

Product Tutorial

DX Operational Intelligence

Configuring Anomaly Detection



- 1. Launch DX Operational Intelligence
- 2. Click on "Settings" in the left navigation menu
- 3. Click "Configure" on the "Monitoring Groups" card

DX Operational Intelligence offers Metric Group Configuration to enable the users to filter and configure the metric groups based on the metric source and enable these metric groups for Anomaly Detection.





						- 2	
	Х Ор	erational Intelligence > Settings					0 II D
\$	Μ	letric Monitoring G	iroups		Metrics enabled for Anomaly detection	n: 2.74K/50.0K + Crea	te metric monitoring group
4	Ţ	Filter +					
٢		Group name 🚛	Description	Filters	Product	Anomaly detection	Last editor
Ø		APM Avg Reponse Time (168)		Metric: Response Time (ms)(ends_with)	R Application Performance Mana		NESTOR.FALCO
		APM - Frontends metrics and c (30)		Metric: (Frontends\ Apps\ [^\\]* CPU\ Processor.* CPU.* GC Monitor	R Application Performance Mana	\checkmark	NESTOR.FALCO
<u></u> a		CAPM - all utilizations via reg (1247)		$Metric: .* (application {\sf CPUUtilization cpuSystemUtilization heapUtilizati} \\$	E CAPM	\checkmark	NESTOR.FALCO
Ë		CAPM - cpu and interface util (1263)		Metric: Utilization(contains)	CAPM	\checkmark	NESTOR.FALCO
_		Core Network Metrics (36)		Metric: reach(contains)	E CAPM		FRANCOIS.CATT
\$		Default 3rd Party Metric Group (0)	A default list of 3rd party integrated	Source: custom\ .*(regex)	CUSTOM		DEFAULTORG
		Test1 (651)	test	Metric: CPU(contains)	Ca UIM		NESTOR.FALCO
		UIM CPU Usage (135)		Metric: CPU Usage(ends_with)	G UIM	\sim	NESTOR.FALCO
		UIM Memory Usage (68)		Metric: Memory Usage pct(contains)	Ca UIM	<	NESTOR.FALCO
						1	
				Showing 9 of 9			
	De	lete					
	•	BROADCOM DX Operation	al Intelligence v21.06.01		© 2021 Br	oadcom. All Rights Reserved. Co	okie Policy Privacy Policy Terms of Use

- 1. Toggle anomaly detection on/off if you want to change activation status for an existing groups
- 2. Click on the "+ Create metric monitoring group" button placed on the right-hand top corner if you want to create a new group of metrics

This screen lists the metric group name, its description provided during the creation, the filters used to create the metric group, a toggle to Anomaly Detection on/off for the group, the metric source and the last editor of the metric group configuration.



Operational Intelligence > Settings			3 Ⅲ
Undefined* /			Configure Alarm
Product name			
UIM 🔺			
CAPM			
UIM			
Application Performance	Source	Metric	Last seen
Management	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	NA 0 NA Devices:Active Device Count	Jun 30, 2021 12:05 AM
Devices:Total Device Count	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	NA 0 NA Devices:Total Device Count	Jun 30, 2021 12:05 AM
System.Disk:Disk Usage MB	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage MB	Jun 30, 2021 12:05 AN
System.Disk:Disk Size GB	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Size GB	Jun 30, 2021 12:05 AM
iystem.Disk:Disk Free MB	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Free MB	Jun 30, 2021 12:05 AM
System.Disk:Disk Usage pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage pct	Jun 30, 2021 12:05 AN
System.Disk:Disk Free pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Free pct	Jun 30, 2021 12:05 AN
System.Disk:Disk Usage Delta pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage Delta pct	Jun 30, 2021 12:05 AM
iystem.CPU:User	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:User	Jun 30, 2021 12:05 AM
iystem.CPU:System	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:System	Jun 30, 2021 12:05 AN
System.CPU:Wait	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:Wait	Jun 30, 2021 12:05 AM
System.CPU:Aggregate CPU Idle	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:Aggregate CPU Idle	Jun 30, 2021 12:05 AN
iystem.CPU.Multi:User	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 CPU-15 System.CPU.Multi:User	Jun 30, 2021 12:05 AN
System.CPU.Multi:System	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 CPU-15 System.CPU.Multi:System	Jun 30, 2021 12:05 AN
	Showing 100 🛈		
Delete			Cancel S
BROADCOM DX Operational Intelligence v21.06.01		© 2021 Broadcom. All Rights	Reserved. Cookie Policy Privacy Policy Terms

1. Select the product from which you get the metrics

To create the metric monitoring group, you have to first select the source product for the metrics from the drop down. This dropdown will contain all the source products for which the metrics are present in the DX Operational Intelligence repository.



