

This tutorial will show how to add GitHub repository <https://github.com/lsheiba/TensorFlow-Programs-and-Tutorials> to the existing model environment. And will make it accessible in the batch mode and by Jupyter notebooks for the interactive development.

KuberLab Catalog Help Leonard Sheiba

KuberLab Demo / Models

We will add a github repository with Tensorflow tutorial to the the model environment

my-first-model (my-first-model) Tensorflow template	demotest	
r-studio (r-studio) RStudio	demotest	
styles-set (styles-set) Style Tranfer demo	demotest	
tf-study-1 (tf-study-1) Tensorflow template	demotest	
zappos-set (zappos-set) Gan Image Similarity	demotest	
1-test-ilja-mxnet (1-test-ilja-mxnet) MXNet Template	Shared cluster: minikube	DISABLED
caffe2 (caffe2) Caffe2	LS Demo	DISABLED
r-studio-delete (r-studio-delete) RStudio	demotest	DISABLED

© KuberLab 2016-2017 UI commit 5985e02 by ilja, built Sep 4 2017 11:34

What we need to do is to add a new storage volume to the model environment. To do that, first we need to go to the SOURCES page.

The screenshot shows the KuberLab web interface. At the top, there is a navigation bar with 'KuberLab', 'Catalog', and 'Help' links. A user profile for 'Leonard Sheiba' is visible in the top right. Below the navigation bar, the breadcrumb path is 'KuberLab Demo / Models / my-first-model'. The main content area shows a project named 'demotest/master/minikube' with a 'Tensorflow template'. A red arrow points to the 'SOURCES' tab in the top navigation bar, with the text 'Select Sources TAB' next to it. The 'SOURCES' tab is active, and the left sidebar shows a list of tasks: 'prepare-data', 'upload' (highlighted in blue), 'standalone', 'worker', 'parallel', 'worker', 'ps', 'export', 'worker', 'workflow', and 'tasks'. The main panel displays the configuration for the 'Task prepare-data'. It includes fields for 'Execution directory' (set to '\$DATA_DIR'), 'Timeout minutes', 'Execution command' (set to 'echo "Uploading Data";echo "Done!!!"'), and 'Node allocator'. Below these are sections for 'Execution Arguments', 'Resources' (with fields for CPU, Memory, GPU, and Replicas), and 'Environment Arguments' (with fields for name and value). A 'SAVE' button and a 'SAVE AND EXECUTE' button are located at the top right of the main panel.

KuberLab Catalog Help

Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: [demotest](#) / [master](#) / [minikube](#)

Tensorflow template

Select Sources TAB

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

Tasks resources list

prepare-data

upload

standalone

worker

parallel

worker

ps

export

worker

workflow

tasks

Task prepare-data

SAVE SAVE AND EXECUTE

Resource upload

Execution directory

\$DATA_DIR

Timeout minutes

Execution command

echo "Uploading Data";echo "Done!!!"

Node allocator

Execution Arguments

Resources

CPU (m)

CPU Limit (m)

Memory (Mi,Gi)

Memory Limit (Mi,Gi)

GPU

Replicas

1

Environment Arguments


name

value

Advanced

On the SOURCES page select ADD new Volume

KuberLabCatalogHelp

 Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: [demotest/](#) [master/](#) [minikube](#)

Tensoflow template


MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

Volume	Lib	Output
<div>NFS</div> <div>training</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: training</div> <div>Mount path:/training</div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div>GIT</div> <div>src</div> <div>gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src</div> <div>Mount path:/src</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>NFS</div> <div>lib</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib</div> <div>Mount path:/workspace/lib</div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div>NFS</div> <div>data</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: data</div> <div>Mount path:/data</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>NFS</div> <div>code</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: code</div> <div>Mount path:/code</div>	<input type="checkbox"/>	<input type="checkbox"/>
		<div>+ ADD</div>

