initMAX

ISP Alliance 2026

Zabbix 8.0 Examples for ISPs

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Availability does not guarantee quality

Customer report

Video keeps stalling.

Speed fluctuates.

What to investigate

Metrics for the affected CPE.

Measurements to confirm interference.

A fix and a service check.

Example complaint from an ISP customer

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switchMAX, an initMAX extension

Which switch port needs attention first?



initMAX switchMAX public demo, original 4K screenshot

switchMAX, an initMAX extension

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Port 6: link down



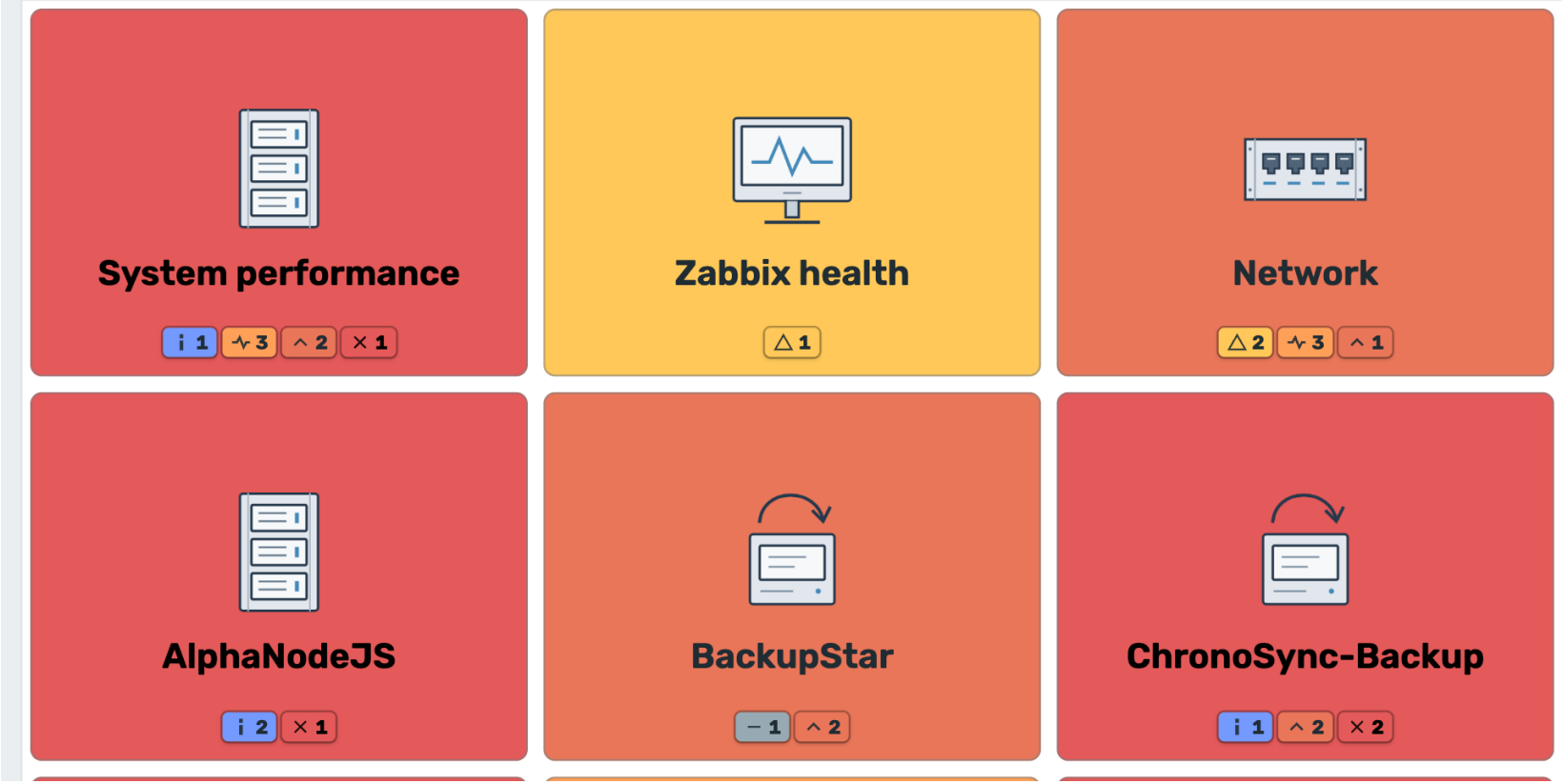
Check the device on port 6 and open its traffic history.

