NQM compound report(綜合查詢)

從 Query Id 取得查詢結果

Resources

- `[GET]` `/nqm/icmp/compound-report?query_id=<query_id>`
- `[GET]` `/nqm/tcp/compound-report?query_id=<query_id>`
- `[GET]` `/nqm/tcpconn/compound-report?query_id=<query_id>`

Parameters

- `query_id` - Use **POST** to get query id by certain conditions
- **PAGING** - `page-size` (*500*), `page-pos` (*1*)
- **SORTING**:
  - `agent_name`, `agent_hostname`, `agent_ip_address`, `agent_isp`, `agent_province`, `agent_city`, `agent_name_tag`
  - `target_name`, `target_host`, `target_isp`, `target_province`, `target_city`, `target_name_tag`
  - `max`, `min`, `avg`, `med`, `mdev`, `loss`, `count`, `pck_sent`, `pck_received`, `num_agent`, `num_target`
- **DEFAULT SORTING**
  - If sorting is by properties of agent/target, the metric sorting would be appended by default
  - `avg(desc)`, `loss(desc)`
  - Otherwise: `<1st metric>(desc)`, `<2nd metric>(desc)`

Response

Status	Content	Detail

200	`application/json`
	
	``[
	  {
	    // [missed] Data of agent
	    "agent": {
	      "id": 32, // [missed] The id of agent
	      "name": "cj-bcs-091-041-182-103", // [missed] The name of agent
	      "ip_address": "91.41.182.103", // [missed] The ip address of agent
	      "hostname": "cj-bcs-091-041-182-103", [missed] // The hostname of agent
	      "isp": { // [missed]
	        "id": 3, // The id of ISP
	        "name": "光載無限" // the name of ISP
	      },
	      "province": { // [missed]
	        "id": 3, // The id of province
	        "name": "廣東省" // the name of province
	      },
	      "city": { // [missed]
	        "id": 3, // The id of city
	        "name": "中山市" // the name of city
	      },
	      "name_tag": { // [missed]
	        "id": 3, // The id of name tag
	        "value": "清華機房" // the name of```	

Status	Content	Detail

```
name tag
        }
      },
      // [missed] Data of target
      "target": { // [missed]
        "id": 398, // [missed] The id of
target
        "name": "aa_cc", // [missed] The name
of target
        "host": "10.98.78.5", // [missed] The
host of target
        "isp": { // [missed]
          "id": 3, // The id of ISP
          "name": "光載無限" // the name of ISP
        },
        "province": { // [missed]
          "id": 3, // The id of province
          "name": "廣東省" // the name of
province
        },
        "city": { // [missed]
          "id": 3, // [The id of city
          "name": "中山市" // the name of city
        },
        "name_tag": { // [missed]
          "id": 3, // [The id of name tag
          "value": "清華機房" // the name of
name tag
        }
      },
      /**
       * See "output.metrics"
       */
      "metrics": {
        "max": 78, // [missed]
        "min": 21, // [missed]
        "avg": 45.67, // [missed]
        "med": 32, // [missed]
        "mdev": 5.81, // [missed]
        "loss": 0.04, // [missed]
        "count": 100, // [missed]
        "pck_sent": 2300, // [missed]
        "pck_received": 2045, // [missed]
        "num_agent": 10, // [missed]
        "num_target": 15 // [missed]
      }
    },
    /* More data... */
  ]
```

404

`application/json`

```
{
  "http_status": 404,
  "uri": "/nqm/icmp/compound-
report?query_id=436381e8-524f-4621-8ef3-
c5410ea4269f",
  "error_code": 1,
  "error_message": "Query id cannot be
fetched"
}
```

Error code:

- `1` - The query id cannot be fetched

從 Query Id 取得查詢的條件

Resources

- `[GET]` `/nqm/icmp/compound-report/query/<query_id>`
- `[GET]` `/nqm/tcp/compound-report/query/<query_id>`
- `[GET]` `/nqm/tcpconn/compound-report/query/<query_id>`

