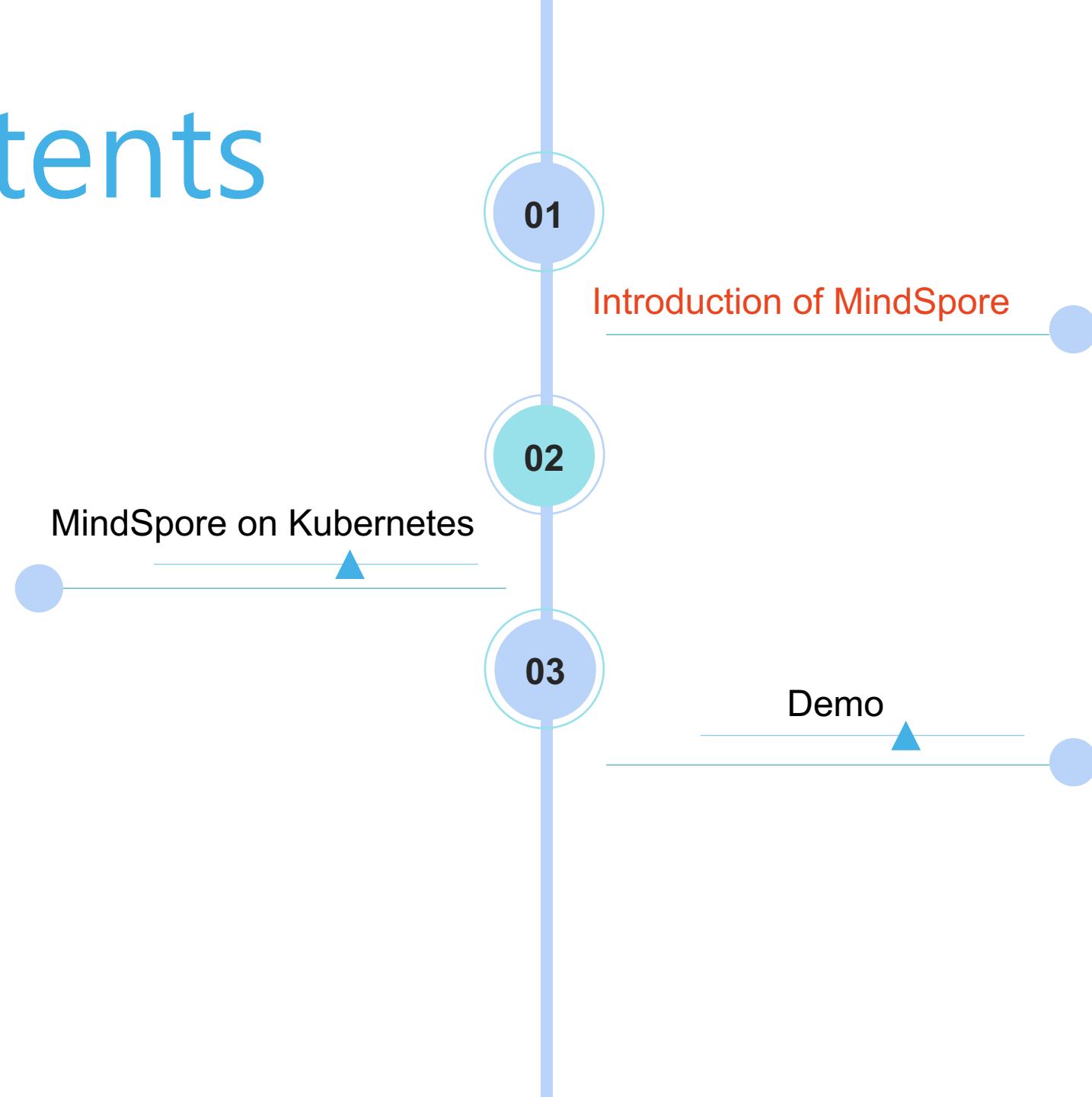




MindSpore And Cloud Native Ecosystem

Zhipeng (Howard) Huang, Huawei
Yedong Liu, Huawei

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MindSpore Introduction

MindSpore is a new open source deep learning training/inference framework that could be used for mobile, edge and cloud scenarios.

