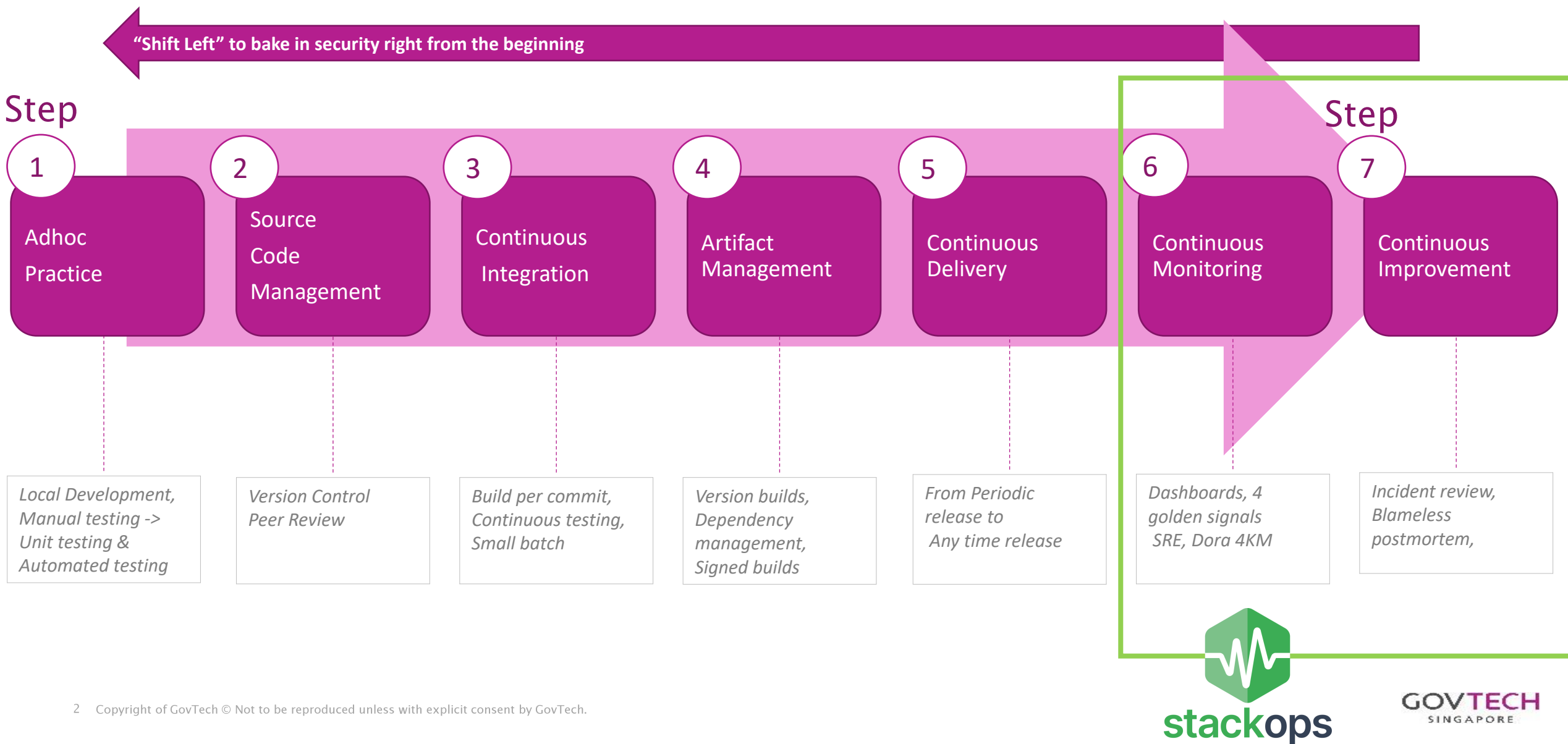


