

EdgeXOS Platform Notes

XRoads Networks

Edge Network Appliance Platform Notes

EdgeXOS Best Path Routing

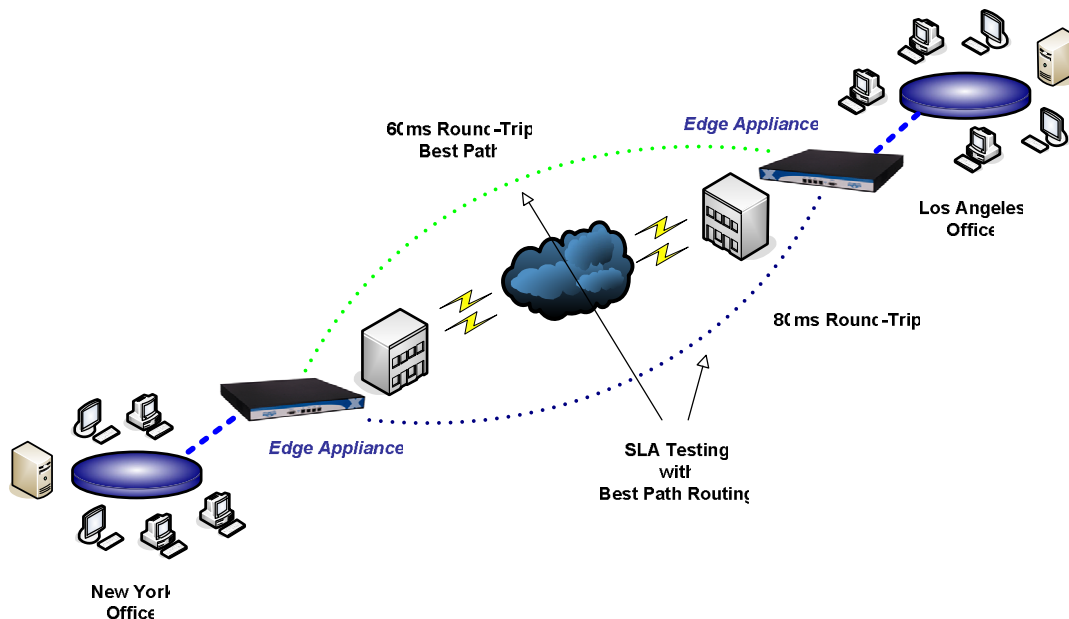
Best Path Routing (BPR) Setup / Overview

This document provides an overview of how you can use Best Path Routing to force specific traffic out a specific interface or have the EdgeXOS platform automatically choose the best path when routing that specific traffic.

Dynamic Route Selection: Best Path Routing can be used to automatically choose the fastest route to a specific destination. This is useful for applications which do not have session persistence issues and/or are easily load balanced. The administrator can enter the latency and packet loss they wish to use when determining the best path.

Session Persistence: Best Path Routing can be used for specific applications where long-term session persistence is required. This includes websites that require single sign-on or real-time applications that can not be balanced, including some CRM, VoIP, and chat/instant messaging services.

SLA Reporting: Best Path Routing can be used to obtain SLA information for each active WAN link. By continuously monitoring each WAN link for latency, packet loss, and jitter, the SLA reports provide detailed information on the status of each WAN link.



In this example we show how to easily add a Best Path Routing rule to maintain session persistence to a email service provider to ensure that all connections to the email service provider use a specific connection unless latency exceeds the pre-defined limit.

- Step 1) Goto the NetBalancing tab and select the Best Path Routing menu
- Step 2) Enter the Network Name
- Step 3) Enter the URL Address OR enter the destination IP address and a probe address

Note: The probe address should be something that the appliance can ping.

- Step 4) Set the Latency to something that you think is reasonable
- Step 5) Set the Packet Loss to something that you think is reasonable

- Step 6) Set the Jitter to something that you think is reasonable
- Step 7) Select to enable SLA reports
- Step 8) Select the default WAN interface that this rule should use
- Step 9) Select the route selection method, "When Threshold Exceeded"

Note: Selecting the threshold exceeded option means that the route will ONLY be changed if the administratively set parameters (latency, etc.) are exceeded. If Best Path is selected then the route will be changed every 15 minutes to reflect the fastest route to the specified destination.

