MULTICAST MONITORING

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TTM Configuration

TTM Configuration allows you to perform very accurate delay measurement between RIPE NCC testboxes. You can define multiple beacons and listeners by entering a multicast IP address and a Port number. The software will then start performing the requested measurements. For TTM measurements currently only a single beacon is allowed per multicast address. While multiple beacons can be run on a single multicast address, you will have to use a Custom Listener on the listening side, which would sacrifice some of the accuracy for delay measurements.

Every TTM Beacon sends out approximately 2 multicast packets per minute using a poession distribution to avoid fixed intervals. Every packet has a header that features a serial number and an offset to locate the timestamp inside the packet. Apart from the timestamp random data is generated as a payload for the packet. Each packet has a size of 100 bytes.

Each configured listener will evaluate incoming packets on a given multicast address and port. These packets have to come from another TTM Beacon, if you want to listen to arbitrary multicast streams, please use the Custom Listener. Timestamps will be extracted and the one-way delay will be calculated and logged. All this is done as soon as the packet arrives on the Data-Link layer to achieve the most accurate one-way delay measurements possible. After starting a listener the plots should usually appear within 10-15 minutes on the Plots page. If no plots are shown it is very likely that there is an error in the configuration or that no packets are arriving due to network problems.

Custom Listener

Configurations

By clicking on "Start Listener and Save Configuration" your configuration can be saved for later use. The TTM-Data configuration is hard coded and can therefore not be deleted. Other configurations may be distributed with the software and can vary from version to version. Usually there are 2 configuration for the dbeacon. "debacon" listens to all incomming packets on a given address and port and trys to extract the timestamp. "debaconSize" however only listens to "real" beacon frames that are 12 bytes in size. All other packets are ignored. Please review the configuration before using them to see if they fit your needs.

Timestamps

You can choose between several options on how the timestamp is stored inside the multicast packet.

- NoTimestamp: There is no timestamp stored inside the packet.

RIPE NCC Multicast Monitoring - Mozilla Firefox

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http://tt85.ripe.net:10259/mcast/configure_alarms.cgi

fark

Getting Started Latest Headlines

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TTM Beacons:

233.13.5.1 12000 Remove

TTM Listeners:

TTM Configuration:

Add another Listener: Multicast IP: Port:

Add another Beacon: Multicast IP: Port: TTL: 128

Email Alarms to: Save Configuration

Done

MULTICAST MONITORING

Multicast	Port	Source Stats	Rate	Time Format	Time Offset	Packet Size	Defined Value(s)	Value Offset(s)	Stat. Intervall	Delete?	Status
233.13.5.1	12000	Yes	2	TTMTimestamp	0	100	0	0	300	Delete	Running
233.2.47.1	10000	Yes	0	dbeaconTimestamp	8	12	beac	0	60	Delete	Running

Conf. Name	Rate	Time Format	Time Offset	Packet Size	Defined Value(s)	Value Offset(s)	Stat. Intervall	Delete?
TTM-Data	2	TTMTimestamp	0	100	0	0	300	
dbeacon	0	dbeaconTimestamp	8	0	beac	0	60	Delete
dbeaconSize	0	dbeaconTimestamp	8	12	beac	0	60	Delete

Add a Listener:

Multicast Address: 233.13.5.2 Source Stats? ☑

Port: 12000

Predefined: New Configuration

Config Name: McastBeacon

Expected Rate (Packets/Minute): 15

Timestamp Format: UnixTimestamp

Timestamp Offset: 4

Packet Payload: 0

Defined Value(s) (hex): 0

Value Offset(s) (bytes): 0

Statistic Intervall (sec): 120

Start Listener | Start Listener and Save Configuration

Select Multicast Membership(s): ☐ **All Memberships**

☑ 233.13.5.1 : 12000 from 193.171.23.110 (Custom Listener)	☐ 233.13.5.1 : 12000 from 195.176.255.5 (Custom Listener)	☐ 233.2.47.1 : 10000 from 130.59.35.110 (Custom Listener)
☐ 233.2.47.1 : 10000 from 130.59.35.130 (Custom Listener)	☐ 233.2.47.1 : 10000 from 130.59.35.22 (Custom Listener)	☐ 233.2.47.1 : 10000 from 130.59.35.78 (Custom Listener)
☐ 233.2.47.1 : 10000 from 130.59.4.84 (Custom Listener)	☐ 233.2.47.1 : 10000 from 130.60.128.70 (Custom Listener)	☐ 233.2.47.1 : 10000 from 212.77.0.131 (Custom Listener)