Detail of the same original 4K screenshot, initMAX public demo

initMAX extensions, examples for ISPs

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navigatorMAX: a site and its problems

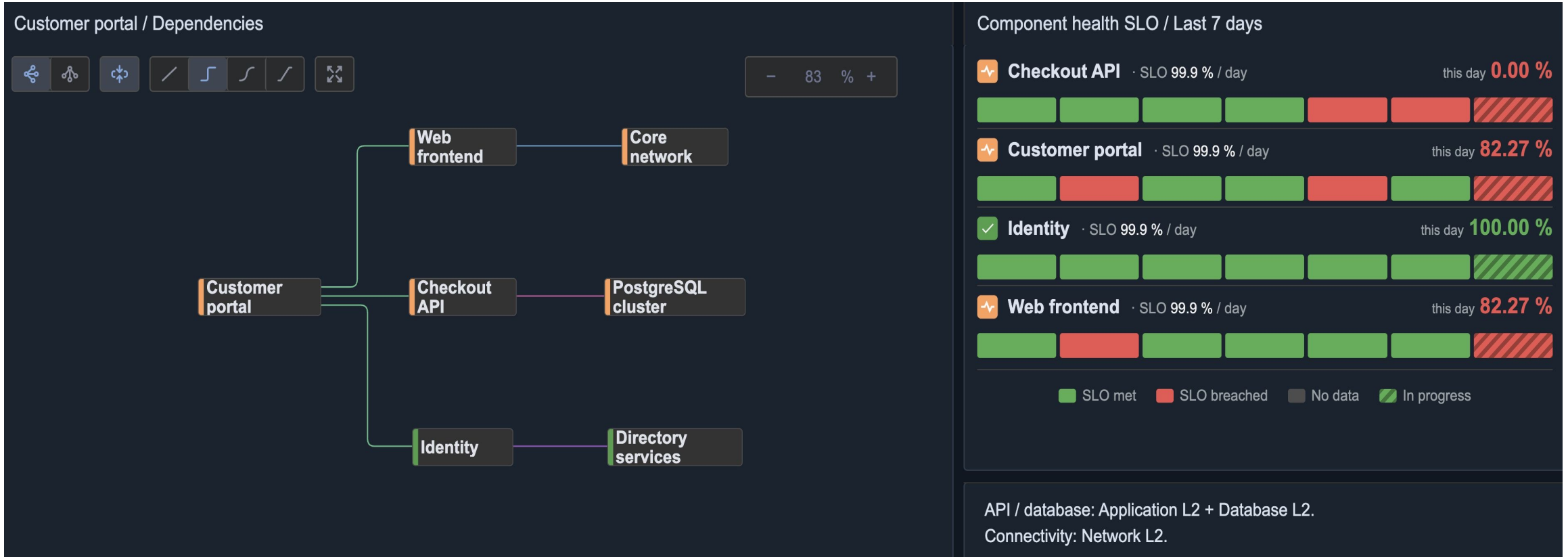


The tile shows status and problem count. Click it to open the related view.

initMAX public demo, open this dashboard

initMAX extensions, examples for ISPs

servicesMAX: service impact of an outage



For ISPs: link the access network to a service and explore related problems.

initMAX public demo, open the servicesMAX example

initMAX extensions, examples for ISPs

heatmapMAX: peaks at the same hour

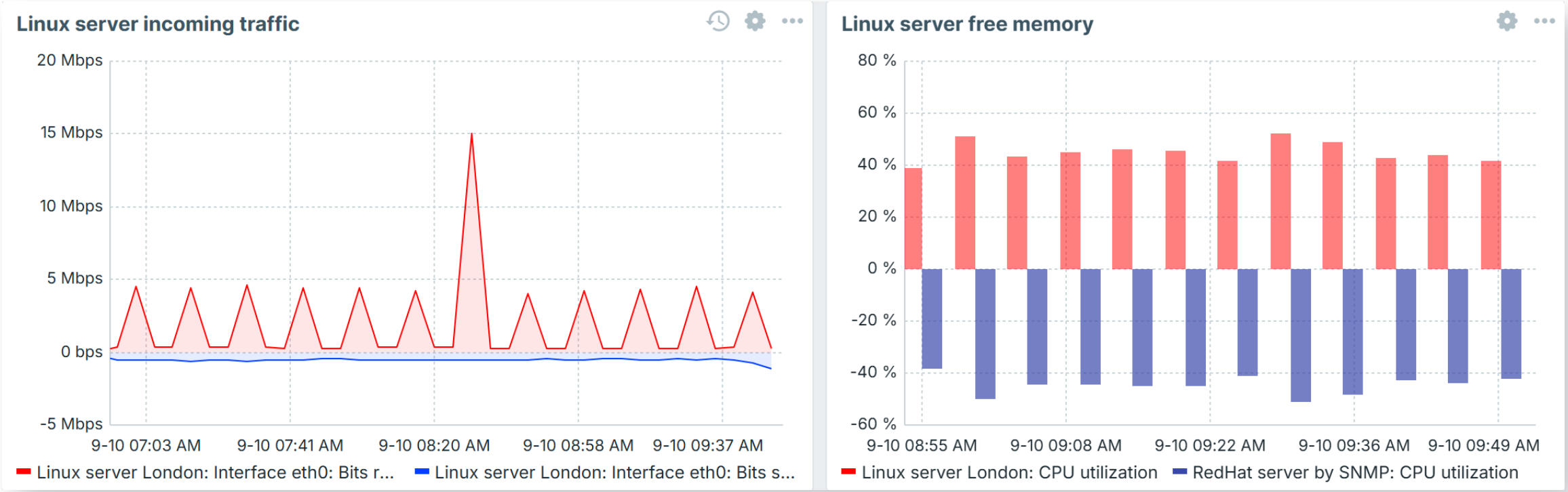


Columns are days, rows are hours. Use this view to spot evening uplink congestion.

