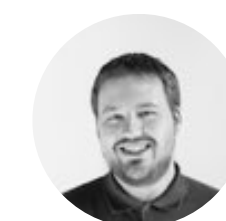


INNOQ Technology Night / Hamburg / 22.06.2023

Observability in Java



MICHAEL VITZ
SENIOR CONSULTANT

MICHAEL VITZ

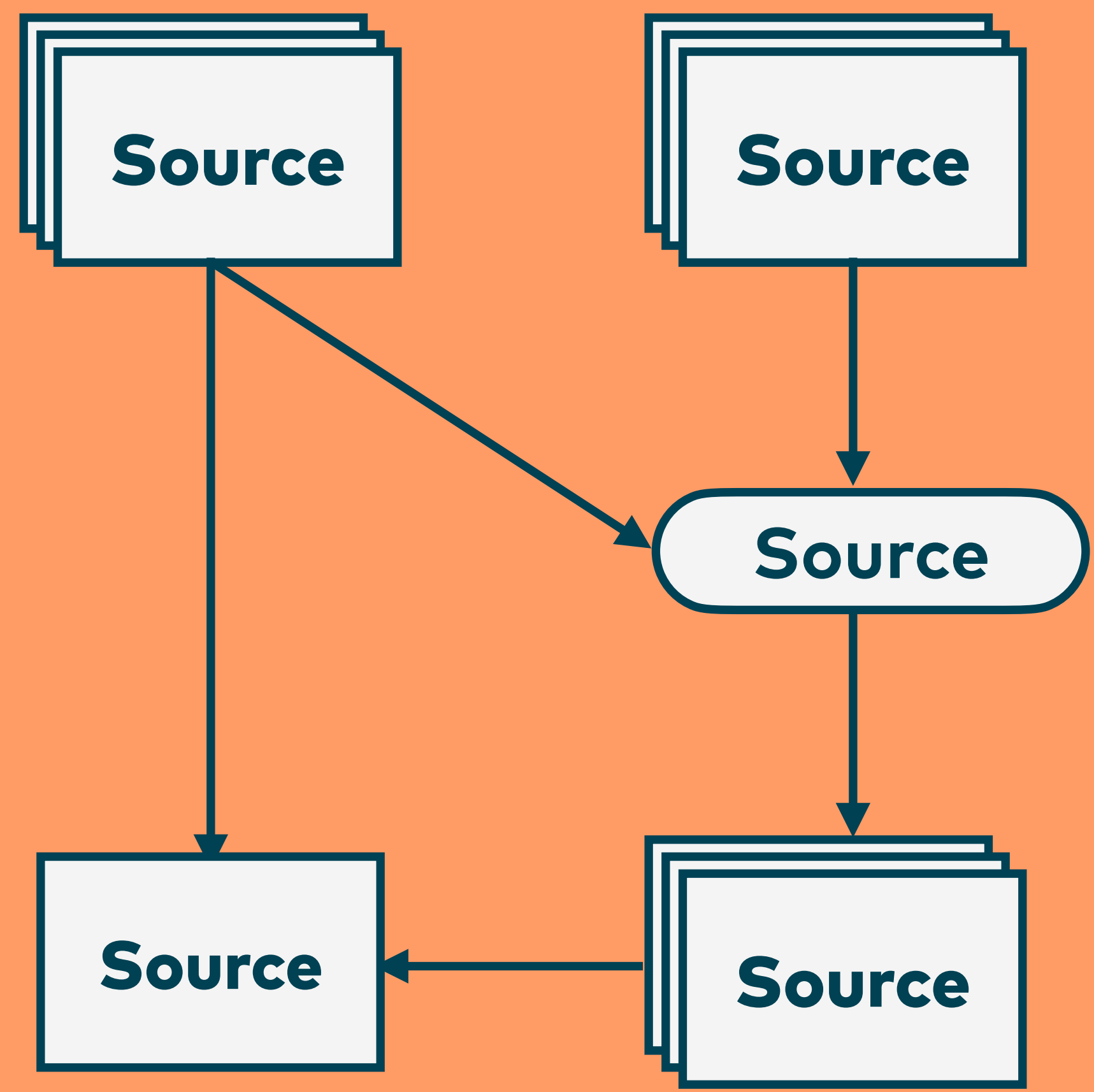
**Senior Consultant
bei INNOQ Deutschland GmbH**