MindSpore is designed to provide development experience with friendly design and efficient execution for the data scientists and algorithmic engineers, native support for Ascend AI processor, and software hardware co-optimization.

At the meantime MindSpore as a global AI open source community, aims to further advance the development and enrichment of the AI software/hardware application ecosystem.



<https://www.mindspore.cn>

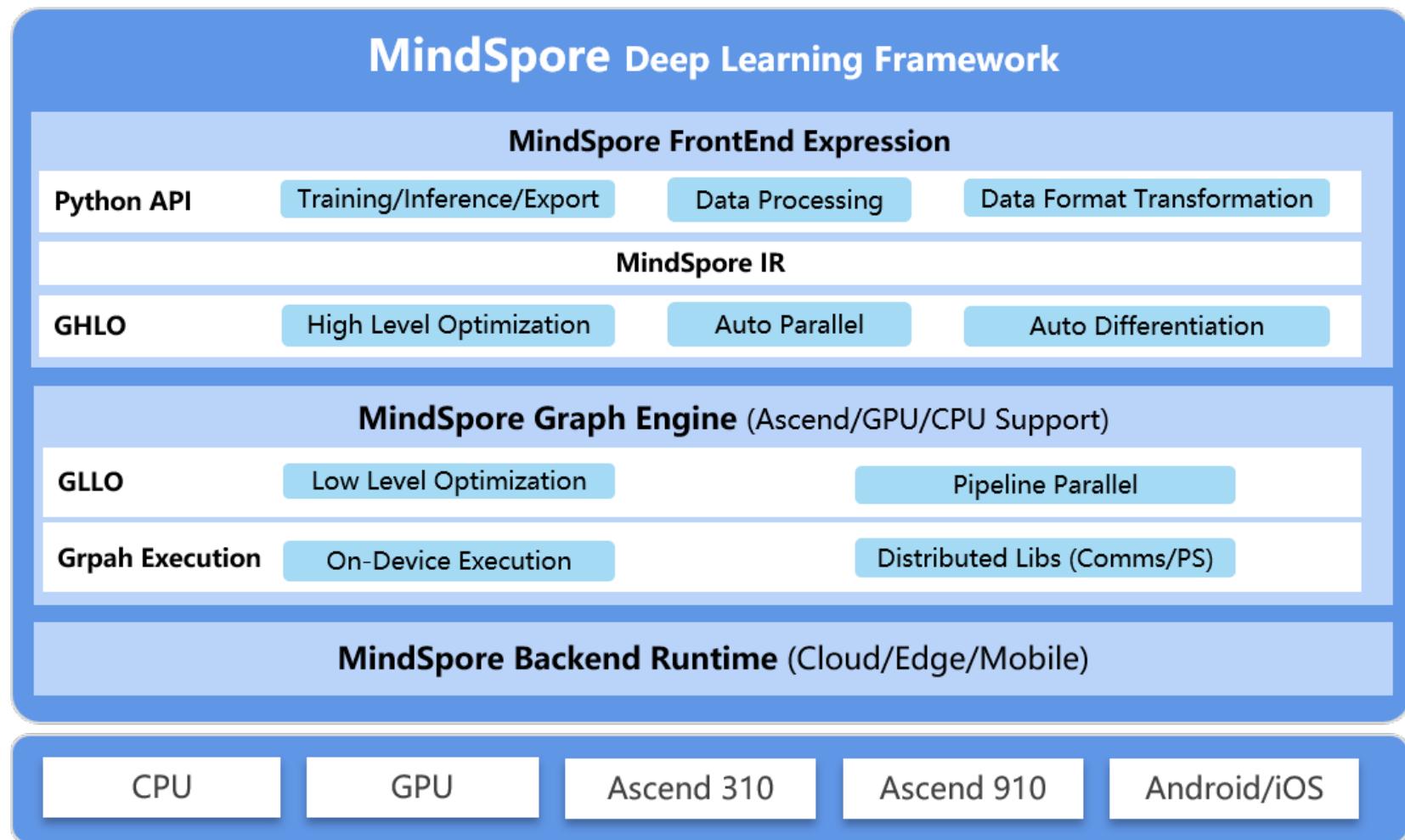


<https://www.gitee.com/mindspore>

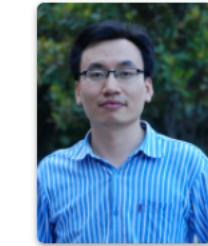
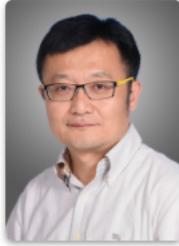