Delays: ☑
Losses: ☐
Rate(Custom): ☑
Packet Size (Custom): ☐
Defined Values (Custom): ☐

Start: now-1day **Length:** start+1day

Height: small **Width:** narrow

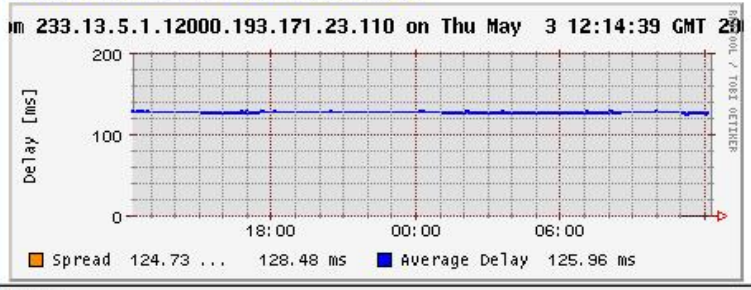
Y-range delay: 0 **to** 1 auto-increment

Loss plots: ○ Loss Only ◉ Loss and Arrived

Draw

Delay (233.13.5.1 : 12000 from 193.171.23.110)

Activate Alarm for this RRD



MULTICAST MONITORING

Alarm email: franz@ripe.net

List of RRD files being monitored:
Custom Listener: Group: 233.2.47.1, Port: 10000, Source: 130.59.35.22, Type: rate, **Stop Monitoring**

Current Alarms:
There are no alarms, everything okay

Test Traffic Measurements: Multicast Traces - Mozilla Firefox

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http://www.ripe.net/ttm/Plots/mcast/graph.cgi?time=1173857400&group=233.2.47.1&Compact+View=0&Co

Getting Started Latest Headlines

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Compare with 07:15

measurement is therefore most likely caused by this, rather than an actual network problem. For more details you can always refer to the plots generated on the testboxes. All times are displayed in UTC.

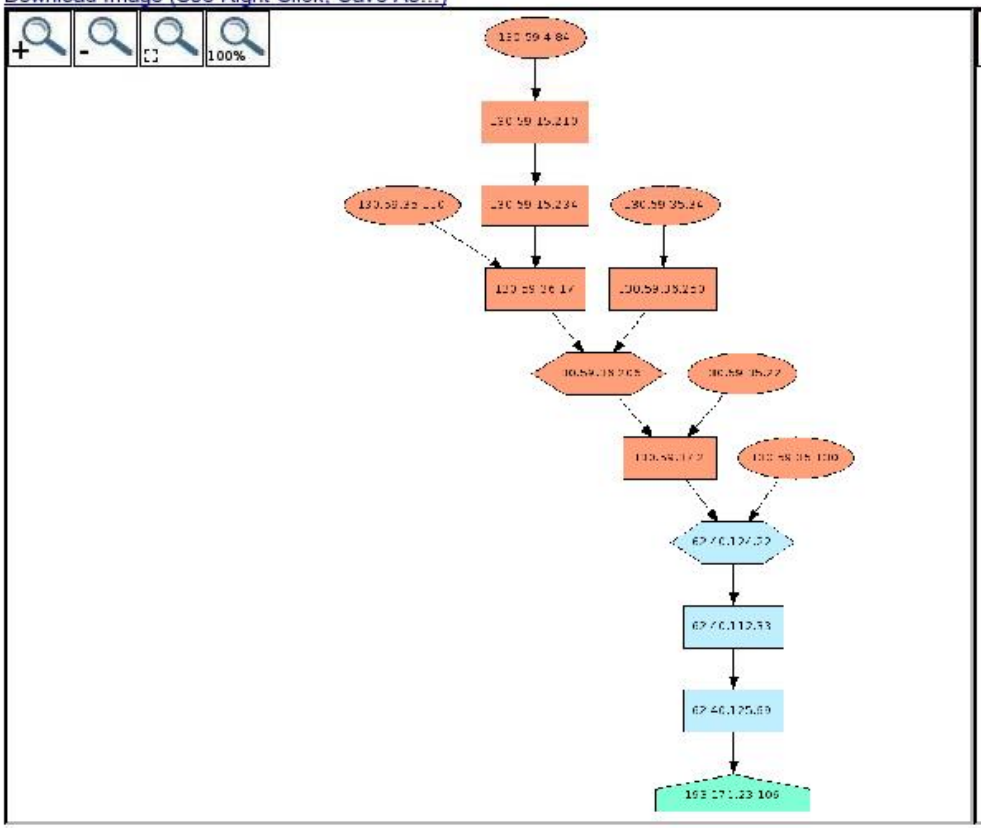
New link 62.40.124.130->62.40.125.69.
New link 193.206.134.190->62.40.124.130.
New link 193.206.134.230->193.206.134.190.
New link 193.206.131.6->193.206.134.230.
New link 212.77.0.131->193.206.131.6.

