# MANRS Observatory data

# https://observatory.manrs.org/

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# Why MANRS Observatory?

## Inform MANRS members about their degree of commitment

- Improve reputation and transparency of the effort
- Facilitate continuous improvement and correction

## Provide a factual state of routing security as it relates to MANRS

- Support the problem statement with data
- Demonstrate the impact and progress
- Network, country, region, over time

## Improve robustness of the evaluation process

- Make it more comprehensive and consistent
- Reduce the load
- Allow preparation (self-assessment)

MANRS Observatory

OVERVIEW HISTORY COMPARISON ABOUT

MONTH (PARTIAL) October 2021

USE GRIP DATA

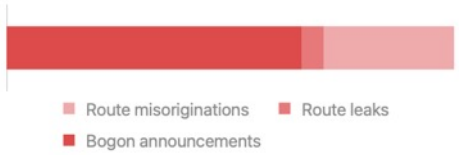
# Overview

## State of Routing Security

Number of incidents, networks involved and quality of published routing information in the IRR and RPKI in the selected region and time period

### Incidents

| | |
|---|---|
| *Route misoriginations* | **314** |
| *Route leaks* | **53** |
| *Bogon announcements* | **707** |
| **Total** | **1,074** |

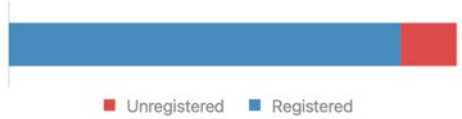



### Culprits

| | |
|---|---|
| *Culprits* | **802** |

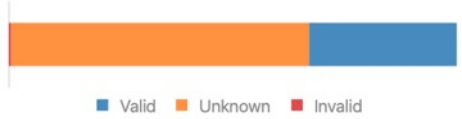
### Routing completeness (IRR)

| | | |
|---|---|---|
| *Unregistered* | 134,120 | **12.6%** |
| *Registered* | 927,137 | **87.4%** |




### Routing completeness (RPKI)

| | | |
|---|---|---|
| *Valid* | 349,800 | **33.0%** |
| *Unknown* | 706,067 | **66.5%** |
| *Invalid* | 5,390 | **0.5%** |

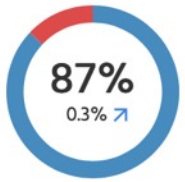



## MANRS Readiness

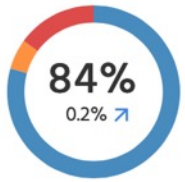
### Filtering

### Anti-spoofing

### Coordination




### Global Validation IRR

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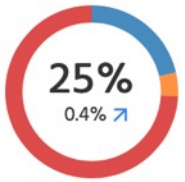


Ready Aspiring Lagging No Data Available

# Measurements(https://observatory.manrs.org/#/about)

| Action | Measurement | Data source | Caveats |
|---|---|---|---|
| Filtering<br>*M1, M1C, M2, M2C* | Route hijacks and leaks | BGPStream.com<br>CAIDA GRIP | False positives, obscure algorithms, vantage points |
| Filtering<br>*M3, M3C, M4, M4C* | "Bogon" announcements | CIDR report | Limited vantage points |
| Anti-spoofing<br>*M5* | Negative tests | CAIDA Spoofer | Sparse, active |
| Coordination<br>*M8* | Registered contacts | RIRs Whois DBs (RIPEStat), PeeringDB | Stale/non-responsive contacts not detected |
| Global validation<br>*M7IRR, M7RPKI, M7RPKIN* | Coverage of routing announcements | IRRs, RPKI (RIPEStat) | |

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MANRS Observatory

OVERV

July 27, 2021

## New Data Source, Feedback Loop Enhance MANRS Observatory

The MANRS Observatory monitors Internet routing security by aggregating data from trusted sources into a user-friendly dashboard to help network operators improve the security of their networks.