<https://www.github.com/mindspore-ai>

Overview



Technical Steering Committee



**14 members from various universities/institutions/companies
that forms an open and global technical governing body**

SIG/WG

SIGs

FrontEnd,
Compiler
Executor
ModelZoo
Data
GraphEngine
Visualization
Security

...

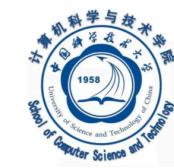
WGs

Documentation
Infrastructure
...

Open Development

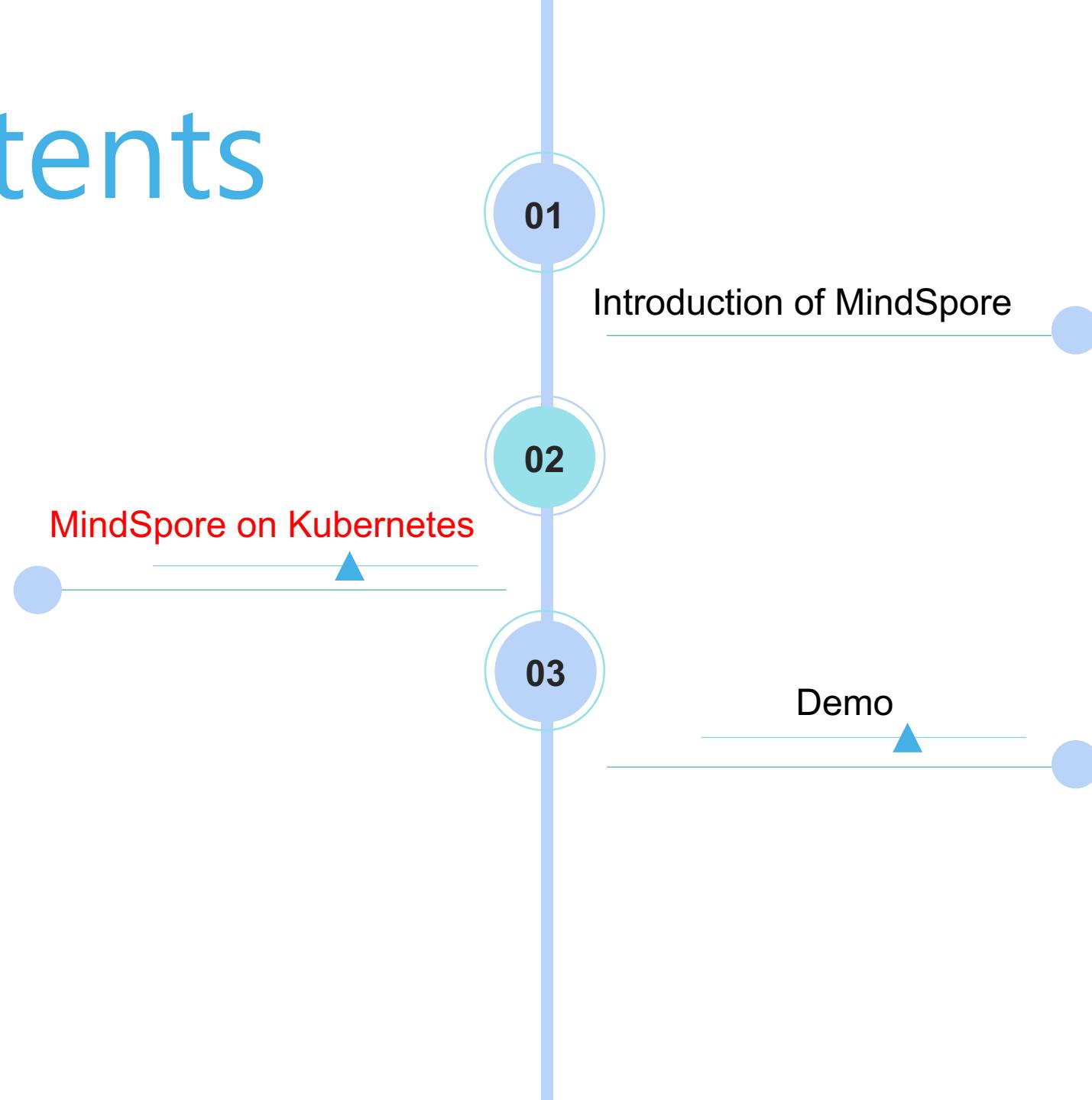


Community partners



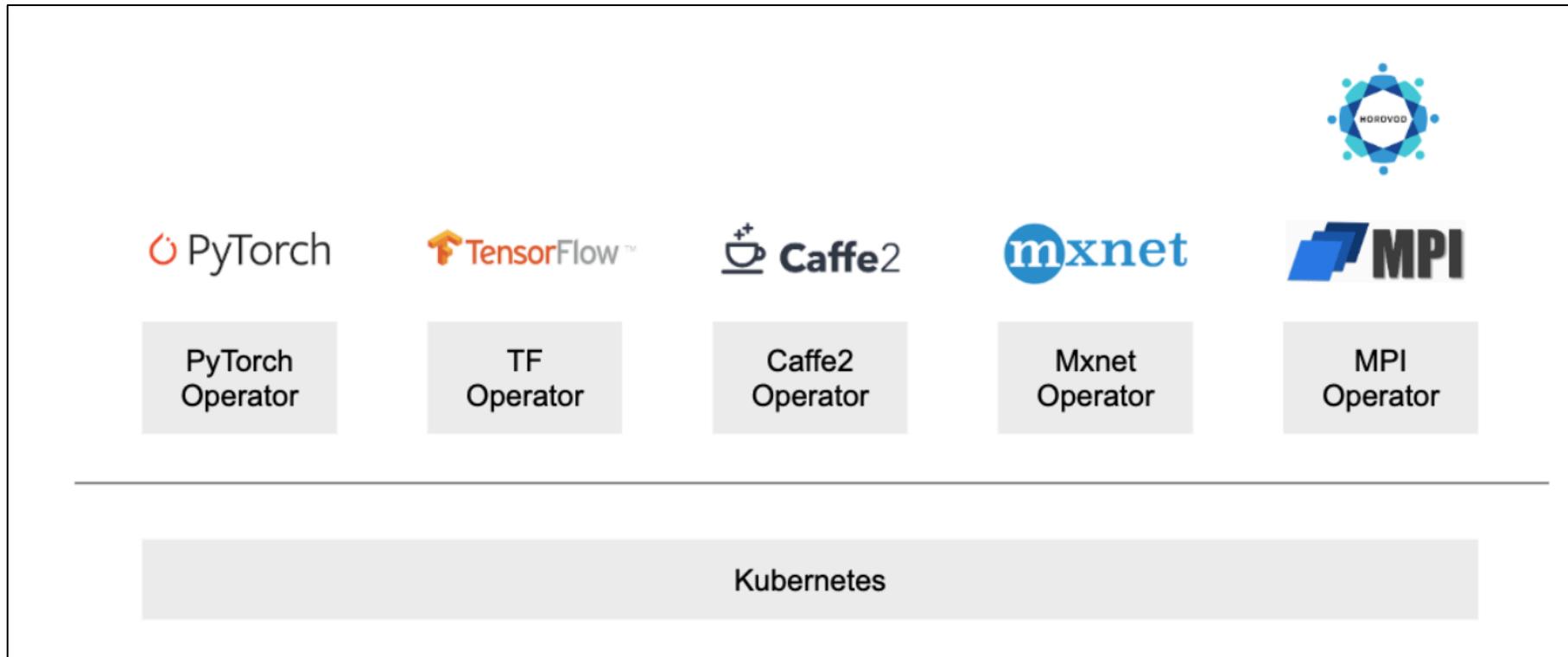
Open Collaboration

Contents



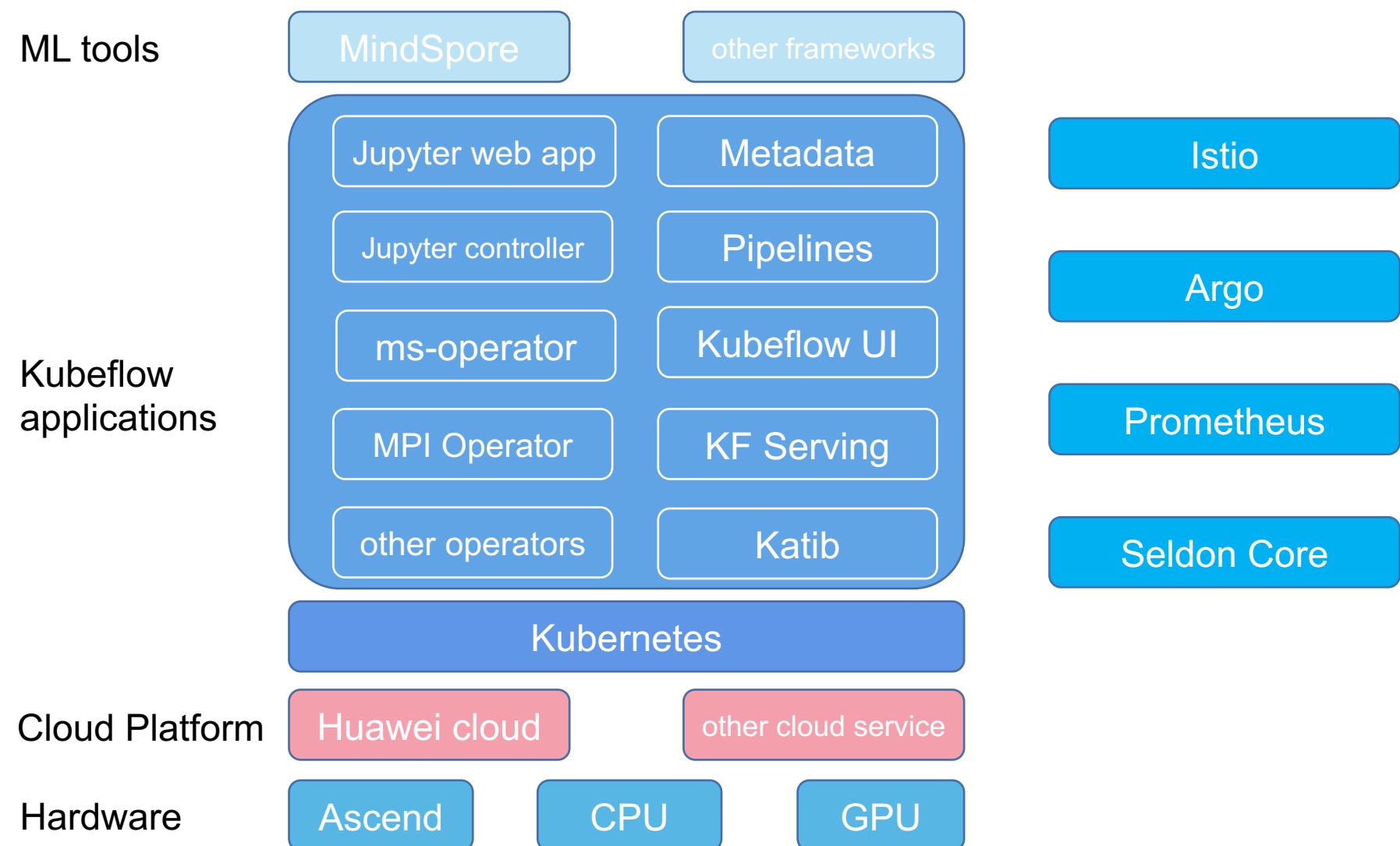


