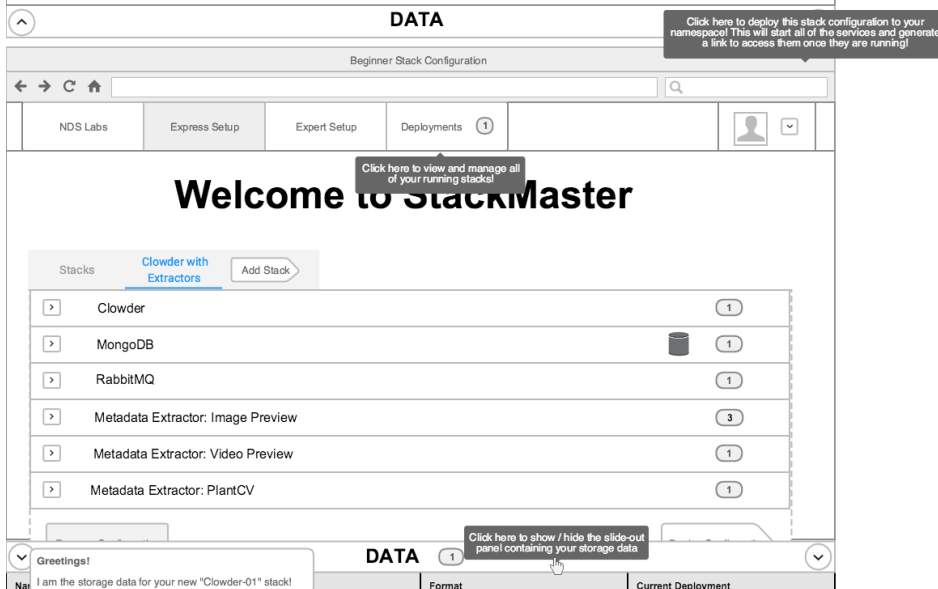
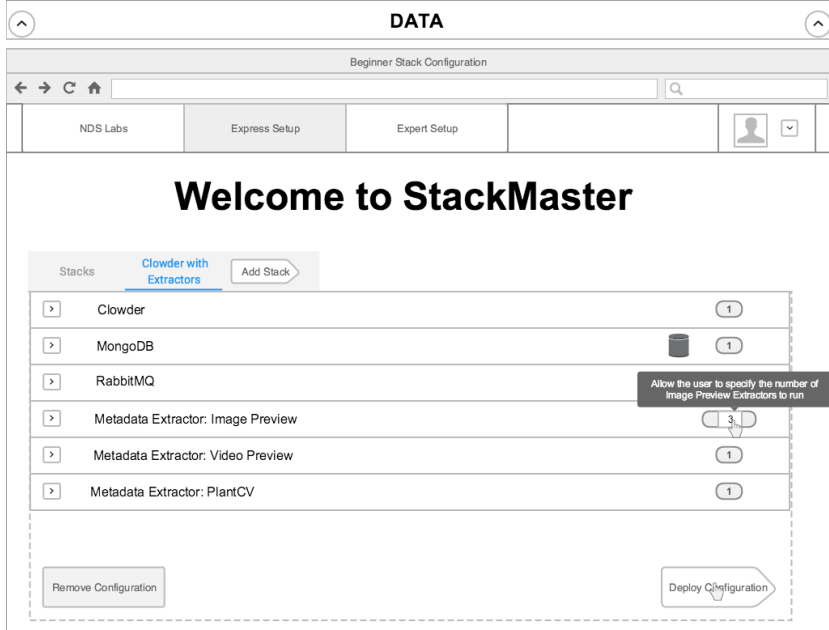
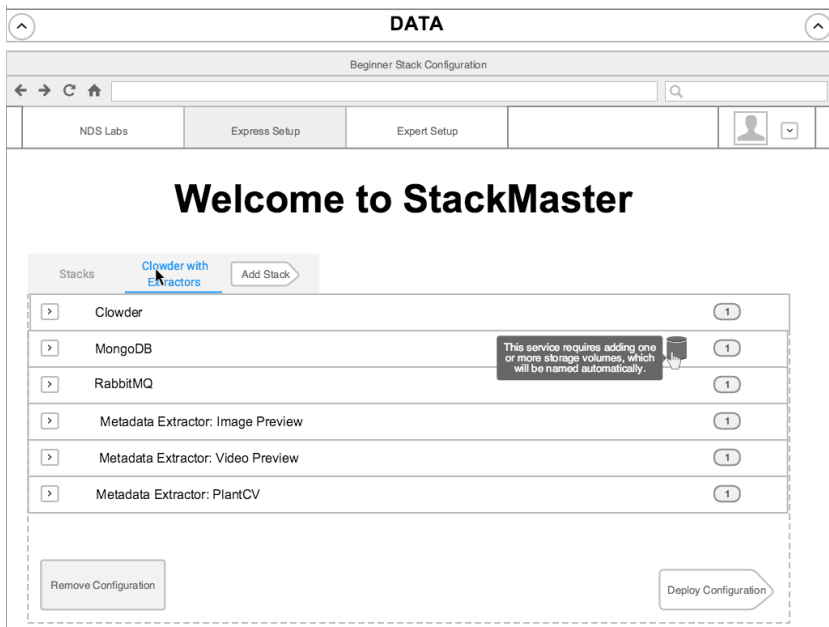
Clowder with Extractors

DataVerse

DataVerse with TwoRavens

Please choose a unique name and select a stack to deploy!

To create your own stack configuration(s), please use the "Expert Setup" tab.



clowder-01-mongo

100 GB

Resize...

Raw

Reformat

Clowder-01

Click here to view and manage your deployed stack

Volumes leftover from previous deployment:

New Size:

GB

Current Storage: 400 / 600 GB Available

After Resize: 777 / 600 GB Available

Cancel

Accept

Deployed stacks:

Clowder-00

Clowder-01

Name

Size

Format

clowder-01-mongo

100 GB

Raw

clowder-00-mongo-orphan

100 GB

Raw

clowder-01-mongo

100 GB

Raw

Reformat

None

Attach...

Delete

clowder-00-mongo-orphan

100 GB

Raw

Reformat

None

Attach...

Delete

Name

Size

Format

clowder-01-mongo

100 GB

Raw

clowder-00-mongo-orphan

100 GB

Raw

Destroy All Data

WARNING! All data stored on this volume will be permanently lost. Are you sure this is what you want?

Destroy All Data

WARNING! All data stored on this volume will be permanently lost. Are you sure this is what you want?

Expert Setup

NDS Labs - Expert Setup

← → ↺ 🏠

🔍

NDS Labs

Express Setup

Expert Setup

👤

▼

Services

🔍 Search

Clowder

Add

DataVerse

Add

Image Preview Extractor

Add

MongoDB

Add

PlantCV Extractor

Add

RabbitMQ

Add

Rserve

Add

Solr

Add

TwoRavens

Add

Video Preview Extractor

Add

Current Configuration