



Mist 運用マニュアル - WAN Assurance - WAN Edge Utilities - Testing Tools 実行手順

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はじめに

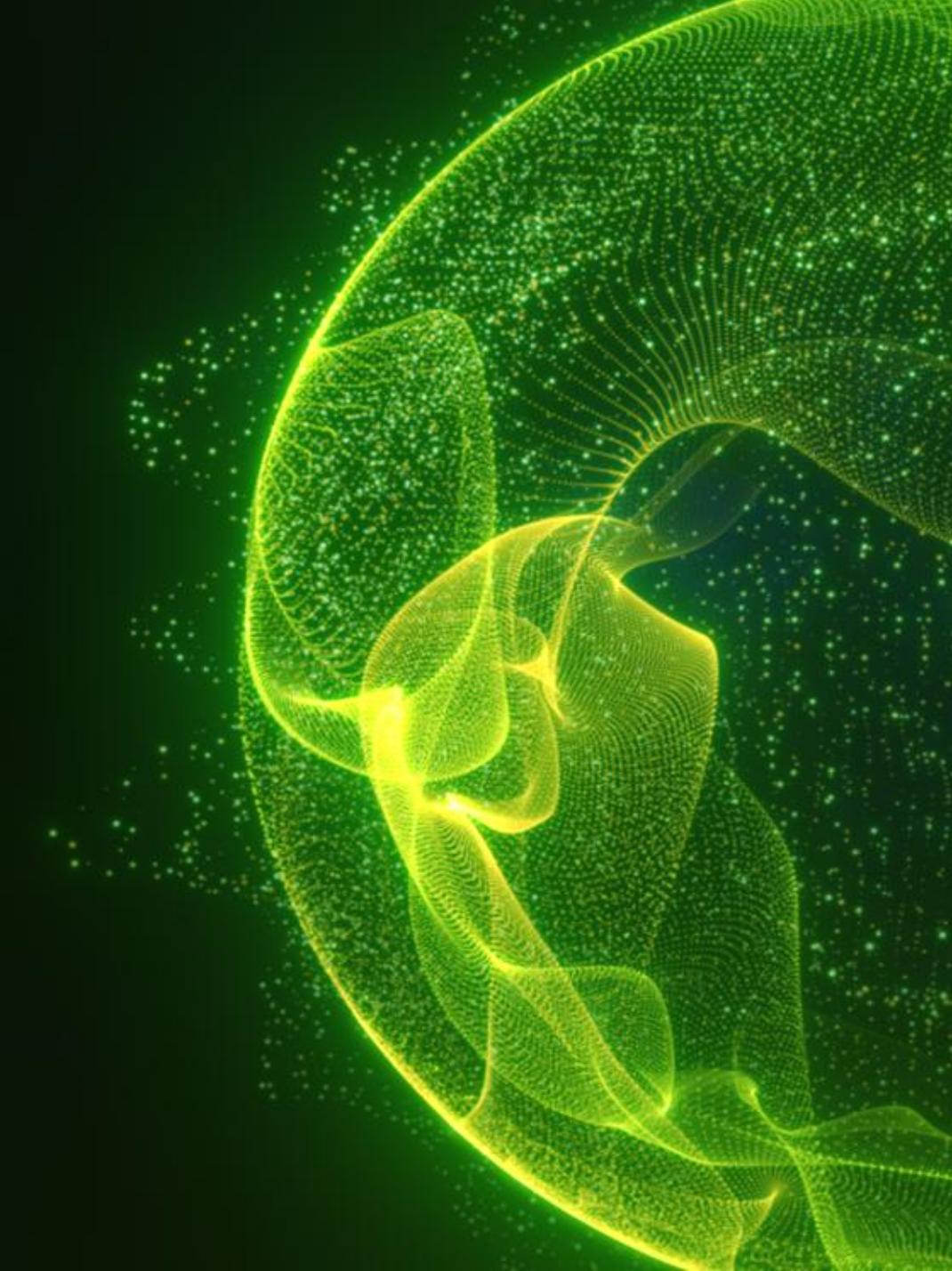
- ❖ 本マニュアルは、『WAN Edge Utilities - Testing Tools 実行手順』について説明します
- ❖ 手順内容は 2025年1月 時点の Mist Cloud にて確認を実施しております
実際の画面と表示が異なる場合は以下のアップデート情報をご確認ください
<https://www.juniper.net/documentation/us/en/software/mist/product-updates/>
- ❖ 設定内容やパラメータは導入する環境や構成によって異なります
各種設定内容の詳細は下記リンクよりご確認ください
<https://www.juniper.net/documentation/product/us/en/mist/>
- ❖ 他にも多数の Mist 日本語マニュアルを「ソリューション&テクニカル情報サイト」に掲載しております
<https://www.juniper.net/jp/ja/local/solution-technical-information/mist.html>
- ❖ **本資料の内容は資料作成時点におけるものであり事前の通告無しに内容を変更する場合があります**
また本資料に記載された構成や機能を提供することを条件として購入することはできません



■ 運用ケース

- 各テストツールの実行
 - ping/traceroute
 - BGP
 - Bounce Port
 - FIB
 - DHCP Release ※
 - ARP ※
 - Application Path/Sessions ※

※ SSR のみ

An abstract visualization of a network or data flow, rendered in vibrant green. It features a large, curved, semi-transparent structure composed of numerous small particles and lines, resembling a complex mesh or a stylized leaf. The structure is set against a dark background with scattered green particles, creating a sense of depth and movement. The overall aesthetic is futuristic and digital.

SSR

WAN Edge Utilities - Testing Tools 実行手順

WAN Edges 一覧 > 選択

1. [WAN Edges] から [WAN Edges] をクリックします
2. [site] を選択、[List] をクリックし、WAN Edge 一覧から Utilities の Testing Tools を実行したい WAN Edge を選択します

The screenshot displays the Juniper Mist management interface. The left sidebar contains navigation options: Monitor, Marvis™, Clients, Access Points, Switches, WAN Edges (highlighted), Mist Edges, and Location. The main content area shows the 'WAN Edges' page for 'site sdwan_denver'. The 'List' button is highlighted. Below the navigation are three status indicators: 100% Config Success, 100% Version Compliance, and 100% WAN Edge Uptime. A table lists the WAN Edges:

<input type="checkbox"/>	Name	Status	MAC	Model	Version	Topology	Last Seen	Insights
<input type="checkbox"/>	sdwan-denver	Connected		SSR	6.3.0-107.r1	Spoke	Jan 8, 2025 10:38:42 PM	WAN Edge Insights