MindSpore on Kubernetes

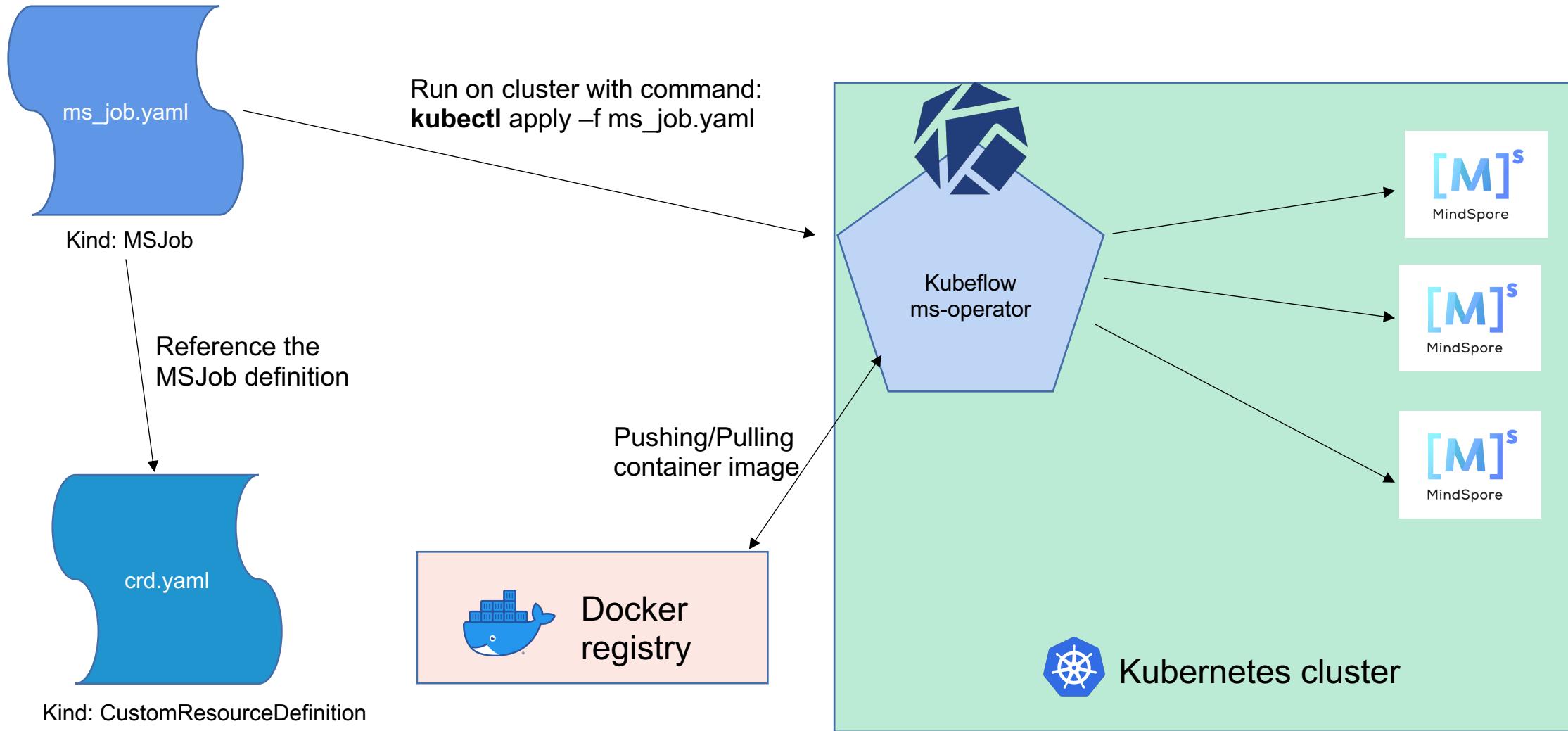


Using the MindSpore Operator crd, users can install, create and manage ms jobs in Kubernetes cluster easily.

