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Using Mediatrace

Troubleshooting RTP and TCP Flows Using Mediatrace

The Mediatrace troubleshooting tool generates a table that lists the currently active RTP streams or TCP sessions. Using these Mediatrace tables and their associated options, you can:

- Identify and select RTP or TCP flows with problems.
- Troubleshoot problems with RTP or TCP flows.
- Troubleshoot problems with RTP or TCP flows between any two arbitrary endpoints.
- Troubleshoot problems with RTP flows starting from the RTP Conversations dashlet.
- Identify and compare flow performance indicators and data sources.

Related Topics

- Using the Mediatrace Tables
- Running Mediatrace from Selected RTP or TCP Flows
- Launching an Ad Hoc Mediatrace From Endpoints
- Troubleshooting Worst RTP Endpoints Using Dashlets
- Comparing Flow Data From Multiple Sources
- Managing Metrics

Using the Mediatrace Tables

The flow information shown in the RTP Streams and TCP Sessions tables is collected and aggregated from NAM and NetFlow data generated throughout the network.

Many rows in the RTP Streams table are arranged in a tree hierarchy. This will occur whenever an RTP application flow involves more than one data stream. In these cases, the flows between the two application endpoints are aggregated into a single row with a triangle icon.

By default, Prime Infrastructure automatically refreshes the RTP Streams table data every 60 seconds; you can also use one of the preset filters.

Prime Infrastructure refreshes TCP Sessions data once every 300 seconds (5 minutes); you can use the **Filter by Application** filtering option to include or exclude applications from the list.

You can also click either table's **Refresh** button at any time. You can turn off automatic refresh by unselecting the **Enable auto refresh** check box.

Text Part Number:

To use the Mediatrace tables:

Step 1   Choose **Services > Application Visibility and Control > Mediatrace**.

Step 2   From the **Application** drop-down list, choose **RTP** or **TCP**. The page shows the corresponding table: RTP Streams or TCP Sessions.

Step 3   Find the flow that you want to troubleshoot:

- To review all flows with a particular type of issue, click the appropriate column heading to sort on that column.

  For example, if you are monitoring RTP performance across the network and want to see the streams with the worst jitter or packet loss, click the Jitter or Packet Loss column headings to sort the streams on these performance indicators. You can then select any of the streams for troubleshooting.

- To find a particular flow with a problem, click the **Quick Filter** icon and enter a filter criterion under one or more row headings.

  For example, an end user having trouble accessing an application might report the IP address and the name of that application. You can do a quick filter on the TCP table for either the Client IP address or Application ID, then select that session for troubleshooting.

- To spot issues in RTP subflows, click the triangle icon next to any aggregated RTP flow.

  For example, an RTP voice/video flow between any two endpoints will appear in the RTP Streams table as a single flow with a triangle icon. Clicking the icon will show you the four subflows: an incoming and outgoing video subflow, and an incoming and outgoing voice subflow.

Step 4   To troubleshoot the flow, see the Running Mediatrace from Selected RTP or TCP Flows.

Related Topics

- Running Mediatrace from Selected RTP or TCP Flows
- Using the Mediatrace Tables
- Running Mediatrace from Selected RTP or TCP Flows
- Launching an Ad Hoc Mediatrace From Endpoints
- Troubleshooting Worst RTP Endpoints Using Dashlets
- Comparing Flow Data From Multiple Sources

Running Mediatrace from Selected RTP or TCP Flows

To troubleshoot RTP or TCP flows using Mediatrace:

Step 1   Choose **Services > Application Visibility and Control > Mediatrace**. In the **Application** drop-down list, choose **RTP** or **TCP**, then find the flow that you want by using the steps in Using the Mediatrace Tables.

Step 2   Select the flow and click **Trace Service Path**. Prime Infrastructure displays the RTP or TCP Stream Details page for the selected flow, with all of the routers in the flow's path in the Troubleshooting Status table, in the order of their distance from the flow's source endpoint. Routers that are Medianet-capable are indicated by a filmstrip icon.

Step 3   To run Mediatrace or Traceroute from a router in the flow's path, click the **Start Mediatrace** or **Start Traceroute** link next to that router in the table.

The **Start Mediatrace** link is present when the device is Mediatrace-capable; the **Start Traceroute** link is present when the device is not Mediatrace-capable.

Mediatrace can take a minute or more to run, depending on traffic, congestion, and the total number of hops between the flow endpoints.