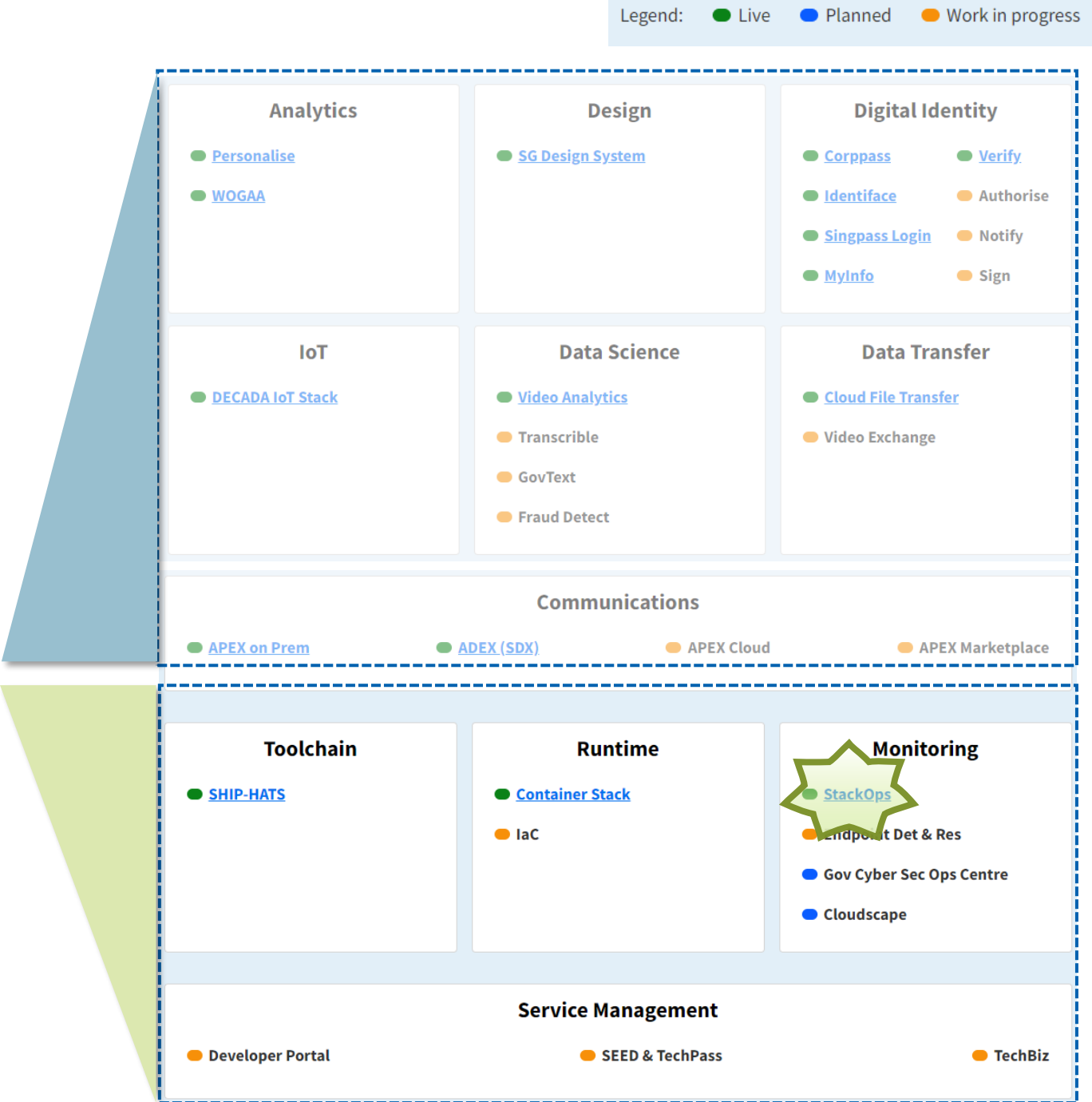
