

My query is:

`_sourceCategory=Labs/Apache/Access and status_code=404`

`| logcompare timeshift -24h`

◆ Line by Line Explanation

1. `_sourceCategory=Labs/Apache/Access and status_code=404`

- This filters logs only from the **Apache Access logs** that have an **HTTP 404 (Not Found)** response.
 - So you're only analyzing failed requests (pages that don't exist).
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2. `| logcompare timeshift -24h`

- `logcompare` groups logs into patterns/signatures (e.g., similar URLs, user agents, requests).
 - Then, it **compares the current time window's log patterns with the same time window 24 hours earlier**.
 - `timeshift -24h` means: "Look at the same time yesterday and compare it with now."
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◆ How the Results Work

Looking at your screenshot, you see columns like:

- **Count** → how many times that log pattern occurred in the current time range.
- **% Change** (e.g., +81%, -33%) → how much the count has increased or decreased compared to the same time yesterday.

✦ Example from your screenshot:

- **Signature #2:** Count = 13, +79%
 - This log pattern (type of 404 error) happened 13 times now.
 - Yesterday, it happened only around 7 times → that's a **79% increase**.
- **Signature #6:** Count = 6, -33%
 - This log pattern happened 6 times now.
 - Yesterday, it happened about 9 times → that's a **33% decrease**.

◆ Why Logcompare is Useful

- It helps you **spot unusual changes** in log behavior without manually comparing yesterday's and today's data.
- Instead of going line by line, Sumo Logic highlights which patterns are happening **more often (suspicious increase)** or **less often (possible resolution)**.

◆ Example of a Helpful Log Source for Logcompare

👉 Authentication Logs (Failed Logins)

- Query:
- `_sourceCategory=Auth/FailedLogins`
- `| logcompare timeshift -24h`
- Why? If failed login attempts from a specific IP or username suddenly spike today compared to yesterday (e.g., +200%), it could indicate a **brute force attack**.

Other examples:

- **Firewall logs** → sudden increase in denied connections.
- **Web server logs** → sudden spike in 500 errors compared to yesterday.

✅ In summary:

- logcompare compares **current logs vs. past logs**.
 - **Count** = raw occurrences now.
 - **% Change** = growth or decline compared to yesterday (or specified timeshift).
 - Great for anomaly detection (e.g., unusual login failures, sudden 404 surges, new types of errors).
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