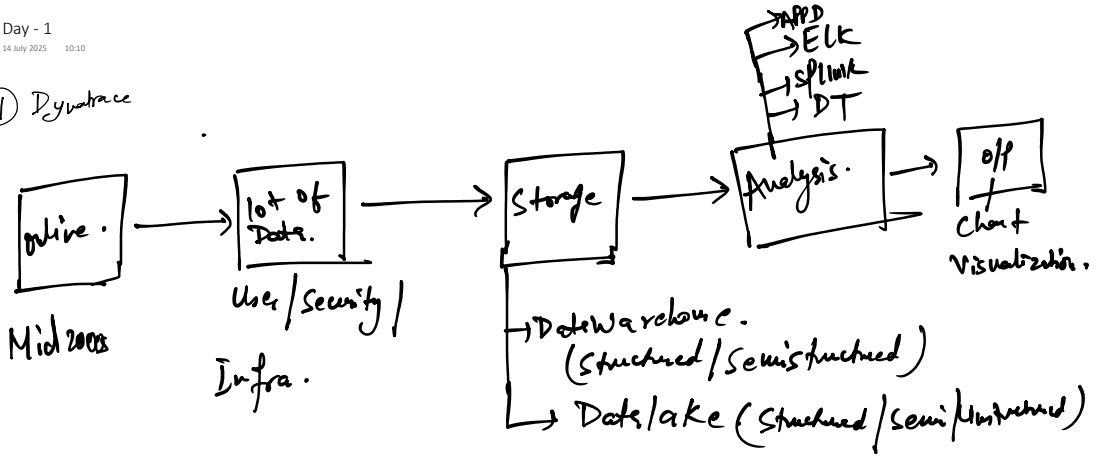
Day - 1

14 July 2025 10:10

① Dynatrace



ELK - inverted index

Splunk - Bucket

① Monitoring → Reactive. (CPU spike happens)

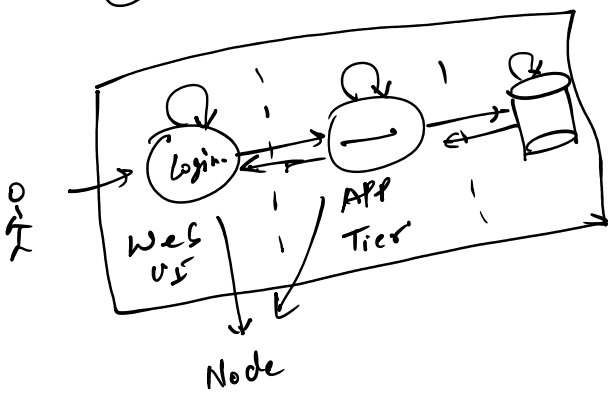
② Observability → Proactive. (Steps / Precaution)

3 Pillars of observability :-

① Metrics - Aggregated output. CPU = 80%. Memory = Full

② logs - Timestamp + some more info.

③ traces - Info. on the Node level Activity



SRE :- Site Reliability Engineer

Google - SRE

Reliable, Scalable, Robust.

... Aggregate value CPU = 80%, Memory ↑

Reliable, Scalable, Robust

1. SLI → Service level Indicator – Aggregate value CPU = 80%., Memory ↑
2. SLO → Service level objective – 99.8% → understanding b/w team. SLO ↑ SLI.
3. SLA → Service level Agreement – Agreement b/w two party. 99.5% → Server should be up.
4. Error Budget → (100 − 99.8) = 0.2% → 1.44 Hours.
5. Toil → Repetitive Activity.
   ↳ Avoid Toil → Costing.

Dynatrace
1. APM
2. EUM → RUM, Synthetic
3. Infra.
4. Containers.
5. Cloud Monitoring.
6. Log Monitoring.

Rival Tools:-
1. Appdynamics – Cisco
2. Datadog.
3. New Relic.
4. Elk

Around 2014, Dynatrace has multiple Monitoring Tool
1. App Mon
2. DC RUM – Data centre Real User Monitoring,
3. Enterprise Synthetic.
4. Gomez.