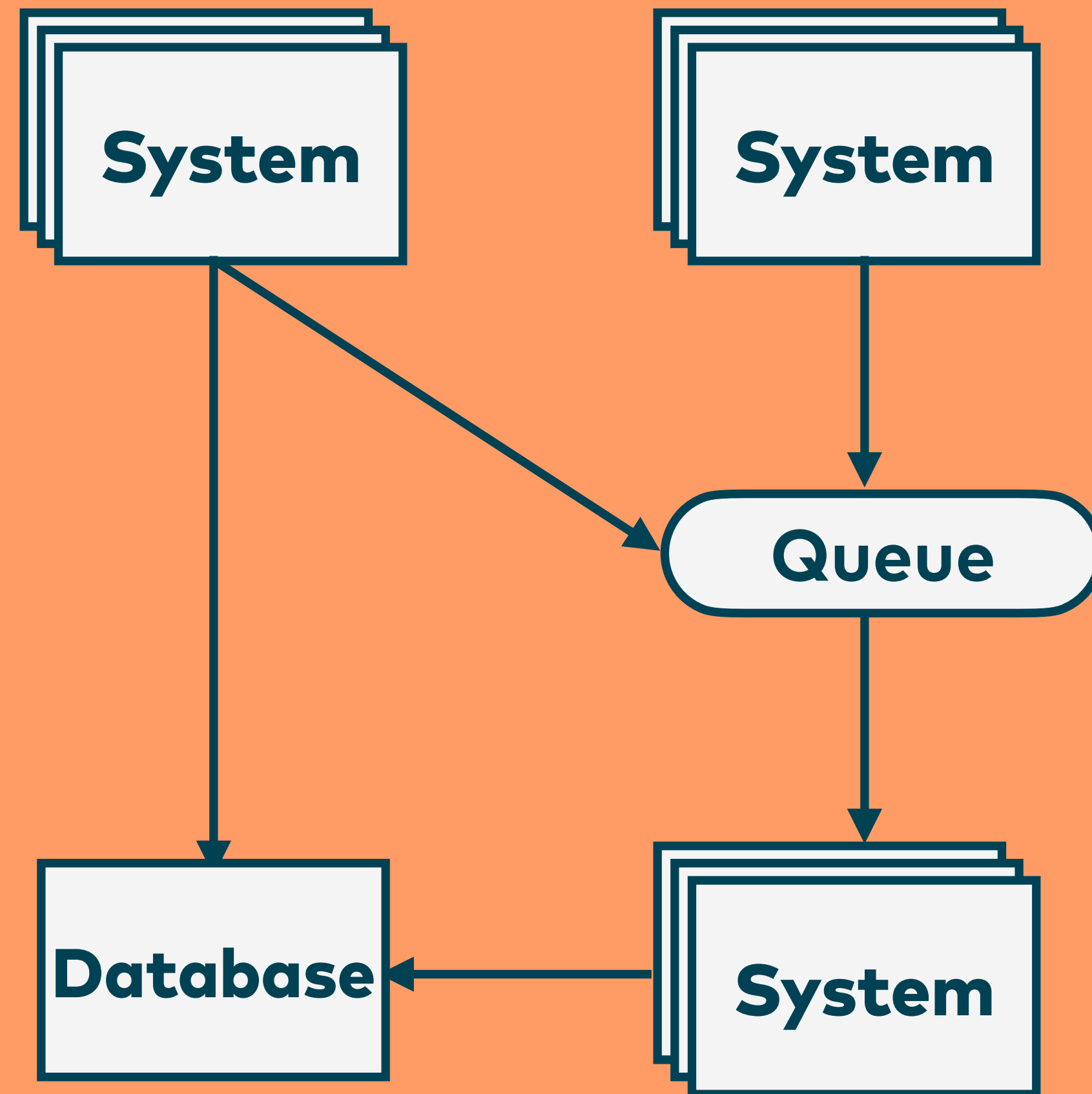


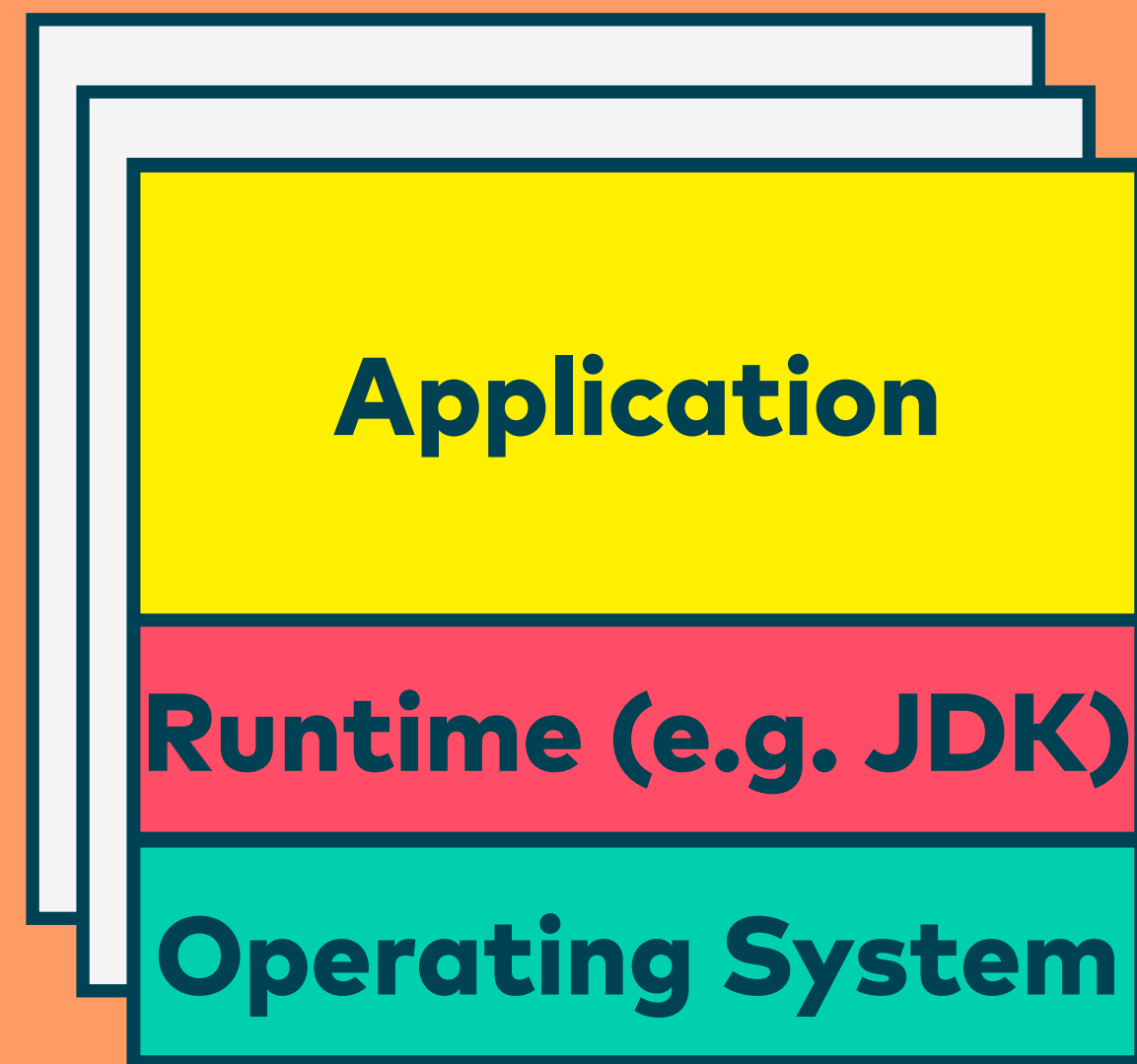
A lateral cephalometric radiograph (X-ray) of a human skull. The image shows the profile of the skull, including the cranium, facial bones, and the dental arches. A ruler is visible in the upper right corner, indicating a scale from 0 to 30. The word "Observability" is overlaid in orange text across the center of the image.

