Nauta

Release Notes, Enterprise Edition 1.1 Release

Document Revision 1.1 October 2019

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Document Revision History

Revision Number	Date	Comments (Latest on Top)
1.1	October 11th 2019	Initial Enterprise Edition 1.1 Release.

Contents

Product Summary

Nauta software provides a multi-user, distributed computing environment for running deep learning model training experiments. The results of the experiments can be viewed and monitored using a command line interface, web UI and/or TensorBoard*.

You can use existing data sets, use your own data, or downloaded data from online sources, and create public or private folders to make collaboration amongst teams easier. Nauta runs using the industry leading Kubernetes* and Docker* platform for scalability and ease of management. Templates are available (and customizable) on the platform to take the complexities out of creating and running single and multi-node deep learning training experiments without all the systems overhead and scripting needed with standard container environments. To test your model, Nauta also supports both batch and streaming inference, all in a single platform.

Nauta CLI Supported Operating Systems

- Ubuntu* (16.04, 18.04)
- RedHat* 7.6
- macOS* High Sierra (10.13)

Nauta Platform Installer Supported Operating Systems

- Red Hat* Enterprise Linux* 7.6
- Ubuntu 16.04, 18.04

Supported Browsers

- Google* Chrome* 62+ for macOS* and Linux
- Additional browsers, such as Microsoft Internet Explorer*, Mozilla* Firefox* and Apple* Safari* may or *may not* function, as they *have not* been validated.

Supported Hardware

Optimized for up to 16 Intel® Xeon® processors (Intel® microarchitecture code name Cascade Lake).

Included Software Components

This release of the Nauta and platform software, version: 1.1, includes the following software components.

Name	Version	Project Link
addon-resizer	1.13.6	https://github.com/kubernetes/autoscaler/tree/master/addon-resizer
buildkit	0.4.0	https://github.com/moby/buildkit
dashboard	1.8.3	https://github.com/kubernetes/dashboard
defaultbackend	1.4	https://github.com/kubernetes/ingress-nginx
dnsmasq-nanny	1.14.8	https://github.com/kubernetes/dns
dns-sidecar	1.14.8	https://github.com/kubernetes/dns
etcd	3.3.9	https://github.com/coreos/etcd
elasticsearch	7.3.0	https://github.com/elastic/elasticsearch
flannel	0.9.1	https://github.com/coreos/flannel
fluentd	1.2.5	https://www.fluentd.org/
gitea	1.6.1	https://github.com/go-gitea/gitea
heapster	1.4.3	https://github.com/kubernetes/heapster
helm	2.11.0	https://github.com/helm/helm
ingress	0.24.0	http://quay.io/kubernetes-ingress-controller/nginx-ingress-controller
kubectl	1.10.11	https://github.com/kubernetes/kubernetes/tree/master/pkg/kubectl
kube-dns	1.14.12	https://github.com/kubernetes/dns
kube-proxy	1.10.11	https://hub.docker.com/r/googlecontainer/kube-proxy-amd64/
mkl-dnn	0.18	https://github.com/intel/mkl-dnn
nginx	1.14.0	https://www.nginx.com/
openvino	2019_R1.1	https://github.com/opencv/dldt
pause	3.1	https://hub.docker.com/r/googlecontainer/pause-amd64/
pytorch	1.2.0	https://github.com/pytorch/pytorch
redsocks	0.5	https://github.com/darkk/redsocks
registry	2.7	https://github.com/docker/distribution
tensorflow	1.14.0	https://github.com/tensorflow/tensorflow

New for this Release

Nauta Enterprise Version 1.1 has been updated to include functional updates. Users should update to the latest version.

Details (Information)
Information: Users can run training with PyTorch* scripts using the PyTorch template pack.
Information: Added new command `nctl model` to allow users to export models post-training. This allows users to use OpenVINO Model Optimizer for model transformations.
Information: Added OpenVINO inference support. Users now have the option of using the OpenVINO inference runtime instead of TFServing to test their model post training, using the `predict` command.
Information: Added '`nctl template`' management capabilities making it easier for users to copy and add additional templates from the template zoo GitHub repository.
Information: Updated Intel Optimized TensorFlow Docker image to version 1.14.
Reminder: Windows has been deprecated. The User Guide and Installation guide updated to reflect this change.

Known Defects

Defect ID	Details (Cautions, Fixes, Updates, and Workarounds)
CAN-2698 & CAN-2699	**Description:** • The duration time continues to increase after the cancellation of an experiment or prediction job. This may result in some log entries of the cancelled job being unavailable. **Workaround:** • None. The duration time of a cancelled job is unreliable.
CAN-2610	**Description:** When the master node is rebooted while an experiment is running, the status is *not* correctly reflected in Nauta experiment list. **Workaround:** • Check the experiment pod status using `nctl experiment view`.
CAN-2564	**Description:** • During the Nauta installation an error occurred: `"no matched for kind "queue" in version "scheduling.incubator.k8s.io/v1alpha1."` **Workaround:** • A race condition in Helm occurred. Rerun the installation.
CAN-2284	**Description:** • An experiment submitted containing a PyTorch script error stayed in the RUNNING state indefinitely. **Workaround:** • Review the experiment logs, fix the experiment and resubmit.
CAN-2063	**Description:** • `etcd-gc` deployment crashes, due to invalid service account. **Workaround:** • `etcd-gc` is a complementary, non-critical service. • Delete `etcd-gc.deployment`.
CAN-1543	**Description:** • Edits to the Horovod Python 3 template's Docker file results in Yum* and dependencies that use py2 to stop working. **Workaround:** • Revert symlink to Python 2.7.5. • As root, execute this command: `ln -sf /usr/bin/python2.7 /usr/bin/python` • After installing the Yum packages, revert changes back to Python 3. • As root, execute this command: `ln -sf /opt/rh/rh-python36/root/usr/bin/python /usr/bin/python`

Defect ID	Details (Cautions, Fixes, Updates, and Workarounds)
CAN-1048	**Description:** • When an experiment node is stopped/turned off, the experiment *is not* started on another node. **Workaround:** • Refer to the Troubleshooting section in Nauta Installation, Configuration, and Administration Guide for more information.