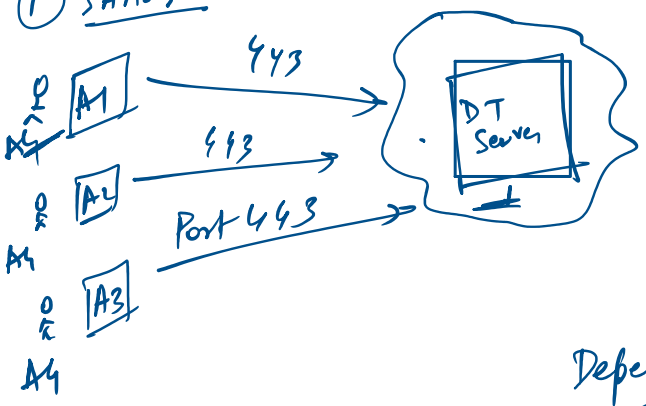
Dynatrace → Ruxit → Combine all the app to one → Dynatrace.

Dynatrace two flavours.
1. SAAS – S/f as a service
2. Managed – Install the App. on the Server.

1) SAAS:-

One Agent - Component installed on the App.

① SAAS :-



One Agent - component installed on the App. level.

Not dependent on whether its Java/.Net/Nodejs/Python

Depends on the OS :-

① Windows.

② Linux.

DT Server Component :-

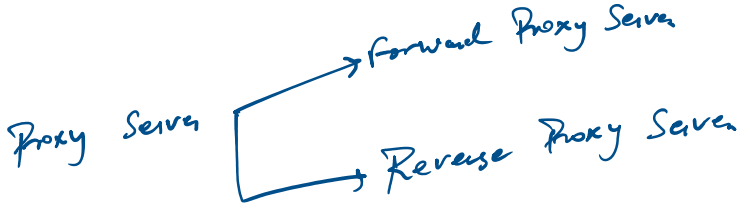
① nginux → Reverse Proxy Server.

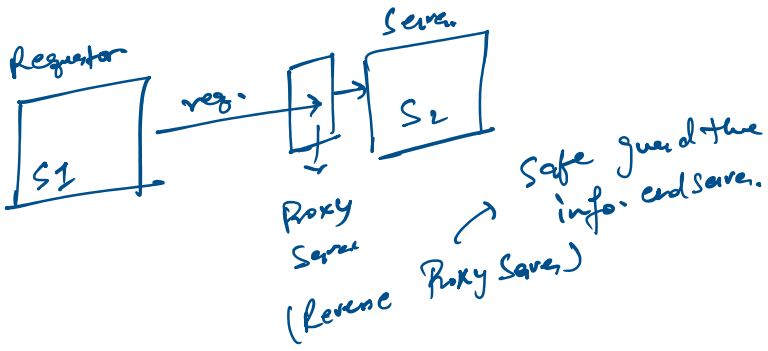
② Elastic Search → Engine that analyse the data.

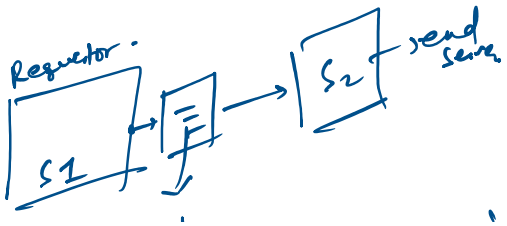
③ Cassandra HyperCube → Distributed database where data is stored.

④ DT Server. → collection, Processing & Analysing the data.

⑤ Embedded Active Gate → Help to collect the local data of DT Server.







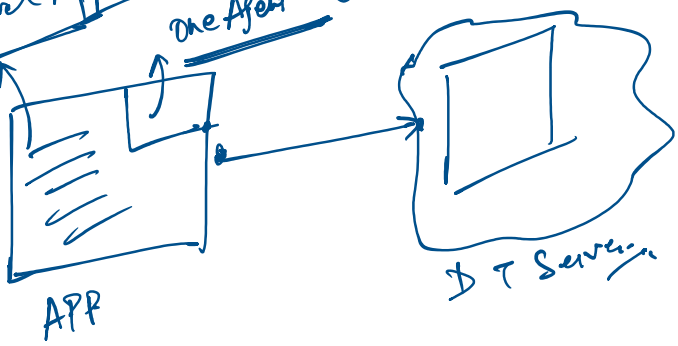
Forward Proxy Server (Safe guard the info. of the Requestor).