initMAX public demo, open this dashboard

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Inverted graph data sets



Zabbix 8.0 adds the option to invert graph data sets:

Makes it easier to compare two values side by side

Configurable for each data set

Zabbix 8.0, table customization

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Table views tailored to each user

Customize views on Problems, Host groups, Template groups, Hosts and Latest data, then save them to your profile.

01 **Column visibility**

Show or hide columns to suit your role and workflow.

02 **Column width**

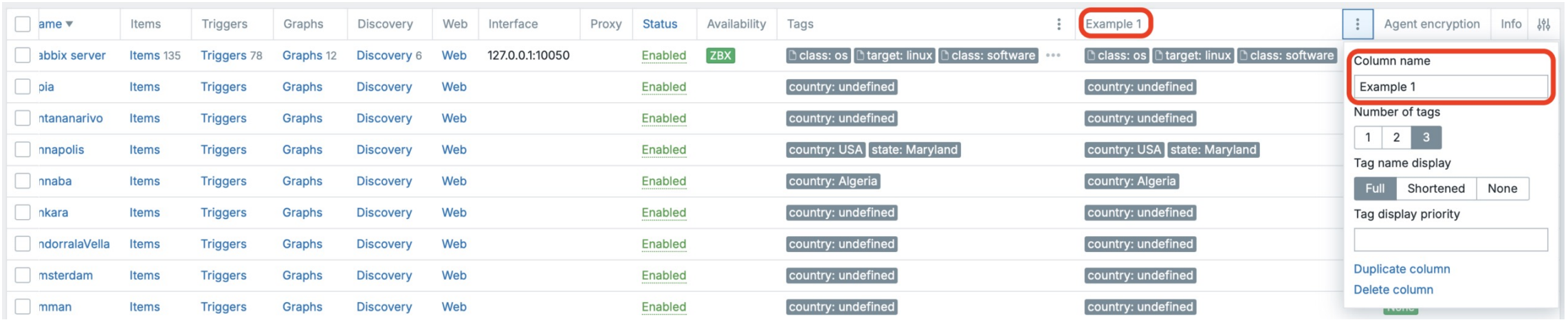
Adjust widths to keep names, values and tags readable.

03 **Clearer tags**

Rename duplicate tag columns to tell them apart.

Zabbix 8.0, table customization

Table views tailored to each user



Rename duplicate tag columns to tell them apart.

initMAX Zabbix MCP Server

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Our MCP connects AI to Zabbix

The model retrieves hosts, metrics and history through the API.

01 **AI client** — ChatGPT, Claude, Codex or another MCP client.