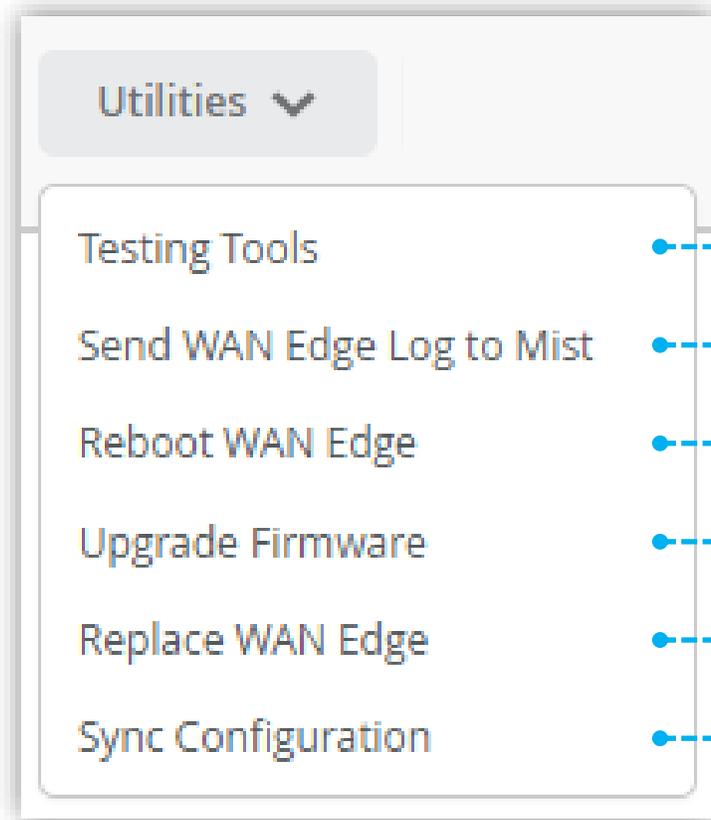
WAN Edge Utilities - Testing Tools 実行手順

Utilities

画面右上の [Utilities] から各操作を実行できます

NOTE

構成・環境により表示メニューが異なります(HA 構成など)



Testing Tools → ping/Release DHCP/BGP/Application Path, Sessions の確認、ARP、FIB を実行します

Send WAN Edge Log to Mist → WAN Edge のログを Mist に送信します

Reboot WAN Edge → WAN Edge を再起動します

Upgrade Firmware → ファームウェアのアップグレードを実行します

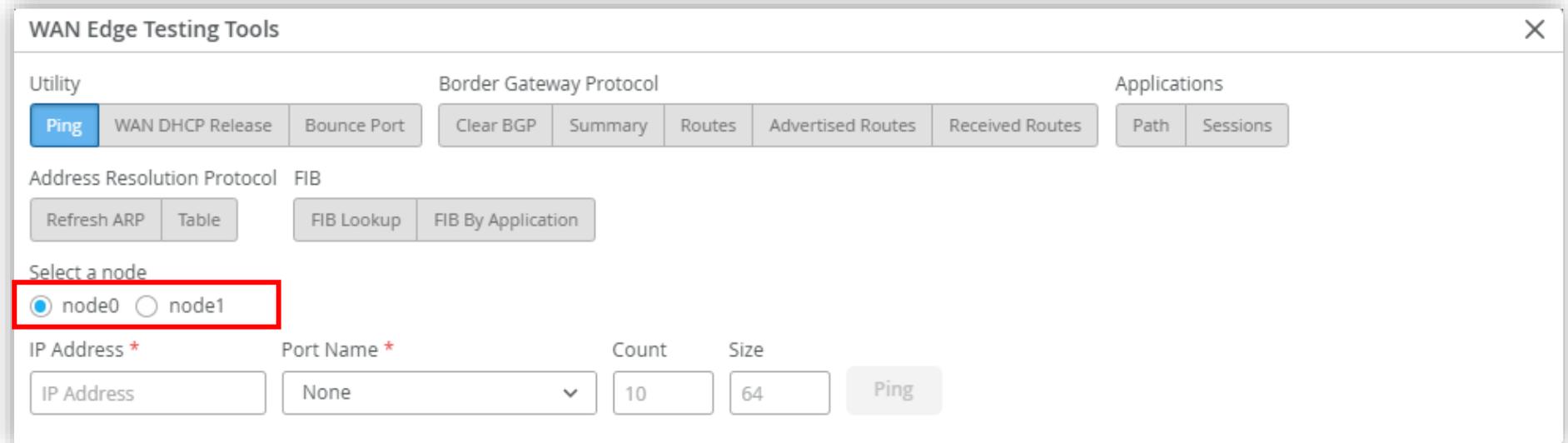
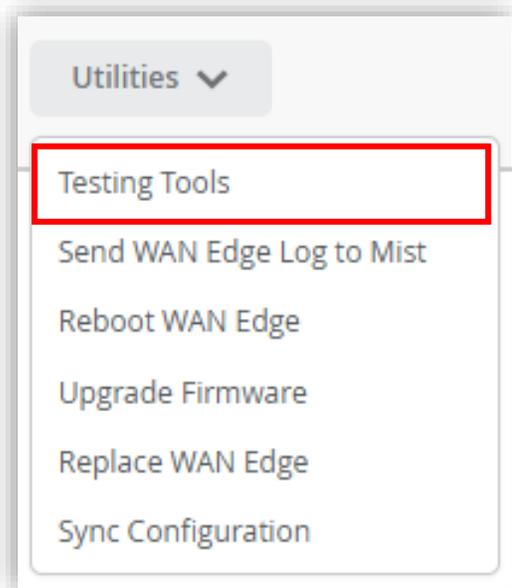
Replace WAN Edge → WAN Edge の交換(設定移行)を実行します

Sync Configuration → 手動でした設定を Mist Cloud で定義された設定で上書きします

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools

[Utilities] から [Testing Tools] をクリックして、各ツールを実行できます



Cluster 構成の場合、
node を指定します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Utility > **Ping**

Ping を実行します

The screenshot shows the 'WAN Edge Testing Tools' window. The 'Utility' section has 'Ping' selected. The 'Border Gateway Protocol' section has 'Clear BGP', 'Summary', 'Routes', 'Advertised Routes', and 'Received Routes'. The 'Applications' section has 'Path' and 'Sessions'. The 'Address Resolution Protocol' section has 'FIB'. The 'FIB' section has 'Refresh ARP', 'Table', 'FIB Lookup', and 'FIB By Application'. The 'IP Address *' field is '8.8.8.8', 'Port Name *' is 'ge-0/0/0', 'Count' is '10', and 'Size' is '64'. The 'Ping' button is highlighted. Below the form is a terminal window showing the output of the ping command.

```
WAN Edge Testing Tools
Utility
Ping WAN DHCP Release Bounce Port Traceroute
Border Gateway Protocol
Clear BGP Summary Routes Advertised Routes Received Routes
Applications
Path Sessions
Address Resolution Protocol FIB
Refresh ARP Table FIB Lookup FIB By Application
IP Address * Port Name * Count Size
8.8.8.8 ge-0/0/0 10 64 Ping
PING 8.8.8.8 56 bytes of data.
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=0 ttl=117 time=12.444ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=1 ttl=117 time=13.764ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=2 ttl=117 time=11.601ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=3 ttl=117 time=11.937ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=4 ttl=117 time=12.067ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=5 ttl=117 time=13.365ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=6 ttl=117 time=13.478ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=7 ttl=117 time=12.69ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=8 ttl=117 time=13.982ms
Ping from 8.8.8.8 (8.8.8.8): icmp_seq=9 ttl=117 time=14.178ms
--- 8.8.8.8 ping statistics ---
10 packets transmitted, 10 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 11.601/12.951/14.178/0.921
```

1 [Ping] をクリックします

2 [IP Address] を入力します

3 [Port Name] で ping を送出口ポートを選択します

4 [Count] を入力します (default: 10)
※ Optional

5 [Size] を入力します (default: 64)
※ Optional

6 [Ping] をクリックして、実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Utility > WAN DHCP Release

DHCP リースをリリースします

The screenshot shows the 'WAN Edge Testing Tools' window. The 'Utility' tab is selected, and the 'WAN DHCP Release' button is highlighted with a red box and a '1' callout. Below it, the 'Port Name' dropdown menu is set to 'ge-0/0/0' and the 'Release' button is highlighted with a red box and a '3' callout. A '2' callout points to the 'Refresh ARP' button. A black terminal window at the bottom displays the output: 'Releasing dhcp...' and 'Successfully released DHCP lease.'