	Operational Intelligence > Settings			0 III D
*	Undefined* /			Configure Alarms
4	Product name			
Ð				
2	Filter +			
10	Metric name <	Source	Metric	Last seen
÷	Select Metric	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	NA 0 NA Devices:Active Device Count	Jun 30, 2021 12:05 AM
	Devices:Total D	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	NA 0 NA Devices:Total Device Count	Jun 30, 2021 12:05 AM
¢î.	System.Disk:Dis Memory usage pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage MB	Jun 30, 2021 12:05 AM
	System.Disk:Di: Add	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Size GB	Jun 30, 2021 12:05 AM
	System.Disk:Disk Free MB	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Free MB	Jun 30, 2021 12:05 AM
	System.Disk:Disk Usage pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage pct	Jun 30, 2021 12:05 AM
	System.Disk:Disk Free pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Free pct	Jun 30, 2021 12:05 AM
	System.Disk:Disk Usage Delta pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Usage Delta pct	Jun 30, 2021 12:05 AM
	System.CPU:User	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:User	Jun 30, 2021 12:05 AM
	System.CPU:System	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:System	Jun 30, 2021 12:05 AM
	System.CPU:Wait	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:Wait	Jun 30, 2021 12:05 AM
	System.CPU:Aggregate CPU Idle	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU:Aggregate CPU Idle	Jun 30, 2021 12:05 AM
	System.CPU.Multi:User	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 CPU-15 System.CPU.Multi:User	Jun 30, 2021 12:05 AM
	System.CPU.Multi:System	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 CPU-15 System.CPU.Multi:System	Jun 30, 2021 12:05 AM
		Showing 100 🛈		
	Delete			Cancel Save
	SROADCOM DX Operational Intelligence v21.06.01		© 2021 Broadcom. All Rights Reserved.	Cookie Policy Privacy Policy Terms of Use

1. Set a relevant filter for the metrics to be used in the group

Use the filter to select metric names or the device sources. In this screen, the filter is set on the Metric name and looking for only for the metric names containing "Memory usage pct".