Select ADD new volume

Fill the for defining your new volume. Then select the TYPE of the volume

KuberLab Catalog Help

 Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: [demotest/](#) [master/](#) [minikube](#)

Tensoflow template

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

Volume	Lib	Output
<div>training</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: training</div> <div>Mount path:/training</div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div>src</div> <div>gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: ., subPath: /tensorflow/src</div> <div>Mount path:/src</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>lib</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib</div> <div>Mount path:/workspace/lib</div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div>data</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: data</div> <div>Mount path:/data</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>code</div> <div>nfs Server: "myrepo" path: /kuberlab, subPath: code</div> <div>Mount path:/code</div>	<input type="checkbox"/>	<input type="checkbox"/>

Name *

Sub Path

MountPath *

Type *

☐ Train Log Dir ☐ Library Dir

CANCEL ADD

Sup Path is the name of your repo
"/TensorFlow-Programs-and-Tutorials"


name your new volume
"myrepo"

mount path
"/myrepo"

Select volume type

Select GIT from the list of available storage types

KuberLab Catalog Help

 Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: [demotest/](#) [master/](#) [minikube](#)

Tensoflow template

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

Volume	Lib	Output
<div><div>NFS</div><div>training</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: training</div><div>Mount path:/training</div></div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div><div>GIT</div><div>src</div><div>gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src</div><div>Mount path:/src</div></div>	<input type="checkbox"/>	<input type="checkbox"/>
<div><div>NFS</div><div>lib</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib</div><div>Mount path:/workspace/lib</div></div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div><div>NFS</div><div>data</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: data</div><div>Mount path:/data</div></div>	<input type="checkbox"/>	<input type="checkbox"/>
<div><div>NFS</div><div>code</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: code</div><div>Mount path:/code</div></div>	<input type="checkbox"/>	<input type="checkbox"/>

Name *

myrepo

Sub Path

/TensorFlow-Programs-and-Tutorials

MountPath *

/myrepo

Type *

GIT

NFS

PVC

Host path

Cluster storage

Type the URL of the repository to add and select ADD button

KuberLab Catalog Help

Leonard Sheiba

[KuberLab Demo](#) / [Models](#) / [my-first-model](#)

Project: [demotest/](#)[master/](#)[minikube](#)

Tensoflow template

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

Volume	Lib	Output
<div>training</div> <div><div>NFS</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: training</div><div>Mount path:/training</div></div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div>src</div> <div><div>GIT</div><div>gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src</div><div>Mount path:/src</div></div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>lib</div> <div><div>NFS</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib</div><div>Mount path:/workspace/lib</div></div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div>data</div> <div><div>NFS</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: data</div><div>Mount path:/data</div></div>	<input type="checkbox"/>	<input type="checkbox"/>
<div>code</div> <div><div>NFS</div><div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: code</div><div>Mount path:/code</div></div>	<input type="checkbox"/>	<input type="checkbox"/>

Name *

myrepo

Sub Path

/TensorFlow-Programs-and-Tutorials

MountPath *

/myrepo

Type *

GIT

Select repository

Repository url

https://github.com/lsheiba/TensorFlow-Programs-and-Tutorials

?

🔍

☐ Train Log Dir ☐ Library Dir

CANCEL


ADD


type repository URL


Select ADD

In the Volumes list you can see your new volume “myrepo”

KuberLabCatalogHelp

 Leonard Sheiba

 [KuberLab Demo](#) / [Models](#) / [my-first-model](#)

 Project: [demotest/](#) [master/](#) [minikube](#)

Tensoflow template

MODELS

SOURCES

JOB







METRICS

LOGS

INSTALL

JUPYTER

TENSORBOARD

Volume	Lib	Output
<div> training nfs Server: 192.168.1.55, path: /kuberlab, subPath: training Mount path:/training</div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div> src gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src Mount path:/src</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> lib nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib Mount path:/workspace/lib</div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div> data nfs Server: 192.168.1.55, path: /kuberlab, subPath: data Mount path:/data</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> code nfs Server: 192.168.1.55, path: /kuberlab, subPath: code Mount path:/code</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> myrepo gitRepo repository: https://github.com/lsheiba/TensorFlow-Programs-and-Tutorials, directory: , subPath: /TensorFlow-Programs-and-Tutorials Mount path:/myrepo</div>	<input type="checkbox"/>	<input type="checkbox"/>