Observability

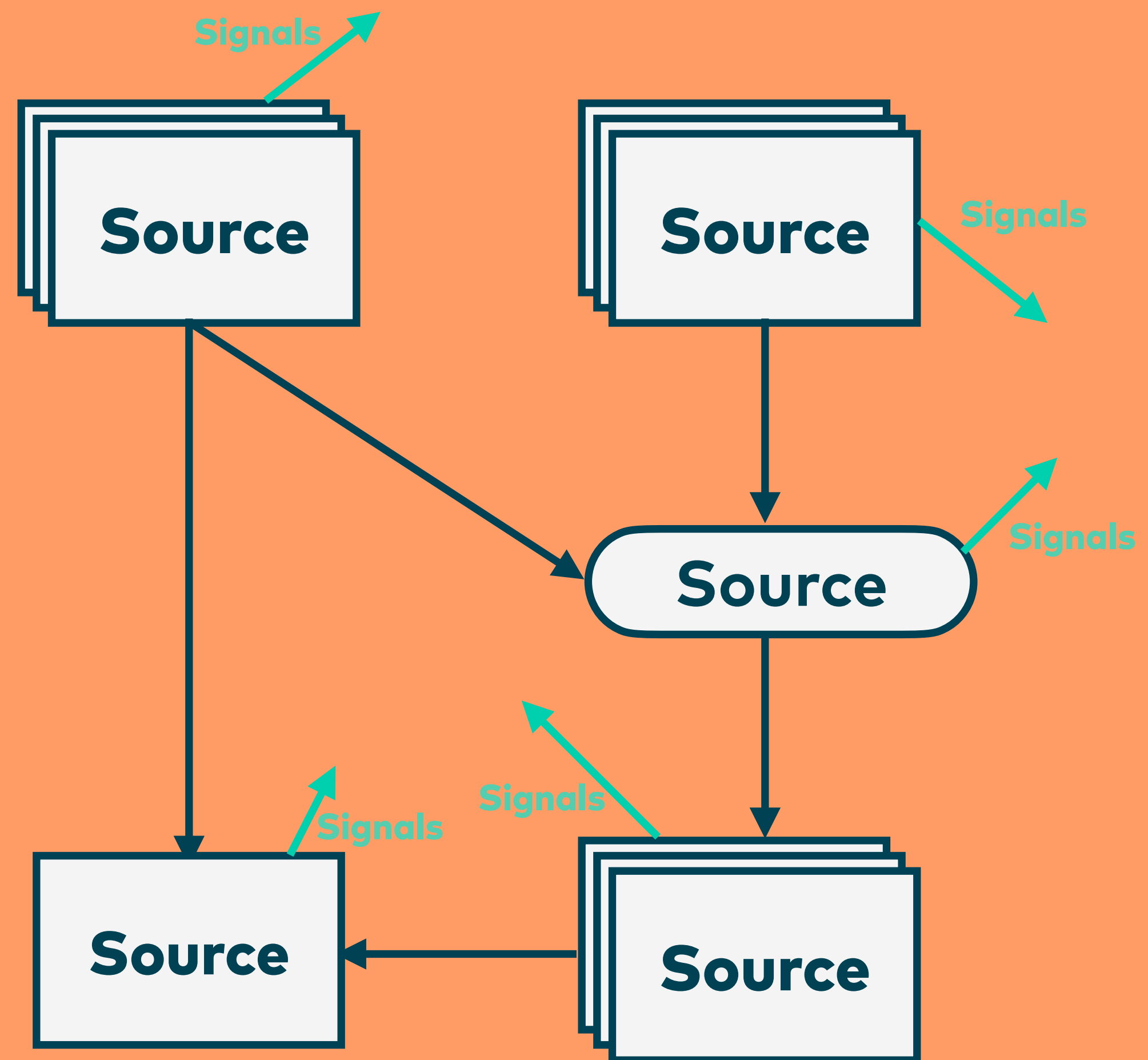
Sources

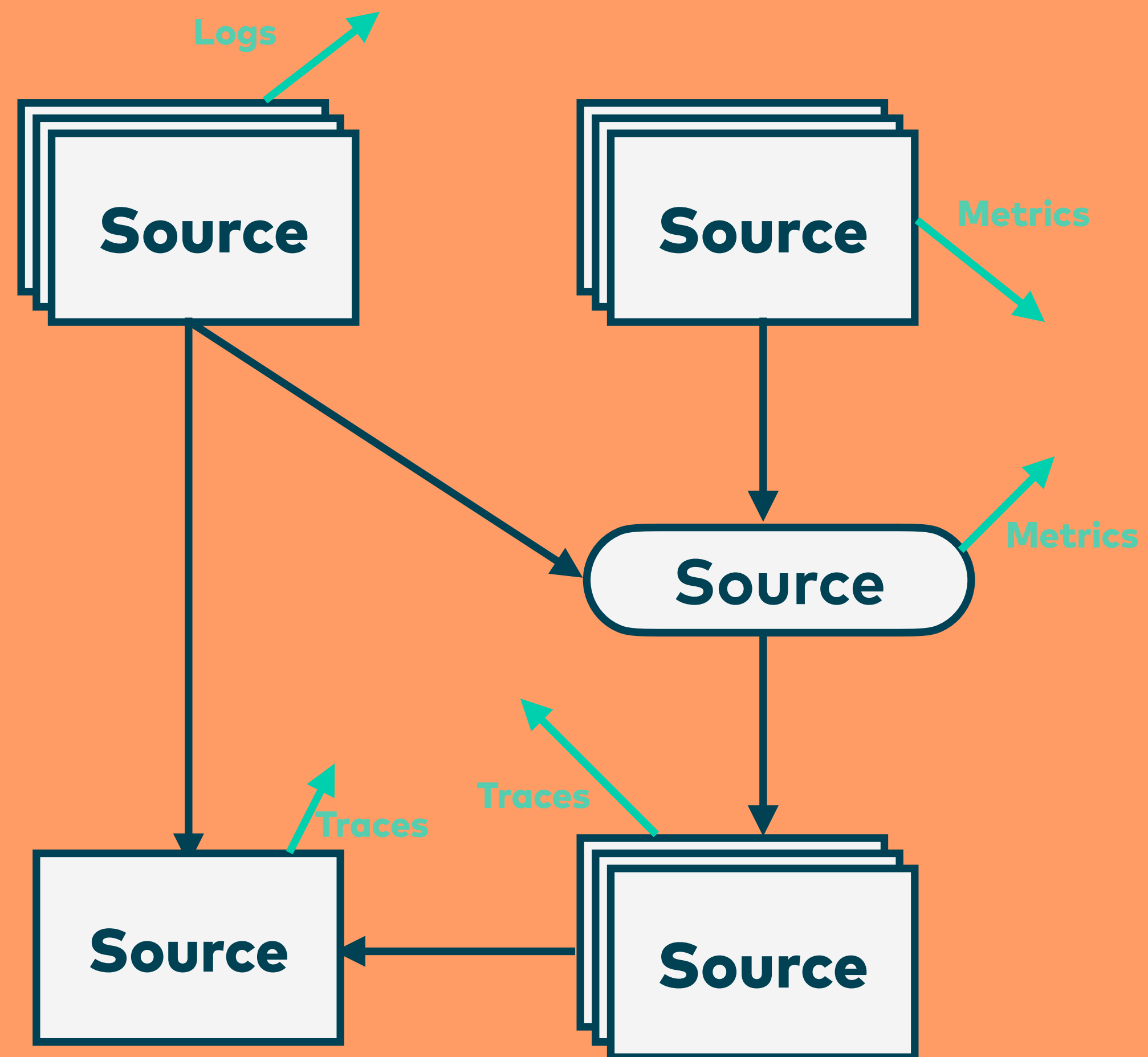




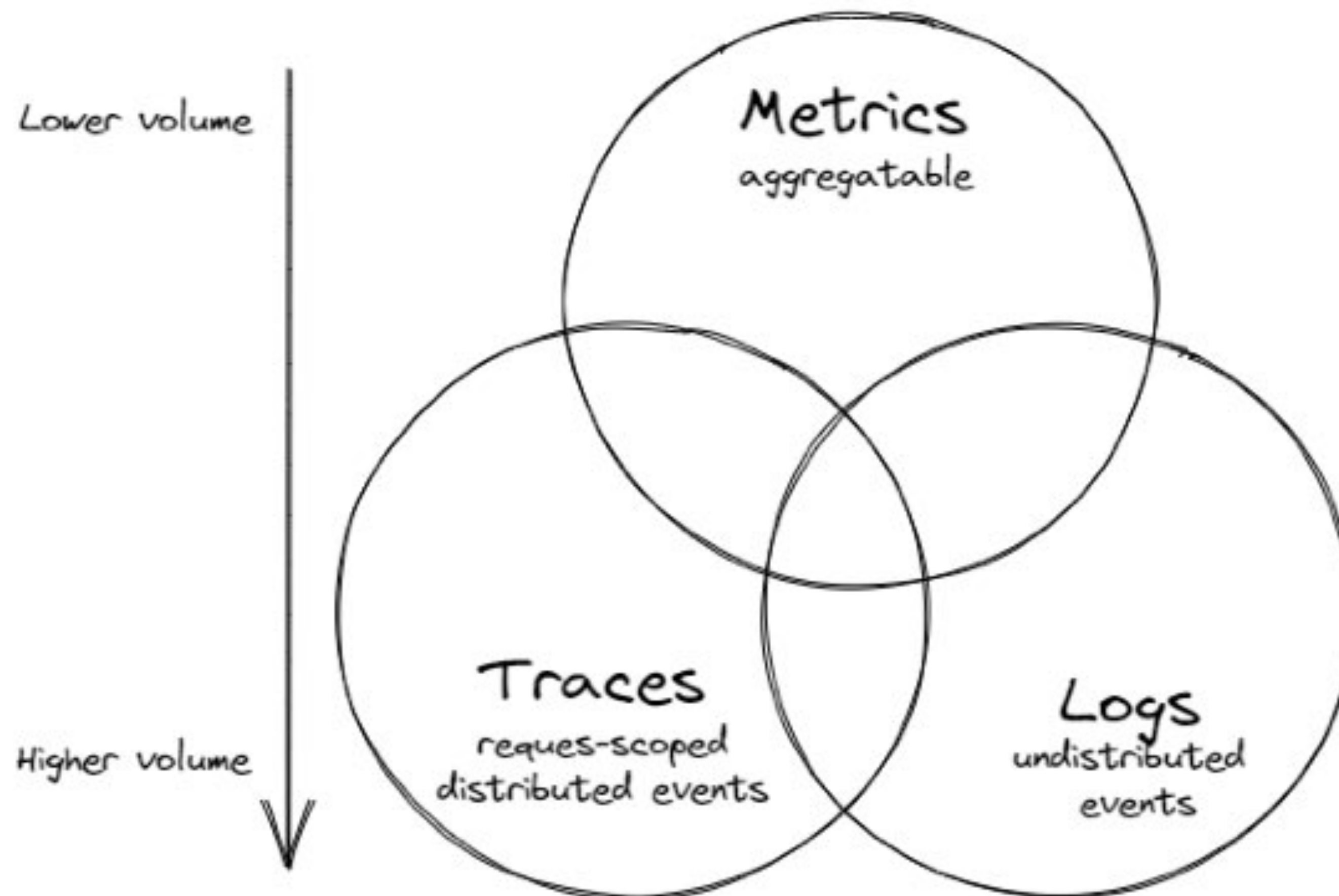


Signals

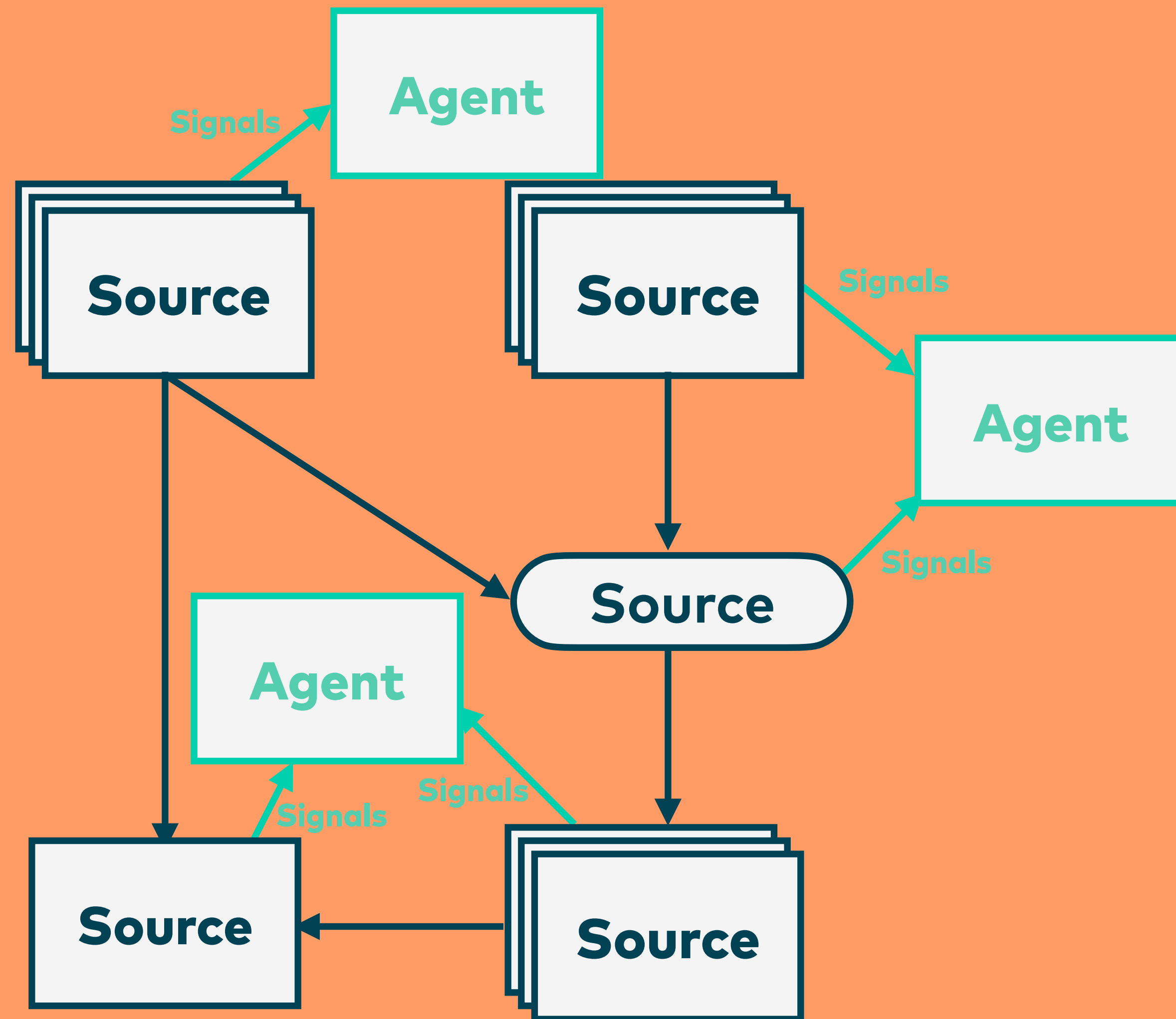




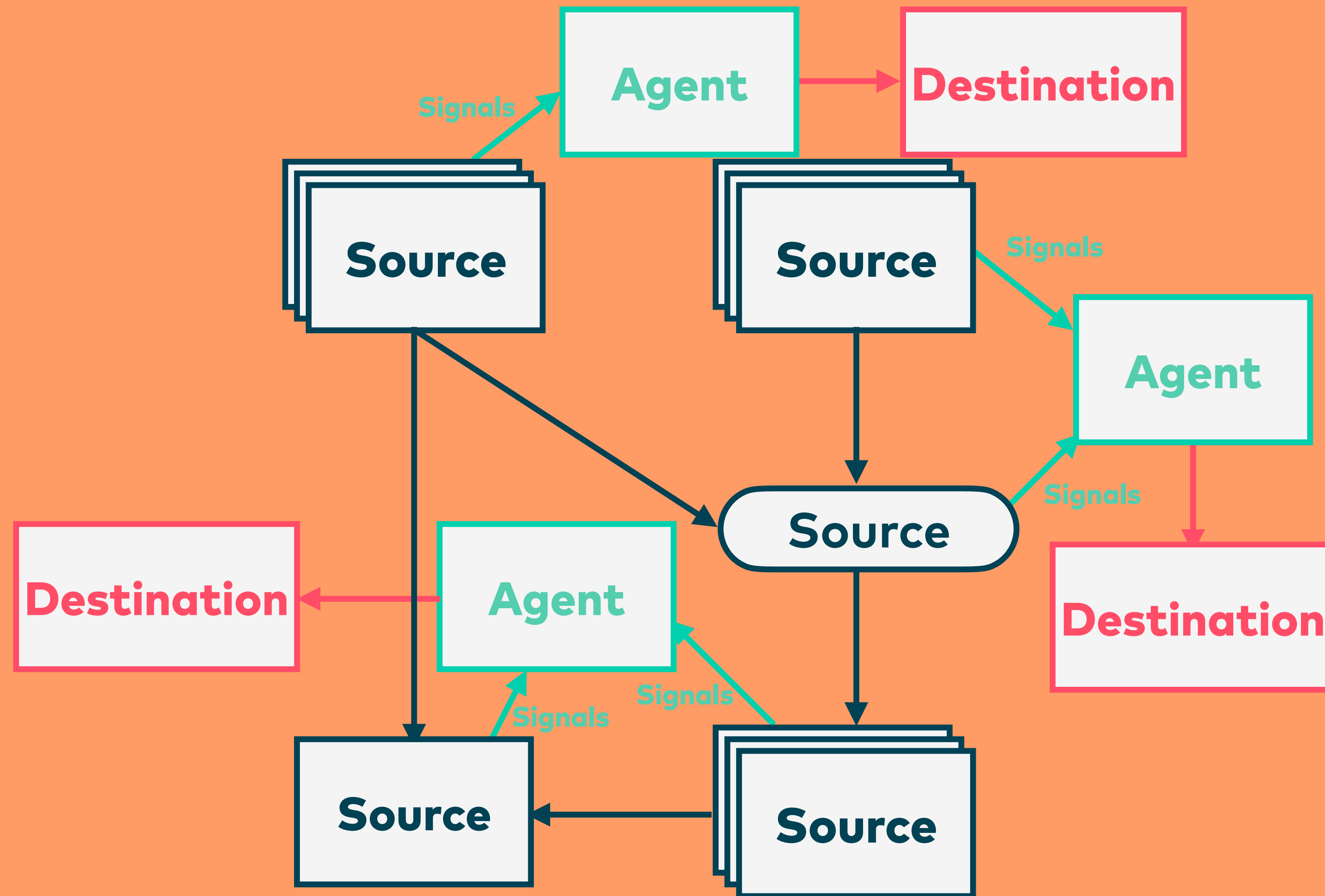
Primary Signals



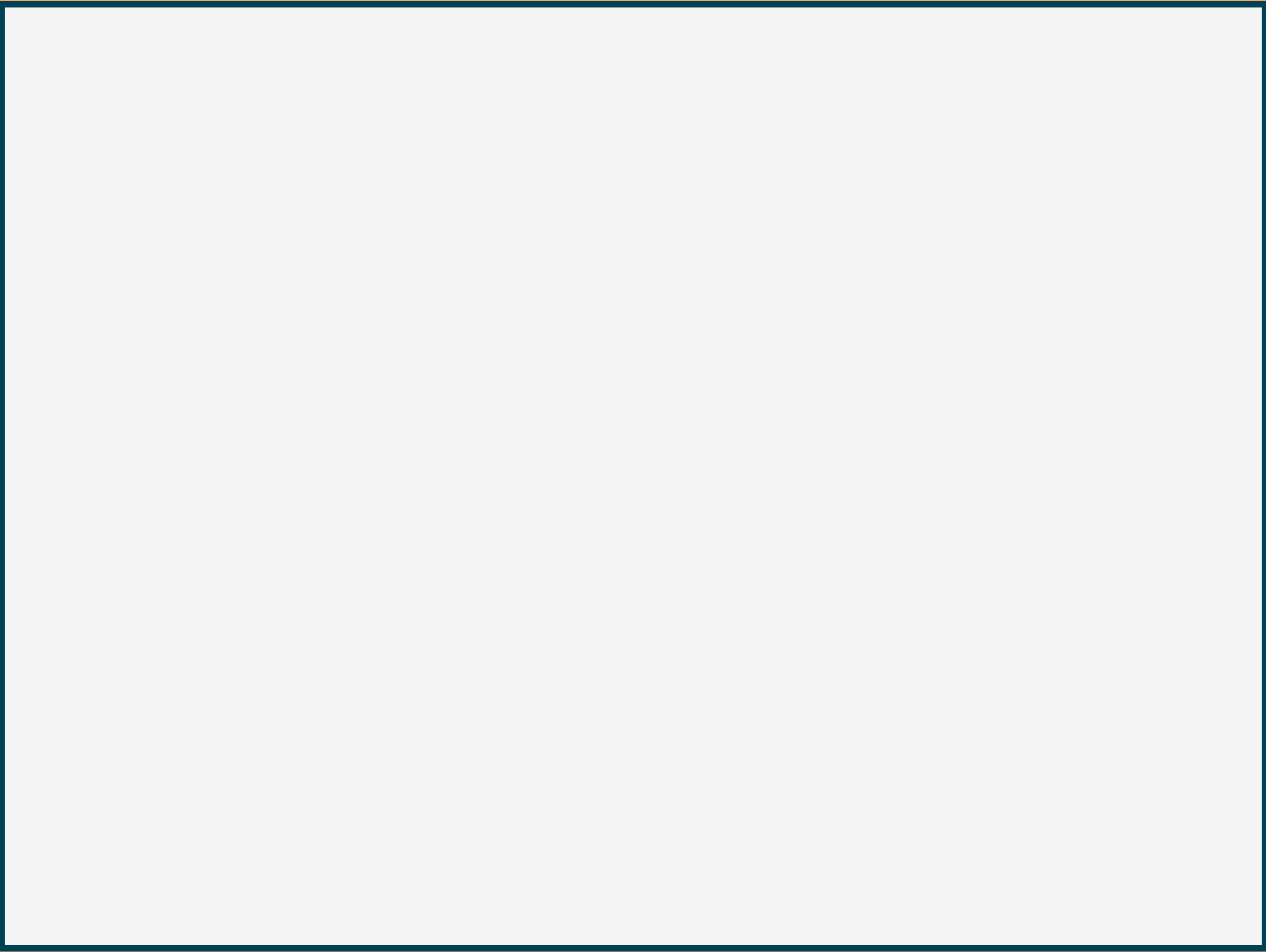
