

Mist 運用マニュアル - Wired Assurance - スイッチメトリック 確認手順

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driven by Mist AI

はじめに

- ❖ 本マニュアルは、『スイッチメトリックの確認手順』について説明します
- ❖ 手順内容は 2024年2月 時点の Mist Cloud にて確認を実施しております
実際の画面と表示が異なる場合は以下のアップデート情報をご確認ください
<https://www.mist.com/documentation/category/product-updates/>
- ❖ 設定内容やパラメータは導入する環境や構成によって異なります
各種設定内容の詳細は下記リンクよりご確認ください
<https://www.mist.com/documentation/>
- ❖ 他にも多数の Mist 日本語マニュアルを「ソリューション & テクニカル情報サイト」に掲載しております
<https://www.juniper.net/jp/ja/local/solution-technical-information/mist.html>
- ❖ **本資料の内容は資料作成時点におけるものであり事前の通告無しに内容を変更する場合があります**
また本資料に記載された構成や機能を提供することを条件として購入することはできません

Mist Wired Assurance について

Wired Assurance には 2 種類(Basic, Advanced)ございます
本書では「スイッチメトリック」について紹介します

| | Basic Wired Assurance | Advanced Wired Assurance |
|-----------------------------|-----------------------|--------------------------|
| 対応機種 | ○ 他社 SW でも可能 ※1 | ○ Juniper EX スイッチのみ |
| スイッチ一覧の表示 | ○ ※1 | ○ |
| スイッチメトリック ※2 | ○ ※1 | ○ |
| トポロジの可視化 | ○ ※1 | ○ |
| スイッチ障害時における電波の影響範囲 | ○ ※1 | ○ |
| SLE の可視化、不具合原因の可視化 | - | ○ |
| ポートの可視化 | - | ○ |
| メモリ・CPU・PoE 給電・通信量・イベントの可視化 | - | ○ |
| GUI 設定 | - | ○ |
| 各種運用ツール(Ping, OS アップグレード等) | - | ○ |

※1 : 他社 SW にて LLDP を有効化する必要がございます

※2 : メトリックとはスイッチ一覧の上部に表示される 6 つの要素「Switch-AP Affinity」「PoE Compliance」「VLANs」「Version Compliance」
「Switch Uptime」「Config Success」を指しております

■ 運用ケース(例) スイッチの各種メトリックを確認したい時

メトリックとは？

スイッチ上の問題を検出する事が可能です

■メトリックの種類

- ・ **Switch-AP Affinity** - しきい値以上の AP が接続されているスイッチの検出
- ・ **PoE Compliance** - 給電が不十分な AP の検出
- ・ **VLANs** - 非アクティブな VLAN の検出
- ・ **Version Compliance** - 異なるソフトウェアバージョンで稼働するスイッチの検出
- ・ **Switch Uptime** - 過去 7 日間で稼働時間が 100% 未満のスイッチの検出
- ・ **Config Success** - 過去 7 日間で設定が正しく適用されなかったスイッチの検出

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NETWORKS

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PoE コンプライアンス

PoE Compliance

Access Points on 1 Switches have insufficient power

Status
Connected

Name
ld-cup-ic

バージョンコンプライアンス

15 Switches

site Live-Demo

List Topology Location

2:52:11 PM (updates every 3 minutes)

13 Cloud Connected Switches
2 Discovered Switches
34 Wired Clients
218 W Total Allocated AP Power

90% Switch-AP Affinity 92% PoE Compliance 100% VLANs 75% Version Compliance > 99% Switch Uptime 100% Config Success

Version Compliance

2 switches have non-compliant versions

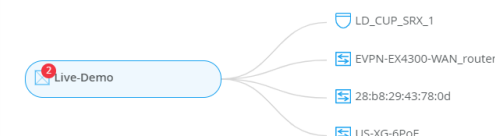
| Status | Name | IP Address | Version | Expected Version |
|-----------|---------------|--------------|-------------|------------------|
| Connected | ld-cup-idf-bb | 10.100.0.141 | 23.2R1.13 | 22.3R1.12 |
| Connected | ld-cup-idf-c | 10.100.0.140 | 22.3R3-S1.3 | 22.3R1.12 |