Undefined* 1			4	Configure Alar
Product name				
UIM 👻				
Filter + Metric: Memory usage pct (Contains) ×	CLEAR ALL			
Metric name	Source		Metric	Last seen
iystem.Memory:Memory Usage pct	UIM lvnqa022521_dc	Metric group	Vmqa022521 1 Total System.Memory:Memory Usage pct	Jun 30, 2021 12:06 A
iystem.Memory:Physical Memory Usage pct	UIM lvnqa022521_dc	A collection of metrics and their monitoring defined by the context and other attribut	Ivnqa022521 1 Physical System.Memory:Physical Memory Usage pct	Jun 30, 2021 12:06 A
iystem.Memory:Swap Memory Usage pct	UIM lvnqa022521_dc	Metric group name	Vnqa022521 1 Swap System.Memory:Swap Memory Usage pct	Jun 30, 2021 12:06 A
iystem.VirtualMachine.Memory:Host Memory Usage pct	UIM lvnqa022521_dc	UIM Memory Usage PCT	SPMAVMGNS0302 17 SPMAVMGNS0302 System.VirtualMachine.Memory:Host Memory	Jun 30, 2021 12:06 A
iystem.Memory:Memory Usage pct	UIM lvnqa022521_dc	Description	10.50.22.23 26 10.50.22.23.Memory System.Memory:Memory Usage pct	Jun 30, 2021 12:06 F
system.Memory:Memory Usage pct	UIM lvnqa022521_dc	UIM memory usage percentage metrics	10.50.22.25 37 10.50.22.25.Memory System.Memory:Memory Usage pct	Jun 30, 2021 12:06 A
system.VirtualMachine.Memory:Host Memory Usage pct	UIM lvnqa022521_dc		SPMAVMDC 27 SPMAVMDC System.VirtualMachine.Memory:Host Memory Usage pct	Jun 30, 2021 12:06 A
ystem.VirtualMachine.Memory:Host Memory Usage pct	UIM lvnqa022521_dc		SPMAVMGNS304 21 SPMAVMGNS304 System.VirtualMachine.Memory:Host Memory	Us Jun 30, 2021 12:06 A
iystem.Memory:Swap Memory Usage pct	UIM lvnqa022521_dc		10.50.22.28 22 10.50.22.28.Memory System.Memory:Swap Memory Usage pct	Jun 30, 2021 12:06 /
iystem.Memory:Memory Usage pct	UIM lvnqa022521_dc	Next	St 22 10.50.22.28.Memory System.Memory:Memory Usage pct	Jun 30, 2021 12:06 A
iystem.Memory:Swap Memory Usage pct	UIM lvnqa022521_dc		110.50.22.30.Memory System.Memory:Swap Memory Usage pct	Jun 30, 2021 12:06 A
iystem.Memory:Memory Usage pct	UIM lvnqa022521_dom	nain lvnqa022521_hub lvnqa022521	10.50.22.30.Memory System.Memory:Memory Usage pct	Jun 30, 2021 12:06 A
system.Memory:Swap Memory Usage pct	UIM lvnqa022521_dom	nain lvnqa022521_hub lvnqa022521	13 10.50.22.32.Memory System.Memory:Swap Memory Usage pct	Jun 30, 2021 12:06
iystem.Memory:Swap Memory Usage pct	UIM lvnqa022521_dom	nain lvnqa022521_hub lvnqa022521	10.50.22.27 3 10.50.22.27. Memory System. Memory: Swap Memory Usage pct	Jun 30, 2021 12:06 P
		Showing 68 of 68		

- 1. Click on the "edit" icon next to the "Undefined*" text on top of the screen
- 2. Give a name and description to the metric monitoring group in the dialog panel
- 3. Click on "Next" to save your changes
- 4. Click on the "Configure Alarm" if you need to fine tune anomaly alarms

Give a name and description to the metric monitoring group, this name and description will be displayed on the Metric Monitoring Group screen.





Fine Tuning Anomaly Alarms



You can set for how many occurrences of anomalies over time/count the system should raise an alarm. This helps in further reducing the alarm noise. For example, if there are 10 instances of CPU usage spike in 15 mins then it might be a matter of concern and an alarm for it would make sense.

- 1. To activate anomaly detection alarms, select the "Enable Detection" checkbox
- To enable fine tuning, unselect "Use System Settings"
- 3. Set if detection should be below or above the dynamic threshold (or both)
- 4. Set the count of anomaly occurences that raise an alarm
- 5. Configure the alarm message (static text and variables)
- 6. Select an alarm notification or create a new one with "Create New"



AI I	DX Operational Intelligence > Settings			0 III D
*	Undefined* /			Configure Alarms
A	Product name			
9	CAPM			
<u></u>	UIM Application Performance	Source	Metric	Last seen
Ë	Malagerien Deulear-Total Deules Count	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	NA 0 NA Devices: Active Device Count	Jun 30, 2021 12:05 AM
¢	System.Disk:Disk Usage MB	UIM Wrqa022521_domain Wrqa022521_hub Wrqa022521	Vnqa022521 1 C/\ System.Disk:Disk Usage MB	Jun 30, 2021 12:05 AM
	System.Disk:Disk Size GB	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnga022521 1 C-\ System.Disk:Disk Size GB	Jun 30, 2021 12:05 AM
	System Disk:Disk Usage pct	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	Imparazza (, , , , , , , , , , , , , , , , , ,	Jun 30, 2021 12:05 AM
	System.Disk:Disk Free pct System.Disk:Disk Usage Delta pct	UIM vnqa022521_domain vnqa022521_hub vnqa022521 UIM vnqa022521_domain vnqa022521_hub vnqa022521	lvnqa022521 1 C:\ System.Disk:Disk Free pct	Jun 30, 2021 12:05 AM
	System.CPU:User	UIM \vnqa022521_domain \vnqa022521_hub \vnqa022521	Nnqa022521 1 Total System.CPU:User	Jun 30, 2021 12:05 AM
	System.CPU:System System.CPU:Wait	UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521 UIM lvnqa022521_domain lvnqa022521_hub lvnqa022521	lvnqa022521 1 Total System.CPU-System lvnqa022521 1 Total System.CPU-Wait	Jun 30, 2021 12:05 AM Jun 30, 2021 12:05 AM
	System.CPU:Aggregate CPU Idle	UIM wnqa022521_domain wnqa022521_hub wnqa022521	knqa022521 1 Total System.CPU:Aggregate CPU Idle	Jun 30, 2021 12:05 AM
	System.CPU.Multi:User System.CPU.Multi:System	UIM [knqa022521_domain [knqa022521_hub [knqa022521 UIM [knqa022521_domain [knqa022521_hub [knqa022521	lvnqa022521 1 CPU-15 System.CPU.Multi:User vnqa022521 1 CPU-15 System.CPU.Multi:System	Jun 30, 2021 12:05 AM Jun 30, 2021 12:05 AM
		Showing 100 🛈		
	Delete			icel Save
	SROADCOM [®] DX Operational Intelligence v21.06.01		© 2021 Broadcom. All Rights Reserved.	cy Policy Terms of Use

