

ELLYPUNK

Yuki Time

WEEKLY DIGEST

28 September - 2 October 2026



This week

28 September - 2 October 2026

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YUKI TIME

SWITCH LOOPS: ONE CABLE, MANY FRAMES

WHY A REDUNDANT LINK CAN FLOOD A LAN

NETWORKING
INTERMEDIATE

1 THE CLUE

“ One extra link looks harmless.
Then every port seems busy.

— YUKI

TWO SWITCHES · ONE UNINTENDED RETURN PATH

2 THE FLOOD

“ A broadcast crosses each active link.
A loop can send copies around again.

— YUKI

ONE FRAME → REPEATED COPIES

A Layer 2 broadcast has no hop count that stops the loop.



TRAFFIC GROWS WHEN THE LOOP KEEPS FORWARDING COPIES.

3 THE FEEDBACK LOOP

The same broadcast can circulate and consume link capacity.



A cable can turn redundancy into a storm.

4 BREAK THE LOOP

“ Trace the unexpected return path.
Isolate it under an approved change.

— YUKI

- CONFIRM THE PHYSICAL TOPOLOGY
- CHECK STP / RSTP PORT STATE
- ISOLATE ONLY THE UNINTENDED LINK
- KEEP PLANNED REDUNDANCY PROTECTED

STP BLOCKS A REDUNDANT PATH

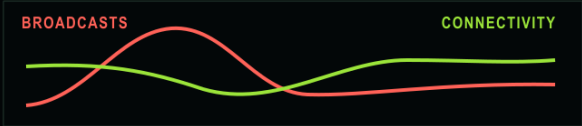
Do not pull an unknown production link; follow local change control.

5 VERIFY RECOVERY

“ Check port state and broadcast rate.
Confirm clients can still reach the LAN.

— YUKI

✓ STABLE PATH



ILLUSTRATIVE TREND · VERIFY WITH REAL SWITCH TELEMETRY

L2 broadcast frames have no IP TTL.

A loop can also cause MAC table instability.

STP / RSTP prevents forwarding loops.

Storm control limits rate; fix the path.

Map the return path.
Protect redundancy with STP.

TRACE · ISOLATE · VERIFY

Sources: Cisco STP guides · Linux bridge documentation

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YUKI TIME

NTP DRIFT

WHY TWO LOGS DISAGREE

HARDWARE & INFRASTRUCTURE
INTERMEDIATE

“ The same event appears seven seconds apart.

— YUKI

TWO HOSTS · SAME EVENT · DIFFERENT LOCAL CLOCKS

A timestamp reports what its host clock believed.

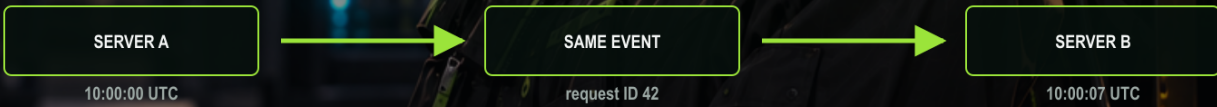
Compare time zones and clock offsets before ordering cross-host logs.

1 COMPARE ONE EVENT

“ I found the same request ID in both server logs.

— YUKI

ILLUSTRATIVE UTC LOG TIMESTAMPS



Seven seconds of timestamp difference may be clock offset, not transit time.

2 CHECK THE CLOCKS

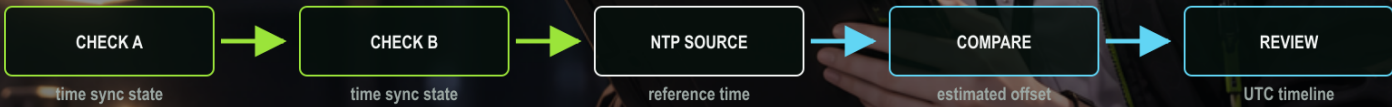
“ I check both hosts against a time source, then compare their reported offsets.

— YUKI

HOST A · AMBER

HOST B · CYAN

SAME REFERENCE



NTP estimates offset using an exchange with a time source.

Inspect the synchronization service each host actually uses; network delay adds uncertainty.

CLOCK OFFSET

Host clock differs from reference time.
It can shift every timestamp on that host.

TIME ZONE

Same instant can print in different local zones.
Normalize timestamps to UTC first.

Match one request ID; compare each host sync state and estimated offset.
Correct time service faults, then re-check new logs and event order.

NTP alignment improves timestamps; it does not prove causal order by itself.

Check both hosts’ sync state and offset.
Convert log timestamps to UTC before comparing events.



YUKI TIME

FIBER POLARITY

WHY THE LINK STAYS DARK

HARDWARE & INFRASTRUCTURE
BEGINNER

“ The new duplex patch is seated, but the link light stays dark.
— YUKI

DUPLEX FIBER · TWO STRANDS · ONE SIGNAL EACH WAY

One strand carries light from A TX to B RX.
The other carries light from B TX to A RX.

1 TRACE THE PAIR

“ I trace the transmit strand
to the far-end receiver.
— YUKI

FOLLOW ONE STRAND END TO END



TX must reach RX at the other end, in both directions.