MindSpore in Kubeflow ecosystem



MS-Operator workflow



Fun facts——the installing issue

cannot install on WSL #7

 Open zhaoxvdong opened this issue 2 days ago · 15 comments



zhaoxvdong commented 2 days ago

while I try to intall MindSpore on the WSL with the command "pip install https://ms-release.obs.cn-north-4.myhuaweicloud.com/0.1.0-alpha/MindSpore/cpu/ubuntu-x86/mindspore-0.1.0-cp37-cp37m-linux_x86_64.whl"

it report the error:
ERROR: mindspore-0.1.0-cp37-cp37m-linux_x86_64.whl is not a supported wheel on this platform.

my python version is 3.7.7



pigao commented 2 days ago

I cannot install from this url maybe because of the proxy in company while other packages(like tqdm from <https://files.pythonhosted.org/packages/47/55/fd9170ba08a1a64a18a7f8a18f088037316f2a41be04d2fe6ece5a653e8f/tqdm-4.43.0-py2.py3-none-any.whl>) are OK.

Installation fails on Mac and Linux-Centos

#11CZ3V Bug-Report  TODO LGpang 创建于 2天前



mindspore/mindspore-cpu

By mindspore · Updated a day ago

Container



mindspore/mindspore-cuda9.2

By mindspore · Updated 2 days ago

Container



mindspore/mindspore-cuda10.1

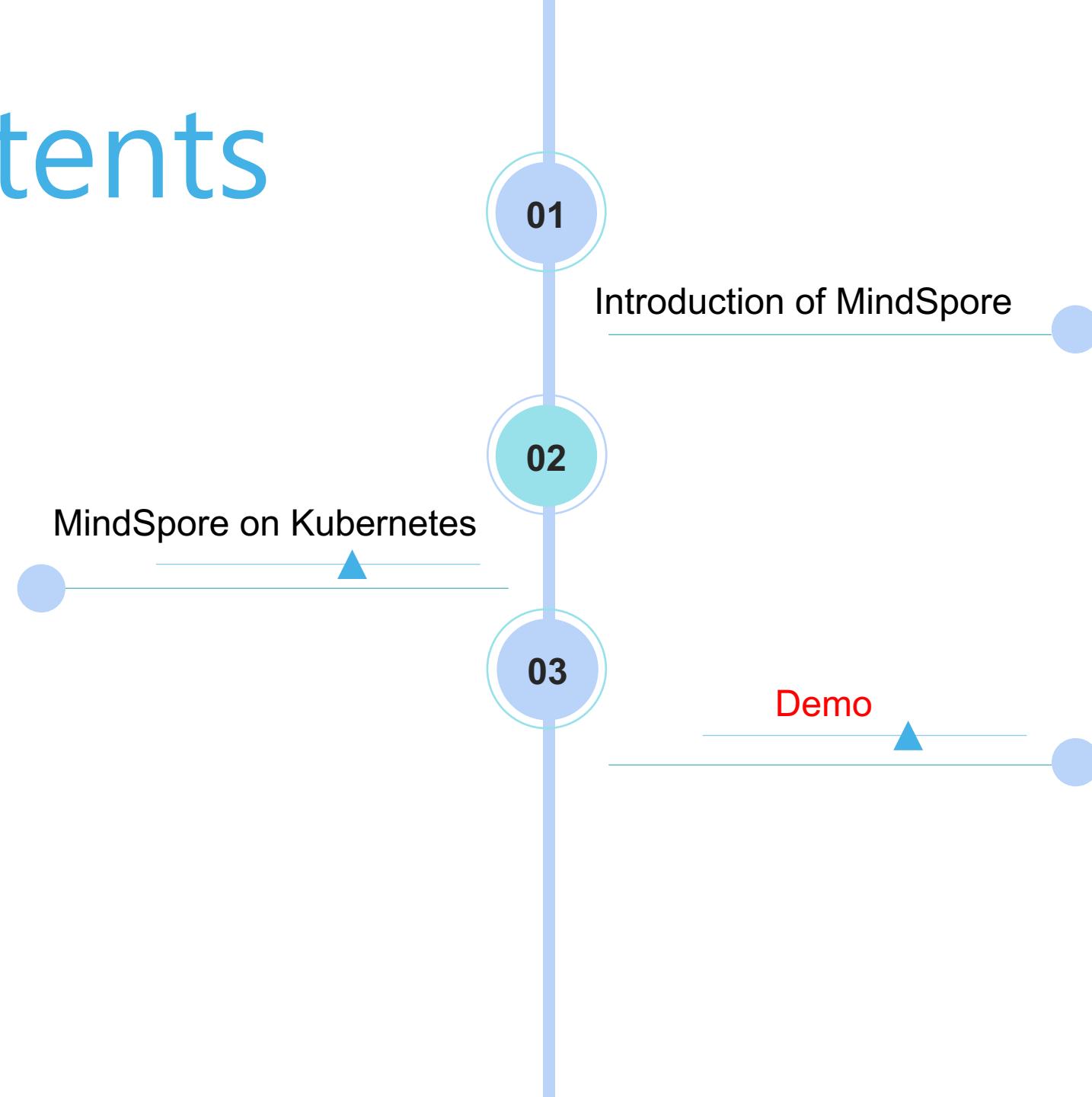
By mindspore · Updated 2 days ago

Container

胡晓曼: 亲测：无痛安装，无痛跑 demo，上手体验非常好！ps: 建议大家用docker安装，体验最好

Translation: No pain installing, no pain running demo, the starting experience is fantastic! I strongly recommend everyone installing MindSpore via docker.

Contents



Demo

MindSpore Operator

Experimental notice: This project is still experimental and only serves as a proof of concept for running MindSpore on Kubernetes. The current version of ms-operator is based on an early version of [PyTorch Operator](#) and [TF Operator](#). Right now MindSpore supports running LeNet with MNIST dataset on a single node, distributed training examples are expected in the near future.