READ MORE »

Observatory, Routing Security

USE GRIP DATA

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802

Culprits

Routing completeness (IRR)

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Unregistered Registered

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| *Unknown* | 706,067 | 66.5% |
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Valid Unknown Invalid

ordination

87%
0.3% ↗

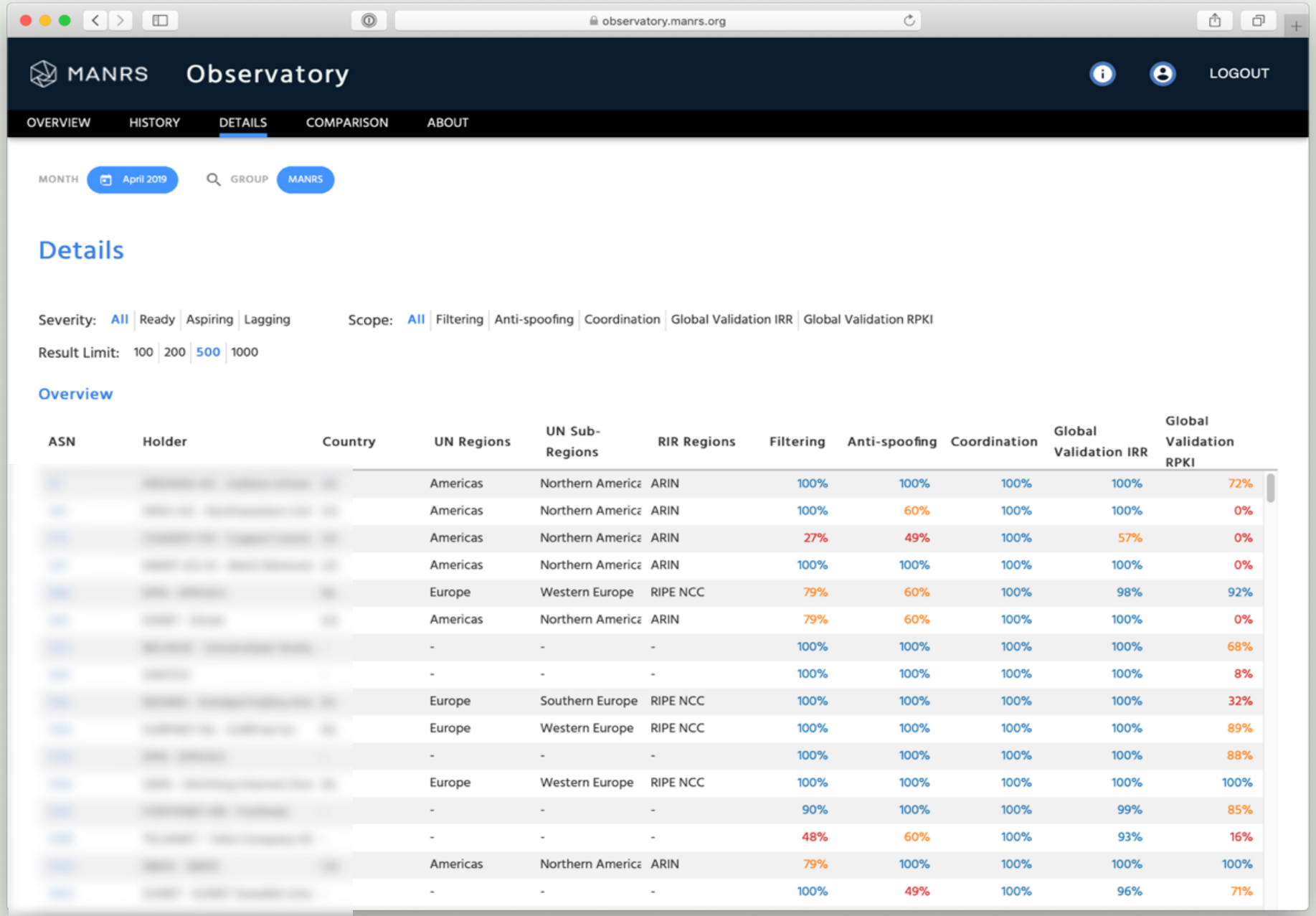
Global Validation IRR

84%
0.2% ↗

Global Validation RPKI

25%
0.4% ↗

Ready Aspiring Lagging No Data Available




| ASN | Holder | Country | UN Regions | UN Sub-Regions | RIR Regions | Filtering | Anti-spoofing | Coordination | Global Validation IRR | Global Validation RPKI |
|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | | | Americas | Northern America | ARIN | 100% | 100% | 100% | 100% | 72% |
| [redacted] | | | Americas | Northern America | ARIN | 100% | 60% | 100% | 100% | 0% |
| [redacted] | | | Americas | Northern America | ARIN | 27% | 49% | 100% | 57% | 0% |
| [redacted] | | | Americas | Northern America | ARIN | 100% | 100% | 100% | 100% | 0% |
| [redacted] | | | Europe | Western Europe | RIPE NCC | 79% | 60% | 100% | 98% | 92% |
| [redacted] | | | Americas | Northern America | ARIN | 79% | 60% | 100% | 100% | 0% |
| [redacted] | | | - | - | - | 100% | 100% | 100% | 100% | 68% |
| [redacted] | | | - | - | - | 100% | 100% | 100% | 100% | 8% |
| [redacted] | | | Europe | Southern Europe | RIPE NCC | 100% | 100% | 100% | 100% | 32% |
| [redacted] | | | Europe | Western Europe | RIPE NCC | 100% | 100% | 100% | 100% | 89% |
| [redacted] | | | - | - | - | 100% | 100% | 100% | 100% | 88% |
| [redacted] | | | Europe | Western Europe | RIPE NCC | 100% | 100% | 100% | 100% | 100% |
| [redacted] | | | - | - | - | 90% | 100% | 100% | 99% | 85% |
