

Telemetry - User-Defined Sessions

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Establishing Telemetry Sessions

UFM Telemetry allows tracking network bandwidth, congestion, errors, and latency. UFM offers the following telemetry features:

- Real-time monitoring views
- Multiple attributes monitoring
- Intelligent Counters: provide error and congestion counters
- InfiniBand port-based error counters
- InfiniBand congestion XmitWait counter-based congestion measurement
- InfiniBand port-based bandwidth data

The following actions may be taken with the telemetry session panels:

- Rearranging using a simple drag-and-drop function
- Resizing by hovering over the panel's border

It is also possible to get a larger view of a telemetry session by clicking the pop-out button on the top right-hand corner of each panel.

Telemetry Session Objects and Attributes

Monitored objects may be ports or devices in the fabric.

Monitored attributes can be raw counters or calculated counters:

- A raw attribute is a simple attribute to be monitored (e.g., Port TX Wait)
- A calculated attribute is an attribute that has been calculated based on one or more counters (e.g., PortXmitPktsRate)

Telemetry Views

Telemetry contains multiple views; the user can create, edit, and delete views.

Telemetry supports two types of panels, time-series which show the relationship between time and counter value for a specific device, and topX, which show all ports with pick by counter greater than topX value.

(i) Note TopX is not supported in the case of the telemetry provider is hidden in this cas	ne ibpm telemetry provider. The se.
elemetry Views: Default Views: Te to the Port RX Packets Rate Te to the RX Packets Rate	Time Last 1 hour View by Name Top5 Members By Port RX Packets Rate
12 10 10 10 10 10 10 10 10 10 10	r-ufm254-hyp-03 mlx5_0 7 sw-hpc62:3 7 sw-hpc62:36 5 switchib:36 5 r-ufm254-hyp-04 mlx5_0 1 2665889 3082605

The panel can be created by filling in the following model:

New Telemetry Session		View by	Name	××
Telemetry Session Timeseries Top X				
Members Devices Ports				
Counters				
Select Counters 👻	All counters			
Devices				
Select Devices	All devices			
			F	inish

The user can select one of the following telemetry session modes:



- Timeseries: Provide the user with historical/live time-series graphs of the selected counters for the selected devices/ports.
- Top X: Provides the user with Top X ports by the selected counters (where X is 5, 10, 15, 20).

You can select the members grouping type; Devices or Ports:



(i) Note

In case the selected telemetry session is Top-X, only the ports are supported.

The user can select one or more counters from the counters dropdown menu:

С	ounters
	Select Counters
	Loaded 27 of 27
-	Port RX Packets Rate
	Port TX Packets
	Normalized Congestion BW
	Port TX Packets Rate
	Port RX Data
	Normalized TX Data
٦	Part PX Data Pata

Alternatively, the user can get a full view of all the supported counters and select one or more by clicking on the "All Counters" button:

New Telemetry Session			×
Please select one or more counters to monitor			
Bandwidth			
Port RX Packets Rate	Port TX Packets	Normalized Congestion BW	
Port TX Packets Rate	Port RX Data	Normalized TX Data	
Port RX Data Rate	Port TX Data	Port TX Data Rate	
Port TX Wait	Congested BW	Port RX Packets	
IB Errors			
Port RX Rem Physical Error	Excess Buffer Overrun Error	Symbol Error Counter	
Port RX Switch Relay Error	Link Error Recovery Counter	Port TX Discard	
Port RX Constraint Error	Local Link Integrity Error	Port RX Error	
Port TX Constraint Error	Link Downed Counter	VI15 Dropped	

The user can select one or more devices/ports from the relevant dropdown menu:

• Devices:

Devices		
se02gn194 ×	se02mr05-mgmt01 ×	×
Loaded 100 of 20	8	
seO2gn194		•
se02mr05-mg	rmt01	
se02ibsw3334	8	
se02ibsw3034	8	-
se02ibsw7034	8	
se02ibsw4104	8	
co02ibaw/(15/	Ι.	

