



Hardware and Software Requirements

NetApp Solutions

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The NetApp AI Control Plane solution is not dependent on this specific hardware. The solution is compatible with any NetApp physical storage appliance, software-defined instance, or cloud service, that is supported by Trident. Examples include a NetApp AFF storage system, Azure NetApp Files, NetApp Cloud Volumes Service, a NetApp ONTAP Select software-defined storage instance, or a NetApp Cloud Volumes ONTAP instance. Additionally, the solution can be implemented on any Kubernetes cluster as long as the Kubernetes version used is supported by Kubeflow and NetApp Trident. For a list of Kubernetes versions that are supported by Kubeflow, see the [official Kubeflow documentation](#). For a list of Kubernetes versions that are supported by Trident, see the [Trident documentation](#). See the following tables for details on the environment that was used to validate the solution.

Infrastructure Component	Quantity	Details	Operating System
Deployment jump host	1	VM	Ubuntu 20.04.2 LTS
Kubernetes master nodes	1	VM	Ubuntu 20.04.2 LTS
Kubernetes worker nodes	2	VM	Ubuntu 20.04.2 LTS
Kubernetes GPU worker nodes	2	NVIDIA DGX-1 (bare-metal)	NVIDIA DGX OS 4.0.5 (based on Ubuntu 18.04.2 LTS)
Storage	1 HA Pair	NetApp AFF A220	NetApp ONTAP 9.7 P6

Software Component	Version
Apache Airflow	2.0.1
Apache Airflow Helm Chart	8.0.8
Docker	19.03.12
Kubeflow	1.2
Kubernetes	1.18.9
NetApp Trident	21.01.2
NVIDIA DeepOps	Trident deployment functionality from master branch as of commit 61898cdfda ; All other functionality from version 21.03

Support

NetApp does not offer enterprise support for Apache Airflow, Docker, Kubeflow, Kubernetes, or NVIDIA DeepOps. If you are interested in a fully supported solution with capabilities similar to the NetApp AI Control Plane solution, [contact NetApp](#) about fully supported AI/ML solutions that NetApp offers jointly with partners.

[Next: Kubernetes Deployment.](#)

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