Parameters

- `<query_id>` - Use **POST** to get query id by certain conditions

Response

Status	Content	Detail

200	`application/json`
	
	``json
	{
	  /**
	   * The original conditions/settings of query
	   */
	  "time" {
	    /* See detail in following section of trac wiki */
	  },
	  "metrics": "$max > 70 or $min > 30" // [null] If any provided, shows the filtering of metrics
	  "agent": {
	    "name": ["host-1", "host-2"], // [empty] Prefix for name of agent
	    "hostname": ["host-1", "host-2"], // [empty] Prefix of hostname
	    "ip_address": ["192.168", "88.78.23.13"], // [empty] Prefix of IP address
	    "connection_id": ["conn-id-1", "conn-id-2"], // [empty] Prefix of connection id
	    "isps": [// [empty] filter for ISPs
	      {
	        "id": 32, // Id of ISP
	        "name": "湖南電信" // Name of ISP
	      },
	      /* More data... */
	    ],
	    "provinces": [// [empty] filter for provinces
	      {
	        "id": 3, // The id of province
	        "name": "廣東省" // the name of province
	      },
	      /* More data... */
	    ],
	    "cities": [// [empty] filter for cities
	      {
	        "id": 3, // The id of city
	        "name": "中山市" // the name of city
	      },
	      /* More data... */
	    ],
	    "name_tags": [// [empty] filter for
	``	

| | ```json
name tags
    {
      "id": 3, // The id of name tag
      "value": "清華機房" // the name of
name tag
    },
    /* More data... */
  ],
  "group_tags": [ // [empty] filter for
group tags
    {
      "id": 33, // The id of group tag
      "name": "BOSS" // The name of
group tag
    },
    /* More data... */
  ]
},
"target": {
  "name": ["host-1", "host-2"], //
[empty] Prefix for name for target
  "host": ["host-1", "host-2"], //
[empty] Prefix of host for target
  "isps": [ // [empty] filter for ISPs
    {
      "id": 32, // Id of ISP
      "name": "湖南電信" // Name of ISP
    },
    /* More data... */
  ],
  "provinces": [ // [empty] filter for
provinces
    {
      "id": 3, // The id of province
      "name": "廣東省" // the name of
province
    },
    /* More data... */
  ],
  "cities": [ // [empty] filter for
cities
    {
      "id": 3, // The id of city
      "name": "中山市" // the name of
city
    },
    /* More data... */
  ],
  "name_tags": [ // [empty] filter for
name tags
    {
      "id": 3, // The id of name tag
      "value": "清華機房" // the name of
name tag
    },
    /* More data... */
  ],
  "group_tags": [ // [empty] filter for
group tags
    {
      "id": 33, // The id of group tag
      "name": "BOSS" // The name of
group tag
``` | | |

Status	Content	Detail
	``` }, /* More data... */] }, // See the API for generating query id "output": { "agent": ["name", // Shows name of agent to group data "ip_address", // Shows IP address of agent to group data "hostname", // Shows hostname of agent to group data "province", // Uses province of agent to group data "city", // Uses city of agent to group data "isp", // Uses ISP of agent to group data "name_tag" // Uses name tag of agent to group data], "target": ["name", // Shows name of agent to group data "host", // Shows IP address of agent to group data "province", // Uses province of agent to group data "city", // Uses city of agent to group data "isp", // Uses ISP of agent to group data "name_tag" // Uses name tag of agent to group data], "metrics": ["max", "min"] } } ```	

404	`application/json`
	
	```json { "http_status": 404, "uri": "/nqm/icmp/compound-report/query/436381e8-524f-4621-8ef3-c5410ea4269f", "error_code": 1, "error_message": "Query id cannot be fetched" } ```
		Error code:
		
		- `1` - The query id cannot be fetched

輸出時間條件

- 格式 1: 絕對時間