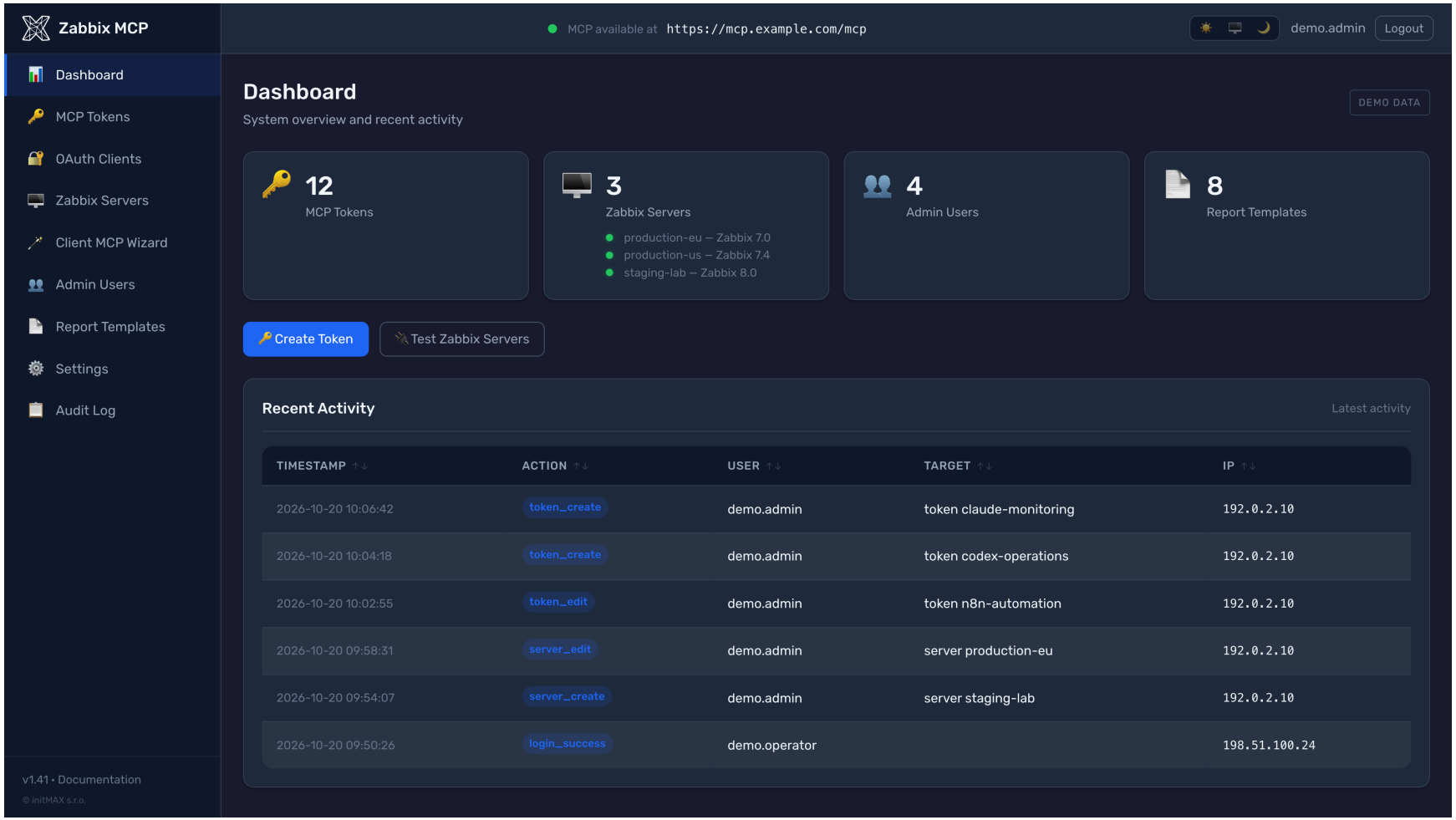
02 **initMAX MCP** — Tools for hosts, problems, items and history.

03 **Zabbix API** — Data limited by the connected account and its permissions.

Zabbix 8.0 support is still marked experimental in the MCP README

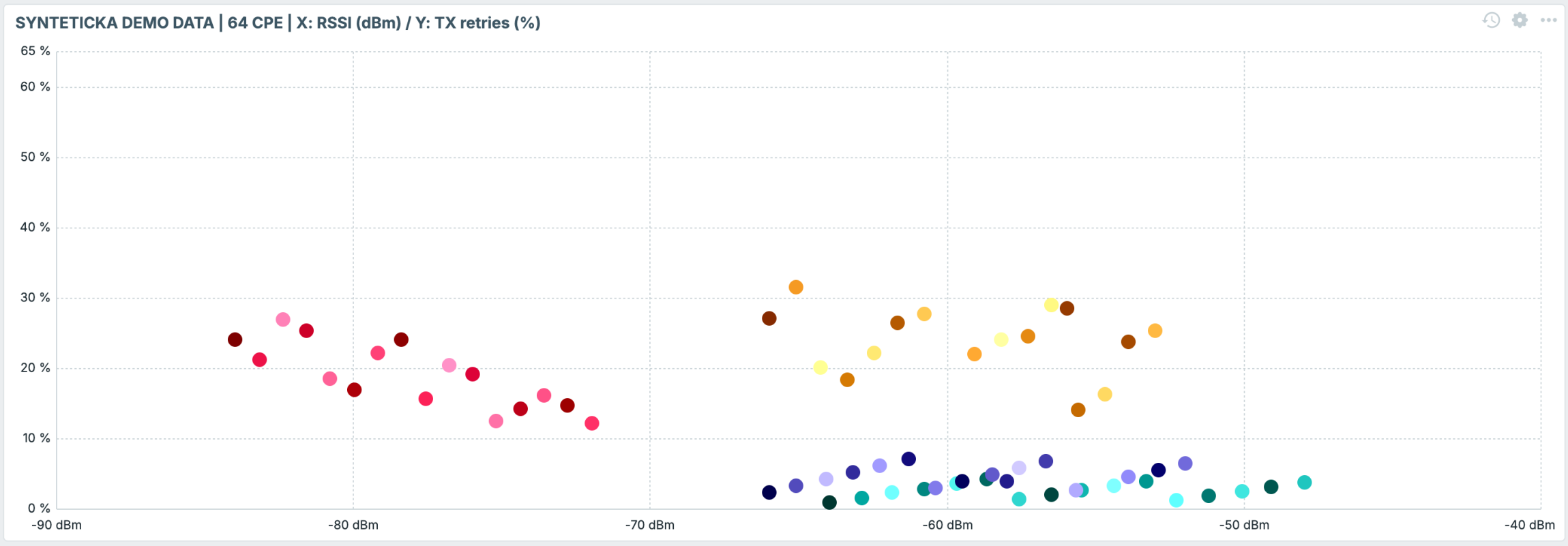
initMAX Zabbix MCP Server

Our MCP connects AI to Zabbix



Scatter plot, Wi-Fi in practice

Which CPEs are outliers?