While running Mediatrace or Traceroute, click the **Logs** tab to see useful information, including:

- The progress of the operation.
- Errors encountered during the operation, including router response timeouts and other steps that did not complete.
- Where non-Medianet-capable routers where encountered and how they were processed.
- Medianet-capable routers on which Medianet is not configured.

Step 4   When the operation is complete, the Troubleshooting tab displays a topology map of all of the devices between the flow's two endpoints. Device icons in the map consist of:

- Alarm Severity—The most severe alarm currently recorded for the device.
- Flag—The device on which the Mediatrace or Traceroute was initiated.
- Filmstrip—The device is Medianet-capable.
- Minus sign on red background—The device is Medianet-capable but not configured as a Medianet responder. RTP/TCP performance statistics will not be available for the device. To remedy this situation, you must configure the device as a Medianet responder as explained in Troubleshooting RTP and TCP Flows Using Mediatrace.
- Minus sign—The device is unmanaged.

Step 5   To see key performance metrics, such as CPU and memory utilization, jitter, and packet loss, for all Medianet-capable devices in the RTP or TCP flow's path, click the **Medianet Path View** tab. To see the performance metrics in numerical and graphic form, click the subtabs in the Medianet Path View pane.

> ✎
> **Note**   The Medianet Path View tab is available only when you are able to start a Mediatrace operation from the Troubleshooting Status table. If you can only trigger Traceroute operations, it will not be shown.

Step 6   Use the appropriate links in the Troubleshooting Status table to:

- Launch a Mediatrace or Traceroute operation on a different router.
- Restart a Mediatrace or Traceroute operation that is completed, or stop one in progress.

Related Topics

- Using the Mediatrace Tables
- Running Mediatrace from Selected RTP or TCP Flows
- Launching an Ad Hoc Mediatrace From Endpoints
- Troubleshooting Worst RTP Endpoints Using Dashlets
- Comparing Flow Data From Multiple Sources

Launching an Ad Hoc Mediatrace From Endpoints

You can quickly launch a Mediatrace against all RTP or TCP flows between any two endpoints in the network. This can include either specific flows running between any two endpoints on the same or different sites, or between a pair of routers on two different sites.

This is handy if your network lacks NAM monitoring, or when you are in a hurry and you know at least the IP addresses of the two endpoints of the RTP or TCP flow. You must still navigate to and start the trace from the appropriate RTP or TCP Mediatrace table.

To launch an ad hoc Mediatrace from two endpoints:

Step 1   Choose **Services > Application Visibility and Control > Mediatrace**. From the **Application** drop-down list, choose **RTP** or **TCP**.

Step 2   Click **Specify Session for Mediatrace**.

Step 3   Enter the required information:

- For an RTP flow:
    - Select the Source Site.
    - Enter the Source Endpoint IP address.
    - Enter the Destination EndPoint IP address.
- For a TCP flow:
    - Select the Client Site.
    - Enter the Client Endpoint IP address.
    - Enter Server Endpoint IP address.

Step 4   Provide any additional endpoint information that you have:

- For an RTP flow, select or enter the Source Endpoint Port and Destination Endpoint Port.
- For a TCP flow, select or enter the Server Endpoint Port.

Step 5   Click **Trace Service Path** (for an RTP flow) or **OK** (for a TCP flow). Prime Infrastructure displays the RTP or TCP Stream Details page for the specified flow, with all of the routers in the flow's path in the Troubleshooting Status table, in the order of their distance from the flow's source or client endpoint. Routers with a "filmstrip" icon next to them are Medianet-capable.

Step 6   To run Mediatrace or Traceroute from a router in the flow's path, click the **Start Mediatrace** or **Start Traceroute** link next to that router in the table.

Mediatrace can take a minute or more to run, depending on traffic, congestion, and the total number of hops between the flow endpoints.

While running Mediatrace or Traceroute, click the **Logs** tab to see useful information, including:

- The progress of the operation.
- Errors encountered during the operation, including router response timeouts and other steps that did not complete.
- Where and how non-Medianet-capable routers where encountered and processed.
- Medianet-capable routers on which Medianet is not configured.

Step 7   When the operation is complete, the Troubleshooting tab displays a topology map of the all the devices between the flow's two endpoints. Device icons in the map will be badged as follows:

- Alarm Severity—The most severe alarm currently recorded for the device.

- Flag—The device on which the Mediatrace or Traceroute was initiated.