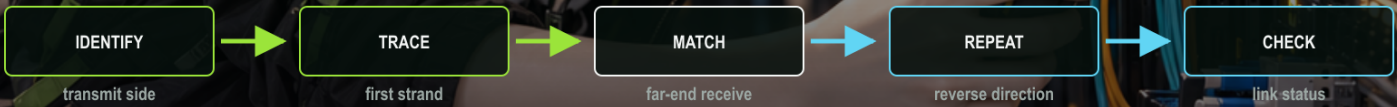
2 VERIFY POLARITY

“ I test the pair safely,
then check both link lights.
— YUKI

END A · AMBER

END B · CYAN

TX TO RX



A safe polarity test follows each strand without looking into a connector.

Never look into a fiber end; use an approved tester and site procedure.

WRONG PAIR

TX connected to TX cannot deliver light to RX.
A dark link can result.

CORRECT PAIR

A TX reaches B RX; B TX reaches A RX.
Check the link lights after correction.

Trace both strands before changing the patch.
If polarity is correct, inspect cleanliness, optic type and power.

A dark link does not prove polarity is the only fault.

Verify TX reaches RX in both directions.
Use a tester; never inspect a fiber end by eye.



YUKI TIME

FAN TACHOMETER

WHY SPINNING STILL ALARMS

HARDWARE & INFRASTRUCTURE
INTERMEDIATE

“ The fan is spinning, but the monitor reports a fan-speed alarm.

— YUKI

VISIBLE MOTION DOES NOT PROVE A VALID TACH READING

The tach lead sends speed pulses to the monitor.
A missing or low reading can trigger an alarm.

1 TRACE THE SIGNAL

“ I can see motion. Now I check the fan’s speed-feedback path.

— YUKI

POWER AND SPEED FEEDBACK ARE DIFFERENT PATHS



A spinning fan can still have missing speed feedback.

2 CHECK THE ALARM PATH

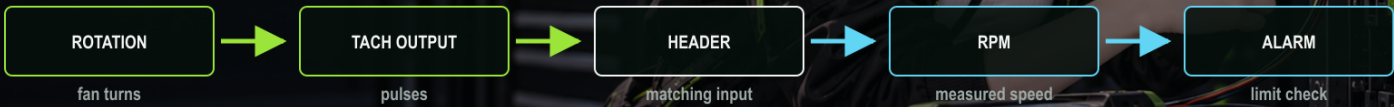
“ I trace the lead to its header, then compare RPM with the alert limit.

— YUKI

PHYSICAL FAN

MONITORED SIGNAL

TACH



The controller needs a valid pulse rate at the monitored input.

PWM control and tach feedback are distinct signals on a compatible fan.

MISSING READING

Fan may spin while the tach lead is loose, absent or on another header.

LOW MEASURED RPM

Pulses may be valid, yet speed falls below the configured limit.

Confirm the monitored header and tach connection.
Compare reported RPM, fan specification and alert limit.

Treat an alarm as real until wiring and actual cooling are checked.

Check the tach path before clearing the alarm.
Do not infer valid RPM from visible motion alone.



YUKI TIME

LINK AGGREGATION

ONE TRANSFER, ONE MEMBER

HARDWARE & INFRASTRUCTURE
INTERMEDIATE

“ Two 1 GbE cables are bundled, but one transfer stays near one link’s rate.
— YUKI

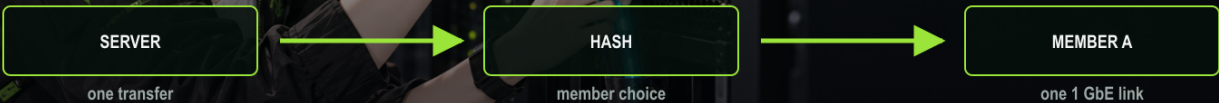
A BUNDLE SHARES FLOWS; IT DOES NOT SPLIT EVERY FLOW

A link aggregation group (LAG) acts as one logical link.
Common hash-based policies map each flow to one member.

1 TRACE ONE FLOW

“ This transfer hashes to member A.
Member B does not carry this flow.
— YUKI

THE SAME FLOW KEEPS ONE MEMBER



Keeping a flow on one member avoids packet reordering.

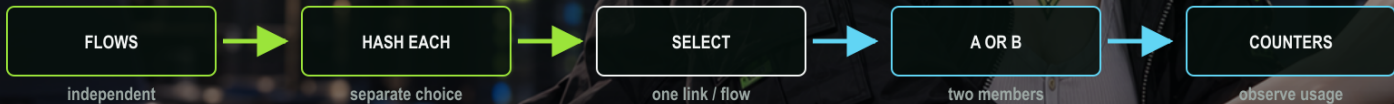
2 COMPARE MANY FLOWS

“ Independent transfers may hash
to different member cables.
— YUKI

PER-FLOW CHOICE

MEMBER USAGE

LAG



Multiple flows can use both links; exact balance depends on the hash.

Example assumes two active 1 GbE members and a common hash-based policy.

ONE TRANSFER

Usually stays on one 1 GbE member;
protocol overhead lowers payload rate.

MULTIPLE FLOWS

May use both members in aggregate
if the hash spreads them.

Check member counters while one transfer runs.
Repeat with independent flows and compare counters.

Do not promise 2 Gb/s for one flow; policy and endpoints matter.

Check the LAG hash policy and per-member counters.
Use multiple flows to test aggregate capacity, not one transfer.