| [redacted] | | | - | - | - | 48% | 60% | 100% | 93% | 16% |
| [redacted] | | | Americas | Northern America | ARIN | 79% | 100% | 100% | 100% | 100% |
| [redacted] | | | - | - | - | 100% | 49% | 100% | 96% | 71% |

# Network Operator Participants

You are here: Home / MANRS for Network Operators / Network Operator Participants

Show 50 entries

| Organization Name | Areas Served | ASNs | Action 1 - Filtering | Action 2 - Anti-Spoofing | Action 3 - Coordination | Action 4 - Global Validation |
|---|---|---|---|---|---|---|
| BDconnect.net | BD | 64063 | ✓ | ✓ | ✓ | ✓ |
| BelWue | DE | 553 | ✓ | ✓ | ✓ | ✓ |
| Benerofonte Networks | BR | 61604 | ✓ | ✓ | ✓ | ✓ |
| BGPNAP | JP | 63771 | ✓ | | ✓ | ✓ |
| BIGLOBE Inc. | JP | 2518 | ✓ | | ✓ | ✓ |
| BIT BV | NL | 12859 | ✓ | ✓ | ✓ | ✓ |
| Bital Internet | BR | 265347 | ✓ | ✓ | ✓ | ✓ |
| Bitcom Provedor de Serviços de Internet Ltda | BR | 28169 | ✓ | ✓ | ✓ | ✓ |

# Help us improve quality of the data!

- Reduce false positives to acceptable level

## M2 (GRIP) - Route misorigin by the AS

Absolute: **1.0** Normalized: **84%** Incident Count: **1**

Incident Id: 1 Absolute: 1.0 Start Date: 07-10-2021 10-15-00 End Date: 07-10-2021 01-30-00 Duration: 3h, 15m, 0s

Download metrics data

## M1C - Route leak by a direct customer

Absolute: **11.0** Normalized: **42%** Incident Count: **1** Include possible related data

Incident Id: 2 Absolute: 11.0 Start Date: 06-10-2021 12-41-21 End Date: 17-10-2021 02-00-00 Duration: 10d, 13h, 18m, 39s

Download metrics data

## M2C (BGPStream) - Route hijack by a direct customer

Absolute: **17.0** Normalized: **31%** Incident Count: **1** Include possible related data

Incident Id: 2 Absolute: 17.0 Start Date: 01-10-2021 02-00-00 End Date: 17-10-2021 02-00-00 Duration: 16d, 0m, 0s

