Relevant for this Network Anomaly	Column Number	Metric Name	Yang Path	Description
	1	name		Path name from yang model
Y	2	time		Metric acquisition time measured in Unix Epoch time (nano seconds) Unix epoch time is seconds since midnight, January 1, 1970 UDT/GMT time zone time stamp converter: https://www.epochconverter.com/ The converter on this page converts timestamps in seconds, milliseconds and microseconds to readable dates.
Y	3	EncodingPath		Device yang path
Y	4	Producer	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	Name of the device that is the source of the telemetry
Y	5	acl-in-rpf-packets		Number of inbound Access Control List reverse path forwarding packets
N	6	active-routes-count	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	Number of active routes present in the routing table for each route source.
Y	7	actual-line-state	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Returns if the line protocol is up or down
Y	8	actual-state	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Returns the actual state of interface (reflects the combination of line protocol and link state)
Y	9	af-name	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	Address family type - IPv4 or IPv6

Y	10	as	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	Autonomous system number The as identifies the unit of control for the routing policy of a single administrative entity. It can be a single device/subnet or can be a group of subnets/prefixes. *
Y	11	backup-routes-count	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	Number of backup routes that are configured in the Routing Information Base (RIB)
Y	12	bandwidth	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	Bandwidth capacity of interface (kbps) This is the bandwith capacity in kilo bits per second =bandwidth number * 1000, e.g. 100,000,000 * 1000 = 100,000,000,000 or 100Gbps
Y	13	bytes-received	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of bytes received by this port. Also known as ingress bytes
Y	14	bytes-sent	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of bytes sent by this port. Also known as egress bytes
Y	15	carrier-transitions	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	loss or recovery of carrier signal- Signal transition, when referring to the modulation of a carrier signal, is a change from one significant condition to another. Examples of signal transitions are a change from one electric current, voltage, or power level to another; a change from one optical power level to another; a phase shift; or a change from one frequency or wavelength to another.
N	16	checksum-error-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of packets with checksum errors - Checksums are used to ensure the integrity of data portions for data

				transmission or storage. A checksum is basically a calculated summary of such a data portion. Network data transmissions often produce errors, such as toggled, missing or duplicated bits. As a result, the data received might not be identical to the data transmitted, which is obviously a bad thing. Because of these transmission errors, network protocols very often use checksums to detect such errors. The transmitter will calculate a checksum of the data and transmits the data together with the checksum. The receiver will calculate the checksum of the received data with the same algorithm as the transmitter. If the received and calculated checksums don't match a transmission error has occurred.
Y	17	crc-errors	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of packets with cyclical redundancy check errors - Cyclic Redundancy Check (CRC) Error indicates when data is corrupted. Calculating from all data, CRC validates packets of information sent by devices and verifies it against the data extracted, ensuring its accuracy.
Y	18	deleted-routes-count	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	number of routes deleted from routing information base / forwarding information base. The forwarding information base (FIB) is the actual information that a routing/switching device uses to choose the interface that a given packet will use for egress. For example, the FIB might be programmed such that a packet bound to a destination in 192.168.1.0/24 should be sent out of physical port ethernet1/2. There may actually be multiple FIB's on a device for unicast forwarding vs multicast RPF checking, different protocols (ip vs mpls vs ipv6) but the basic function is the same - selection criteria (usually destination) mapping to output interface/encapsulation. Individual FIB's may also be partitioned to achieve concurrent independent forwarding tables (i.e. vrf's). Each FIB is programmed by one or more routing information bases (RIB).