- 1 [WAN DHCP Release] をクリックします
- 2 [Port Name] で DHCP リースをするポートを選択します
- 3 [Release DHCP] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Utility > **Bounce Port**

Bounce Port を実行します

The screenshot shows the WAN Edge Testing Tools interface. The 'Utility' section has 'Bounce Port' selected. The 'Port' dropdown is set to 'ge-0/0/3', and the 'Soft Bounce Port' button is visible. The 'RESULT' section shows 'SUCCESS'.

1 [Bounce Port] をクリックします

2 [Port] でソフトバウンス(リセット)するポートを選択します

3 [Soft Bounce Port] をクリックして実行します

NOTE

- ソフトバウンスは、一時的にポートをダウンさせ、その後アップさせることにより機器内部でのポートの状態を変化させます
- ソフトバウンスによって外部の物理リンクの状態が変更されることはありません
- SSR に接続された機器はリンクの状態変化を認識することはありません

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Utility > **Traceroute** BETA

traceroute を実行します

The screenshot shows the 'WAN Edge Testing Tools' window. The 'Utility' section has 'Traceroute' selected. The 'Network' dropdown is set to 'None' and the 'Host' field contains '8.8.8.8'. The 'Traceroute' button is highlighted. Below the configuration, a terminal window displays the output of the traceroute command.

```
Running traceroute...
traceroute to 8.8.8.8, 64 hops max
 0  6.6.6.1 2 ms  6.6.6.1 2 ms  6.6.6.1 0 ms
 1  10.0.0.1 2 ms  10.0.0.1 1 ms  10.0.0.1 1 ms
 2  100.118.11.73 2 ms  100.118.11.73 2 ms  100.118.11.73 4 ms
 3  100.118.16.41 6 ms  100.118.16.41 4 ms  100.118.16.41 4 ms
 4  66.129.234.238 7 ms  66.129.234.238 2 ms  66.129.234.238 3 ms
 5  172.25.32.5 4 ms  172.25.32.5 2 ms  172.25.32.5 3 ms
 6  66.129.243.10 3 ms  66.129.243.10 3 ms  66.129.243.10 9 ms
 7  4.16.224.129 11 ms  4.16.224.129 10 ms  4.16.224.129 8 ms
```

- 1 [Traceroute] をクリックします
- 2 [Network] を選択します
※ Optional
- 3 [Host] IP アドレスを指定します
- 4 [Traceroute] をクリックします

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Border Gateway Protocol > **Clear BGP**

BGP セッションをクリアして、経路情報を更新します

The screenshot shows the WAN Edge Testing Tools interface. The 'Utility' section is set to 'Border Gateway Protocol'. The 'Clear BGP' button is highlighted with a red box and labeled '1'. Below this, the 'Neighbor *' field contains '10.224.8.48' (labeled '2'), the 'Type' dropdown is set to 'Hard Clear' (labeled '3'), and the 'VRF' field contains 'VRF' (labeled '4'). A 'Clear BGP' button is also highlighted with a red box and labeled '5'. The 'Applications' section is set to 'Sessions'. Below the configuration fields, there is a search bar and a 'RESULT' section showing 'Success'.

- 1 [Clear BGP] をクリックします
- 2 [Neighbor IP] で BGP ネイバーを指定します
- 3 [Type] を選択します
 - Hard Clear
 - Soft Clear In
 - Soft Clear Out
- 4 [VRF] 名を入力します
※ Optional
- 5 [Clear BGP] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Border Gateway Protocol > **Summary**

BGP サマリ(要約)を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Utility' section is set to 'Border Gateway Protocol'. The 'Summary' button is highlighted with a red box and a '1' callout. The 'Address Resolution Protocol' section has 'Show Summary' highlighted with a red box and a '2' callout. Below the buttons is a search bar and a table with 1 item.

TYPE	NAME	VRF NAME	INSTANCE LOCAL AS	NEIGHBOR	NEIGHBOR LOCAL AS	REMOTE AS	MESSAGES RE
SVR	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	default	65000	10.224.8.48	65000	65000	846

1 [Summary] をクリックします

2 [Show Summary] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Border Gateway Protocol > **Routes**

BGP の経路情報を表示します

WAN Edge Testing Tools

Utility: Ping, WAN DHCP Release, Bounce Port, Traceroute, **Clear BGP**, Summary, **Routes**, Advertised Routes, Received Routes, Path, Sessions

Address Resolution Protocol: Refresh ARP, Table, **ARP** Lookup, FIB By App

Route Prefix: VRF: **Show Routes**

Search: 7 items

VRF NAME	PREFIX	NAME	METRIC	WEIGHT	AS PATH	LOCAL PREFERENCE	STATUS	SELE
default	0.0.0.0/0	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	1000000	0		100	Valid, Best	First
default	172.16.128.0/30	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	0	0		100	Valid, Best	First
default	172.26.128.0/30	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	0	0		100	Valid, Best	First
default	192.168.63.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	0	0		100	Valid, Best	First
default	192.168.64.0/24		0	32768		100	Valid, Best	First
default	192.168.65.0/24		0	32768		100	Valid, Best	First
default	192.168.66.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	0	0		100	Valid, Best	First

- 1 [Routes] をクリックします
- 2 [Route Prefix] を指定します
※Optional
- 3 [VRF] 名を入力します
※Optional
- 4 [Show Routes] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Border Gateway Protocol > **Advertised Routes**

BGP ネイバーへ通知している BGP 経路情報を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Border Gateway Protocol' section is active, and the 'Advertised Routes' button is highlighted with a red box and a blue '1' callout. The 'Neighbor IP' field contains '10.224.8.48' (highlighted with a red box and a blue '2' callout), and the 'VRF' field contains 'VRF' (highlighted with a blue box and a blue '3' callout). The 'Show Routes' button is highlighted with a red box and a blue '4' callout. Below the input fields, a search bar shows '2 items' and a table displays the following data:

VRF NAME	ADDRESS FAMILY	PREFIX	NAME	LOCAL ROUTER ID	LOCAL AS	NEXTHOP	METRIC	WEIGHT	AS PATH	LOCAL PREFERENCE	STATUS
default	IPv4 Unicast	192.168.64.0/24		10.224.8.16	65000	0.0.0.0	0	32768		100	Valid, Best
default	IPv4 Unicast	192.168.65.0/24		10.224.8.16	65000	0.0.0.0	0	32768		100	Valid, Best

1 [Advertised Routes] をクリックします

2 [Neighbor IP] で BGP ネイバーを指定します

3 [VRF] 名を入力します
※Optional

4 [Show Routes] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Border Gateway Protocol > **Received Routes**