スイッチ-AP アフィニティ

Switch-AP Affinity

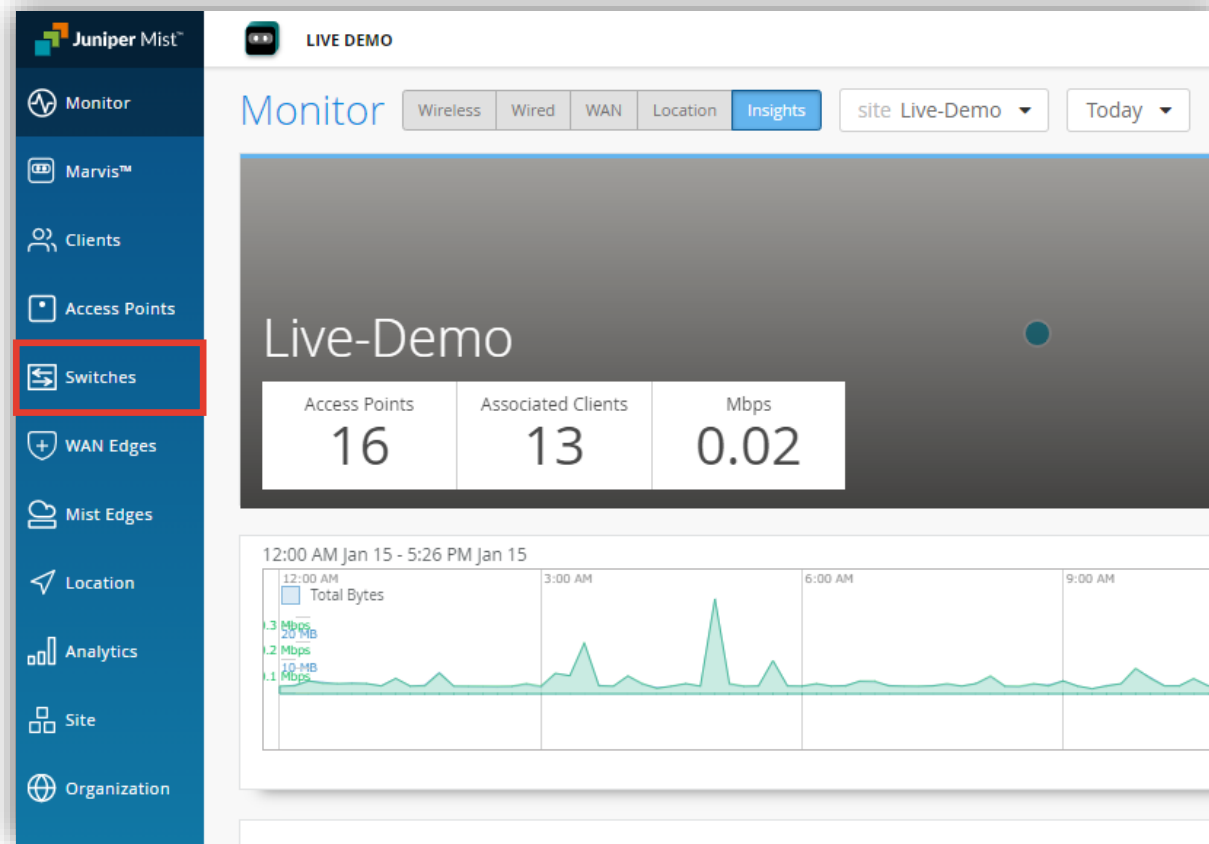
2 switches have excess Access Points connected (more than 2)

1 7 14 15



スイッチのメトリック 確認手順

1. [Switches] を選択します



スイッチのメトリック 確認手順

2. メトリック欄にてスイッチネットワーク上の問題を把握します
※各メトリックの詳細は次ページ以降で紹介します

The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The 'Switches' section is active, showing 13 Cloud Connected Switches and 2 Discovered Switches. A callout box highlights six key metrics: Switch-AP Affinity (90%), PoE Compliance (92%), VLANs (100%), Version Compliance (75%), Switch Uptime (> 99%), and Config Success (100%). Below the metrics is a table listing individual switches with their status, name, IP address, model, and client counts.