- Filmstrip—The device is Medianet-capable.

- Minus sign on red background—The device is Medianet-capable but not configured as a Medianet responder. RTP/TCP performance statistics will not be available for the device. To remedy this situation, you must configure the device as a Medianet responder.

- Minus sign—The device is unmanaged.

Step 8   To see key performance metrics for all Medianet-capable devices in the flow's path, click the **Medianet Path View** tab. Click the subtabs in the Medianet Path View pane to see the performance metrics in numerical and graphic form.

> **Note**   The Medianet Path View tab is available only when you are able to start a Mediatrace operation from the Troubleshooting Status table. If you can only trigger Traceroute operations, it will not be shown.

Step 9   Use the appropriate links in the Troubleshooting Status table to launch a Mediatrace or Traceroute operation on a different router, restart a Mediatrace or Traceroute operation that is completed, or stop one in progress.

Troubleshooting Worst RTP Endpoints Using Dashlets

You can quickly launch a Mediatrace against the poorest performing RTP flows in your network using the Worst N RTP End Point Pairs. and RTP Conversation dashlets. This works only for RTP flows.

The RTP Conversations dashlet shows the complete history for a source endpoint, including flows that are no longer active. You will want to select only the most recent flows. If you launch Mediatrace on such an inactive flow, you will receive an error message advising you of this fact.

Step 1   Choose **Dashboard > Performance > End User Experience**.

Step 2   In the **Worst N RTP End Point Pairs** dashlet (if this dashlet is not already in the dashboard, see Adding Dashlets), note the Source Address for your worst performing RTP flows.

Step 3   In the **RTP Conversations** dashlet in the same page, find the most recent conversation for the same Source Address.

Step 4   Select that conversation in the RTP Conversations dashlet, then choose **Troubleshoot > Trace Service** path. Prime Infrastructure displays the RTP Stream Details page for the selected flow, with all of the routers in the flow's path in the Troubleshooting Status table, in order of their distance from the flow's source endpoint. Routers that are Medianet-capable are indicated by a filmstrip icon.

Step 5   To run Mediatrace or Traceroute from a router in the flow's path, click the **Start Mediatrace** or **Start Traceroute** link next to that router in the table.

> **Note**   The **Start Mediatrace** link is present when the device is Mediatrace-capable; the **Start Traceroute** link is present when the device is not Mediatrace-capable.

Mediatrace can take a minute or more to run, depending on traffic, congestion, and the total number of hops between the flow endpoints.

While running Mediatrace or Traceroute, click the **Logs** tab to see useful information, including:

- The progress of the operation.
- Errors encountered during the operation, including router response timeouts and other steps that did not complete.
- Where and how non-Medianet-capable routers where encountered and processed.
- Medianet-capable routers on which Medianet is not configured.

Step 6   When the operation is complete, the Troubleshooting tab displays a topology map of the all of the devices between the flow's two endpoints. Device icons in the map will be badged as follows:

- Flag—The device on which the Mediatrace or Traceroute was initiated.
- Filmstrip—The device is Medianet-capable.
- Minus sign—The device is unmanaged.

Step 7   To see key performance metrics for all Medianet-capable devices in the flow's path, click the **Medianet Path View** tab. To see the performance metrics in numerical and graphic form, click the subtabs in the Medianet Path View pane.

> **Note**   The Medianet Path View tab is available only when you are able to start a Mediatrace operation from the Troubleshooting Status table. If you can only trigger Traceroute operations, it will not be shown.

Step 8   Use the appropriate links in the Troubleshooting Status table to:

- Launch a Mediatrace or Traceroute operation on a different router.
- Restart a Mediatrace or Traceroute operation that is completed, or stop one in progress.

Comparing Flow Data From Multiple Sources

When interpreting Mediatrace performance data, you might find it helpful to:

- Identify the NAM, NetFlow, and other sources reporting this performance data.
- If you have multiple NAM or NetFlow data sources, compare how those sources are reporting key performance indicators for a particular flow.

To compare flow data from multiple sources:

Step 1   Choose **Services > Application Visibility and Control > Mediatrace**.

Step 2   From the **Application** drop-down list, choose **RTP** or **TCP**, then find the flow that you want using the steps in Using the Mediatrace Tables.

Step 3   Expand a row (for an RTP or TCP flow) to view the details of the key performance indicators appropriate for the selected flow and the data source for each such set of indicators.

Step 4   When you are finished, click **OK**.

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