Related Data
Multicast Plots (tt73)

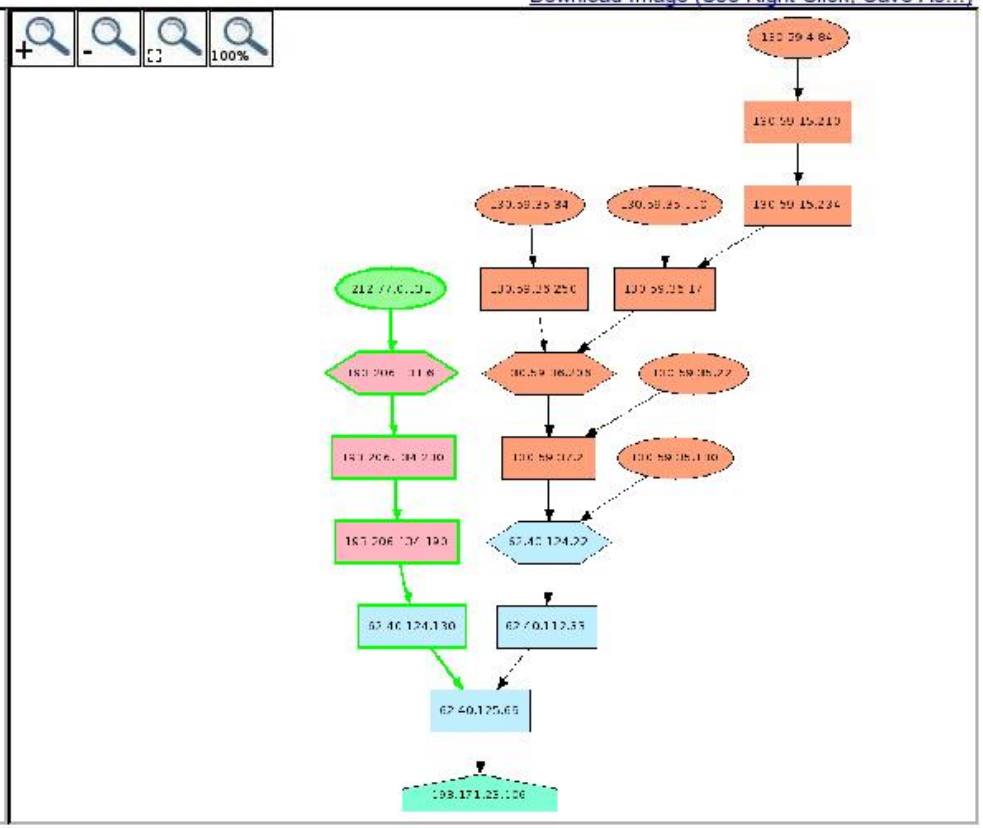
Select a group: 233.2.47.1 Select *Jump to* Date: 20070314 Time: 07:30 Jump

Now << < > >>

Multicast Group: 233.2.47.1, Wed Mar 14 2007 07:15
Download Image (Use Right Click, Save As...)



Multicast Group: 233.2.47.1, Wed Mar 14 2007 07:30
Download Image (Use Right Click, Save As...)