1. Click on the "Save" button on the metric filtering page, the Metric Monitoring Group configuration can be saved

To create the metric monitoring group, you have to first select the source product for the metrics from the drop down. This dropdown will contain all the source products for which the metrics are present in the DX Operational Intelligence repository.



,																2
) DX	(Ope	erationa	l Intelligence			29-Jun-21	12:11 am	то 30-Ји	n-21 12:11 an							2
	AI	ll ala	arms	50 of 151 displayed												▲ 🖹 > :
ŀ	DIST	ribution	n		P	rinnea Queues				Ľ			гор	alarmi	ng Entity(s)	Situations
	1		By entity type			Queue	Total	A 4	• 0	٢			E			Service alarms
	L		device (18.54%)	All Others (81.46%)		All alarms (defa	563	71 40	1 17 73	1				-	2 1	All alarms
						Spectrum Faults	11	7 2	1 0	1			4			Auto-update view
	ſ		By severity Major (100%)			UIM anomalies	151	3 6	9 0	0			mu	ntest00)	Show Maintenance
	•					Mainframe Alar	1	0 0	1 0	0			b64	c96971	L	alarms
		▲	Alarm type	Message	Entity(s)		Servi	e(s)		Source	() Ticket	Owner		Last updated	alarms Export to Excel
		•	Anomaly	System.Memory:Physical Memory Usage pct has breached threshold for 5 out	muntes	t001220					G UIM	Open ticket	Unassigned	÷	Jun 29, 2021 11	Set As OI Landing Page
		•	Anomaly	System.Memory:Memory Usage pct has breached threshold for 5 out of 6 time	muntes	t001220						Open ticket	Unassigned	1	Jun 29, 2021 11	:40
		•	Anomaly	System.Memory:Physical Memory Usage pct has breached threshold for 5 out	munpro	od000511					G UIM	Open ticket	Unassigned	÷	Jun 29, 2021 11	:30
		•	Anomaly	System.Memory:Memory Usage pct has breached threshold for 5 out of 6 time	munpro	od000511					G UIM	Open ticket	Unassigned	:	Jun 29, 2021 11	:20
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	ISPM		₽ CAPM	Open ticket	Unassigned	1	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi1/0/1	5		NetO	ISPM		GAPM CAPM CAP	Open ticket	Unassigned	:	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	sPM		CAPM	Open ticket	Unassigned	-	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	sPM		© CAPM	Open ticket	Unassigned	:	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationOut: Rare Anomaly (outside 99.7th percentile probability range) detec	Gi1/0/1	5		NetO	ISPM		© CAPM	Open ticket	Unassigned	÷	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	isPM		© CAPM	Open ticket	Unassigned	:	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	ISPM		👺 САРМ	Open ticket	Unassigned	1	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	isPM		CAPM	Open ticket	Unassigned	1	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationOut: Rare Anomaly (outside 99.7th percentile probability range) detec	Gi1/0/1	5		NetO	ISPM		⊜ САРМ	Open ticket	Unassigned	1	Jun 18, 2021 2:4	45 P
		•	Anomaly	utilizationIn: Rare Anomaly (outside 99.7th percentile probability range) detected	Gi0/0			NetO	ISPM		CAPM	Open ticket	Unassigned	1	Jun 18, 2021 2:4	45 P
			Anomaly	utilizationOut: Rare Anomaly (outside 99.7th nercentile prohability range) deter	Gi0/0			NetO	sePM		E CAPM	Open ticket	Unassigned	:	lup 18 2021 29	15 P