+ ADD

We added GIT repository to the volumes accessible by the execution environment. To be able to use myrepo volume from Jupyter notebooks we need to add it to the Jupyter configuration. Open the menu in the right corner of the page. Select Edit.

KuberLab

Catalog

Help

 Leonard Sheiba

KuberLab Demo / Models / my-first-model

Select Edit

Project: demotest/ master/ minikube

Tensorflow template

MODELS

SOURCES

JOB

METRICS

LOGS

INSTALL

JUPYTER

TENSORBOARD

Volume	Lib		
<div>training</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: training</div> <div>Mount path:/training</div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<div></div>
<div>src</div> <div>gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src</div> <div>Mount path:/src</div>	<input type="checkbox"/>	<input type="checkbox"/>	<div></div>
<div>lib</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib</div> <div>Mount path:/workspace/lib</div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div></div>
<div>data</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: data</div> <div>Mount path:/data</div>	<input type="checkbox"/>	<input type="checkbox"/>	<div></div>
<div>code</div> <div>nfs Server: 192.168.1.55, path: /kuberlab, subPath: code</div> <div>Mount path:/code</div>	<input type="checkbox"/>	<input type="checkbox"/>	<div></div>
<div>myrepo</div> <div>gitRepo repository: https://github.com/lsheiba/TensorFlow-Programs-and-Tutorials, directory: , subPath: /TensorFlow-Programs-and-Tutorials</div> <div>Mount path:/myrepo</div>	<input type="checkbox"/>	<input type="checkbox"/>	<div></div>

+ ADD

On the model configuration page select “Configuration”

KuberLab Catalog Help Leonard Sheiba

KuberLab Demo / Models / my-first-model

ML application name * my-first-model ML application identification my-first-model

Description
Tensorflow template

Link project

Project demotest Cluster minikube

Configuration

SELECT CONFIGURATION

CANCEL SAVE

In the Jupyter TAB and select “Advanced”

KuberLab Catalog Help

Project demotest Cluster minikube

Configuration Configuration

JUPYTER TENSORBOARD

Resource jupyter

Execution directory Timeout minutes

Execution command Node allocator

Execution Arguments

Resources

CPU (m)	CPU Limit (m)
100m	1000m
Memory (Mi, Gi)	Memory Limit (Mi, Gi)
256Mi	4Gi
GPU	Replicas
0	0

Environment Arguments

name	value
Advanced	

Advanced

CANCEL SAVE

Select ADD volume

KuberLabCatalogHelp

Leonard Sheiba

Environment Arguments

namevalue

Advanced

Images

cpu

kuberlab/mlboard-jupyter:latest

gpu

kuberlab/mlboard-jupyter-gpu:latest

Ports

name	protocol	port	TargetPort
http	TCP	8888	8888

Volumes

Name	lib	Sub path	Mount path	/notebooks/lib	
Name	src	Sub path	Mount path	/notebooks/src	
Name	training	Sub path	Mount path	/notebooks/training	
Name	data	Sub path	Mount path	/notebooks/data	
Name	code	Sub path	Mount path	/notebooks	

Select ADD Volume


+ ADD

CANCEL

SAVE

Select "myrepo" from the list of available volumes. Jupyter environment configured to have /notebooks as root folder. Type volume mount path related to /notebooks folder - "/notebooks/myrepo". Select APPLY. And save the changes to the model environment.

