Device Dashboard

API calls for retrieving troubleshooting information about Viptela devices in the overlay network:

- Application-Aware Routing Aggregation
- Control Connections
- Device BFD State
- Device Counters
- Device Status Summary
- Device System Summary
- Events
- Events by Severity
- Flow Log
- Interface Aggregation
- Ping
- Synced Interface
- Top Applications for a Device
- Top Destinations for a Device
- Device Dashboard
- Traceroute

Application-Aware Routing Aggregation

Display loss, latency, and jitter information for a device's TLOCs and tunnels.

URL: https://vmanage-ip-address/dataservice/statistics/approute/aggregation

Method: POST

Request Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>vManage sample query to filter by device identifier and time.</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

Response Content Type: application/json
Response Object: See Response Object, below.

Example

Display average loss, latency, and jitter for each local color on the device:

```json
{
  "query":{
    "condition":"AND",
    "rules":[
      {
        "value": [24],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "value": [100],
        "field": "loss_percentage",
        "type": "number",
        "operator": "less"
      },
      {
        "value": ["172.16.255.11"],
        "field": "vdevice_name",
        "type": "string",
        "operator": "in"
      }
    ]
  },
  "aggregation":{
    "field":{
      "property": "local_color",
      "order": "asc",
      "sequence": 1
    },
    "metrics":{
      "property": "loss_percentage",
      "type": "avg"
    },
    "property": "latency",
    "type": "avg"
  }
}
```

Display average loss percentage in 30-minute intervals on each tunnel for the last 12 hours:

```json
{
  "query": { 
    "condition": "AND",
    "rules": [
      {
        "value": [12],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "value": ["1.1.28.1"],
        "field": "vdevice_name",
        "type": "string"
      }
    ]
  }
}
```
Control Connections

Display status and statistics for a device's control connections.

**URL:** https://vmanage-ip-address/dataservice/device/control/synced/connections?deviceId=deviceId

**Method:** POST

**Request Parameters**
<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Body</td>
<td>String</td>
</tr>
</tbody>
</table>

Response Content Type: application/json
Response Object: See Response Object, below.

### Device BFD State

Display information about a device's BFD sessions.

**URL**: https://vmanage-ip-address/dataservice/device/bfd/state/device?deviceId=deviceId

**Method**: GET

#### Request Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Query</td>
<td>String</td>
</tr>
</tbody>
</table>

Response Content Type: application/json
Response Object: See Response Object, below.

### Device Counters

Display device counters, including number of crashes, control connections, OMP peers up and down, reboots, and BFD sessions up and down.

**URL**: https://vmanage-ip-address/dataservice/device/counters?deviceId=deviceId

**Method**: GET

#### Request Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Query</td>
<td>String</td>
</tr>
</tbody>
</table>

Response Content Type: application/json
Response Object: See Response Object, below.

### Device Status Summary

Display hardware information about the device, including fans, temperature sensors, USB ports, and power supply.

**URL**: https://vmanage-ip-address/dataservice/device/hardware/status/summary?deviceId=deviceId

**Method**: GET
## Request Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceld</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Query</td>
<td>String</td>
</tr>
</tbody>
</table>

**Response Content Type**: application/json

**Response Object**: See Response Object, below.

---

### Device System Summary

Display historical memory and CPU information about the device.

### Device System Summary Using GET Method

If the query size is less than 2048 characters, use the GET method.

**URL**: https://vmanage-ip-address/dataservice/statistics/system?query=query

**Method**: GET

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
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<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>Query to filter data returned</td>
<td>Query</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

### Device System Summary Using POST Method

If the query size is more than 2048 characters, use the POST method. This is the recommended method.

**URL**: https://vmanage-ip-address/dataservice/statistics/system

**Method**: POST

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
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<th>Data Type</th>
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<tbody>
<tr>
<td>query</td>
<td>Optional</td>
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<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type**: application/json

**Response Object**: See Response Object, below.

---

### Example

Display system statistics for the last 24 hours for a device:

```json
{
  "query":{
    "condition":"AND",
    "rules":{}
}
```
Events

Display information about events on the device. By default, the API call returns all events for the device.