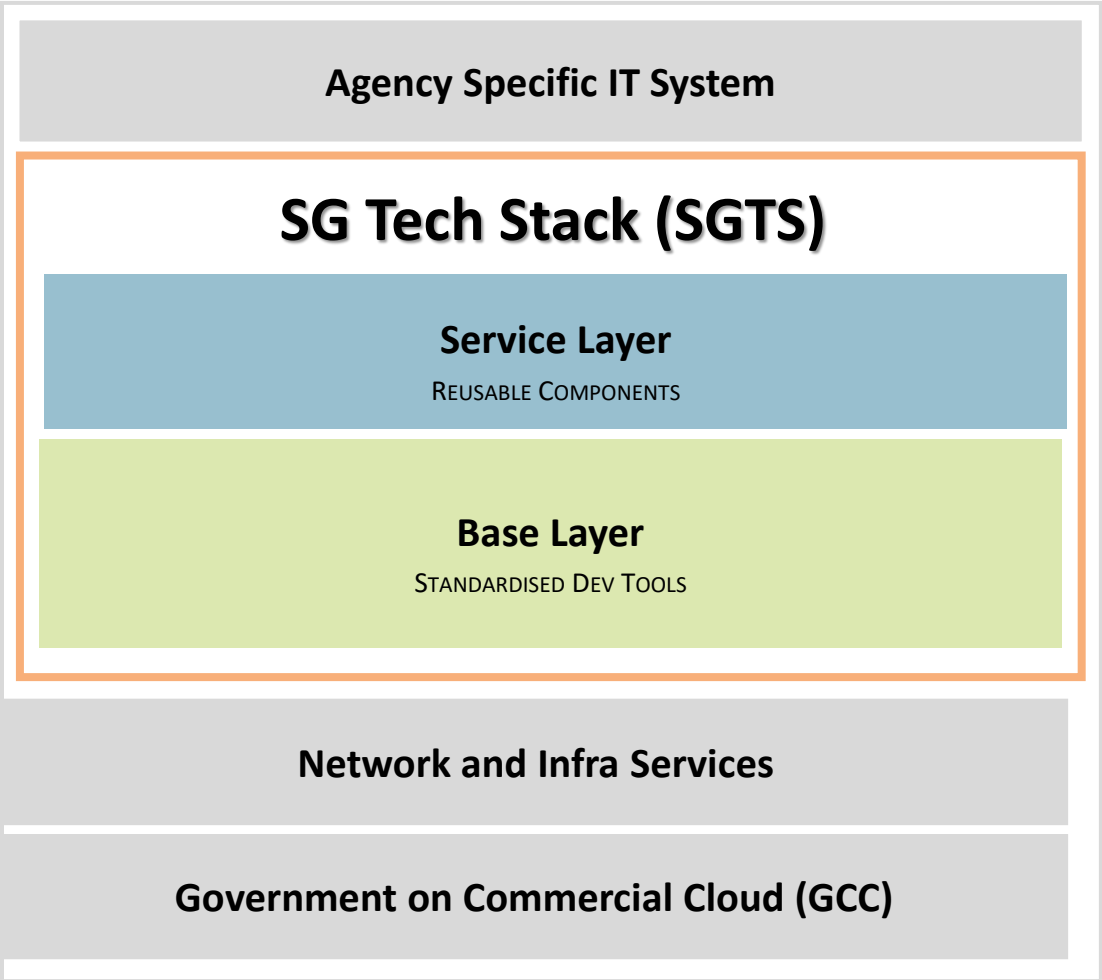