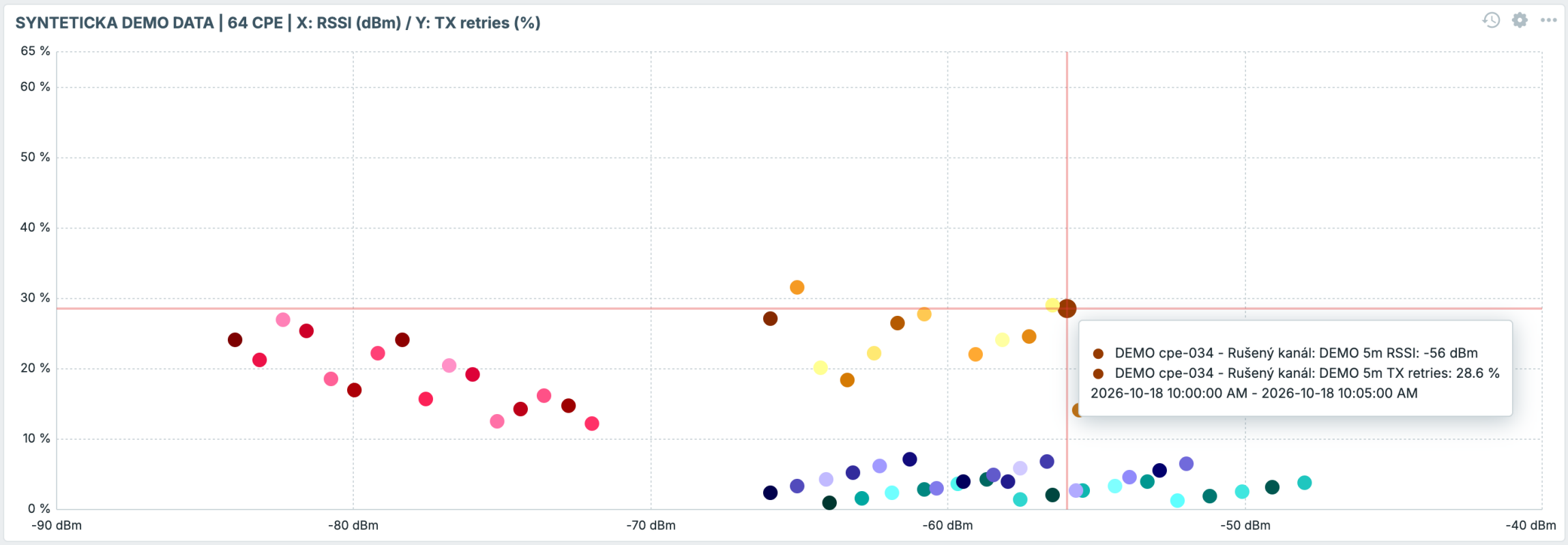


A strong signal alone does not guarantee a good link.