```json
{
  "start_time": 890700,
  "end_time": 900700
}
```

- 格式 2: 相對時間

```
{
  "start_time": 890700, // 相對時間所算出的開始時間
  "end_time": 900700, // 相對時間所算出的結束時間
  "to_now": { // 相對時間細節，見產生 Query Id API
    "unit": "d",
    "value": 3
  }
}
```

- 格式 3: 相對時間

```
{
  "to_now": { // 相對時間細節，見產生 Query Id API
    "unit": "d",
    "value": 3,
    "start_time_of_day": "20:00",
    "end_time_of_day": "23:00"
  }
}
```

產生 Query Id

Resources

- [POST] /nqm/icmp/compound-report
- [POST] /nqm/tcp/compound-report
- [POST] /nqm/tcpconn/compound-report

Parameters

Request

Content	Detail

`application/json`
 	
```curl -H "Content-Type: application/json" -d '{ "filters": { "agent": { "name": "開元機房" } } }' \ http://<host>/nqm/icmp/compound-report```
 	
```{ "filters": { "time": { "start_time": 277371212, "end_time": 277371212 }, "agent": { "name": ["OK-1", "GC-2"], "isp_ids": [3, 4, 7], "province_ids": [6, 2] }, "target": { "name": ["OK-1", "GC-2"], "isp_ids": [3, 4, 7], "province_ids": [6, 2] }, "metrics": "$avg > 40 OR $max < 80" },```	

Name	Comment
output	Controls the output of metrics values(not incluing grouping)
filter	The filters for data
grouping	The grouping columns, which would be parts of output

Content	Detail
| ```
  "grouping": {
    "agent": ["province"],
    "target": ["isp", "province"]
  },
  "output": {
    "metrics": ["max", "min", "avg"]
  }
}
``` | |

Response

Status	Content	Detail
| 200 | `application/json`<br><br>```
{
  "query_id" : "e4c0c23e-7d56-4afc-b5c9-18ae632ec3ca"
}
``` | | Name | Constraint | Comment |<br>|---|---|---|<br>| `query_id` | **Mandatory** | Used to get real result of query by **GET** method of HTTP | |
| 400 | `application/json`<br><br>```
{
  "error_code" : 1,
  "error_message": "Syntax of filter on metrics: 'kk is unknown'"
}
``` | Error code:<br><br>  • `1` - The syntax of fileter on metrics has error |

Query Body

`filters.time`

- 1st form(with **absolute time**):

```
{
  "start_time": 234764732,
  "end_time": 23242342
}
```

- 2nd form(with **relative time**, to **NOW**):

```
{
  "to_now": {
    /**
     * Unit of value:
     * y, year - N years
     * m, month - N months
     * w, week - N weeks(monday is the first day)
     * d, day - N days
     * h, hour - N hours
     * n, minute - N minutes
     */
    "unit": "d",
    /**
     * value for time unit
     * 0 - Means this minute, this hour, today, this month, or this
year
     */
    "value": 3, // value for time unit
```

```
        "start_time_of_day": "20:00", // [null] Start time on days
        "end_time_of_day": "23:00" // [null] End time on days
    }
}
```

For relative time:

- `1y` , `0y` - last year, this year
- `1m` , `0m` - last month, this month
- `1w` , `0w` - last week, this week(first day of a week is monday)
- `1d` , `0d` - yesterday, today
- `1h` , `0h` - last hour, this hour
- `1n` , `0n` - last minute, this minute

`filters.agent`

Every property is combined with **AND** relation.