Agents



Destinations



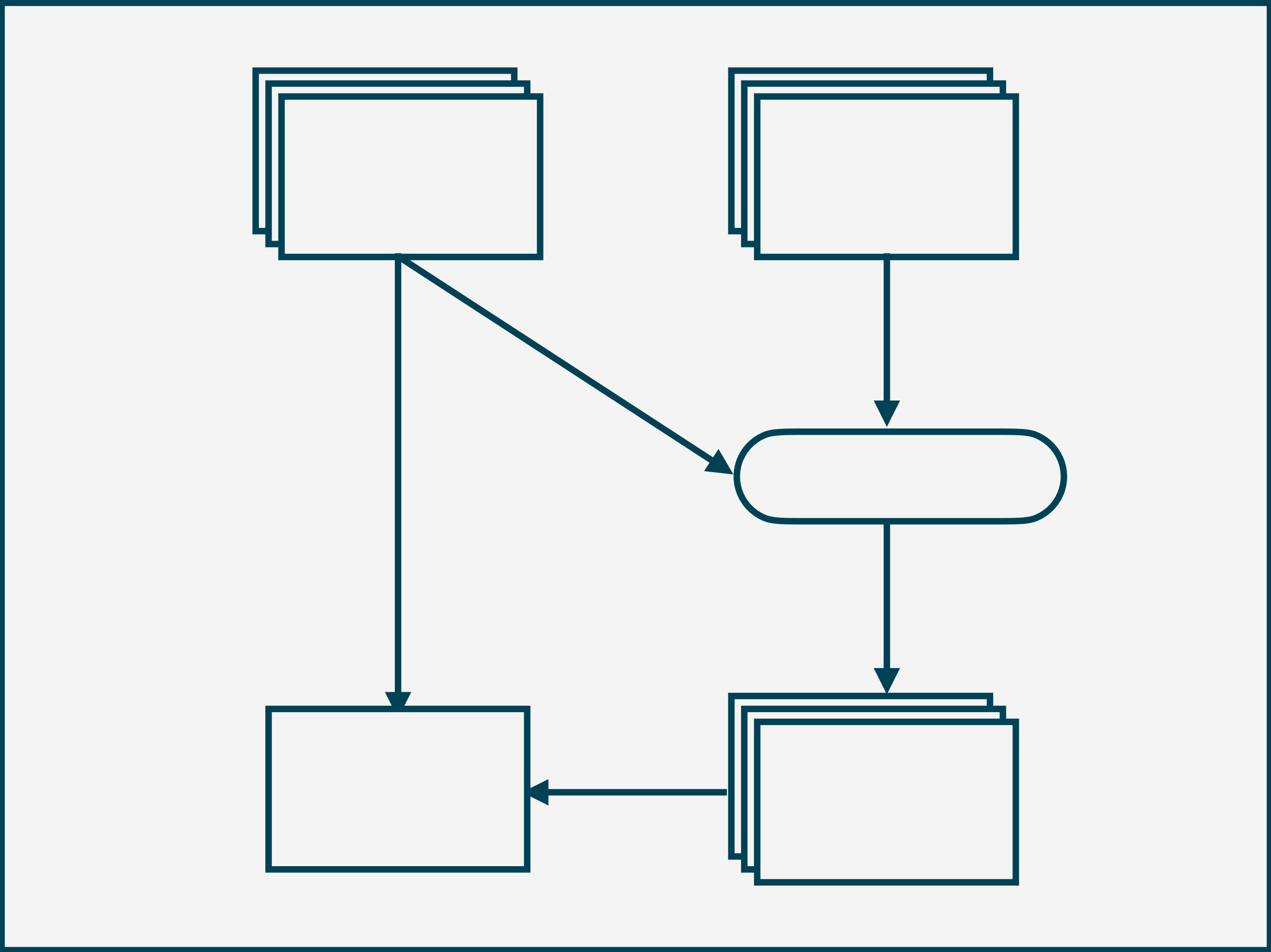






```
ssh user@some_server
```

```
cat /var/logs/myapp.log | grep ERROR
```







DevOps & Shift Left



Logging

Logback

SLF4J

Log4j



```
LOGGER.debug("The calculated value is: {}", value);  
LOGGER.info("Cleanup job started");  
LOGGER.warn("Geocoding service is not reachable falling back to ...");  
LOGGER.error("Unable to detect geo location because address is invalid");
```



```
try (var ignored = MDC.putCloseable("tenantId", tenantId)) {  
    LOGGER.info("Updating session {}", v("sessionId", sessionId));  
}
```



```
{  
  "timestamp": "2023-06-22T16:05:35.910522+02:00",  
  "@version": "1",  
  "message": "Started Application in 4.32 seconds ...",  
  "logger_name": "de.mvitz.tnhh.backend.Application",  
  "thread_name": "main",  
  "level": "INFO",  
  "level_value": 20000,  
  "app": "backend"  
}
```