BGP ネイバーから受信した BGP 経路情報を表示します

WAN Edge Testing Tools

Utility: Ping, WAN DHCP Release, Bounce Port, Traceroute, **Received Routes**, Path, Sessions

Address Resolution Protocol: Refresh ARP, Table, FIB Lookup, FIB By Application

Neighbor IP *: 10.224.8.48, VRF: VRF, Show Routes

Search: 7 items

VRF NAME	ADDRESS FAMILY	PREFIX	NAME	LOCAL ROUTER ID	LOCAL AS	NEXTHOP	METRIC
default	IPv4 Unicast	0.0.0.0/0	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	10000
default	IPv4 Unicast	172.16.128.0/30	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0
default	IPv4 Unicast	172.26.128.0/30	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0
default	IPv4 Unicast	192.168.63.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0
default	IPv4 Unicast	192.168.64.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0
default	IPv4 Unicast	192.168.65.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0
default	IPv4 Unicast	192.168.66.0/24	020001c23771 (896a416b-a002-4191-9b6f-da17574def59)	10.224.8.16	65000	10.224.8.48	0

1 [Received Routes] をクリックします

2 [Neighbor IP] で BGP ネイバーを指定します

3 [VRF] 名を入力します
※Optional

4 [Show Routes] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Applications > **Path**

指定したアプリケーションの経路を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Applications' tab is selected, and the 'Path' button is highlighted with a red box and a '1' callout. The 'Application Name' dropdown is set to 'Boston-lan1' and is also highlighted with a red box and a '2' callout. The 'Show Path' button is highlighted with a red box and a '3' callout. Below the dropdown, a table displays the path information for the selected application.

SERVICE	TYPE	DESTINATION	NEXT-HOP	INTERFACE	VECTOR	COST	RATE	CAPACITY	STATE	MI
Boston-lan1	bgp-over-svr	3.3.3.127/32	3.3.3.127	ge-0/0/2	BostonDC_HA-boston-broadband2.OrgOverlay	never	0	0/unlimited	Up	Ye
Boston-lan1	bgp-over-svr	3.3.3.128/32	3.3.3.128	ge-0/0/2	BostonDC_HA-boston-broadband.OrgOverlay	30	0	0/unlimited	Up	Ye
Boston-lan1	bgp-over-svr	10.0.128.5/32	10.0.128.5	ge-0/0/3	BostonDC_HA-boston-mpls2.OrgOverlay	20	0	0/unlimited	Up	Ye
Boston-lan1	bgp-over-svr	10.0.128.6/32	10.0.128.6	ge-0/0/3	BostonDC_HA-boston-mpls.OrgOverlay	10	0	0/unlimited	Up	Ye

1 [Path] をクリックします

2 [Application Name] でアプリケーションを選択します

3 [Show Path] をクリックしてアプリケーション経路を表示します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Applications > Sessions

指定したアプリケーションのセッション情報を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Applications' section has the 'Sessions' tab selected. The 'Application Name' dropdown is set to 'Internet'. The 'Show Sessions' button is highlighted. Below the dropdown, a table lists 10 session items with columns for Session ID, Direction, Service, Tenant, Device Interface, Network Interface, Protocol, Source IP, and Source Port.

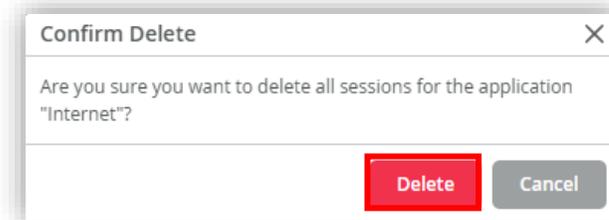
SESSION ID	DIRECTION	SERVICE	TENANT	DEVICE INTERFACE	NETWORK INTERFACE	PROTOCOL	SOURCE IP	SOURCE PORT
1218f24f-ebda-4774-98e1-9e58305bf91d	forward	Internet	alaska-lan2	ge-0/0/2	ge-0/0/2	UDP	192.168.71.2	123
1218f24f-ebda-4774-98e1-9e58305bf91d	reverse	Internet	alaska-lan2	ge-0/0/3	ge-0/0/3	UDP	3.3.3.128	166
32bf8a7c-2a64-4276-b4ad-9a51b7795888	forward	Internet	alaska-lan2	ge-0/0/2	ge-0/0/2	TCP	192.168.71.5	487
32bf8a7c-2a64-4276-b4ad-9a51b7795888	reverse	Internet	alaska-lan2	ge-0/0/3	ge-0/0/3	TCP	3.3.3.128	167
55e2e577-0085-4164-b32c-025d87e9b5e9	forward	Internet	alaska-lan2	ge-0/0/2	ge-0/0/2	UDP	192.168.71.2	123
55e2e577-0085-4164-b32c-025d87e9b5e9	reverse	Internet	alaska-lan2	ge-0/0/3	ge-0/0/3	UDP	3.3.3.128	166
62a525c5-4675-4089-aea0-4f7785741009	forward	Internet	alaska-lan2	ge-0/0/2	ge-0/0/2	UDP	192.168.71.2	123
62a525c5-4675-4089-aea0-4f7785741009	reverse	Internet	alaska-lan2	ge-0/0/3	ge-0/0/3	UDP	3.3.3.128	166
83649387-21f6-43b9-aa3f-6ff3f0aede4b	forward	Internet	alaska-lan2	ge-0/0/2	ge-0/0/2	UDP	192.168.71.2	123
83649387-21f6-43b9-aa3f-6ff3f0aede4b	reverse	Internet	alaska-lan2	ge-0/0/3	ge-0/0/3	UDP	3.3.3.128	166

1 [Sessions] をクリックします

2 [Application Name] でアプリケーションを選択します

3 [Show Sessions] をクリックしてセッション情報を表示します

4 [Delete All Sessions] をクリックします
確認画面(Confirm Delete)が表示され、
[Delete] でセッションを削除できます



WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Address Resolution Protocol > Refresh ARP

ARP 情報をリフレッシュします

The screenshot shows the 'WAN Edge Testing Tools' window. The 'Utility' tab is selected, and the 'Address Resolution Protocol' sub-tab is active. The 'Refresh ARP' button is highlighted with a red box and labeled '1'. The 'Port Name' dropdown menu is set to 'ge-0/0/2' and is highlighted with a red box and labeled '2'. The 'VLAN' dropdown menu is set to 'VLAN' and is highlighted with a blue box and labeled '3'. The 'IP Address' input field is set to 'IP' and is highlighted with a blue box and labeled '4'. The 'Refresh ARP' button is also highlighted with a blue box and labeled '5'. Below the configuration fields, there is a search bar and a table with the following content:

RESULT
Success

- 1 [Refresh ARP] をクリックします
- 2 [Port Name] で ARP をリフレッシュするポートを選択します
- 3 [VLAN] を指定します
※ Optional
- 4 [IP Address] を入力します
※ Optional
- 5 [Refresh ARP] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Address Resolution Protocol > **Table**

ARP テーブルを表示します

The screenshot shows the 'WAN Edge Testing Tools' window. Under the 'Address Resolution Protocol' section, the 'Table' button is highlighted with a red box and a '2' in a blue square. Below it, the 'Show ARP' button is also highlighted with a red box and a '2' in a blue square. The ARP table below shows three entries:

DEVICE INTERFACE	VLAN	IP ADDRESS	DESTINATION MAC	STATE
ge-0/0/2	0	192.168.71.2	00:50:56:be:ce:dd	Valid
ge-0/0/2	0	192.168.71.5	5c:5b:35:cf:3a:b5	Valid
ge-0/0/3	0	6.6.6.1	00:50:56:be:80:e2	Valid

1 [Table] をクリックします

2 [Show ARP] で ARP テーブルを表示します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > FIB > **FIB Lookup**

FIB Lookup(検索) します

The screenshot shows the WAN Edge Testing Tools interface. The 'FIB Lookup' utility is selected. The configuration fields are: Network: alaska-lan, Destination IP: 8.8.8.8, Destination Port: 0, Protocol: ICMP. The 'Lookup' button is highlighted. The results table shows one item:

IPPREFIX	PORT	PROTOCOL	TENANT	VRF	SERVICE	NEXT HOP INTERFACE	NEXT HOP IP	VECTOR	COST
0.0.0.0/0	0	None	alaska-lan	default	Internet	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverlay	1

- 1 [FIB Lookup] をクリックします
- 2 [Network] を選択します
- 3 [Destination IP] を指定します
- 4 [Destination Port] を指定します
- 5 [Protocol] を選択します
 - ESP
 - GRE
 - ICMP
 - TCP
 - UDP
- 6 [Lookup] をクリックします

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > FIB > **FIB By Application**

アプリケーション毎の FIB を表示します

The screenshot shows the 'WAN Edge Testing Tools' window. The 'FIB' section is active, with 'FIB By Application' selected. The 'Application' dropdown is set to 'Boston-lan1'. The 'VRF' and 'Prefix' fields are empty. The 'Show FIB' button is highlighted. Below the form is a search bar and a table of 10 items.

IPPREFIX	PORT	PROTOCOL	TENANT	VRF	SERVICE	NEXT HOP INTERFACE	NEXT HOP IP	VECTOR
172.16.128.0/30	0	ICMP	alaska-lan	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	0	ICMP	alaska-lan2	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	0	GRE	alaska-lan	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	0	GRE	alaska-lan2	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	0	ESP	alaska-lan	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	0	ESP	alaska-lan2	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	1-65535	TCP	alaska-lan	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	1-65535	TCP	alaska-lan2	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	1-65535	UDP	alaska-lan	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla
172.16.128.0/30	1-65535	UDP	alaska-lan2	default	Boston-lan1	ge-0/0/3	3.3.3.128	BostonDC_HA-boston-broadband.OrgOverla

- 1 [FIB By Application] をクリックします
- 2 [Application] を選択します
- 3 [VRF] を指定します
※ Optional
- 4 [Prefix] を指定します (IP Addr/mask)
※ Optional
- 5 [Show FIB] を選択します

An abstract visualization of a network or data flow, rendered in vibrant green and yellow. It features a complex, multi-layered structure of interconnected points and lines, resembling a dense, organic form or a series of overlapping, glowing spheres. The overall effect is one of dynamic energy and connectivity.

SRX

WAN Edge Utilities - Testing Tools 実行手順

WAN Edges 一覧 > 選択

1. [WAN Edges] から [WAN Edges] をクリックします
2. [site] を選択、[List] をクリックし、WAN Edge 一覧から Utilities の Testing Tools を実行したい WAN Edge を選択します

The screenshot displays the Juniper Mist management console interface. The left sidebar contains navigation options: Monitor, Marvis™, Clients, Access Points, Switches, WAN Edges (highlighted), Mist Edges, and Location. The main content area shows the 'WAN Edges' page for the 'site spoke1-site'. The page includes a 'List' button and a 'Topology' button. Below these are three status indicators: '100% Config Success', '100% Version Compliance', and '100% WAN Edge Uptime'. A table lists the WAN Edges, with the 'Spoke1' entry highlighted in red. The table columns are: Name, Status, MAC, IP Address, Model, Version, Topology, Location, Uptime, Managed, Insights, and Errors. The 'Spoke1' entry has a status of 'Connected', an IP address of '192.168.173.102', a model of 'VSRX3', a version of '21.4R1.12', and an uptime of '11h 17m'. The 'Insights' column for 'Spoke1' contains a link to 'WAN Edge Insights'.

<input type="checkbox"/>	Name	Status	MAC	IP Address	Model	Version	Topology	Location	Uptime	Managed	Insights	Errors
<input type="checkbox"/>	Spoke1	Connected		192.168.173.102	VSRX3	21.4R1.12	--	not on floorplan	11h 17m	<input checked="" type="checkbox"/>	WAN Edge Insights	

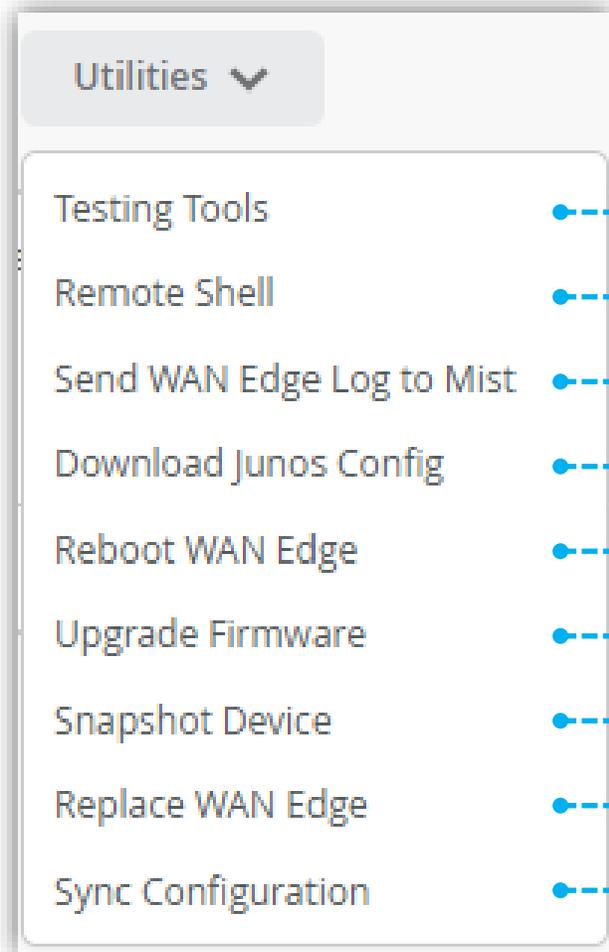
WAN Edge Utilities - Testing Tools 実行手順

Utilities

画面右上の [Utilities] から各操作を実行できます

NOTE

構成・環境により表示メニューが異なります(HA 構成など)



Testing Tools

ping/traceroute/Bounce Port/BGP/FIB を実行します

Remote Shell

Remote Shell を起動します(ブラウザ上で CLI コマンドの実行が可能です)