DevSecOps Maturity Model for Agencies

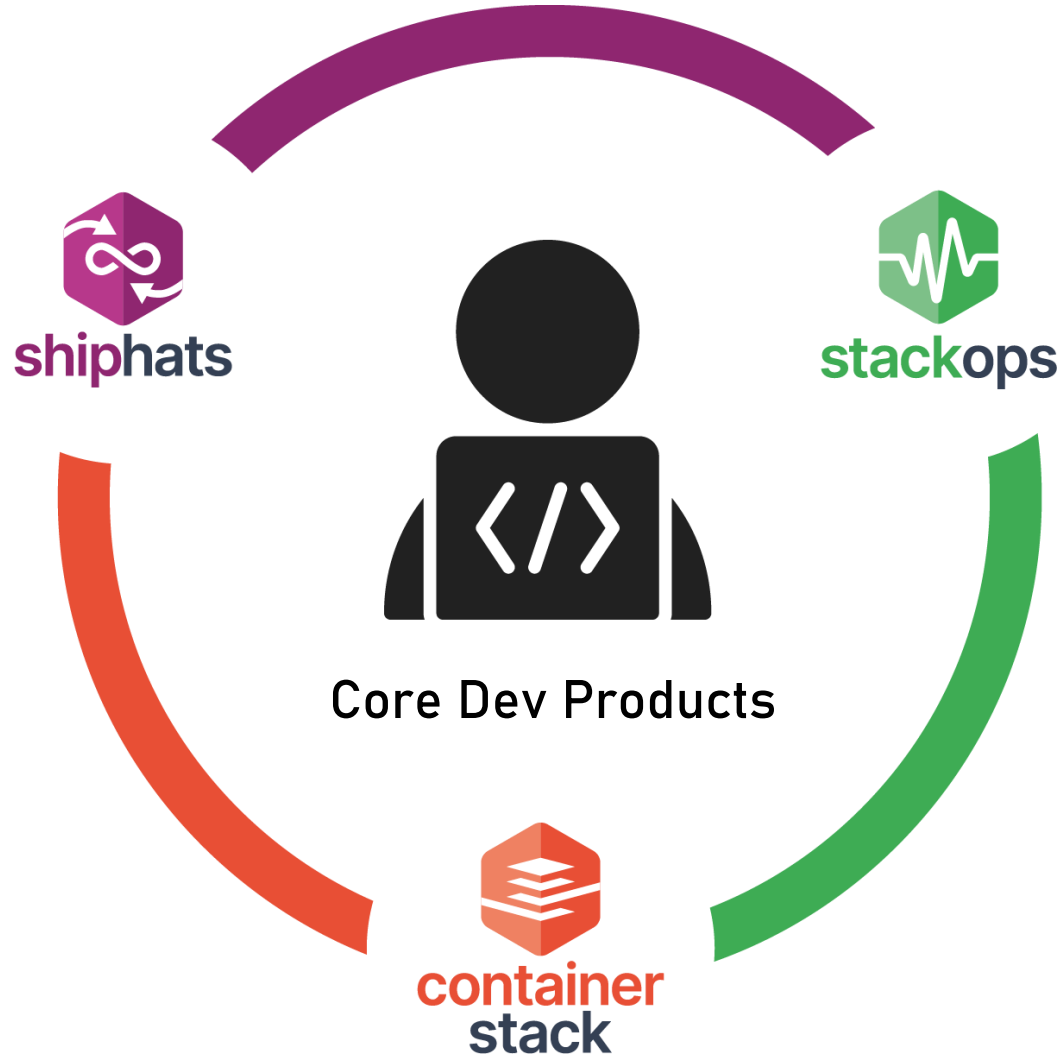


Stack – Government-in-a-Box

www.developer.tech.gov.sg



SGTS Base Layer Core Dev Products



Ancillary Products

 **Singapore Government Developer Portal**

 **techbiz**

 **techpass**

 **SEED**

Introducing StackOps



Product Vision

To be the service for WOG to embrace **Site Reliability Engineering** with **Automated, Easy-to-use** and **Open-Source** monitoring service which provides the user with the flexibility to track any metrics required.



Product Overview

Under-the-hood

- ✓ Monitoring product for Agencies for logs, traces and metrics
- ✓ Support systems with logs classification Restricted and below
- ✓ Runs on Elastic Cloud
- ✓ Measure system reliability via service-journeys
- ✓ Multi-tenants capable

SGTS Product

- Monitoring component in SGTS
- Integrated solution with other SGTS products.
- Access through TechPass & SEED and onboarding through TechBiz

Key Features

Metrics Monitoring

- Use prebuild dashboards to monitor metrics data coming from different sources
- Integrations that cover wide range of hosts and workloads.

Log & Trace Monitoring

- Queries over View logs with thresholds and set alerts.
- Alert configurations can be integrated with tools like Slack, Telegram etc.

Application Performance Monitoring

- Advance Application performance monitor to understand the service behavior.
- Effective visualization of the service dependencies and latencies.

SIEM/Endpoint security/XDR

- Comes with security monitoring features built in as well.
- Configurable by tenants according to the usecase.

Support cross CSP ingestion and correlation

- Support cross CSP ingestion and correlation

Pilot Use Cases



- Logs from DB & App is ingested to StackOps.
- Alerting via Kibana
- On Prod & Dev environment



- Monitoring team extracts and aggregates from various data sources and monitor alerts
- Dev team access the data for next level investigation or troubleshooting



- Renovation system on Trial phase
- Will be onboarding all the apps once GCC2.0 migration is complete