Step 10) Click the Add/ Update button to create and view the policy.

Route Description: (Network Name)

(URL Address - example: www.xyz.com)
NOTE: Must be pingable, and should not be the same as a [link Control website](#).

Define Network: OR

. . . (Network Address Or Subnet)

(Subnet Mask)

Test Node: . . . (This is the address that will be pinged)
NOTE: Created automatically if a URL is entered above.

Latency: ms (Round Trip Time Threshold - Default 500)

Packet Loss: % (Packet Loss Percentage - Default 50)

Jitter: ms (Latency Difference Between Tests - Default 500)

SLA Reporting: (Enable SLA Reports)

Route Method: (Select the default WAN interface)

(How route selection will be applied)
NOTE: If persistence is an issue for this route, do not select best path.

When entering a URL the EdgeXOS appliance will automatically determine the remote network and add the appropriate IP address information.

Route Name	Network Address	Network Mask	Test Node
MailStreet	ms02.mailstreet2003.net	255.255.255.0	69.25.50.135

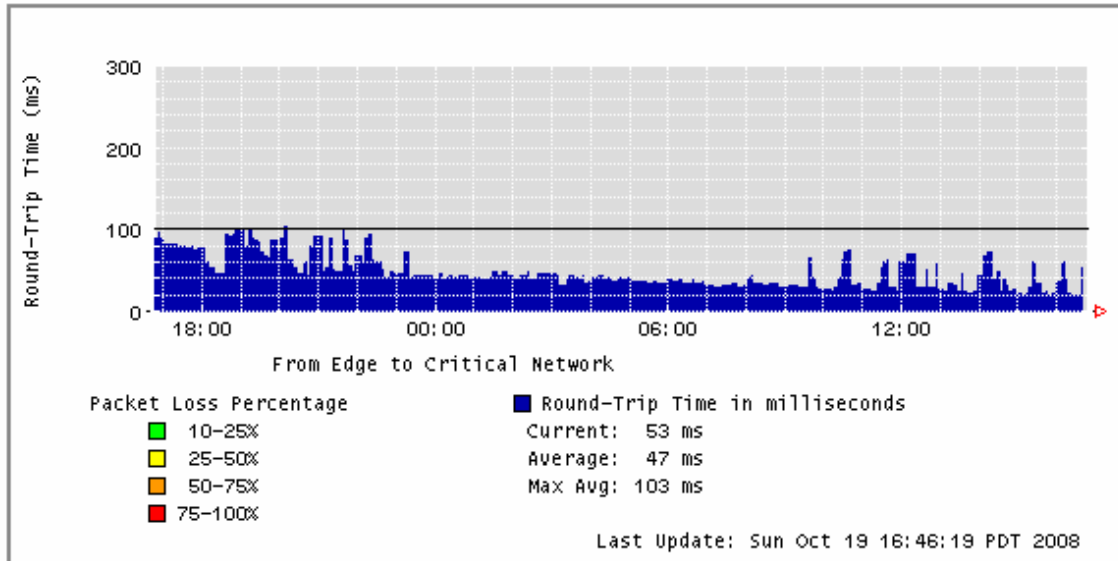
By default the rule will force all traffic out the default WAN interface selected, and then use the parameters to determine how the routing will change in the future.

Default Port	Latency	Packet Loss	Jitter	SLA Stats
wan1	500ms	50	500ms	On

SLA Reporting

When SLA reporting is enabled when the Best Path Routing policy is created then the EdgeXOS appliance will automatically begin monitoring the remote site via each WAN link and provide a graphical report and statistics.

Here are some examples of the SLA reporting:



Time	Avg	Min	Max	Packet Loss	Jitter	Status
Current	55.264	48.115	62.414	0%	7.153	●
Fifteen Minutes Ago	19.324	19.118	19.531	0%	0.248	●
One Hour Ago	23.377	21.791	24.983	0%	1.586	●
One Day Ago	22.752	21.478	24.026	0%	1.274	●
One Week Ago	25.015	24.377	25.654	0%	0.657	●