# **■** NetApp

### **Software Requirements**

**NetApp Solutions** 

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## **Table of Contents**

Software Requirements	 •
Contware requirements	

### **Software Requirements**

This solution was validated using a basic Kubernetes deployment with the Run:Al operator installed. Kubernetes was deployed using the NVIDIA DeepOps deployment engine, which deploys all required components for a production-ready environment. DeepOps automatically deployed NetApp Trident for persistent storage integration with the k8s environment, and default storage classes were created so containers leverage storage from the AFF A800 storage system. For more information on Trident with Kubernetes on ONTAP AI, see TR-4798.

The following table lists the software components that are required to implement the solution as tested.

Software	Version or Other Information
NetApp ONTAP data management software	9.6p4
Cisco NX-OS switch firmware	7.0(3)I6(1)
NVIDIA DGX OS	4.0.4 - Ubuntu 18.04 LTS
Kubernetes version	1.17
Trident version	20.04.0
Run:Al CLI	v2.1.13
Run:Al Orchestration Kubernetes Operator version	1.0.39
Docker container platform	18.06.1-ce [e68fc7a]

Additional software requirements for Run:Al can be found at Run:Al GPU cluster prerequisites.

Next: Optimal Cluster and GPU Utilization with Run Al.

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