

# Drut Fabric Manager (DFM)

#### **Key Benefits**

Software that maintains the available resource pool (CPUs, GPUs, Storage, IPUs, FPGAs)

Allows for machines to be created from the available resource pool

Programs the photonic switch (PXC) to create the desired machine

DMTF Redfish APIs

DFM provides end-to-end orchestration with runtime attach/detach for a system device without interruptions to machine BIOS/System OS

DFM is connected to Drut Software Platform (DSP) for application integration

DFM is priced on the number of photonic switch ports available in the fabric cluster The Drut Fabric Manager (DFM) is the operational control of the photonic fabric. The DFM maintains the available resource pool (CPUs, GPUs, Memory, Storage, IPUs, etc.). It allows for machines to be created from the resource pool and programs the photonic switch (PXC) to create the desired machine. This capability is unique and critical in order to create a dynamic fabric. The DFM discovers the resource end-point data from the Fabric Interface Cards and allows the PXC to be programmed and re-programmed to yield the desired results. The DFM provides end-to-end orchestration with run-time attach/detach for a system device without interruptions to machine BIOS/System OS.

### **DFM Advantages**

Drut Fabric Manager (DFM) is a fleet of microservices that are deployed on a Kubernetes cluster, it is managed through a standard GUI within the Drut Software Platform and exposes Redfish compliant northbound rest APIs. FM can be configured to be installed per rack, a group of racks in a POD or for a whole cluster.

ashboard dr	abric running al	: 10.50.0.18:8	080 and activ	/e						Compos	se Node	dFabric ∨
SOURCE BLOCK SUM	MARY											
RESOURCE BLOCKS	120 BLOCKS			20 COMPUTE					20 DPU			
	Unused	nused 101 •		UNUSED .	COMPOSED				UNUSED .	COMPOSED .	FAILED .	UNAVAILABLE
	Composed		19 •	16	4	0		0	16	4	0	0
	Failed	0 •		Total 96 of 480 CORES Composed						Tabel 46 - 5 00 CODES Company		
	Unavailable	Unavailable 0 •			Total 96 of 480 CORES Composed Total Memory 262144 of 1310720 GB Composed)							
20 NETWORK				20 OFFLOAD					40 STORAGE			
UNUSED • O	OMPOSED .	FAILED • UI	NAVAILABLE	UNUSED .	COMPOSED	FAILED	UNAVA	AILABLE	UNUSED .	COMPOSED .	FAILED .	UNAVAILABLE
16	4	0	0	18	2	0		0	35	5	0	0
	Total 400 of	2000 GBPs C	omposed		Total 307	2 of 30720 COF	RES Com	posed	(11111111)	To	otal <b>0</b> of 0 G	B Composed
VICES SUMMARY >									NODE SUMMAN	8Y)		
TYPE	TOTAL	COMPOSED	UNUSE	D FAI	LED	UNAVAILABLE			NODES			4 NODES
Offload	20	2	18		0	0				Free Nod	e	2
itorage	40	5	35		0	0				Registere	d	2
Network	20	4	16		0	0				Failed		0 •
Compute	20	4	16		0	0				In Progre	ss	0
OPU	20	4	16		0	0						

#### **Ordering Information**

Product:DFMCode:DRT-SW-DFM-STD-RTUDescription:Fabric Manager RTU

## **Drut Fabric Manager Services**

- Automatic discovery of Fabric elements and composable resources via OOB Network
- Create composed system along with necessary data paths as per the configuration requirements
- Dynamically attach or detach a composable asset to the composed system
- Facilitate operations on the composed system
- Periodic Health check for the composed systems, involved data paths, fabric elements.
- Event and alarm management, audit log of all commands issued in the past 30 days.
- Automatic firmware/software upgrades for Fabric elements
- Access to Fabric Manager API via RBAC (Role Based Access Control)
- Highly configurable, independently scalable, fault tolerant microservices with self-healing features
- Audit trail of composed system operations, composable asset operations along with metrics
- Built on open-source software (Spring Boot, Java, Python, RabbitMQ, PostgreSQL, DockerCE)