URL: https://vmanage-ip-address/dataservice/event

Method: POST

Request Parameters
### vManage REST APIs

Display events for the last 24 hours for a device:

```json
{
  "query": {
    "condition": "AND",
    "rules": [
      {
        "value": ["24"],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "field": "system_ip",
        "operator": "in",
        "type": "string",
        "value": ["172.16.255.11"
      ]
    ]
  },
  "size": 10000
}
```

### Events by Severity

Display information about events by severity level.

**URL:** https://vmanage-ip-address/dataservice/event/severity/summary

**Method:** GET

**Request Parameters**

<table>
<thead>
<tr>
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<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>vManage sample query to filter by device identifier and time.</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Response Object:** See Response Object, below.

**Example**

Display events by severity for the last 24 hours for a device:

```json
{
  "query": {
    "condition": "AND",
    "rules": [
      {
        "value": ["24"],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "field": "system_ip",
        "operator": "in",
        "type": "string",
        "value": ["172.16.255.11"
      ]
    ]
  }
}
```
Flow Log

Display flow log information.

**URL:** https://vmanage-ip-address/dataservice/statistics/flowlog

**Method:** POST

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
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<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>vManage sample query to filter by device identifier and time</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Response Object:** See Response Object, below.

**Example**

Display flow log information for the last 24 hours for a device:

```
{
  "query":{
    "condition":"AND",
    "rules":[
      {
        "value": ["24"],
        "field":"entry_time",
        "type":"date",
        "operator":"last_n_hours"
      },
      {
        "value": ["1.1.200.7"],
        "field":"vdevice_name",
        "type":"string",
        "operator":"in"
      }
    ]
  }
}
```
Interface Aggregation

Display aggregated interface information.

URL: https://vmanage-ip-address/dataservice/statistics/interface/aggregation

Method: POST

Request Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>Query to filter data returned. Possible values for transfer and receive rates are drop, error, kbps, octets, packets, and pps.</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

Example

Return the average transfer and receive rates in intervals of 30 minutes for each specified interface:

```json
{
  "query":{
    "condition":"AND",
    "rules":[
      {
        "value": ["24"],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "value": ["172.16.255.11"],
        "field": "vdevice_name",
        "type": "string",
        "operator": "in"
      },
      {
        "value": ["ge0/1", "ge0/2", "ge0/3", "ge0/4", "ge0/5", "ge0/6"],
        "field": "interface",
        "type": "string",
        "operator": "in"
      }
    ],
    "sort": [
      {
        "field": "entry_time",
        "type": "date",
        "order": "asc"
      }
    ],
    "aggregation": [
      {
        "field": [
          {
            "property": "interface",
            "sequence": 1
          }
        ],
        "histogram": [
          {"property": "entry_time",
```
Ping

Ping a device.

**URL:** https://vmanage-ip-address/dataservice/device/tools/ping/deviceId

**Method:** POST

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Path</td>
<td>String</td>
</tr>
<tr>
<td>inputJson</td>
<td>Yes</td>
<td>Ping parameters</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Request Body Schema**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceIp</td>
<td>IP address of the device to ping</td>
</tr>
<tr>
<td>host</td>
<td>IP address of host to ping</td>
</tr>
<tr>
<td>source</td>
<td>Interface or IP address from which to send ping packets</td>
</tr>
<tr>
<td>vpn</td>
<td>VPN in which to ping</td>
</tr>
</tbody>
</table>

**Example**

Ping a device whose IP address is 1.1.200.7:

```json
{
  "deviceId":"1.1.200.7",
  "host":"1.1.1.1",
  "vpn":"0",
  "source":"ge0/0"
}
```
Synced Interface

Display information about the interfaces on a Viptela device (from vManage NMS only).

**URL:** https://vmanage-ip-address/dataservice/device/interface/synced?deviceId=deviceId

**Method:** GET

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Query</td>
<td>String</td>
</tr>
<tr>
<td>vpn-id</td>
<td>Optional</td>
<td>VPN ID</td>
<td>Query</td>
<td>Number</td>
</tr>
<tr>
<td>ifname</td>
<td>Optional</td>
<td>Interface name</td>
<td>Query</td>
<td>String</td>
</tr>
<tr>
<td>af-type</td>
<td>Optional</td>
<td>Address family type</td>
<td>Query</td>
<td>String</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Response Object:** See Response Object, below.