| Status | Name | IP Address | Model | Mist APs | Wireless Clients | Wired Clients | Insights |
|--------------|-------------------------|--------------|--------------|----------|------------------|---------------|-----------------|
| Connected | ld-cup-idf-d | 192.168.2.76 | EX4100-48MP | 0 | 0 | 1 | Switch Insights |
| Connected | ld-cup-idf-bb | 10.100.0.141 | EX4100-48MP | 4 | 8 | 11 | Switch Insights |
| Connected | ld-cup-idf-a-core | 10.100.0.134 | EX4100-48MP | 1 | 1 | 6 | Switch Insights |
| Connected | ld-cup-idf-c | 10.100.0.140 | EX4100-48MP | 3 | 2 | 4 | Switch Insights |
| Connected | ld-cup-idf-d-sw440000 | 192.168.2.79 | EX4400-48T | 0 | 0 | -- | Switch Insights |
| Connected | ld-cup-idf-d-VC | 10.100.0.74 | EX2300-48P | 0, 2 | 3 | 12 | Switch Insights |
| Disconnected | ld-cup-idf-d-desktop | 192.168.2.96 | EX2300-C-12P | 0 | 0 | -- | Switch Insights |
| Disconnected | ld-cup-idf-d-desktop-22 | 10.100.0.39 | EX4100-F-12P | 0 | 0 | -- | Switch Insights |
| Disconnected | EVPN-EX4400-Access-1 | -- | EX4400-24P | 0 | 0 | -- | Switch Insights |
| Disconnected | EVPN-EX4400_Core_2 | -- | EX4400-24MP | 0 | 0 | -- | Switch Insights |

スイッチのメトリック 確認手順(Switch-AP Affinity)

3. [Switch-AP Affinity] をクリックします

Switch-AP Affinity ではしきい値以上の AP が接続されているスイッチの検出が可能です

The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The 'Switches' section shows 15 switches with various metrics: 13 Cloud Connected Switches, 2 Discovered Switches, 34 Wired Clients, and 218 W Total Allocated AP Power. A row of metrics includes '90% Switch-AP Affinity' (highlighted with a red box), '92% PoE Compliance', '100% VLANs', '75% Version Compliance', '> 99% Switch Uptime', and '100% Config Success'. Below this, the 'Switch-AP Affinity' section indicates that 2 switches have excess Access Points connected (more than 2). A table lists these switches:

| Status | Name | IP Address | Mist APs |
|-----------|---------------|--------------|----------|
| Connected | ld-cup-idf-bb | 10.100.0.141 | 4 |
| Connected | ld-cup-idf-c | 10.100.0.140 | 3 |

A red box highlights the 'Switch-AP Affinity' metric and the menu icon for the table. A callout box titled '閾値の設定(デフォルトでは 12 台)' (Threshold Setting (Default is 12)) shows the 'Switch Metric Configuration' dialog with a 'Switch-AP Affinity threshold' input field and a warning: 'The Switch-AP Affinity threshold must be between 1 and 100'.

スイッチのメトリック 確認手順(PoE Compliance)

4. [PoE Compliance] をクリックします

PoE Compliance では 802.3at で給電されていない AP の検出が可能です

The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The 'Switches' section is active, showing 15 switches. Key metrics include 13 Cloud Connected Switches, 2 Discovered Switches, 34 Wired Clients, and 212 W Total Allocated AP Power. A row of performance indicators shows 88% Switch-AP Affinity, 90% PoE Compliance (highlighted with a red box), 100% VLANs, 75% Version Compliance, > 99% Switch Uptime, and 100% Config Success.