				The RIB is a selection of routing information learned via static definition or a dynamic routing protocol. The algorithms used within various RIB's will vary - so, for example, the means by which BGP or OSPF determines potential best paths vary quite a bit. The means by which multiple RIB's are programmed into a common (set) of FIB's in a box will vary by implementation but this is where concepts like administrative distance are used (e.g. identical paths are learned via eBGP and OSPF, the eBGP is usually preferred for FIB injection). Again, RIB's may also be potentially partitioned to allow for multiple vrf's, etc
Y	19	df-unreachable-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	ICMP destination unreachable message with code that indicates fragmentation needed by do not fragment bit is set. When a router is unable to forward a datagram because it exceeds the Maximum Transfer Unit of the next-hop network and its Don't Fragment bit is set, the router is required to return an ICMP Destination Unreachable message to the source of the datagram, with the Code indicating "fragmentation needed and DF set". To support the Path MTU Discovery technique specified in this memo, the router MUST include the MTU of that next-hop network in the low-order 16 bits of the ICMP header field that is labelled "unused" in the ICMP specification. The high-order 16 bits remain unused, and MUST be set to zero.
Y	20	discard-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of discarded packets - The packets were received with *no errors* but were dumped before being passed on to a higher layer protocol. A typical cause of discards is when the router/switch needs to regain some buffer space.
	21	encapsulation	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	
Y	22	encapsulation-failure-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of packets where packets encapsulation failed IP fragmentation is an Internet Protocol (IP) process that breaks

				datagrams into smaller pieces (fragments), so that packets may be formed that can pass through a link with a smaller maximum transmission unit (MTU) than the original datagram size. The fragments are reassembled by the receiving host. If the do not fragment bit is set in the IP header, the packet will be dropped
N	23	encapsulation-type-string	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Encapsulation protocol type being used on the interface
N	24	fragmentation-consumed-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of consumed fragmentation packets
N	25	fragmentation-failure-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of failed fragmented packets
N	26	free-application-memory	Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summary	amount of free application memory in bytes
Y	27	free-physical-memory	Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summary	amount of free physical memory in bytes
Y	28	global__established-neighbors-count-total	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of established neighbors -The fact that routers are neighbors is not sufficient to guarantee an exchange of route/link state updates; they must form adjacencies to exchange route / link-state updates. Adjacency is an advanced form of neighborship formed by routers that are willing to exchange routing information after negotiating parameters of such an exchange. Routers reach a FULL state of adjacency when they have synchronized information
Y	29	global__neighbors-count-total	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	total number of neighbors (see above for neighbor description)
Y	30	global__nexthop-count	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of next hops - Next hop is a routing term that refers to the next closest router a packet can go through. The next hop is among the series of routers 27that are connected together in a network and is the next possible destination for a data packet.
Y	31	global__restart-count	Cisco-IOS-XR-ipv4-bgp-	number of session restarts - This is the number of

			oper:bgp/instances/instance/instance-active/default-vrf/process-info	
Y	33	gre-error-drop	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of gre packet drops
N	33	gre-lookup-failed-drop	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of gre lookup failures
N	34	incomplete-adjacency-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	incomplete adjacency packets
Y	35	input-data-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	number of input data rate in bytes
Y	36	input-drops	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of input packet drops
Y	37	input-errors	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of input packet errors
Y	38	input-ignored-packets	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of input packet ignored
Y	39	input-load	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	input bandwidth laod
Y	40	input-packet-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	input packet rate
Y	41	input-queue-drops	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of input queue drops
Y	42	instance-name	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	name that uniquely identifies a routing process
Y	43	interface		same as interface-name
Y	44	interface-name	Cisco-IOS-XR-infra-statsd-oper:infra-	interface name

			statistics/interfaces/interface/latest/generic-counters Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	
Y	45	l2-transport	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Indicates if the interface is in a layer 2 forwarding state (true or false). By default, interfaces are layer 3.
Y	46	line-state	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Indicates the line state of the interface (up, down, adminup, admindown). Should be consistent with actual-line-state
Y	47	lisp-decap-error-drops	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of lisp decapsulation drops
N	48	lisp-encap-error-drops	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of lisp encapsulation drops
N	49	lisp-punt-drops	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of lisp punt drops
N	50	load-interval	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	number of seconds for load calculation of an interface for load averages
Y	51	mpls-disabled-interface	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	mpls interface forwarding in a disabled state
Y	52	mtu	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Message Transfer Unit value on interface. Identifies the size of the packet that the interface will forward.
N	53	multi-label-drops	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of multi-label drops
N	54	no-route-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of no route packets
Y	55	node-name	Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summary Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops Cisco-IOS-XR-wdsysmon-fd-oper:system-monitoring/cpu-utilization	name of the node
Y	56	null-packets	Cisco-IOS-XR-fib-common-oper:fib-	total number of null packets