Online Web App.. (login, Account, Payment, Early)

easytrip App.

(Java/.Net)

One Agent. (one token)



APP

DT Server..

44.202.173.46

Page fault :- Process will access a part of memory that is currently not mapped.

Minor page fault

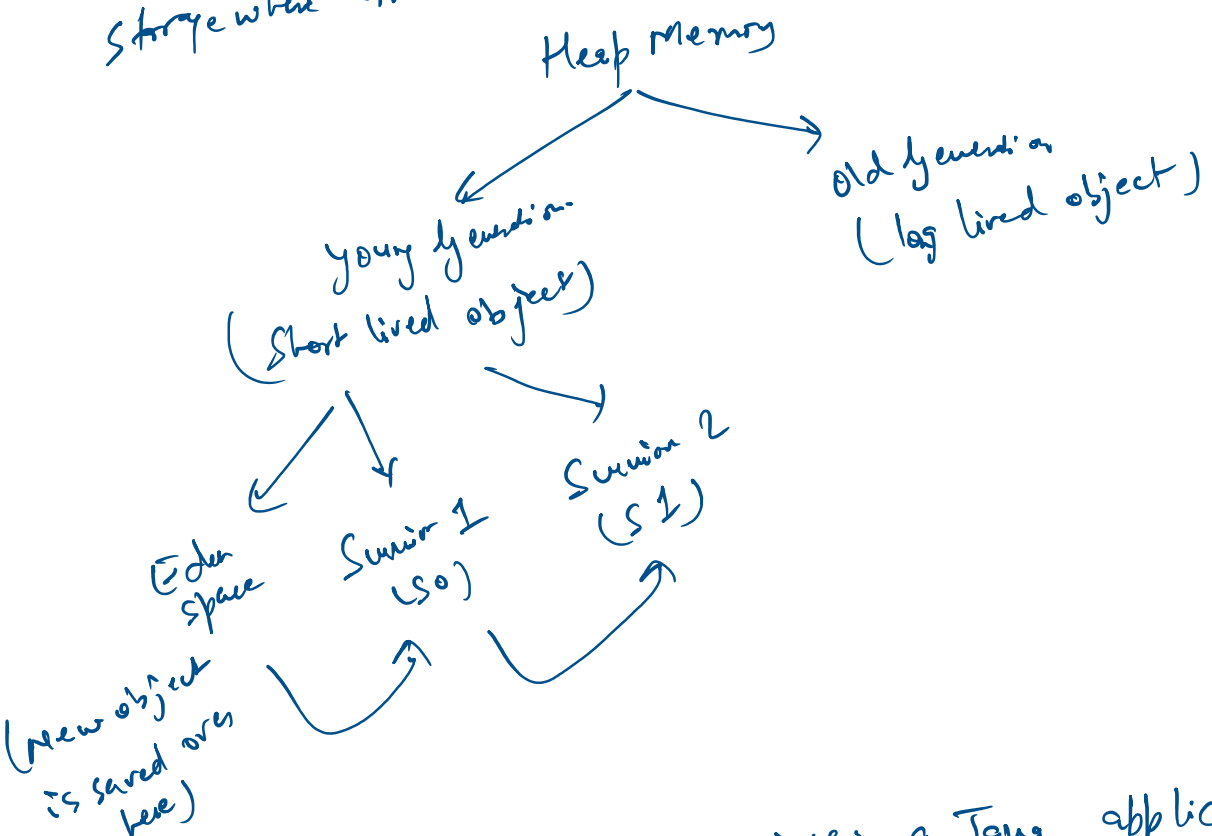
Major Page fault fetched from Disk. which slow.

(RAM) ↓ just not mapped.

JVM (Java Virtual Machine) :- System to run a java Programs.

.. Java Object are stored at runtime.

Storage where the Java object are stored at runtime



Thread:- Enable parallel execution within a Java application.

1. Multi-tasking
2. Run Background jobs
3. Handle I/O operation.
4. Improve Response of overall app.

Thread → User Thread – Main App logic.

→ Daemon Thread – Background Service thread.

New → Runnable → Running → Blocked/Waiting / Timed Waiting (Thread.sleep()) → Terminated

object.wait()

execution finished.

Web Application.

My Web App

By default → My Web Application.

My Web URL