Send WAN Edge Log to Mist

WAN Edge のログを Mist に送信します

Download Junos Config

Junos の config(設定ファイル) をダウンロードします

Reboot WAN Edge

WAN Edge を再起動します

Upgrade Firmware

ファームウェアのアップグレードを実行します

Snapshot Device

Snapshot を取得します

Replace WAN Edge

WAN Edge の交換(設定移行)を実行します

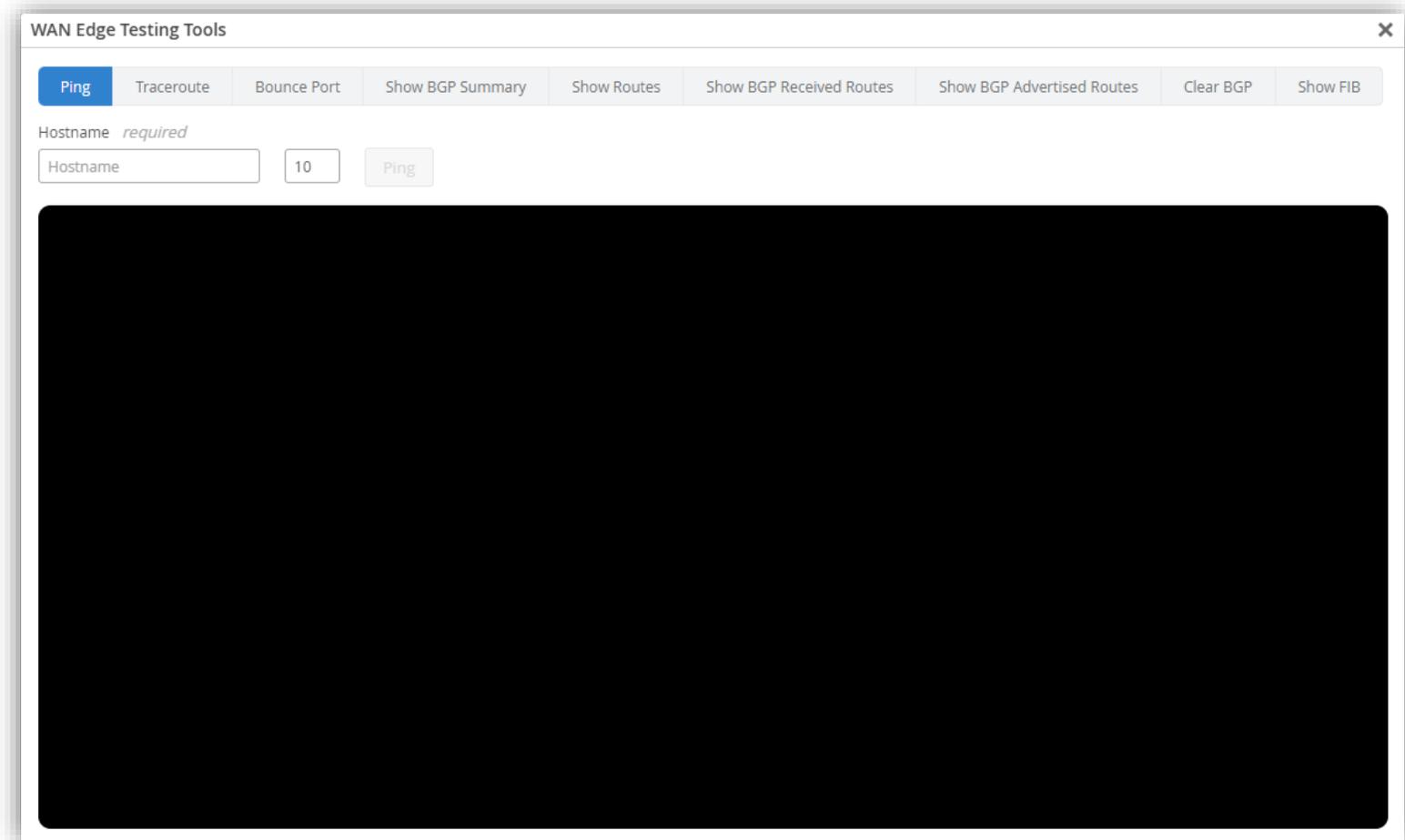
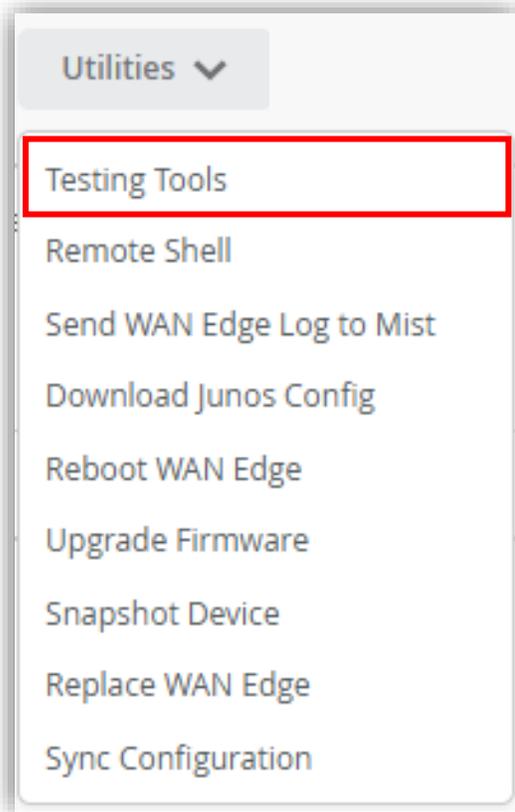
Sync Configuration

手動でした設定を Mist Cloud で定義された設定で上書きします

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools

[Utilities] から [Testing Tools] をクリックして、各ツールを実行できます



WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Ping

Ping を実行します

The screenshot shows the WAN Edge Testing Tools window. The 'Ping' tab is selected. The 'Hostname' field contains '8.8.8.8', the 'Count' field contains '10', and the 'Ping' button is highlighted. The terminal output shows the results of the ping command.

```
WAN Edge Testing Tools
Ping Traceroute Bounce Port Show BGP Summary Show Routes Show BGP Received Routes Show BGP Advertised Routes Clear BGP Show FIB
Hostname required
8.8.8.8 10 Ping

Ping 8.8.8.8 Jan 17, 2025 5:32:37 PM
PING 8.8.8.8 (8.8.8.8): 56 data bytes
64 bytes from 8.8.8.8: icmp_seq=0 ttl=111 time=11.381 ms
64 bytes from 8.8.8.8: icmp_seq=1 ttl=111 time=10.833 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=111 time=11.190 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=111 time=11.110 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=111 time=11.137 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=111 time=12.396 ms
64 bytes from 8.8.8.8: icmp_seq=6 ttl=111 time=10.356 ms
64 bytes from 8.8.8.8: icmp_seq=7 ttl=111 time=9.823 ms
64 bytes from 8.8.8.8: icmp_seq=8 ttl=111 time=12.925 ms
64 bytes from 8.8.8.8: icmp_seq=9 ttl=111 time=20.910 ms

--- 8.8.8.8 ping statistics ---
10 packets transmitted, 10 packets received, 0% packet loss
round-trip min/avg/max/stddev = 9.823/12.206/20.910/3.023 ms
```

1

2

3

4

1

2

3

4

[Ping] をクリックします

[Hostname] を入力します
(hostname/IP アドレス)