Done

Test Traffic Measurements: Multicast Traces - Mozilla Firefox

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http://www.ripe.net/ttm/Plots/mcast/graph.cgi?time=1173867300&group=233.2.47.1&Compact+View=0&Co

Getting Started Latest Headlines

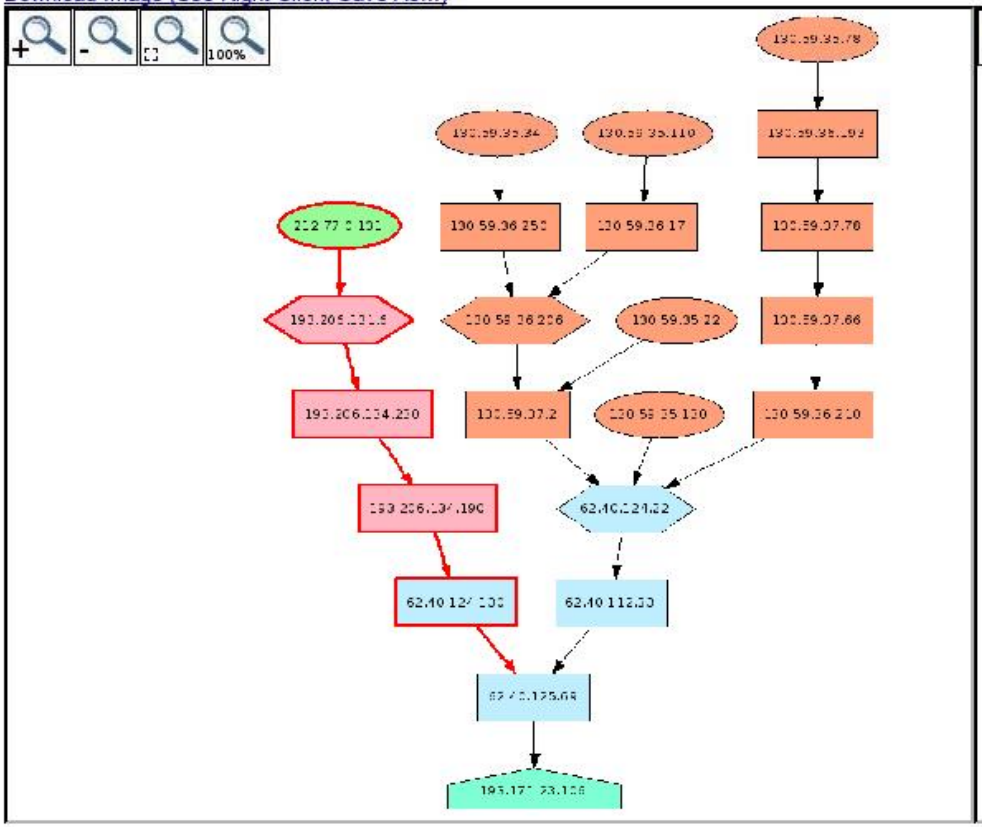
Test Traffic Measurements: ... | RIPE NCC Multicast Monitori... | Test Traffic Measureme...

Link 193.206.131.6->193.206.134.230 vanished.
Link 212.77.0.131->193.206.131.6 vanished.
New link 130.59.15.234->130.59.36.17.
New link 130.59.15.210->130.59.15.234.
New link 130.59.4.84->130.59.15.210.