Top Applications for a Device

Display applications with the highest utilization for a device.

Top Applications Using GET Method

If the query size is less than 2048 characters, use the GET method.

**URL:** https://vmanage-ip-address/dataservice/statistics/dpi/aggregation?query=query

**Method:** GET

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>Query to filter data returned</td>
<td>Query</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

Top Applications Using POST Method

If the query size is more than 2048 characters, use the POST method. This is the recommended method.

**URL:** https://vmanage-ip-address/statistics/dpi/aggregation

**Method:** POST

**Request Parameters**
<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
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<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>Query to filter data returned</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Response Object:** See Response Object, below.

---

**Example**

Return the top applications for the last 24 hours:

```
{
  "query":{
    "condition":"AND",
    "rules":[
      {
        "value": [
          "24"
        ],
        "field": "entry_time",
        "type": "date",
        "operator": "last_n_hours"
      },
      {
        "value": [
          "172.16.255.11"
        ],
        "field": "vdevice_name",
        "type": "string",
        "operator": "in"
      }
    ]
  },
  "aggregation":{
    "field": [
      {
        "property": "family",
        "size": 200,
        "sequence": 1
      }
    ],
    "metrics": [
      {
        "property": "octets",
        "type": "sum",
        "order": "desc"
      }
    ]
  }
}
```

---

**Top Destinations for a Device**

Display top flows for a given destination for a device.

---

**Top Destinations Using GET Method**

If the query size is less than 2048 characters, use the GET method.

**URL:** https://vmanage-ip-address/dataservice/statistics/cflowd/aggregation?query=query

**Method:** GET

**Request Parameters**
### Top Destinations Using POST Method

If the query size is more than 2048 characters, use the POST method. This is the recommended method.

**URL:** https://vmanage-ip-address/statistics/cflowd/aggregation

**Method:** POST

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
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<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>query</td>
<td>Optional</td>
<td>Query to filter data returned</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type:** application/json

**Response Object:** See Response Object, below.

### Example

Return the top destinations for the last 24 hours:

```json
{
    "query":{
        "condition":"AND",
        "rules":[
            {
                "value":[
                    "24"
                ],
                "field":"entry_time",
                "type":"date",
                "operator":"last_n_hours"
            },
            {
                "value":[
                    "172.16.255.11"
                ],
                "field":"vdevice_name",
                "type":"string",
                "operator":"in"
            }
        ],
        "aggregation":{
            "field":{
                "property":"dest_ip",
                "size":200,"sequence":1
            },
            "metrics":{
                "property":"total_bytes",
                "type":"num",
                "order":"desc"
            }
        }
    }
}
```
Traceroute

Display the path that packets take to reach a host or IP address on the network.

**URL**: https://vmanage-ip-address/dataservice/device/tools/traceroute/deviceId

**Method**: POST

**Request Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Description</th>
<th>Parameter Type</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceId</td>
<td>Yes</td>
<td>IP address of device</td>
<td>Path</td>
<td>String</td>
</tr>
<tr>
<td>inputJson</td>
<td>Yes</td>
<td>Ping parameters</td>
<td>Body</td>
<td>String (JSON)</td>
</tr>
</tbody>
</table>

**Response Content Type**: application/json

**Request Body Schema**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>deviceIp</td>
<td>IP address of the destination device</td>
</tr>
<tr>
<td>host</td>
<td>IP address of destination host</td>
</tr>
<tr>
<td>source</td>
<td>Interface or IP address through which the traceroute should send packets</td>
</tr>
<tr>
<td>vpn</td>
<td>VPN in which the host is located</td>
</tr>
</tbody>
</table>

**Example**

Run a traceroute to a device with IP address 1.1.200.7:

```json
{
    "deviceIp":"1.1.200.7",
    "host":"1.1.1.1",
    "vpn":"0",
    "source":"ge0/0"
}
```

**Response Object**

Troubleshooting API call responses have the following format:

```json
{
    "header": {
        "generatedOn": timestamp, milliseconds (UNIX time format),
        "viewKeys": {
            "uniqueKey": ["key"]
        },
        "fields": {
            properties and types
        },
    },
    "data": {
        array of objects
    }
}
```
Using the vManage REST API