Special condition for id:

- `-11` - The ISP(or location, etc.) should be same with target
- `-12` - The ISP(or location, etc.) should not be same with target

Ids support special conditions: `isp_ids` , `province_ids` , `city_ids` , `name_tag_ids`

```
{
  "name": ["host-1", "host-2"], // Prefix for name of agent
  "hostname": ["host-1", "host-2"], // Prefix of hostname
  "ip_address": ["192.168", "88.78.23.13"], // Prefix of IP address
  "connection_id": ["conn-id-1", "conn-id-2"], // Prefix of connection id
  "isp_ids": [12, 13, 14], // By ids of ISP
  "province_ids": [12, 13, 14], // By ids of province
  "city_ids": [12, 13, 14], // By ids of city
  "name_tag_ids": [12, 91], // By ids of name tag
  "group_tag_ids": [28, 99] // By ids of group tag(must contains all of
the ids)
}
```

`filters.target`

Every property is combined with **AND** relation.

Special condition for id:

- `-11` - The ISP(or location, etc.) should be same with agent
- `-12` - The ISP(or location, etc.) should not be same with agent

Ids support special conditions: `isp_ids` , `province_ids` , `city_ids` , `name_tag_ids`

```
{
  "name": ["host-1", "host-2"], // Prefix for name of target
  "host": ["host-1", "117.81"], // Prefix of host
  "isp_ids": [12, 13, 14], // By ids of ISP
  "province_ids": [12, 13, 14], // By ids of province
  "city_ids": [12, 13, 14], // By ids of city
  "name_tag_ids": [12, 91], // By ids of name tag
  "group_tag_ids": [28, 99] // By ids of group tag(must contains all of
the ids)
}
```

`filters.metrics`

A DSL for supporting complex mathematical comparision.

```
{
  "metrics": "$max > 70 or $min > 30"
}
```

This filter is applied after gouping of data for statistics

- `$max` - 最大值
- `$min` - 最小值
- `$avg` - 平均值
- `$med` - 中位數
- `$mdev` - 標準差
- `$loss` - 掉包率
- `$count` - Ping 執行次數
- `$pck_sent` - 送出封包數
- `$pck_received` - 收到封包數
- `$num_agent` - Agent 數
- `$num_target` - Target 數

Syntax:

```
expr ::=
    | term
    | term compound term

compound ::= "and" | "or"

term ::=
    | factor op factor
    | "(" expr ")"

factor ::=
    | metrics
    | float_number

op ::= ">" | "<" | "==" | "!=" | ">=" | "<="

metrics ::= "$" metric_name

metric_name ::= "max" | "min" | "avg" | "med" | "mdev" | "loss"
| "count"
    | "pck_sent" | "pck_received"
    | "num_agent" | "num_target"
```

`grouping.agent`

Sets the grouping column of agent

For `name`, `ip_address`, and `hostname`, every agent would be shown as a row of output

```
{
  "agent": [
    "name", // Shows name of agent to group data
    "ip_address", // Shows IP address of agent to group data
    "hostname", // Shows hostname of agent to group data
    "province", // Uses province of agent to group data
    "city", // Uses city of agent to group data
    "isp", // Uses ISP of agent to group data
    "name_tag" // Uses name tag of agent to group data
  ]
}
```

`grouping.target`

Sets the grouping column of target

For `name` and `host`, every target would be shown as a row of output

```json
{
  "target": [
    "name", // Shows name of agent to group data
    "host", // Shows IP address of agent to group data
    "province", // Uses province of agent to group data
    "city", // Uses city of agent to group data
    "isp", // Uses ISP of agent to group data
    "name_tag" // Uses name tag of agent to group data
  ]
}
```

`output.metrics`

Sets the output values of metrics statistics

- `max` - 最大值
- `min` - 最小值
- `avg` - 平均值
- `med` - 中位數
- `mdev` - 標準差
- `loss` - 掉包率
- `count` - Ping 執行次數
- `pck_sent` - 送出封包數
- `pck_received` - 收到封包數
- `num_agent` - Agent 數
- `num_target` - Target 數

```json
{
  "metrics": [
    "max", "min"
  ]
}
```

Last modified on 2017-07-12T14:37:35+08:00