- Stable link
- Weak signal
- Interference
- Busy sector

Scatter plot, Wi-Fi in practice

cpe-034: −56 dBm and 28.6% retries

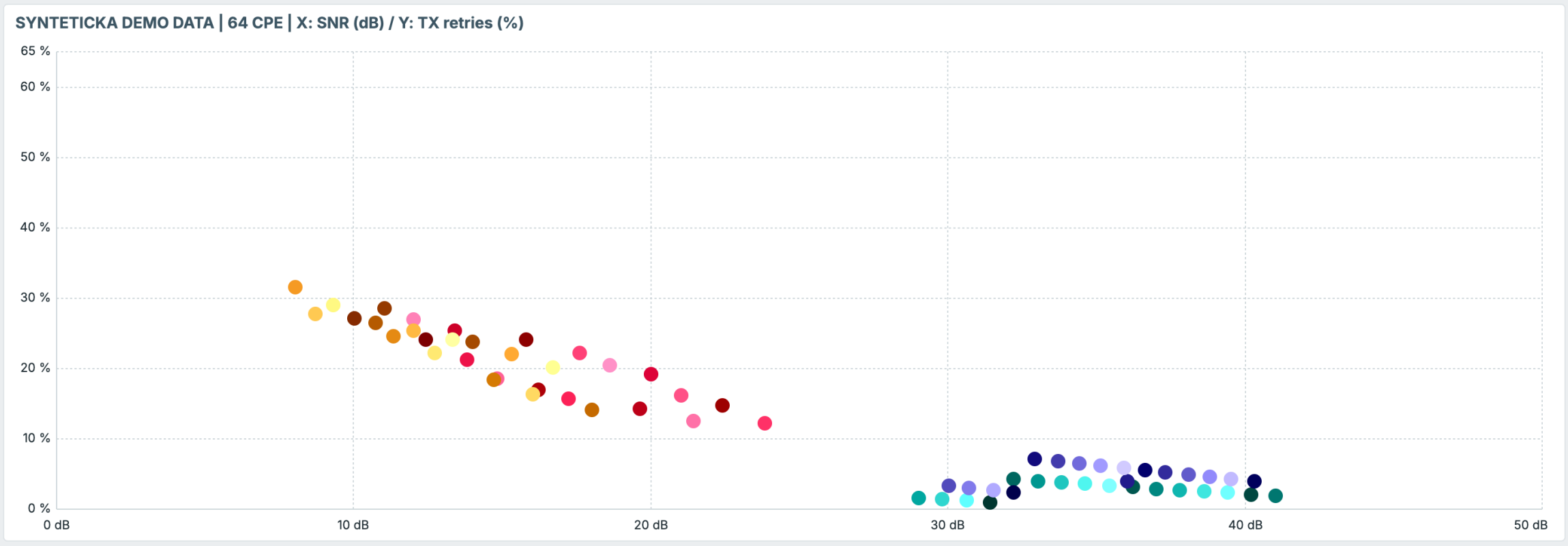


Check noise, SNR and channel utilization.

- Stable link
- Weak signal
- Interference
- Busy sector

Scatter plot, Wi-Fi in practice

SNR adds the missing context



Same CPEs, same time window. Now X = SNR.

- Stable link
- Weak signal
- Interference
- Busy sector

Scatter plot, Wi-Fi in practice

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Scatter: pairing the right values

Widget setting	Example value
Hosts	cpe-* with tag demo=isp2026
X axis	Wi-Fi: RSSI [wlan1], dBm
Y axis	Wi-Fi: TX retries [wlan1], %
History and aggregation	History, avg, interval 5m
Time	18 Oct, 10:00–10:05, the same for both axes

Pair the same CPE and radio. For multiple radios, use an exact Item list.

Example widget setup, field names follow the documentation

Scatter plot, Wi-Fi in practice

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cpe-034: checks after clicking

cpe-034 in the same time window	Value
RSSI / noise	−56 / −67 dBm
SNR	11 dB
TX retries	28.6%
Next step	Spectrum, noise, channel use and time series

Low SNR supports the interference hypothesis. One point does not confirm the cause.

Synthetic data for the same CPE, same 10:00–10:05 window

Scatter plot, Wi-Fi in practice

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Interference continues after the first alarm



Use the time series to distinguish a brief spike from sustained degradation.

Synthetic one-minute series for cpe-034, before changing the AP profile

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MCP: answers backed by traceable evidence

“Why does cpe-034 have high TX retries when RSSI looks good?”

Step	Example evidence
CPE and item selection	host_get, item_get
Same time window	history_get for RSSI, SNR and TX retries
Observed values	RSSI −56 dBm, SNR 11 dB, TX retries 28.6%
Operational conclusion	Check interference, noise and channel use

Keep the host, items and time window with the answer.

Example walkthrough using the same CPE data, not a recording of a live call

Example incident, resolving Wi-Fi interference

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Spectrum measurements to verify interference

What to check	How to distinguish the cause
–56 dBm, but SNR only 11 dB	Strong signal with elevated noise
Survey channel A and candidate B	Spectrum, utilization and timing
Uplink, CRC errors and traffic load	Rule out other causes of the same symptom

Survey with a suitable radio or analyzer. A standard AP scan cannot see everything.

Fictional cpe-034 scenario, example values and times

Example incident, resolving Wi-Fi interference

Changing the channel and bandwidth

Parameter	Before	After the change
AP / sector	Saved profile A	Profile B selected by measurement
Channel width	80 MHz	20 MHz in this example
Change time	Rollback plan ready	10:14:20
Clients	List of affected CPEs	Check that every CPE is connected

Channel B must comply with the country profile, site conditions and DFS/CAC rules.