- MindSpore Operator
 - Introduction of MindSpore and ms-operator
 - MindSpore Docker Image
 - Design
 - Overview of MindSpore in Kubeflow Ecosystem
 - Getting Started
 - Prerequisites
 - Steps of running the example
 - Future Work
 - Appendix: Example yaml file

Goal: Training LeNet with MNIST dataset using MindSpore on a single node in Kubernetes cluster.

Training starts:

```
root@lyd-vm:~# kubectl logs msjob-mnist
=====
Starting Training =====
epoch: 1 step: 1, loss is 2.3021634
epoch: 1 step: 2, loss is 2.3018425
epoch: 1 step: 3, loss is 2.3022137
epoch: 1 step: 4, loss is 2.3040679
epoch: 1 step: 5, loss is 2.3008597
epoch: 1 step: 6, loss is 2.305821
```

Training ends:

```
epoch: 1 step: 1872, loss is 0.24085818
epoch: 1 step: 1873, loss is 0.07940897
epoch: 1 step: 1874, loss is 0.12767722
epoch: 1 step: 1875, loss is 0.03795357
=====
Starting Testing =====
===== Accuracy:{'Accuracy': 0.9637419871794872} =====
```

<https://www.youtube.com/watch?v=P2uXOlc4kg>



MindSpore

Call For Participation

- Checkout the Code
 - <https://gitee.com/mindspore> (main development)
 - <https://github.com/mindspore-ai> (mirror)
- Try with docker
 - docker pull mindspore/mindspore-cpu:0.1.0-alpha
 - docker pull mindspore/mindspore-cuda10.1:0.1.0-alpha
 - docker pull mindspore/mindspore-cuda9.2:0.1.0-alpha
- Discussion
 - Slack: https://join.slack.com/t/mindspore/shared_invite/enQtOTcwMTIxMDI3NjM0LTNkMWM2MzI5NjlyZWU5ZWQ5M2EwMTQ5MWNiYzMxOGM4OWFhZjI4M2E5OGI2YTg3ODU1ODE2Njg1MThiNWI3YmQ
 - Mailing list: <https://mailweb.mindspore.cn/postorius/lists/mindspore-discuss.mindspore.cn/>

THANK YOU

www.mindspore.cn/en