

DetNet Flow Information Model

draft-zha-detnet-flow-info-model-00

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Agenda

- **DetNet Flow**
- DetNet Flow Information Model
- How to Use Flow Model
- Status and Next Step

DetNet Flow

- DetNet Flow
 - “A DetNet flow is a sequence of packets to which the DetNet service is to be applied.”
 - Do not rapidly change
 - Limited traffic from source
 - Synchronous or asynchronous
- How to describe a DetNet flow
 - DetNet flow model
 - Scalable and reusable

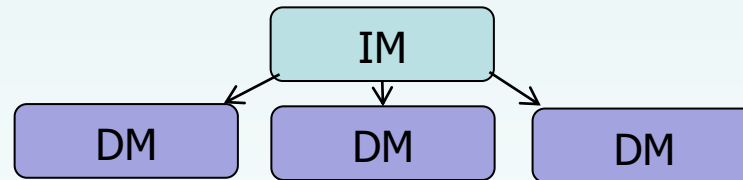
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Information Model

- Information model (RFC 3444)

- Information Models are used to model managed objects at a conceptual level, independent of any specific protocols used to transport the data (protocol agnostic).
- Information models focus on relationships between managed objects.



- Data model (RFC 3444)

- Data Models are defined at a lower level of abstraction and include many details (compared to information models).
- They are intended for implementers and include implementation- and protocol-specific constructs.
- Data models are often represented in formal data definition languages that are specific to the management protocol being used

Flow Information

- Depends on how to describe a flow
 - Define common concepts of a DetNet flow
- Used by different network functions or entities
 - Flow indentifying and filtering
 - Data plane configuration
 - Resource reservation
 - Control protocols
 - YANG models

Flow Identifier

- First step for DetNet service provisioning
 - Differentiates user
 - Differentiates user + application

Name	Elements
Stream Identifier	MAC Address
	StreamID
ServiceType	

Traffic Description

- To reserve proper amount of resource
- Is bandwidth reservation enough?
- More description, more constraint on traffic, more deterministly on service

Name	Elements	Elements
Priority		
MTU		
Bandwidth		
BurstList-Periodic		
PeriodValue		
BurstList-Length		
	BurstListID	
	BurstLegnth	
		BurstID
BurstList		MaxFrames
	Burst	MaxFrameSize
		StartTime
		EndTime

Flow Statistics

- Delay and loss information are important
 - OAM fault management of flow delay
 - Control plane

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Service Model

- Service needs DetNet flow information
- Mapping from flow attributes from up layer to lower layer

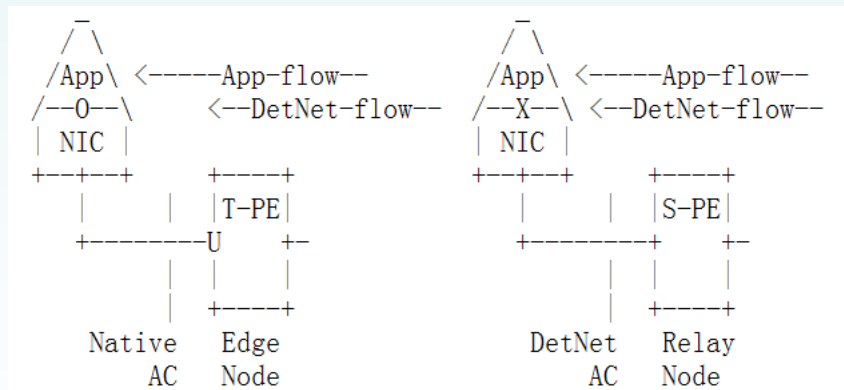
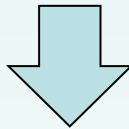


Figure 2: DetNet aware/unaware End-systems

Data Plane

- Mapping from DetNet flow to data plane configuration

- Traffic description



- TAS control list

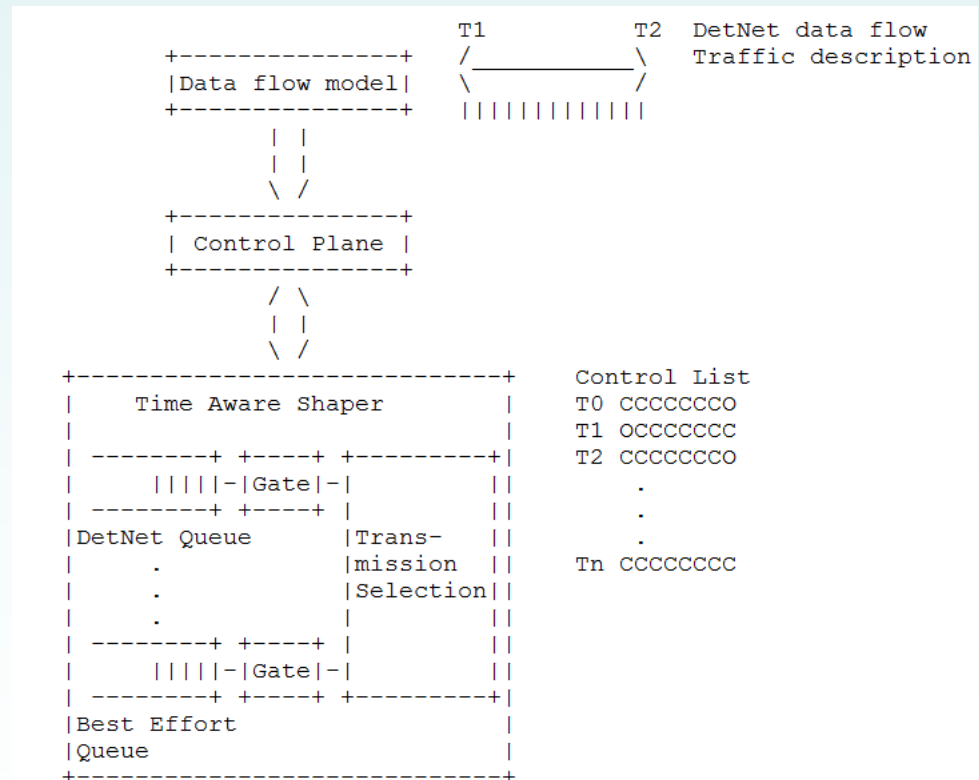


Figure 2. Mapping of Flow Model into TAS Configuration

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Status and Next

- Current status
 - Initial version, has some comments
 - Focus on traffic description, need more information
- Next step
 - More participants
 - More information
 - How to use the information model

Questions?

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