[Count] を入力します (default: 10)
※ Optional

[Ping] をクリックして、実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > **Traceroute**

traceroute(UDP) を実行します

The screenshot shows the WAN Edge Testing Tools interface. The 'Traceroute' tab is selected. The configuration fields are: Hostname: 8.8.8.8, Protocol: UDP, Port: 33434, Timeout: 60 sec, and VRF: (empty). The 'Traceroute' button is highlighted. The output window shows the following results:

```
Traceroute 8.8.8.8 Jan 17, 2025 5:33:45 PM
traceroute to 8.8.8.8 (8.8.8.8), 30 hops max, 52 byte packets
 1 192.168.191.1 (192.168.191.1) 2.532 ms 1.552 ms 1.327 ms
 2 192.168.129.190 (192.168.129.190) 1.789 ms 1.828 ms 1.548 ms
 3 192.168.70.1 (192.168.70.1) 5.338 ms 3.444 ms 2.426 ms
 4 100.118.11.109 (100.118.11.109) 3.670 ms 5.123 ms 4.456 ms
 5 100.118.16.45 (100.118.16.45) 6.317 ms 4.018 ms 4.977 ms
 6 66.129.234.238 (66.129.234.238) 4.465 ms 6.193 ms 5.052 ms
 7 172.25.32.5 (172.25.32.5) 5.356 ms 4.149 ms 6.052 ms
 8 66.129.243.10 (66.129.243.10) 5.378 ms 21.138 ms 4.735 ms
 9 9-2-8.ear1.Seattle3.Level3.net (4.16.224.129) 10.308 ms 8.771 ms 8.654 ms
10 ae1.3505.ear4.Seattle1.net.lumen.tech (4.69.202.234) 11.408 ms * *
11 142.250.167.78 (142.250.167.78) 10.411 ms 72.14.243.62 (72.14.243.62) 10.367 ms 8.528 ms
12 108.170.255.177 (108.170.255.177) 12.124 ms * 108.170.255.125 (108.170.255.125) 12.799 ms
13 dns.google (8.8.8.8) 9.137 ms 14.009 ms 10.028 ms
```

- 1 [Traceroute] をクリックします
- 2 [Hostname] を入力します (hostname/IP アドレス)
- 3 [UDP] をクリック、[Port] を入力します
- 4 [Timeout] を入力します (default: 60)
- 5 [VRF] を入力します ※ Optional
- 6 [Traceroute] をクリックして、実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > **Traceroute**

traceroute(ICMP) を実行します

The screenshot shows the WAN Edge Testing Tools interface. The 'Traceroute' tab is selected. The 'Hostname' field contains '1.1.1.1'. The 'ICMP' radio button is selected. The 'Timeout' is set to '60' seconds. The 'VRF' field is empty. The 'Traceroute' button is highlighted. Below the configuration, the execution results are displayed in a terminal window.

```
Traceroute 1.1.1.1 Jan 17, 2025 5:35:21 PM
traceroute to 1.1.1.1 (1.1.1.1), 30 hops max, 52 byte packets
 1 192.168.191.1 (192.168.191.1)  1.887 ms  1.139 ms  1.126 ms
 2 192.168.129.190 (192.168.129.190)  1.576 ms  1.795 ms  1.822 ms
 3 192.168.70.1 (192.168.70.1)  2.424 ms  2.988 ms  2.327 ms
 4 100.118.11.109 (100.118.11.109)  2.266 ms  2.576 ms  3.281 ms
 5 100.118.16.45 (100.118.16.45)  4.153 ms  5.543 ms  6.850 ms
 6 66.129.234.238 (66.129.234.238)  4.336 ms  3.786 ms  3.621 ms
 7 172.25.32.5 (172.25.32.5)  4.362 ms  4.585 ms  4.421 ms
 8 66.129.243.10 (66.129.243.10)  5.563 ms  7.170 ms  5.746 ms
 9 9-2-8.earl.Seattle3.Level3.net (4.16.224.129)  12.120 ms  10.992 ms  9.978 ms
10 ae1.3515.edge6.Seattle1.net.lumen.tech (4.69.219.206)  11.570 ms  13.475 ms  11.175 ms
11 4.30.140.62 (4.30.140.62)  20.334 ms  14.500 ms  10.774 ms
12 108.162.243.33 (108.162.243.33)  26.314 ms  108.162.243.39 (108.162.243.39)  11.725 ms  13.672 ms
13 one.one.one.one (1.1.1.1)  10.576 ms  11.462 ms  10.423 ms
```

- 1 [Traceroute] をクリックします
- 2 [Hostname] を入力します (hostname/IP アドレス)
- 3 [ICMP] をクリックします
- 4 [Timeout] を入力します (default: 60)
- 5 [VRF] を入力します
※ Optional
- 6 [Traceroute] をクリックして、実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > **Bounce Port**

Bounce Port を実行します

The screenshot shows the 'WAN Edge Testing Tools' window. At the top, there is a menu bar with buttons for 'Ping', 'Trace', 'Bounce Port', 'Show BGP Summary', 'Show Routes', 'Show BGP Received Routes', 'Show BGP Advertised Routes', 'Clear BGP', and 'Show FIB'. The 'Bounce Port' button is highlighted with a red box and a '1' in a blue square. Below the menu bar, there is a 'Port Name' dropdown menu with 'ge-0/0/2' selected, highlighted with a red box and a '2' in a blue square. To the right of the dropdown menu is a 'Bounce Port' button, highlighted with a red box and a '3' in a blue square. The main area of the window is a terminal window with a black background and white text. The text in the terminal reads: 'Bounce Port ge-0/0/2', 'Bouncing port...', and 'Port bounce complete.' The date and time 'Jan 17, 2025 11:07:24 AM' are displayed in the top right corner of the terminal window.

- 1 [Bounce Port] をクリックします
- 2 [Port Name] ポートを選択します
- 3 [Bounce Port] をクリックして実行します

NOTE

- Bounce Port は、ポートをダウンさせ、その後アップさせます
- 操作が完了するまで、画面を閉じないようご注意ください
完了前に画面を閉じると、ポートがダウンしたままの状態になる可能性があります

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Show BGP Summary

BGP サマリ(要約)を表示します

WAN Edge Testing Tools

1

Ping Traceroute Bounce Port **Show BGP Summary** Show Routes Show BGP Received Routes Show BGP Advertised Routes Clear BGP Show FIB

2

Show BGP Summary

```
Jan 17, 2025 5:35:59 PM
Threading mode: BGP I/O
Default eBGP mode: advertise - accept, receive - accept
Groups: 1 Peers: 2 Down peers: 0
Unconfigured peers: 2
Peer      AS      InPkt   OutPkt   OutQ   Flaps Last Up/Dwn  State|#Active/Received/Accepted/Damped...
100.101.0.1  65000   32      32      0      0      12:43  Establ
  vpn_OrgOverlay.inet.0: 1/1/1/0
100.101.0.2  65000   32      32      0      0      12:46  Establ
  vpn_OrgOverlay.inet.0: 1/1/1/0
```

1 [Show BGP Summary] をクリックします

2 [Show BGP Summary] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Show Routes

BGP の経路情報を表示します

The screenshot shows the WAN Edge Testing Tools interface. At the top, there is a navigation bar with buttons for 'Ping', 'Traceroute', 'Bounce P...', 'Show BGP Summary', 'Show Routes', 'Show BGP Received Routes', 'Show BGP Advertised Routes', 'Clear BGP', and 'Show FIB'. The 'Show Routes' button is highlighted with a red box and a '1' in a blue square. Below the navigation bar, there are input fields for 'Route Prefix' and 'VRF', both highlighted with blue boxes. A 'Show Routes' button is also highlighted with a red box and a '4' in a blue square. The main content area displays the output of the 'Show Routes' command, including the date and time 'Jan 17, 2025 5:36:37 PM' and a list of routes for various VRFs such as inet.0, mgmt_junos.inet.0, INET.inet.0, MPLS.inet.0, lan.inet.0, and vpn_OrgOverlay.inet.0. The output includes details like destinations, active routes, and BGP path information.