 Alibaba Cloud Log Service Alibaba Cloud Log Service Alibaba Cloud MCap: \$233.4B	 DataSet Scalyr Funding: \$27.6M	 elastic Elastic ★ 63,438 MCap: \$5.8B	 fluentd Fluentd Cloud Native Computing Foundation (CNCF) ★ 11,914 Funding: \$3M	 Grafana loki Grafana Loki Grafana Labs ★ 18,861 Funding: \$535.2M	 graylog Graylog ★ 6 Funding: \$27
 humio A CrowdStrike Company Funding: \$31.8M	 Loggie Loggie NetEase ★ 938 MCap: \$60.3B	 LOGGLY Loggly Funding: \$47.4M	 LOGIQ Logiq Logiq.ai Funding: \$1.8M	 logstash Logstash Elastic ★ 13,408 MCap: \$5.8B	 mezmo Mezmo Funding: \$108
 OpenSearch Search on Web Services ★ 6,761 MCap: \$1.1T	 Pandora Pandora2.0 Qiniu Funding: \$396.9M	 parseable Parseable ★ 1,076	 日志易 Rizhiyi Rizhiyi Funding: \$11.4M	 sematext Sematext Sematext	 splunk Splunk MCap: \$1
 sumo logic Logic Logic MCap: \$1.5B	 Tencent Cloud Log Service Tencent Cloud Log Service Tencent MCap: \$425.4B	 TRINK Trink.io Trink.io			