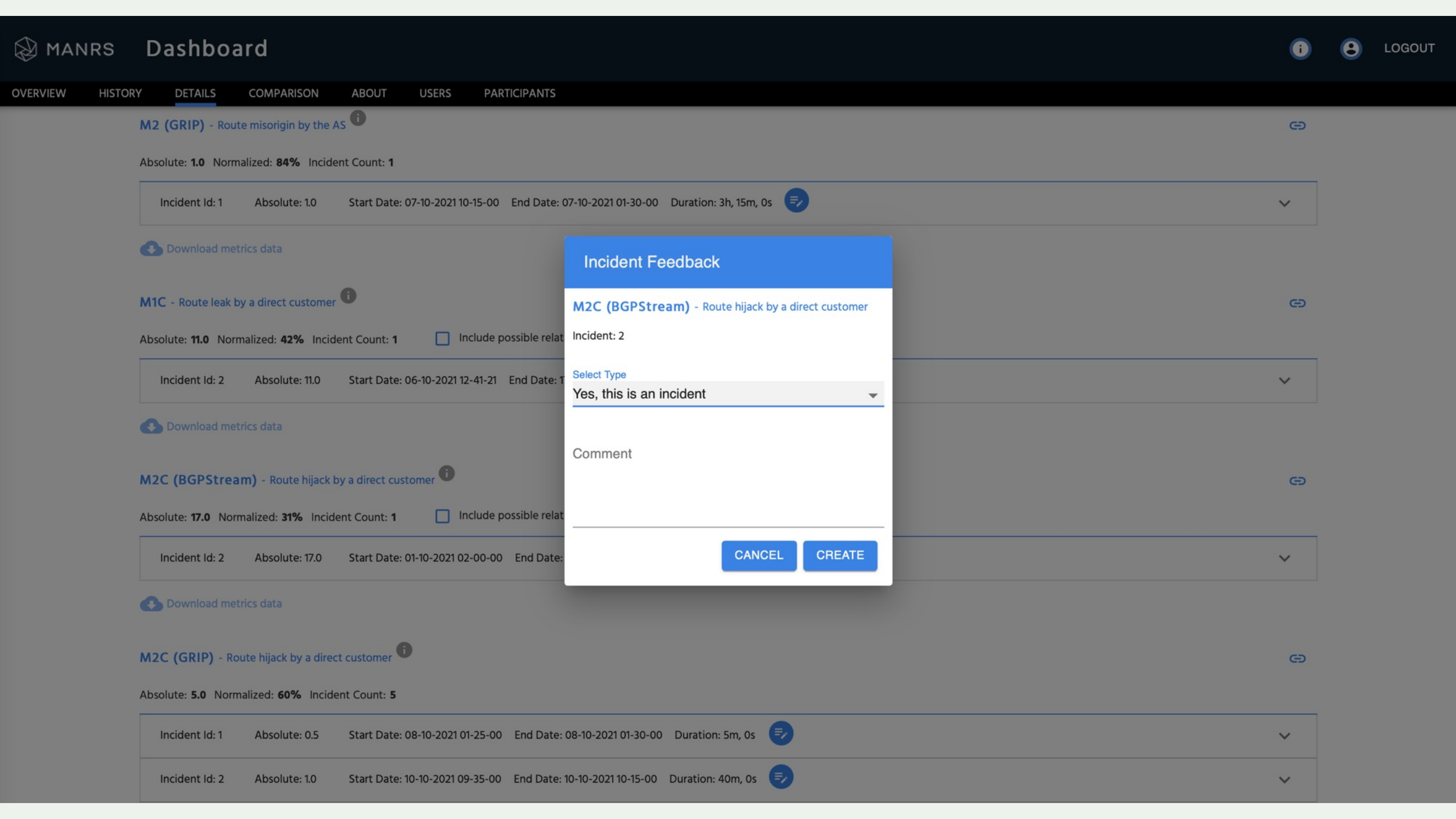
Download metrics data

## M2C (GRIP) - Route hijack by a direct customer

Absolute: **5.0** Normalized: **60%** Incident Count: **5**

Incident Id: 1 Absolute: 0.5 Start Date: 08-10-2021 01-25-00 End Date: 08-10-2021 01-30-00 Duration: 5m, 0s

Incident Id: 2 Absolute: 1.0 Start Date: 10-10-2021 09-35-00 End Date: 10-10-2021 10-15-00 Duration: 40m, 0s