- 1. Click on the 2nd icon in the left navigation menu
- 2. Click on the three-dot menu on the top-right of the screen
- 3. To view the anomaly alarms, select the "All Alarms" from the menu

Once the alarms get generated, you can view and act on the alarms using Alarm Analytics in DX Operational Intelligence. Filter the alarms by selecting the "Alarm Type" as "Anomaly", to view all the Anomaly alarms in the list of alarms.



۰ <mark>آھ</mark> ا	X Operatio	onal Intelligenc	2		29-jun-	21 12:11 am	30-Jun-3	1 12:11 am						0 III D
₽		alarms	50											A ≥ :
	LISTIDU	Tion	of 151 displayed		Pinned Ulleli	ac			126			Ion ala		E bittorical ave
0					Times Ques							TOP UIU		
3		By entity type device (1)	.54%) All Others (81.46%)		Queue	Total	A •	• 0	3			Entity	Count	
Ø					All alarms (de	fa 563	71 401	17 73	1			Sim150	90:	19
	-				Spectrum Fau	Its 11	/ 2	1 0	1			Sim358	83:1	9
±0.		By seventy	2641		F-Anomalies	191	2 6	0 0	0			munpri	*00	2
-		= major (re			Mainframe Al	s 10 ar 1	0 0	1 0	0			bfac96	971	1
	-				monitronic An		0 0		0			000000	_	
10		Alarm ty	e Message		Entity(s)		Service	5)		Source	() Ticket	Owner	Last updated	
-	0	Anomaly	System.Memory:Physical Memo	ny osage pct has breached threshold	for 5 out muntest001220						Open ticket	Unassigned	Jun 29, 2021 11:40	
	Phy System	2	r Usage Pct (Pct)							٠		4 Anomal Usage o	Rare Probable Commo	n 🖩 Mean 🖿 Actual
		20-	Mrs 10225 200									breache	d threshold Upper Rare band	
		18- 16-								5353		Actual Mean	y, June 29, 2021 10:30 PM 18.688432 pct 17.968715870386784 pct 6 230489, 19.466398 pct	
		29 jun	04:00 PM 29 Jun 04:30 PM 29 Jun 05:05 P	M 29 Jun 05:35 PM 29 Jun 06:05 PM	29 Jun 06:35 PM 29 Jun 07:05 PM	29 Jun 07:35 PM	29 Jun 08:05 P	29 Jun 0	08:35 PM	29 Jun 09:05 PM 29 Jun 09:35 PM	29 Jun 10:05 Pt	M 29 Jun susaire m	v.330460, 10.406326 pCt	PM 30 Jun 12:05 AM
			Avg: 18.48 PCT			Min: 17	91 PCT					Max: 19	1.12 PCT	
														Compare metrics >
	•	Anomaly	System.Memory:Memory Usage	e pct has breached threshold for 5 ou	t of 6 time muntest001220					G UIM	Open ticket	Unassigned	Jun 29, 2021 11:40	
	•	Anomaly	System.Memory:Physical Memo	ory Usage pct has breached threshold	for 5 out munprod000511					G UIM	Open ticket	Unassigned	Jun 29, 2021 11:30	
		Anomaly	System.Memory:Memory Usage	e pct has breached threshold for 5 ou	t of 6 time munprod000511					G UIM	Open ticket	Unassigned	Jun 29, 2021 11:20	

- 1. Click on an alarm in the list to display the expanded view
- 2. Select which information to display in one of the available tabs

The configured alarm message is displayed in the Message column of the table and the entity for which the anomaly has been detected for the given metric is visible in the Entity(s) column.