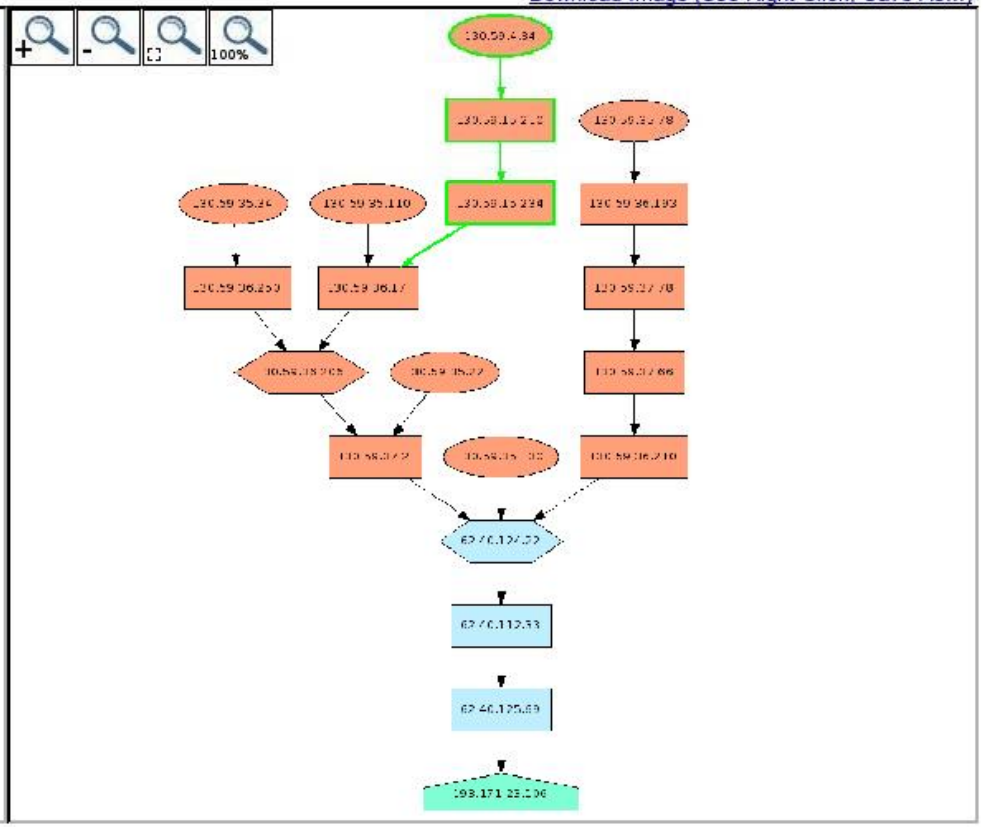
Related Data
Multicast Plots (tt73)

Select a group: 233.2.47.1 Select *Jump to* Date: 20070314 Time: 10:15 Jump
Now << < > >>

Multicast Group: 233.2.47.1, Wed Mar 14 2007 10:00
Download Image (Use Right Click, Save As...)



Multicast Group: 233.2.47.1, Wed Mar 14 2007 10:15
Download Image (Use Right Click, Save As...)



Done

Test Traffic Measurements: Multicast Plots - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.ripe.net/ttm/Plots/mcast/plots.cgi?dest=tt73&group=233.2.47.1&source=212.77.0.131&type=rate