MANRS
Dashboard
LOGOUT
OVERVIEW
HISTORY
DETAILS
COMPARISON
ABOUT
USERS
PARTICIPANTS
M2 (GRIP) - Route misorigin by the AS
Absolute: 1.0 Normalized: 84% Incident Count: 1
Incident Id: 1 Absolute: 1.0 Start Date: 07-10-2021 10-15-00 End Date: 07-10-2021 01-30-00 Duration: 3h, 15m, 0s
Download metrics data
M1C - Route leak by a direct customer
Absolute: 11.0 Normalized: 42% Incident Count: 1
Include possible relat
Incident Id: 2 Absolute: 11.0 Start Date: 06-10-2021 12-41-21 End Date: 1
Download metrics data
M2C (BGPStream) - Route hijack by a direct customer
Absolute: 17.0 Normalized: 31% Incident Count: 1
Include possible relat
Incident Id: 2 Absolute: 17.0 Start Date: 01-10-2021 02-00-00 End Date:
Download metrics data
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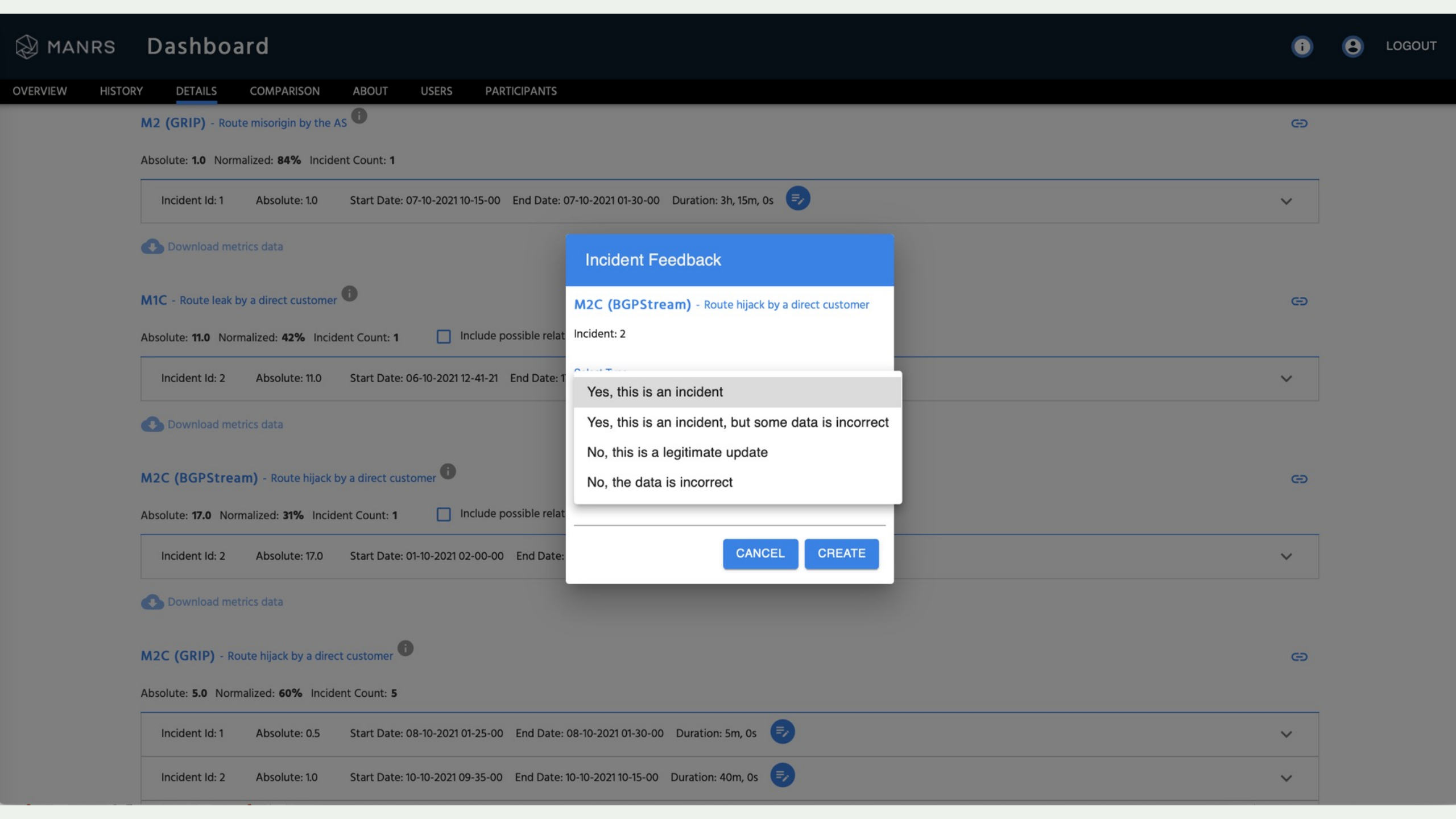
Incident Feedback
M2C (BGPStream) - Route hijack by a direct customer
Incident: 2
Select Type
Yes, this is an incident
Comment
CANCEL
CREATE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Download metrics data
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Include possible relat
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Download metrics data
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Incident Id: 2 Absolute: 1.0 Start Date: 10-10-2021 09-35-00 End Date: 10-10-2021 10-15-00 Duration: 40m, 0s
Incident Feedback
M2C (BGPStream) - Route hijack by a direct customer
Incident: 2
Yes, this is an incident
Yes, this is an incident, but some data is incorrect
No, this is a legitimate update
No, the data is incorrect
CANCEL
CREATE

# → 100%

- Improve transparency and credibility of MANRS
- Facilitate continuous improvement and correction

# Thank you.

manrs@isoc.org

manrs.org