

NDS Labs Service Specification

Service specification documentation is now in Github for each release:

<https://github.com/nds-org/ndslabs-specs/>

The following refers only to version 1 of the NDS Labs service spec.

Overview

This page describes version 1 of the NDS Labs service specification. Example specifications can be found in the [ndslabs-specs](#) Github repository.

Service

Field	Type	Description
key	string	Unique identifier for the service (alpha-numeric only, lowercase)
label	string	Label used for display
description	string	Description used for display
image	string	Docker image path
ports	Port[]	List of ports exposed by this service (see below)
config	Config[]	List of configuration options (see below)
volumeMounts	VolumeMount[]	Defines volume requirements for the service. Currently only one mount is supported per service.
depends	ServiceDependency[]	List of dependencies (see below)
display	string	<ul style="list-style-type: none">"stack" => show this service as a top-level stack"standalone" => show this service as a standalone (hidden behind the checkbox in the UI)otherwise, do not display this service; only allow it to be added to other stacks
access	string	<ul style="list-style-type: none">"internal" => allow this service to receive requests only from within the cluster"external" => allow this service to receive requests from outside of the cluster (usually a browser)otherwise, do not allow any communication to be received by this service
readinessProbe	ReadyProbe	Probe used to determine when a service is ready to receive traffic
args	string[]	Optional arguments to be passed to the container
command	string[]	Optional commands to be passed to the container.
resourceLimits	ResourceLimit[]	Required CPU and memory requirements for application.

Port

Field	Type	Description
port	int	Port
protocol	string	Protocol – must be one of "http" or "tcp". Determines whether a link is displayed on the NDSLabs UI

Config

Field	Type	Description
name	string	Name of environment variables passed to container
value	string	Default value of environment variable

label	string	Label used for display in the NDSLabs UI
isPassword	bool	Whether the field is a password for display in NDSLabs UI
canOverride	bool	Whether the value can be overridden

VolumeMount

Field	Type	Description
mountPath	string	Mount path
name	string	Name, currently must match the service key

ReadyProbe

Field	Type	Description
type	string	Probe type: must be one of "http" or "tcp"
path	string	Probe path for HTTP probes
port	int	Probe port
initialDelay	int	How long to wait before starting probe
timeout	int	How long to wait before timing out

ServiceDependency

Field	Type	Description
key	string	Unique identifier of a child service
required	bool	Whether the service is required or optional
shareConfig	bool	If true, configuration of the child service is injected into the parent container. This prevents needing to collect the same information twice.

ResourceLimit

Individual NDS Labs projects are configured with specific memory and CPU limits. Because of this, all services must declare memory and CPU requirements to enable scheduling and resource constraint enforcement. These values relate directly to Kubernetes [limit ranges](#) and [resource requests](#).

Field	Type	Description
cpuMax	String	Maximum expected CPU utilization in millicores (1 core = 1000m)
cpuDefault	String	Initial CPU utilization in millicores (1 core = 1000m)
memMax	String	Maximum memory in SI (G, M, K) or power-of-two (Gi, Mi, Ki)
memDefault	String	Initial memory in SI (G, M, K) or power-of-two (Gi, Mi, Ki)