	Opera	itional I	Intelligence		29-Jun-21	12:11 am	o 30-J i	un-21 1	2:11 am	•							0	III (D)
ž	All	ala	rms 🕝	50 of 151 displayed													ê >	> :
2	Distri	oution			Pinned Queues					Ľi					iop alarm	ning Entity(s) 🗸		E historical avg
î.	1		By entity type		Queue	Total		• •	0	٢					Entity	Count		
	C]	device (18.54%)	All Others (81.46%)	All alarms (defa	563	71 4	01 17	73	1					Sim15090):		19
					Spectrum Faults	11	7 2	1	0	1					Sim35883	3:t		9
	ſ		By severity Major (100%)		UIM anomalies	18	3 6	51 0	0	0								2
í.					Mainframe Alar	. 1	0 0	1	0	0								1
	0	•	Alarm type	Message	Entity(s)		Serv	ice(s)			s	ource	() Ticket	Owner		st updated 🚛		
		•	Anomaly	System.Memory:Physical Memory Usage pct has breached threshold for 5 out	muntest001220						Ģ	E UIM	Open ticket	Unassign	ned :	Jun 29, 2021 11:40		
		0	verview	Affected metric Topology Annotation											A	Alarm Management		
	P	hysio	cal Memory	y Usage Pct (Pct)											A	issign to	>	
	Sy	stem.Men	nory												с	lear		
															н	lide		tual
		22-										٠				In-Acknowledge		
		20-														Jn-Assign		
		18-						-						111	100	InHide		8
		16-													-			
		14	29 Jun 04:00 Ph	T T T T T T T T T T T T T T T T T T T	PM 29 Jun 07:05 PM 25	1 9 Jun 07:35 PM	29 jun 08	:05 PM	29 jun 0	8:35 PM	29 Jun 09:05 P	1 M 29 Jun 09:35 PM	1 29 jun 10:05 PI	A 29 jur	10:35 PM	29 Jun 11:05 PM 29 Jun 11:3	15 PM 30 Ju	n 12:05 AM
				Avg: 18.48 PCT		Min: 17.	.91 PCT								Max: 19.12	2 PCT		
																	Compare r	metrics >
	•	Þ	Anomaly	System.Memory:Memory Usage pct has breached threshold for 5 out of 6 time	muntest001220						Ģ	E UIM	Open ticket	Unassig	ned 🚦	Jun 29, 2021 11:40		
	•	Þ	Anomaly	System.Memory:Physical Memory Usage pct has breached threshold for 5 out	munprod000511						G	€ UIM	Open ticket	Unassig	ned :	Jun 29, 2021 11:30		
		•	Anomaly	System.Memory:Memory Usage pct has breached threshold for 5 out of 6 time	munprod000511						Ģ	UIM	Open ticket	Unassig	ned :	Jun 29, 2021 11:20		

- 1. Click the three-dot menu next to "Unassigned" in the "Owner" column in the alarms table.
- 2. Select "Assign to" in the menu to make a team member owner of the alarm

Assigning an alarm to in team member make the name of the person to appear in the "Owner" column.