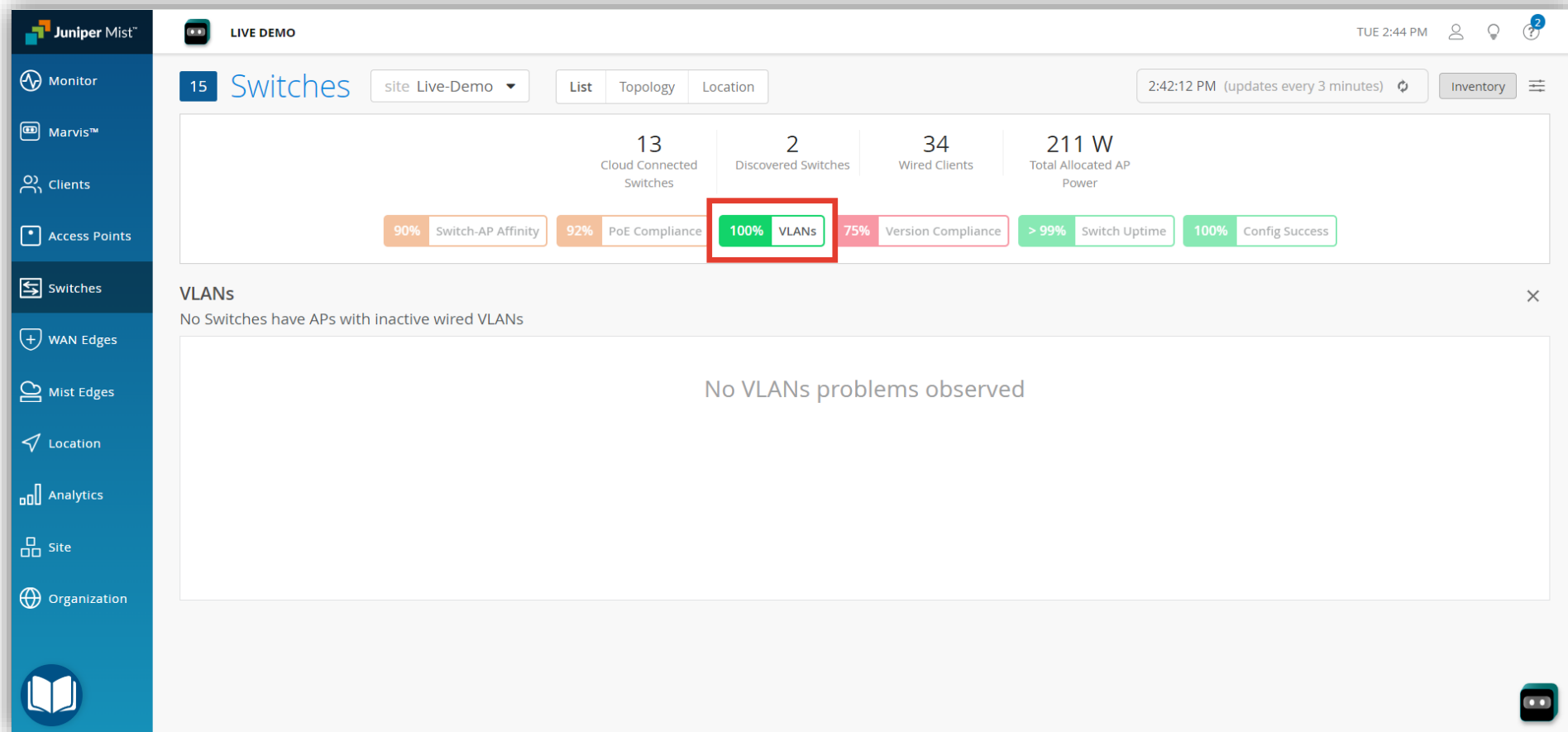
The 'PoE Compliance' section is expanded, showing a warning: 'Access Points on 1 Switches have insufficient power'. Below this is a table with the following data:

| Status | Name | IP Address | APs with insufficient power |
|-----------|-----------------|-------------|---------------------------------|
| Connected | ld-cup-idf-d-VC | 10.100.0.74 | (allocated 25.5 W, draw 30.3 W) |

スイッチのメトリック 確認手順(VLANs)

5. [VLANs] をクリックします

VLANs では非アクティブな VLAN または不一致の VLAN の検出が可能です



The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The left sidebar contains navigation options: Monitor, Marvis™, Clients, Access Points, Switches (selected), WAN Edges, Mist Edges, Location, Analytics, Site, and Organization. The main content area shows a 'Switches' overview with a '15 Switches' indicator and a 'site Live-Demo' dropdown. Below this are four summary cards: '13 Cloud Connected Switches', '2 Discovered Switches', '34 Wired Clients', and '211 W Total Allocated AP Power'. A row of six performance metrics is shown: '90% Switch-AP Affinity', '92% PoE Compliance', '100% VLANs' (highlighted with a red box), '75% Version Compliance', '> 99% Switch Uptime', and '100% Config Success'. Below the metrics, a 'VLANs' section is expanded, displaying the message 'No Switches have APs with inactive wired VLANs' and 'No VLANs problems observed'.