KuberLabCatalogHelp

 Leonard Sheiba

Environment Arguments

namevalue

Advanced

Images

cpu

kuberlab/mlboard-jupyter:latest

gpu

kuberlab/mlboard-jupyter-gpu:latest

Ports

name	protocol	port	TargetPort
http	TCP	8888	8888

Volumes

Name	Sub path	Mount path	
lib		/notebooks/lib	
src		/notebooks/src	
training		/notebooks/training	
data		/notebooks/data	
code		/notebooks	
myrepo		/notebooks/myrepo	

select "myrepo" from the list of model volumes

type mount path for Jupyter environment

Select APPLY

Select SAVE


APPLY


CANCEL


SAVE

Select Jupyter tab to go to the Jupyter environment. The changes we just made require the reloading of the environment. It may take several seconds to re-start Jupyter.

KuberLabCatalogHelp


 Leonard Sheiba

 [KuberLab Demo](#) / [Models](#) / [my-first-model](#)

 Project: [demotest/](#) [master/](#) [minikube](#)

Tensorflow template

Select Jupyter



MODELS

SOURCES

JOB







METRICS

LOGS

INSTALL

JUPYTER

TENSORBOARD

Volume	Lib	Output
<div> training nfs Server: 192.168.1.55, path: /kuberlab, subPath: training Mount path:/training</div>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<div> src gitRepo repository: https://github.com/kuberlab-catalog/tensorflow, directory: , subPath: /tensorflow/src Mount path:/src</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> lib nfs Server: 192.168.1.55, path: /kuberlab, subPath: lib Mount path:/workspace/lib</div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div> data nfs Server: 192.168.1.55, path: /kuberlab, subPath: data Mount path:/data</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> code nfs Server: 192.168.1.55, path: /kuberlab, subPath: code Mount path:/code</div>	<input type="checkbox"/>	<input type="checkbox"/>
<div> myrepo gitRepo repository: https://github.com/lsheiba/TensorFlow-Programs-and-Tutorials, directory: , subPath: /TensorFlow-Programs-and-Tutorials Mount path:/myrepo</div>	<input type="checkbox"/>	<input type="checkbox"/>

+ ADD

We can see “myrepo” folder and can open it

KuberLab Catalog Help Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: demotest/ master/ minikube

Tensorflow template

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

OPEN IN NEW TAB


jupyter

Files Running Clusters

Select items to perform actions on them. Upload New

	Name	Last Modified
	data	a day ago
	lib	a day ago
	myrepo	seconds ago
	src	a minute ago
	training	a day ago

go to "myrepo"



The contents of “myrepo” folder have all the files from GitHub repository TensorFlow-Programs-and-Tutorials. The GitHub repository was successfully edit to the model environment.

It is very important to remember that GIT volume currently is not persistent. The changes you made in the files will exist until Jupyter environment is not re-loaded. This may happen if you add another volume to Jupyter or disable the model. To make you changes persistent move your file to the root of the environment or another persistent volume.

KuberLabCatalogHelp

Leonard Sheiba

KuberLab Demo / Models / my-first-model

Project: demotest/ master/ minikube

Tensoflow template

MODELS SOURCES JOBS METRICS LOGS INSTALL JUPYTER TENSORBOARD

OPEN IN NEW TAB

jupyter

FilesRunningClusters

Select items to perform actions on them.

myrepo

..

Data

Character Level RNN.ipynb

CNNs with Noisy Labels.ipynb

Convolutional Neural Networks.ipynb

Generative Adversarial Networks.ipynb

Learning to Model the XOR Function.ipynb

Linear and Logistic Regression.ipynb

Math in Tensorflow.ipynb

Question Pair Classification with RNNs.ipynb

SELU Nonlinearity.ipynb

Sentiment Analysis with LSTMs.ipynb

Simple Neural Networks.ipynb

Universal Approximation Theorem.ipynb

README.md

Name

Last Modified

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

seconds ago

UploadNew

!!! GIT volume is not persistent.
To save the changes notebooks
need to be moved to the root
folder!!!