Fictional cpe-034 scenario, example values and times

Example incident, resolving Wi-Fi interference

Same signal, different outcome

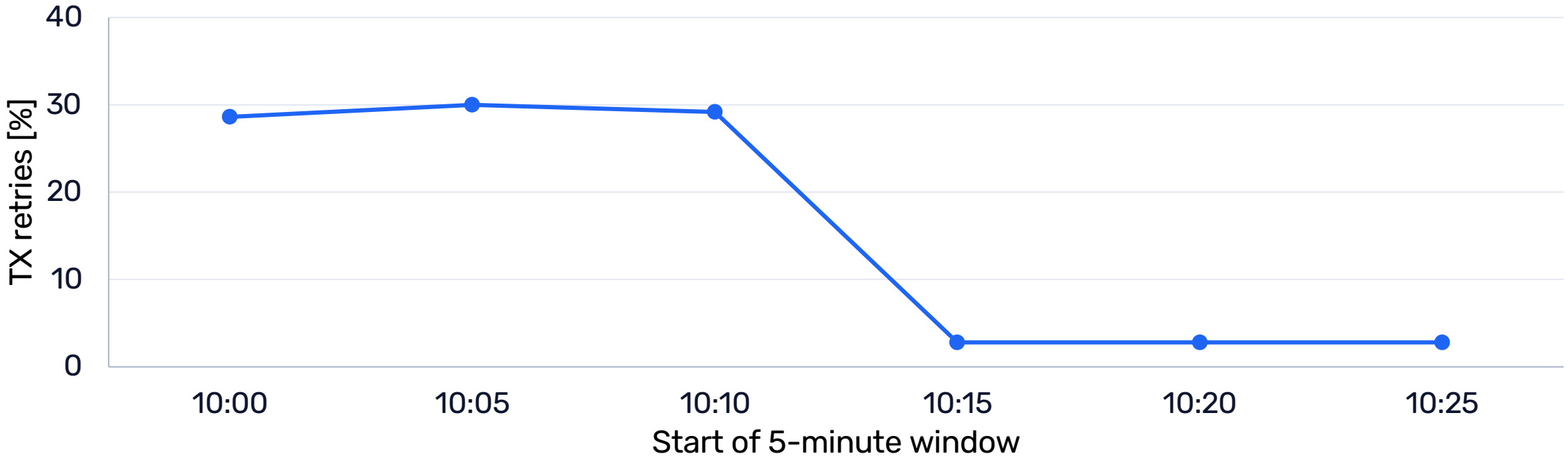
cpe-034	Before: 10:00–10:05	After: 10:15–10:20
RSSI	−56 dBm	−56 dBm
Noise floor	−67 dBm	−84 dBm
SNR	11 dB	28 dB
TX retries	28.6%	2.8%
ICMP loss	2.3%	0 %
RTT (average)	26 ms	8 ms
Channel utilization	79 %	35 %

Synthetic data, matching 5-minute aggregates and comparable load

Example incident, checks after the fix

Checking later intervals after the change

Profile changed at 10:14:20. The first stable window starts at 10:15.



RF metrics, response times and a follow-up service test jointly confirm the fix.

Synthetic scenario, values calculated from one-minute CSV data

Example incident, resolving Wi-Fi interference

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Verifying the service and closing the incident

Example acceptance check	Result
Plan / test to the ISP endpoint	50/10, 72/18 Mbit/s
RTT / packet loss	8 ms / 0 %
Other clients	16 of 16 CPEs connected
Check from 10:15 to 10:45	Stable, incident closed

If the acceptance criteria are not met, revert to the prepared permitted configuration.

Fictional plan, test and acceptance result, example 2×2 radio in the 5 GHz band

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One outage, many events

Time	Host	Event
10:22:00	sw-pop-jicin	Uplink unavailable
10:22:05	ap-jicin-01	Host unavailable
10:22:08	ap-jicin-02	Host unavailable
10:22:12	dns-pop-jicin	Service check failed
10:22:18	portal-jicin	HTTP check failed

A separate example incident on a different day

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CEP: site and a shared time window

CEP rule element	Example configuration
Input selection	Events from site=jicin
Time window	Cause and symptoms grouping, 2m
Relationship	Same site tag value
Result	An umbrella event with related symptoms

First verify event order and grouping against a known outage.

A separate example incident on a different day

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Keep the cause central and symptoms close