ОХ Ор	erationa	al Intelligence		29-Jun-21 12:11 am	To 30-Jun-21 12:11 am				0 🏼
A	ll ala	arms	50 of 151 displayed						
DIST	ributio	n		Pinnea Queues	凶			iop alarming	Entity(s) 🗸 😸
1		By entity type		Queue Total	A 🔶 🖲 🛈			Entity	Count
		device (18.54%)	All Others (81.46%)	All alarms (defa 563	71 401 17 73 1			Sim15090:	
	-			Spectrum Faults 11	7 2 1 0 1			Sim35883:t	
1		By severity		F-Anomalies 151	0 151 0 0 0			munprod0	
		Major (100%)		Mainframe Alar 1	0 0 1 0 0			b6ec96971	<u></u>
	•	Alarm type	Message	Entity(s)	Service(s)	Source	🖒 Ticket 🛛 Own	ner La	ast updated 1
		Anomaly	Sustam MamoneDhurical Mamonel Irago net has broached threshold for E out	mustert001220			INCOACIE2 ADD		-n 20, 2021 11:40
	Phys System M	Overview ical Memor	Affected metric Topology Annotati y Usage Pct (Pct)	ion				I Rare	Probable 🖩 Common 🖷 Mean 🖷 Actual
	Phys System.M 22 21	Overview sical Memor emory	Affected metric Topology Annotati	ion		٠		Rare	III Probable III Common III Mean III Actual
	Phys System.M 22 26 18	Overview ical Memor emory	Affected metric Topology Annotati	ion		•		■ Rare	E Prebable E Common E Mean • Actual
	Phys System.M 22 26 14 14 14	Overview ical Memor emory 29 Jun 6400 P	Affected metric Topology Annotati y Usage Pct (Pct) M 23 par 0130 PM 23 par 0505 PM 23 par	ion Феза РМ 29 уля 0765 РМ 29 уля 0735 РМ	29 Jun 1885 PM 29 Jun 0835 PM 22	\$ 130-0955 PM 2930-09351	M 23 Jun 1005 PM 2	2) Jun 10.25 PM 20)	Probable Common Dean Actual
	Phys System.M 22 24 14 14 14	Overview ical Memory a a a 293,on 6400 P	Affected metric Topology Annotati y Usage Pct (Pct)	ion 06.35 РМ 29 улл 07.05 РМ 29 улл 07.35 РМ Міле	20 Jun 08:05 PM 20 Jun 08:05 PM 20 17.91 PCT	• 1.0m 09:05 PM 29.0m 09:35 I	м 29 дип 1005 РМ 2	Rare Rare Solution 10:15 PM 20) Max: 19:12 PCT	Probable Common Mean Actual
	Phys System.M 22 24 14 14 14	Overview ical Memor emory 29 Jun 6400 P	Affected metric Topology Annotati y Usage Pct (Pct)	ion 06,35 РМ 29 дин 07.65 РМ 29 дин 07.35 РМ Мисс	20 јил 61.65 РМ. 29 јил 68.35 РМ. 23 17.91 РСТ	ананан 19 дан 19 65 Р.М. 29 дан 19 53 Г	м 20 дин 1005 РМ 2	E Race • 20)un 10.35 PM 20)un Maio: 19.12 PCT	III Probable III Common III Mean III Actual
	Phys System.M 22 24 11 14 14 14 14	Overview ical Memory and and and and and and and and	Affected metric Topology Annotati y Usage Pct (Pct)	ion осая РМ 29,000 РМ 29,007.35 РМ Мілс 2 muntest001220	29 Jun 08:05 PM 29 Jun 08:05 PM 29 17.91 PCT	аран ФООS PM 22 ран ФОЗЗ 6 Сёт UIM	M 29 Jun 1005 PM 2 Open ticket Unas	Rare 29/Jin 10:35 PM 29/Jin Mai: 19:12 PCT ssigned i Ju	Probable Common Mean Actual Actual
	Phys System M 1	Overview ical Memory a a a 293,an 6400 m Anomaly Anomaly	Affected metric Topology Annotati y Usage Pct (Pct)	ion 6635 PM 29 ул 0705 PM 29 ул 0735 PM Міл: 2 muntest001220 muntprod000511	29 Jun de os PM 29 Jun de 35 PM 29 17.91 PCT	• 1900-00005 PM 29300-00335 I C UIM C UIM	M 29jun 1005 PM 2 Open ticket Unas Open ticket Unas	Rare Rare Solun 1935 PM 20ju Max: 19.12 PCT ssigned I Ju ssigned I Ju	Probable Common Mean Actual Actual

- Create a new ticket by clicking the "Open Ticket" link in the selected alarm row
- 2. Check the ticket number or open an existing ticket by clicking on the ticket number in the "Ticket" column

Opening a new ticket directly from the alarm screen is possible if a Ticket Management system has been configured to the DX Operational Intelligence. This can be done from the settings menu by the Admin.