Metrics

Micrometer

Dropwizard Metrics

Eclipse Microprofile Metrics









USE

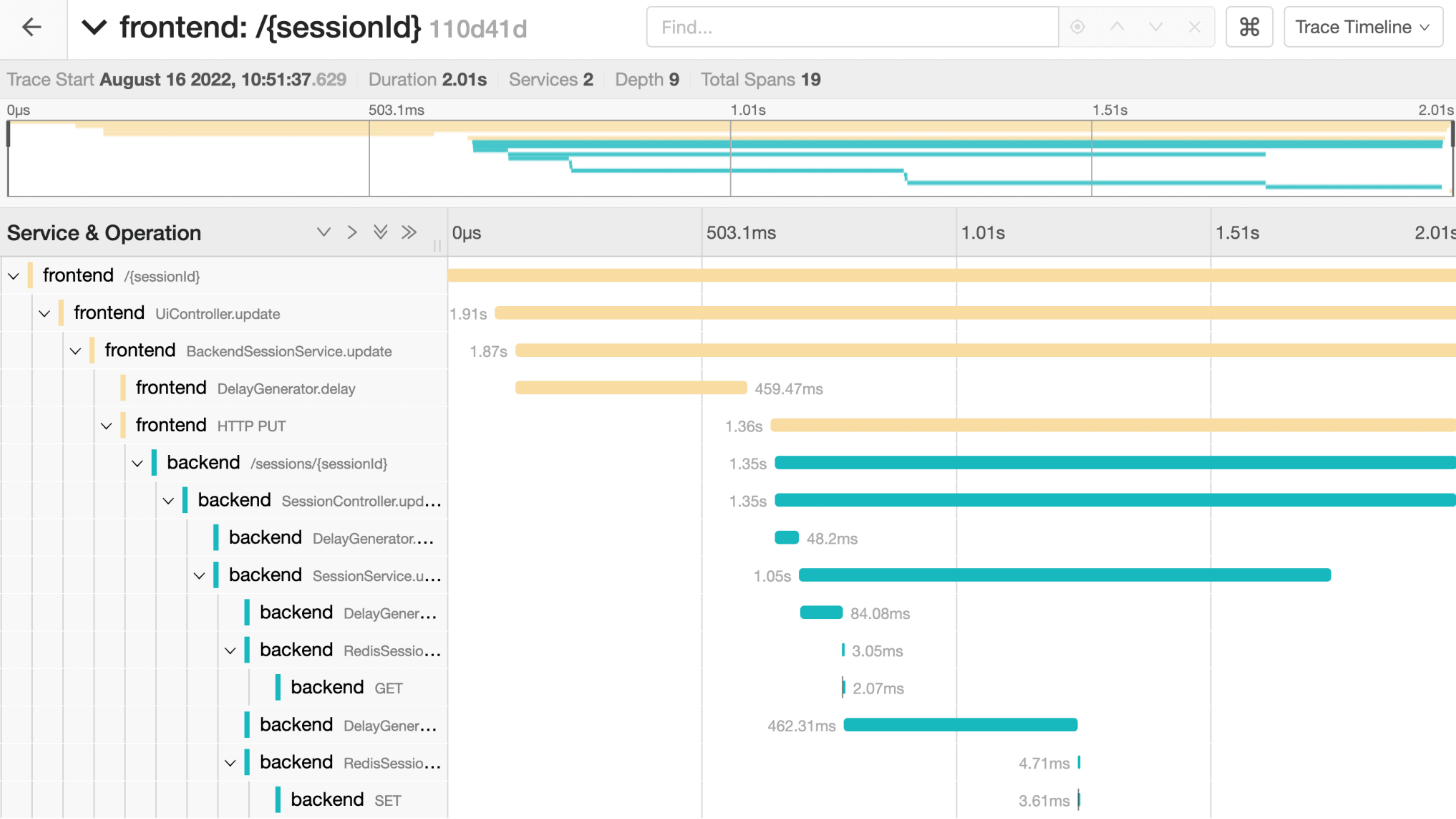
RED

Push

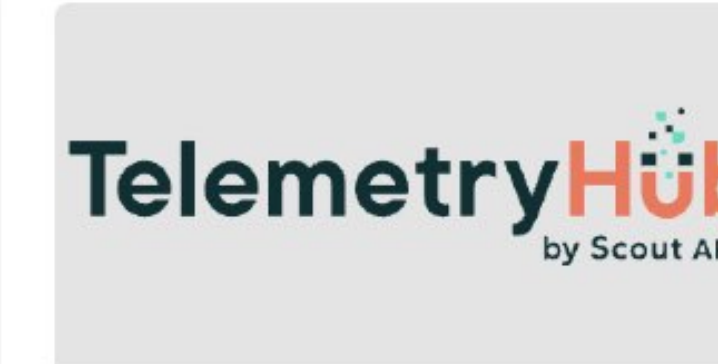
Pull

 Amazon CloudWatch Amazon CloudWatch Amazon Web Services MCap: \$1.1T	 AppDynamics AppDynamics AppDynamics Funding: \$364.5M	 Application High Availability Service Alibaba Cloud MCap: \$233.4B	 ManageEngine Applications Manager ManageEngine	 AppNeta AppNeta AppNeta Funding: \$63.2M	 AppOptics SolarWinds MCap: \$1.4B	 AppSignal AppSignal	 Aternity Riverbed Technology Funding: \$28.4M	 Azure Monitor Microsoft MCap: \$2.1T	 beats Elastic ★ 11,613 MCap: \$5.8B	 bluematador Blue Matador Blue Matador Funding: \$3.1M	 botkube Botkube Kubeshop ★ 1,742
 catchpoint Catchpoint Catchpoint Funding: \$49.8M	 centreon Centreon Centreon ★ 30	 checkmk tribe29 ★ 999	 chronosphere Chronosphere Chronosphere Funding: \$342.5M	 CloudHealth Technologies CloudHealth Technologies Funding: \$85.7M	 Cloudwise Cloudwise Synthetic Monitoring Cloudwise Funding: \$241M	 cortex Cortex Cloud Native Computing Foundation (CNCF) ★ 5,046 Funding: \$3M	 Datadog Datadog MCap: \$20.9B	 DeepFlow Yunshan Networks ★ 826 Funding: \$25M	 dynatrace Dynatrace MCap: \$12.2B	 epsagon Epsagon Epsagon Funding: \$30M	 falcon Falcon Xiaomi ★ 7,056 MCap: \$37.4B
 FLOWMILL Flowmill Flowmill	 FONIO Fonio Cloud Native Computing Foundation (CNCF) ★ 399 Funding: \$3M	 foresight Thundra Funding: \$4M	 Google Stackdriver Google MCap: \$1.4T	 Gradle Gradle Enterprise Gradle Inc. Funding: \$54.7M	 Grafana Grafana Grafana Labs ★ 54,952 Funding: \$535.2M	 Grafana Mimir Grafana Labs ★ 3,058 Funding: \$535.2M	 Grafana Phlare Grafana Labs ★ 2,034 Funding: \$335.2M	 graphite Graphite Graphite ★ 5,648	 观测云 GUANCE.COM Guance Cloud Guance Cloud Funding: \$70.6M	 HEADLAMP Headlamp Cloud Native Computing Foundation (CNCF) ★ 1,035 Funding: \$3M	 Honeybadger Honeybadger Honeybadger
 HUBBLE Hubble Cloud Native Computing Foundation (CNCF) ★ 2,621 Funding: \$3M	 icinga Icinga Icinga ★ 1,834	 influxdata InfluxData InfluxData ★ 25,283 Funding: \$200.9M	 INSPEKTOR GADGET Cloud Native Computing Foundation (CNCF) ★ 1,403 Funding: \$3M	 INSTANA IBM Company Instana Instana Funding: \$57M	 IRONdb Circonus Funding: \$16.8M	 K8SGPT k8sgpt-ai ★ 2,539	 KEPLER Kepler Cloud Native Computing Foundation (CNCF) ★ 503 Funding: \$3M	 kiali Kiali Red Hat ★ 3,082 MCap: \$114.6B	 kuberhealthy Kuberhealthy Cloud Native Computing Foundation (CNCF) ★ 1,681 Funding: \$3M	 LeanIX LeanIX Value Stream Management (VSM) LeanIX Funding: \$119.9M	 LinDB LinDB LinData ★ 2,656
 LogicMonitor LogicMonitor LogicMonitor Funding: \$142.9M	 logz.io Logz.io Logz.io Funding: \$121.9M	 M3 Uber ★ 4,407 MCap: \$63.4B	 mackerel Hatena	 MICROMETER Micrometer VMware ★ 3,956 MCap: \$55B	 Nagios Nagios Nagios ★ 1,253	 NETDATA Netdata Netdata ★ 62,665 Funding: \$34.7M	 Netis Netis Technologies ★ 920	 new relic New Relic New Relic MCap: \$5B	 NexClipper NexCloud ★ 559	 Nightingale Didi Labs ★ 6,293	 NODESOURCE NodeSource NodeSource Funding: \$33.4M
 OPENMETRICS OpenMetrics Cloud Native Computing Foundation (CNCF) ★ 2,044 Funding: \$3M	 OPENTSDb OpenTSDB OpenTSDB ★ 4,821	 opstrace Opstrace Opstrace ★ 1,212	 OverOps OverOps OverOps Funding: \$49.5M	 PIXIE Pixie Cloud Native Computing Foundation (CNCF) ★ 4,494 Funding: \$3M	 Prometheus Prometheus Cloud Native Computing Foundation (CNCF) ★ 47,774 Funding: \$3M	 Promscale Promscale Timescale ★ 1,324 Funding: \$181.1M	 replex Replex Replex Funding: \$4.2M	 ROOKOUT Rookout Rookout Funding: \$28.4M	 Sensu Sensu Sensu ★ 875 Funding: \$12.5M	 SENTRY Sentry Sentry ★ 33,961 Funding: \$217M	 SIDEKICK Sidekick Thundra ★ 1,663 Funding: \$4M
 SignalFx SignalFx Splunk MCap: \$15.1B	 Skooner Cloud Native Computing Foundation (CNCF) ★ 1,092 Funding: \$3M	 SOSIVIO Sosivio Sosivio Funding: \$6.2M	 StackState StackState StackState Funding: \$13M	 sysdig Sysdig Sysdig ★ 7,226 Funding: \$729.5M	 Thanos Cloud Native Computing Foundation (CNCF) ★ 11,639 Funding: \$3M	 听云 TINGYUN Tingyun Tingyun Funding: \$135.6M	 trickster Trickster Cloud Native Computing Foundation (CNCF) ★ 1,872 Funding: \$3M	 VECTOR By Timber.io Vector Timber ★ 13,281 Funding: \$5.8M	 VICTORIA METRICS VictoriaMetrics VictoriaMetrics ★ 8,367	 virtasant Virtasant Virtasant	 WAVEFRONT by vmware Wavefront VMware MCap: \$55B
 weave scope	 Whatan	 ZABBIX									

Tracing



Observability and Analysis - Tracing (18)

 Aspecto Aspecto	 EaseAgent MegaEase, Inc.★ 516	 Elastic APM Elastic★ 1,093 MCap: \$5.8B	 Grafana Tempo Grafana Labs★ 2,922 Funding: \$535.2M	 Helios HeliosFunding: \$5M	 Honeycomb HoneycombFunding: \$148.9M
 Jaeger★ 17,481 Cloud Native Computing Foundation Funding: \$3M (CNCF)	 LightStep LightStepFunding: \$70M	 OpenTelemetry★ 607 Cloud Native Computing Foundation Funding: \$3M (CNCF)	 OpenTracing★ 3,459 Cloud Native Computing Foundation Funding: \$3M (CNCF)	 Pinpoint★ 12,712 Pinpoint	 SkyWalking★ 21,668 The Apache Software Foundation
 SOFATracer★ 1,047 Ant GroupMCap: \$233.4B	 Spring Cloud Sleuth★ 1,687 VMwareMCap: \$55B	 TelemetryHub by Scout APM TelemetryHub by Scout APMFunding: \$8M	 Teletrace★ 535 CiscoMCap: \$190.8B	 Tracetest★ 504 Kubeshop	 Zipkin★ 16,118 Zipkin



Danke! Fragen?



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