			statistics/nodes/node/drops	
Y	57	output-buffer-failures	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	Number of output buffer failures
Y	58	output-data-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	output data rate in bytes
Y	69	output-drops	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of output drops
Y	60	output-errors	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of output errors
Y	61	output-load	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	output bandwidth load in X bytes p[er second
Y	62	output-packet-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	output packet rate in packets per second
Y	63	output-queue-drops	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of output queue drops
Y	64	packets-received	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of packets received
Y	65	packets-sent	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters	number of packets sent
Y	66	parent-interface	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Value of parent interface to a sub or set of sub interfaces
Y	67	paths-count	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	number of learned route paths

Y	68	peak-input-data-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	peak input data rate in bytes
Y	69	peak-input-packet-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	peak input packet per second rate
Y	70	peak-output-data-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	peak output data rate in bytes
Y	71	peak-output-packet-rate	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	peak output packet per second rate
Y	72	performance-statistics__global__configuration-items-processed	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of configuration items processed
Y	73	performance-statistics__global__ipv4rib-server__is-rib-connection-up	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	identifies RIB stats as up (true) or down (false)
Y	74	performance-statistics__global__ipv4rib-server__rib-connection-up-count	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	identifies the type of address family - IPv4 or IPv6
Y	75	performance-statistics__vrf__inbound-update-messages	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of inbound update messages to vrf
Y	76	protocol-route-memory	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	the amount of route memory in use
Y	77	punt-unreachable-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of packets punted to route processor for IP addressed with an unreachable destination
Y	78	ram-memory	Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summary	amount of RAM
Y	79	reliability	Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/data-rate	reliability rates achieved by each process in the system

Y	80	route-table-name	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	total number of routes
Y	81	routes-counts	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	number of route
Y	82	rp-destination-drop-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of packet drops destined for route processor
Y	83	rpf-check-failure-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of reverse path forwarding failure packets
Y	84	saf-name	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information	Service Advertisement Framework name
Y	85	state	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Returns state of the interface (up, down, adminup, admindown)
Y	86	sub-interface-mtu-overhead	Cisco-IOS-XR-pfi-im-cmd-oper:interfaces/interface-briefs/interface-brief	Message Transfer Unit overhead if this is a sub interface
Y	87	system-ram-memory	Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summary	system RAM
Y	88	total-cpu-fifteen-minute	Cisco-IOS-XR-wdsysmon-fd-oper:system-monitoring/cpu-utilization	CPU load for last 15 minutes
Y	89	total-cpu-five-minute	Cisco-IOS-XR-wdsysmon-fd-oper:system-monitoring/cpu-utilization	CPU load for last 5 minutes
Y	90	total-cpu-one-minute	Cisco-IOS-XR-wdsysmon-fd-oper:system-monitoring/cpu-utilization	CPU load for last 1 minutes
Y	91	total-number-of-drop-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	total number of dropped packets
Y	92	type	Cisco-IOS-XR-pfi-im-cmd-	type of interface (ethernet, ethernetbundle, etc)

			oper:interfaces/interface-briefs/interface-brief	
Y	93	unresolved-prefix-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of unresolved route prefix packets
Y	94	unsupported-feature-packets	Cisco-IOS-XR-fib-common-oper:fib-statistics/nodes/node/drops	number of unsupported feature packets
Y	95	vrf-name	Cisco-IOS-XR-ip-rib-ipv4-oper:rib/vrfs/vrf/afs/af/safs/saf/ip-rib-route-table-names/ip-rib-route-table-name/protocol/bgp/as/information Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	virtual routing and forwarding name
Y	96	vrf_neighbors-count	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of neighbor counts for virtual routing and forwarding name
Y	97	vrf_network-count	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of network counts for virtual routing and forwarding name
Y	98	vrf_path-count	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of path counts for virtual routing and forwarding name
Y	99	vrf_update-messages-received	Cisco-IOS-XR-ipv4-bgp-oper:bgp/instances/instance/instance-active/default-vrf/process-info	number of update messages received for virtual routing and forwarding name