- 1. Click on the third icon from the top in the left navigation menu
- 2. Click on the three-dot menu on the top of the screen, next to "Entity"

For deeper analysis of the metric showing anomalous behavior through visualization, navigate to Performance Analytics in DX Operational Intelligence





← Done			Filter			U
Filter						
Selec	< Select Entity Name	(m. 1997)				
State	Equals 🗸	Service	Group	Туре	Identifier	Source
	muntest001220	test7, Synthetic Transactions, Backend B		WEBSERVICE_SERVER	Host:33cd11c56c9d	R Application Performance Managem
	Add	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	75 Application Performance Managem
		Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	Application Performance Managem
• •	/jtixchange_web/shop/inde	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	R Application Performance Managem
	/jtixchange_web/shop/new0	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	n Application Performance Managem
	/jtixchange_web/shop/newOrderFo	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	R Application Performance Managem
	/jtixchange_web/shop/signon.shtml	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	🏹 Application Performance Managem
	/jtixchange_web/shop/signonForm.shtml	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	認 Application Performance Managem
• •	/jtixchange_web/shop/viewCategory.shtml	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	Replication Performance Managem
• •	/jtixchange_web/shop/viewProduct.shtml	Synthetic Transactions, TIXCHANGE Web		BUSINESSTRANSACTION	ServiceId:Ticketing	🟹 Application Performance Managem
	0b0c85369669 TomcatProcess TixChange-Serv	ice		AGENT	Host:0b0c85369669	R Application Performance Managem
	10.109.34.38	VMware vCenter, Virtualization, AB-Infra		VCENTER		認 Application Performance Manager
	10.109.34.38			vCenter	IP:10.109.34.38	Spectrum (
	10.124.122.233			device	Host:10.124.122.233	CAPC
	10.125.34.226			device	Host:10.125.34.226	CAPC
	10.125.34.44			device	Host:10.125.34.44	CAPC
	10.126.12.190			device	Host:10.126.12.190	CAPC
• •	10.126.13.26			device	Host:10.126.13.26	CAPC
	10.126.42.100			device	Host:10.126.42.100	CAPC

- 1. Enter a filter to select to the entity you want to display
- 2. Click "Add"
- 3. Select the filtered entity
- 4. Click on "Done"

The same entity name can be used to do a deeper analysis of the affected metric in Performance Analytics





_			
A	DX Operational Intelligence	29-jun-21 12:11 am 10 30-jun-21 12:11 am	III ()
\$	muntest001220 ···	Aggregation Interval ♥ = = = = = = = = = = = = = = = = . Available metrics	
		Please add metrics from Metrics catalogue to get started.	
3		Display Selected Metrics	-
Ø		> System Disk	
<u></u>		✓ System Memory 3/3	
Ë		> Total	
¢		Physical 1/1 Physical Memory Usag	
		> Swap	
		> System CPU	
		> Infrastructure Robot	
	BROADCOM DX Operational Intelligence v21.06.01	© 2021 Broadcom. All Rights Reserved. Cookie Policy Philasy Poli	cy Terms of Us

1. Click on the "Metrics" button

2. Expand the metric tree in the Available metrics slider and clicking the "+" icon for the desired metric



			29-Jun-21 12:20 am To 30-Jun-21 12:20 am					❷ Ⅲ	D
nuntest001220					Aggregation Interval 🗸	= = = =	@= 3#	Metrics	:
hysical Memory Usa	ge Pct (Pct)								
						III Rare III Pro	able 🔳 Common 🛛	Mean 📕 Acts	Jal
22- 20-	•	•				•	•	•	
18-			3				MIL		Z
14 29 Jun 01:30 AM 2) Jun 02:50 AM 29 Jun 04:10 AM 29 Jun 05:30 AJ Avg:: 18.51 PCT	M 29 Jun 06:50 AM 29 Jun 08:10 AM 29 J	jun 09:30 AM 29 jun 10:50 AM 29 jun 12:10 PM 29 jun 01:30 PM Min:: 17.79 PCT	29 jun 02:50 PM 29 jun 04:10 PM 29 jun 0	15:35 PM 29 Jun 06:55 PM	29 Jun 08:15 PM 29 Jun 09: Max:: 19.12 PCT	5 PM 29 Jun 10.5	55 PM 30 Ju	n 12:15 AM
BROADCOM DX C	perational Intelligence v21.06.01				© 2021 Bro	adcom. All Rights Reserved.	Cookie Policy Priv	vacy Policy Ten	ms of Use
									•

1. Select the time range of your choice

Analyze the metric data in the selected time period and also see the anomalies detected. DX Operational Intelligence can help your operations team navigate from Anomaly to Action through a single pane of glass and helping them meet their SLAs and reduce MTTR



BROADCOM[®] SOFTWARE