Alternatively, the user can choose to get a full view of the devices by clicking on the "All Devices" button:

Back Select



com.atlassian.confluence.content.render.xhtml.XhtmlException: Missing required attribute: {http://atlassian.com/resource/identifier}value

• Ports:

After switching from "Devices" to "Ports," you user can view the ports' dropdown menu:

	_	_	٤.	_	
۲	Ø	r	ť	s	
	-		-	-	

Select Ports	L.	1
Loaded 100 of 7990		1
se02mr05-mgmt01:L8/U2/1	0	A DESCRIPTION OF TAXABLE PARTY.
se02mr05-mgmt01:L8/U2/2		
se02mr05-mgmt01:L8/U2/3		
se02mr05-mgmt01:L8/U2/4		
se02mr05-mgmt01:L8/U2/5		
se02mr05-mgmt01:L8/U2/6		
5002ms05_mamt01.L8/L12/7		

Alternatively, the user can choose to get a full view of the ports by clicking on the "All Ports" button.

Data aggregation can be changed in the timeseries panel by grouping the members by device or ports; this functionality is an option in the context menu. Therefore, if the timeseries panel is created with the "Devices" members, the panel shows each port in an individual line by right-clicking and then grouping by ports.





The Telemetry obtains live data from the server's each specific interval which equals the default session interval. The interval can be changed from the sampling rate option in the context menu.



Time Range

The starting time of timeseries panel can be changed from the time calendar at the top of the page, time can be "Time Range" or "Custom". In case the "Custom" option is chosen, only history data is shown.

		Time 🛛 Last 1 hour 🗸
	Time Range	
	Last 5 Minutes	Last 1 hour
	Last 12 hours	Last 24 hours
k	Last week	Last month
¢	Last 6 months	Last 1 year
h	Custom Cancel	Save

The panel can be edited by changing members, members' type and grouping. The changes can be discarded or saved. The panel can also be deleted.





Save Discard		Rem
r-ufm254-hyp-03 mlx5_0	7	Port TX Packets
sw-hpc62:3	7	206245297
sw-hpc62:36	5	3116853770
switchib:36	5	211671098
r-ufm254-hyp-04 mlx5_0	1	2665905481
		3082609608
Pick ports with highest		
Port RX Packets Rate		
Top X		
5		
Additional Counters		
Port TX Packets × × *		

Threshold

The threshold is supported in Telemetry as a line drawn at the threshold value.



Add Monitoring Session from Devices Table

In the Devices table, the user can see telemetry data for one or multiple devices as timeseries chart by clicking on the monitoring option in the context menu.

				All 🗸	C Displayed C	olumns 🗸 🛛 CSV 🗸
S	Name	GUID	Туре	Model	IP	Firmware Ve
) 7	Filter 🔽	Filter 🍞	Filter 🏼 🗸	Filter 🏼 🗸	Filter 🗸	Filter 🗸
D	smg-ib-sw032	0x98039b0300	switch	💿 MQM8700	N/A	27.2000.2046
D	smg-ib-olg001	0x248a070300	switch	📀 CS7520	N/A	mismatched
?	smg-ib-sw056	0x900a840300	switch	👰 МQM9700	N/A	31.2010.2036
0	smg-ib-sw035	🕒 Copy Cel	L	≥ MQM8700	N/A	27.2010.2010
A	smg-ib-sw040	Upgrade Ca	able Transceivers	≥ МQM8700	10.209.24.57	27.2010.1404
D	smg-ib-sw022	Add To Gro	up 🕨	MSB7700	N/A	11.2008.3328
B	smg-ib-sw012	Remove En	ana Grauna 🔹 🕨	≥ МQM8700	N/A	27.2008.2538
9 I	unmanagedEDR	Constant		<mark>≥</mark> EDR	N/A	15.2008.1604
D	unmanagedHDT	Suppress N	lotifications	≥ HDR	N/A	27.2008.2402
D	smg-ib-sw036	Add To Mor	nitor Session	MQM8700	N/A	27.2010.1404



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