スイッチのメトリック 確認手順 (Version Compliance)

6. [Version Compliance] をクリックします

Version Compliance では異なるソフトウェアバージョンで稼働するスイッチの検出が可能です

The screenshot shows the Juniper Mist dashboard for a 'LIVE DEMO' site. The 'Switches' section is active, displaying various metrics: 13 Cloud Connected Switches, 2 Discovered Switches, 34 Wired Clients, and 218 W Total Allocated AP Power. Below these are performance indicators: 90% Switch-AP Affinity, 92% PoE Compliance, 100% VLANs, 75% Version Compliance (highlighted with a red box), > 99% Switch Uptime, and 100% Config Success. A 'Version Compliance' pop-up window is open, showing a table of non-compliant switches.

| Status | Name | IP Address | Version | Expected Version |
|-----------|---------------|--------------|-------------|------------------|
| Connected | ld-cup-idf-bb | 10.100.0.141 | 23.2R1.13 | 22.3R1.12 |
| Connected | ld-cup-idf-c | 10.100.0.140 | 22.3R3-S1.3 | 22.3R1.12 |

スイッチのメトリック 確認手順(Switch Uptime)

7. [Switch Uptime] をクリックします

Switch Uptime では過去 7 日間に稼働時間が 100% 未満のスイッチの検出が可能です

The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The 'Switches' section shows 13 Cloud Connected Switches and 2 Discovered Switches. A 'Topology' view is selected, showing a network diagram with a central 'Live-Demo' node connected to several other nodes, including 'LD_CUP_SRX_1', 'EVPN-EX4300-WAN_router', 'daluu9485ad', '28:b8:29:43:78:0d', and 'US-XG-6PoE'. A callout box highlights a node with a warning icon and the text 'Uptime < 100%'. Below the topology, a row of metrics shows: 90% Switch-AP Affinity, 92% PoE Compliance, 100% VLANs, 75% Version Compliance, > 99% Switch Uptime (highlighted with a red box), and 100% Config Success. A table titled 'Switch Uptime' shows 5 switches with < 100% uptime during the past 7 days. The table has columns for Status, Name, and IP Address.

| Status | Name | IP Address |
|-----------|-------------------|--------------|
| Unknown | US-XG-6PoE | -- |
| Connected | ld-cup-idf-a-core | 10.100.0.134 |
| Connected | ld-cup-idf-bb | 10.100.0.141 |
| Connected | ld-cup-idf-c | 10.100.0.140 |
| Connected | ld-cup-idf-d-VC | 10.100.0.74 |

[Topology]にて警告マークがあるスイッチが稼働時間 100% 未満のスイッチ

スイッチのメトリック 確認手順(Config Success)

8. [Config Success] をクリックします

Config Success では過去 7 日間で設定が正しく適用されなかったスイッチの検出が可能です

The screenshot displays the Juniper Mist dashboard for a 'LIVE DEMO' site. The main navigation menu on the left includes Monitor, Marvis™, Clients, Access Points, Switches, WAN Edges, Mist Edges, Location, Analytics, Site, and Organization. The 'Switches' section is active, showing 15 switches for the 'Live-Demo' site. Key metrics are displayed: 13 Cloud Connected Switches, 2 Discovered Switches, 34 Wired Clients, and 216 W Total Allocated AP Power. A row of performance indicators shows: 90% Switch-AP Affinity, 92% PoE Compliance, 100% VLANs, 75% Version Compliance, > 99% Switch Uptime, and 100% Config Success. The 'Config Success' indicator is highlighted with a red box. Below this, a 'Config Success' alert is shown, stating 'No Switches had < 100% config success during the past 7 days' and 'No Config Success problems observed'.



Thank you

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