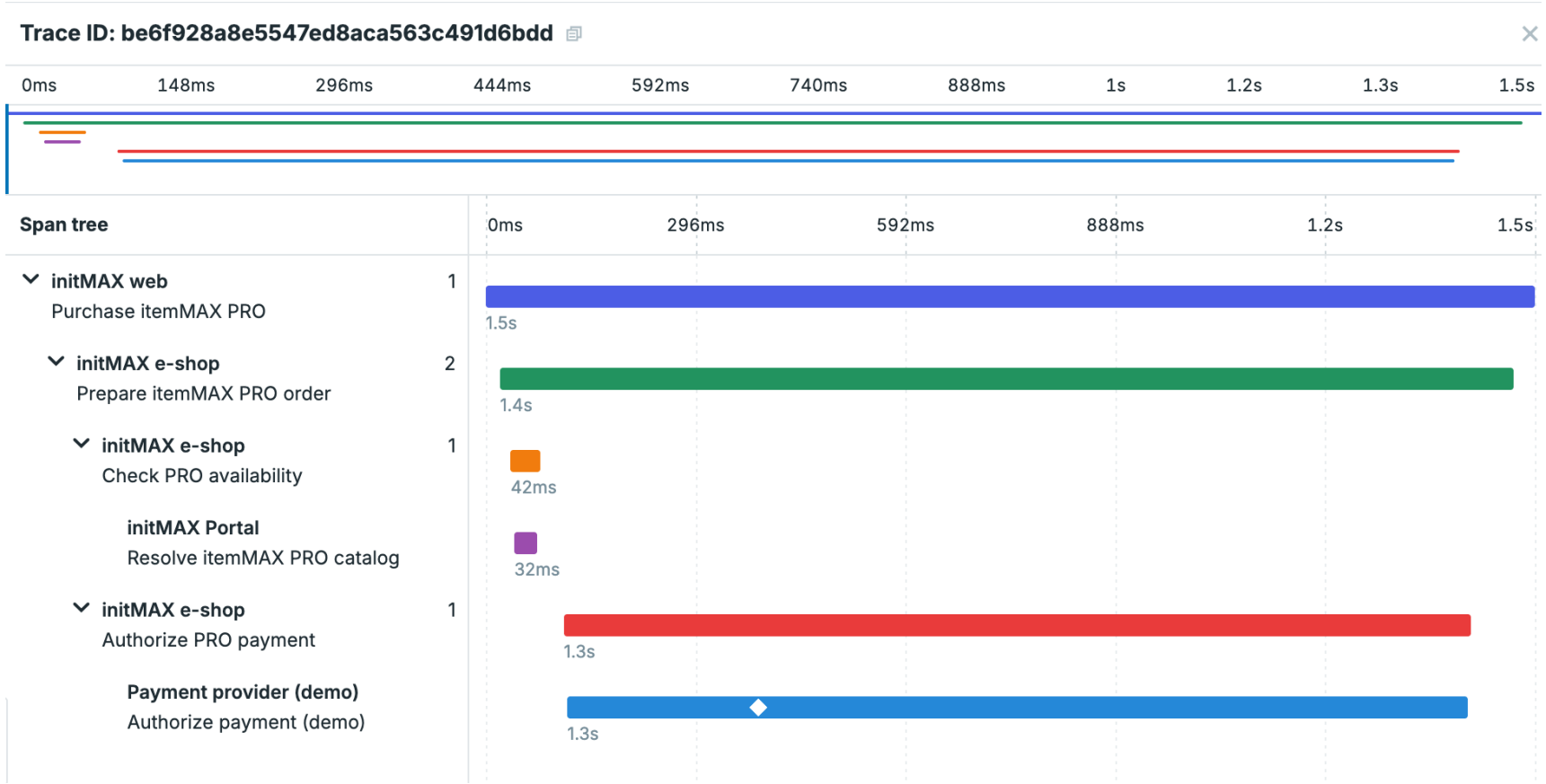
Shift view	What remains traceable
Main event	Unavailable uplink at the Jičín site
Related symptoms	APs, DNS and portal at the same site
Evidence	Timestamps and original events within the group
Cause verification	Topology and an independent uplink test

Grouping helps operators. Further measurements confirm the physical cause.

A separate example incident on a different day

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APM: where a request spent its time



Payment takes about 1.3 s out of a total request time of roughly 1.5 s.

initMAX lab running 8.0 RC1, synthetic demo, not a production incident

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APM: a percentile for a standard trigger

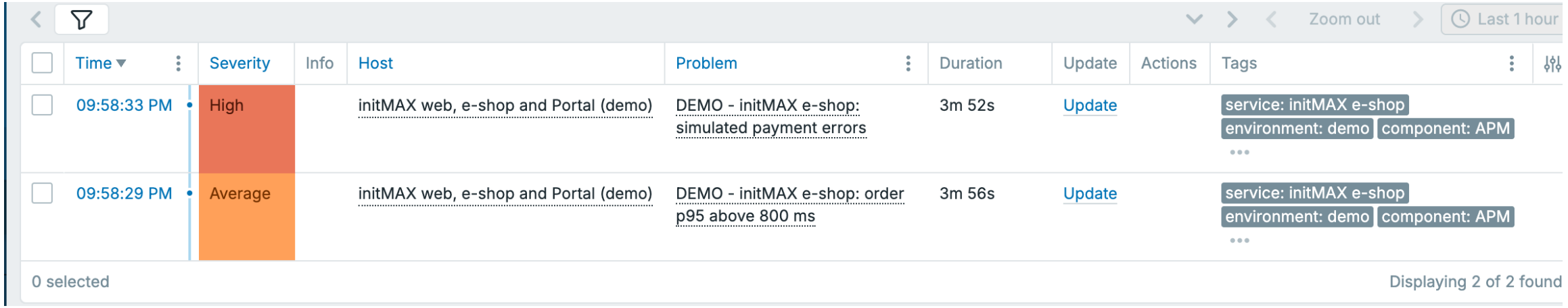
Function	Alias	Actions
percentile(Duration, 95)	p95	Edit Remove
avg(Duration)	avg	Edit Remove
count	cnt	Edit Remove

Add

percentile(Duration, 95) calculates p95 duration for use in a standard trigger.

APM, an initMAX demo

APM: the same problem in the NOC queue



P95 above 800 ms and payment errors use standard Zabbix actions.

initMAX lab running 8.0 RC1, synthetic demo, not a production incident

initMAX public demo

Explore the widgets in our demo

Sign in as guest

[Demo of all widgets]

[navigatorMAX]

[servicesMAX]

[heatmapMAX]

www.initmax.com/zabbix



The QR code opens the widget overview

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