1 [Show Routes] をクリックします

2 [Route Prefix] を指定します
※Optional

3 [VRF] 名を入力します
※Optional

4 [Show Routes] をクリックして実行
します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Show Received Routes

BGP ネイバーから受信した BGP 経路情報を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Show BGP Received Routes' button is highlighted with a red box and labeled '1'. The 'Neighbor' field contains '100.101.0.1' and the 'VRF' field contains 'VRF', both highlighted with red boxes and labeled '2' and '3' respectively. The 'Show BGP Received Routes' button is also highlighted with a red box and labeled '4'. The output of the command is displayed in a terminal window, showing the following information:

```
Jan 17, 2025 5:37:22 PM

Show BGP Received Routes

inet.0: 5 destinations, 5 routes (5 active, 0 holddown, 0 hidden)
mgmt_junos.inet.0: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
INET.inet.0: 14 destinations, 14 routes (14 active, 0 holddown, 0 hidden)
MPLS.inet.0: 15 destinations, 15 routes (15 active, 0 holddown, 0 hidden)
lan.inet.0: 6 destinations, 6 routes (6 active, 0 holddown, 0 hidden)
  Prefix      Nexthop    MED    Lclpref  AS path
* 10.88.88.0/24  100.101.0.1  100    I
vpn_OrgOverlay.inet.0: 25 destinations, 25 routes (25 active, 0 holddown, 0 hidden)
  Prefix      Nexthop    MED    Lclpref  AS path
* 10.88.88.0/24  100.101.0.1  100    I
apbr_Underlay.inet.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
apbr_Overlay.inet.0: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
  Prefix      Nexthop    MED    Lclpref  AS path
* 10.88.88.0/24  100.101.0.1  100    I
apbr_CentralBreakout.inet.0: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
inet6.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
INET.inet6.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
```

1 [Show Received Routes] をクリックします

2 [Neighbor] で BGP ネイバーを指定します

3 [VRF] を入力します
※Optional

4 [Show BGP Received Routes] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Show BGP Advertised Routes

BGP ネイバーへ通知している BGP 経路情報を表示します

The screenshot shows the 'WAN Edge Testing Tools' window. The 'Show BGP Advertised Routes' button is highlighted with a red box and labeled '1'. The 'Neighbor' field contains '100.101.0.1' (labeled '2') and the 'VRF' field contains 'VRF' (labeled '3'). The 'Show BGP Advertised Routes' button is also highlighted with a red box and labeled '4'. The terminal output shows the following BGP advertised routes:

```
Show BGP Advertised Routes Jan 17, 2025 5:38:02 PM

vpn_OrigOverlay.inet.0: 25 destinations, 25 routes (25 active, 0 holddown, 0 hidden)
Prefix      Nexthop    MED    Lclpref  AS path
* 0.0.0.0/0  Self      0       100      I
* 10.66.66.0/24 Self      0       100      I
* 10.99.99.0/24 Self      0       100      I
```

- 1 [Show BGP Advertised Routes] をクリックします
- 2 [Neighbor] で BGP ネイバーを指定します
- 3 [VRF] を入力します
※Optional
- 4 [Show BGP Advertised Routes] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > **Clear BGP**

BGP セッションをクリアして、経路情報を更新します

The screenshot shows the WAN Edge Testing Tools interface. The 'Clear BGP' button is highlighted with a red box and labeled '1'. The 'Neighbor' field contains '100.101.0.2' and is highlighted with a red box and labeled '2'. The 'Type' dropdown menu is set to 'Hard Clear' and is highlighted with a blue box and labeled '3'. The 'VRF' field contains 'VRF' and is highlighted with a blue box and labeled '4'. The 'Clear BGP' button is also highlighted with a blue box and labeled '5'. Below the form, a terminal window shows the command 'Clear BGP' and the output 'Cleared 1 connections' with a timestamp of 'Jan 17, 2025 5:40:44 PM'.

- 1 [Clear BGP] をクリックします
- 2 [Neighbor IP] で BGP ネイバーを指定します
- 3 [Type] を選択します
 - Hard Clear
 - Soft Clear In
 - Soft Clear Out
- 4 [VRF] 名を入力します
※ Optional
- 5 [Clear BGP] をクリックして実行します

WAN Edge Utilities - Testing Tools 実行手順

Testing Tools > Show FIB

FIB を表示します

The screenshot shows the WAN Edge Testing Tools interface. The 'Show FIB' button is highlighted with a red box and a '1' in a blue box. The 'VRF' and 'Prefix' input fields are highlighted with blue boxes and '2' and '3' respectively. The 'Show FIB' button in the input area is highlighted with a red box and a '4' in a blue box. The output shows three routing tables for different VRFs: default.inet, __pfe_private__.inet, and __master.anon__.inet.

```
WAN Edge Testing Tools
[2] VRF [3] Prefix [4] Show FIB
Show FIB
Routing table: default.inet
Internet:
Destination      Type RtRef Next hop          Type Index  NhRef Netif
default          user  1 52:54:0:d3:2f:b6   ucst  698    8 ge-0/0/0.0
default          perm  0                   rjct   36     1
0.0.0.0/32       perm  0                   dscd   34     2
100.99.255.2/32  user  0                   dscd   34     2
100.100.0.3/32   intf  0 100.100.0.3        locl   707    1
192.168.190.254/32 user  0 192.168.190.254    locl   701    3
192.168.191.254/32 user  0 192.168.191.254    locl   696    3
224.0.0.0/4      perm  0                   mdsc   35     1
224.0.0.1/32     perm  0 224.0.0.1          mcst   31     1
255.255.255.255/32 perm  0                   bcst   32     1

Routing table: __pfe_private__.inet
Internet:
Destination      Type RtRef Next hop          Type Index  NhRef Netif
default          perm  0                   dscd   518    2
0.0.0.0/32       perm  0                   dscd   518    2
224.0.0.0/4      perm  0                   mdsc   519    1
224.0.0.1/32     perm  0 224.0.0.1          mcst   522    1
255.255.255.255/32 perm  0                   bcst   523    1

Routing table: __master.anon__.inet
Internet:
Destination      Type RtRef Next hop          Type Index  NhRef Netif
default          perm  0                   rjct   529    1
0.0.0.0/32       perm  0                   dscd   527    1
```

1 [Show FIB] をクリックします

2 [VRF] を入力します
※ Optional

3 [Prefix] を入力します
※ Optional

4 [Show FIB] をクリックします



Thank you

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