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Multicast Plots

Test Traffic Home Page

Select a Destination: tt73 Select

Select a Group: 233.2.47.1 Select

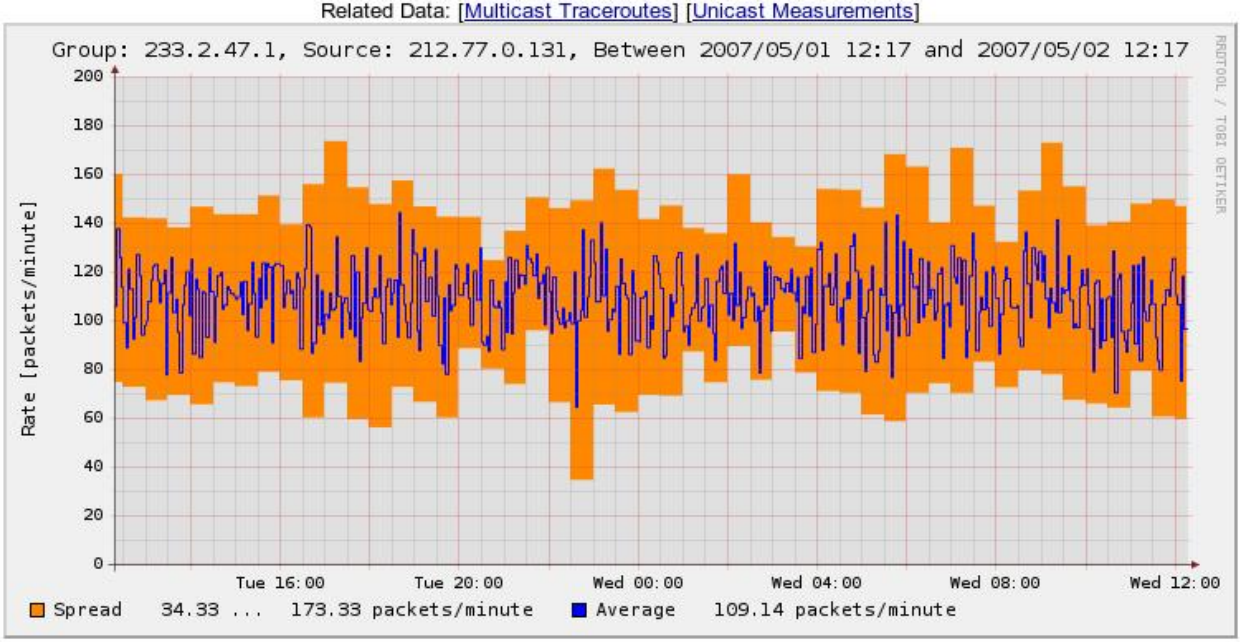
Select a Source: 212.77.0.131 Select

Select a Type: rate Select

Start Date: 20070501 Time: 12:17

End Date: 20070502 Time: 12:17 Select

Related Data: [Multicast Traceroutes] [Unicast Measurements]



Done

Test Traffic Measurements: Multicast Plots - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.ripe.net/ttm/Plots/mcast/plots.cgi?dest=tt73&group=233.13.5.1&source=195.176.255.5&type=de

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Multicast Plots

Test Traffic Home Page

Select a Destination: tt73 Select

Select a Group: 233.13.5.1 Select

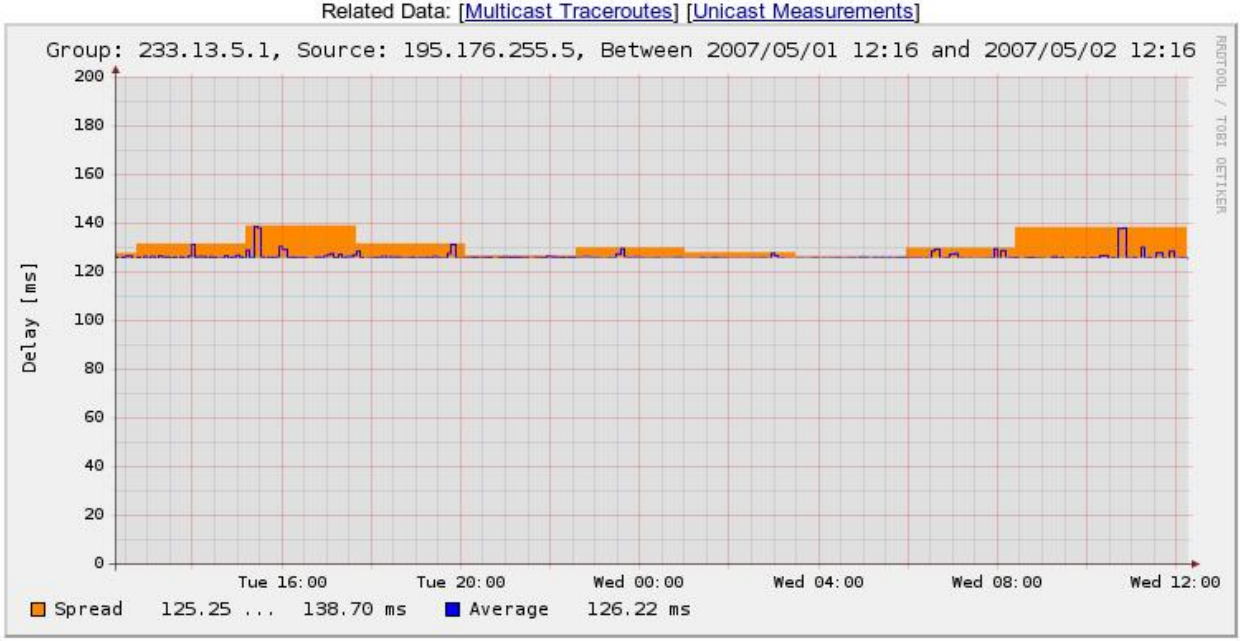
Select a Source: 195.176.255.5 Select

Select a Type: delay Select

Start Date: 20070501 Time: 12:16

End Date: 20070502 Time: 12:16 Select

Related Data: [Multicast Traceroutes] [Unicast Measurements]



Done