Pricing

Pricing Summary – Starting May ‘23

StackOps cost = Monthly Elastic Consumption +
20% SMF on Elastic Consumption

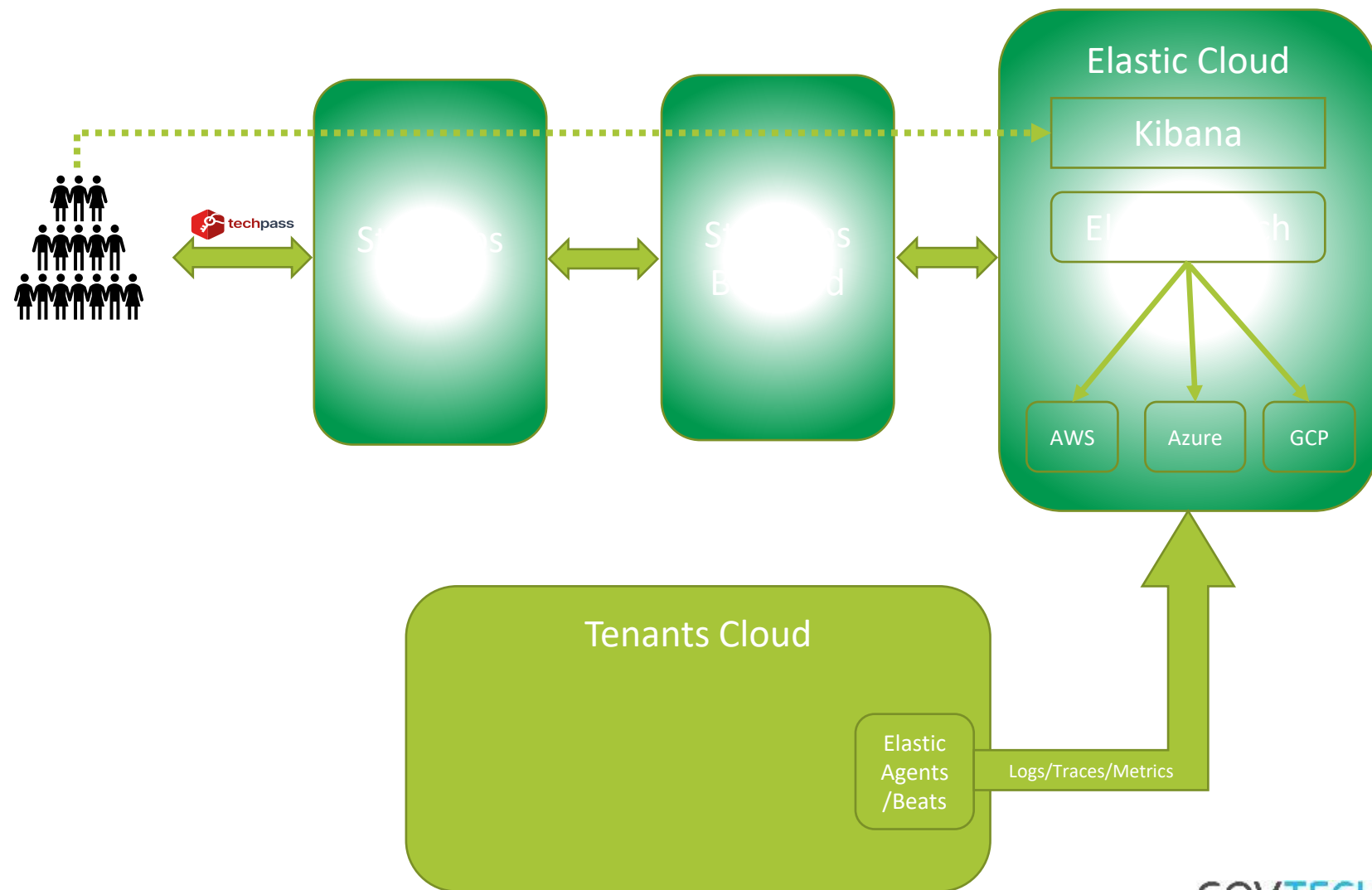
Eg: Your Monthly Consumption = 900 USD

Your cost = 900 + 180 (20% of 900)

= 1080 USD

= ~1,463 SGD

Product Architecture



Onboarding – Provisioning

- If you already have Techpass account:
 - Send an email to stackops_sre@hive.gov.sg
 - Mention that you want to onboard StackOps.
 - Mention your Agency & Division name.
 - Mention system DGP ID & Name if available
 - You will receive onboarding steps in the same email.
- If you don't have Techpass account:
 - Signup for Techpass account [here](#).

Q&A

Talk to us!

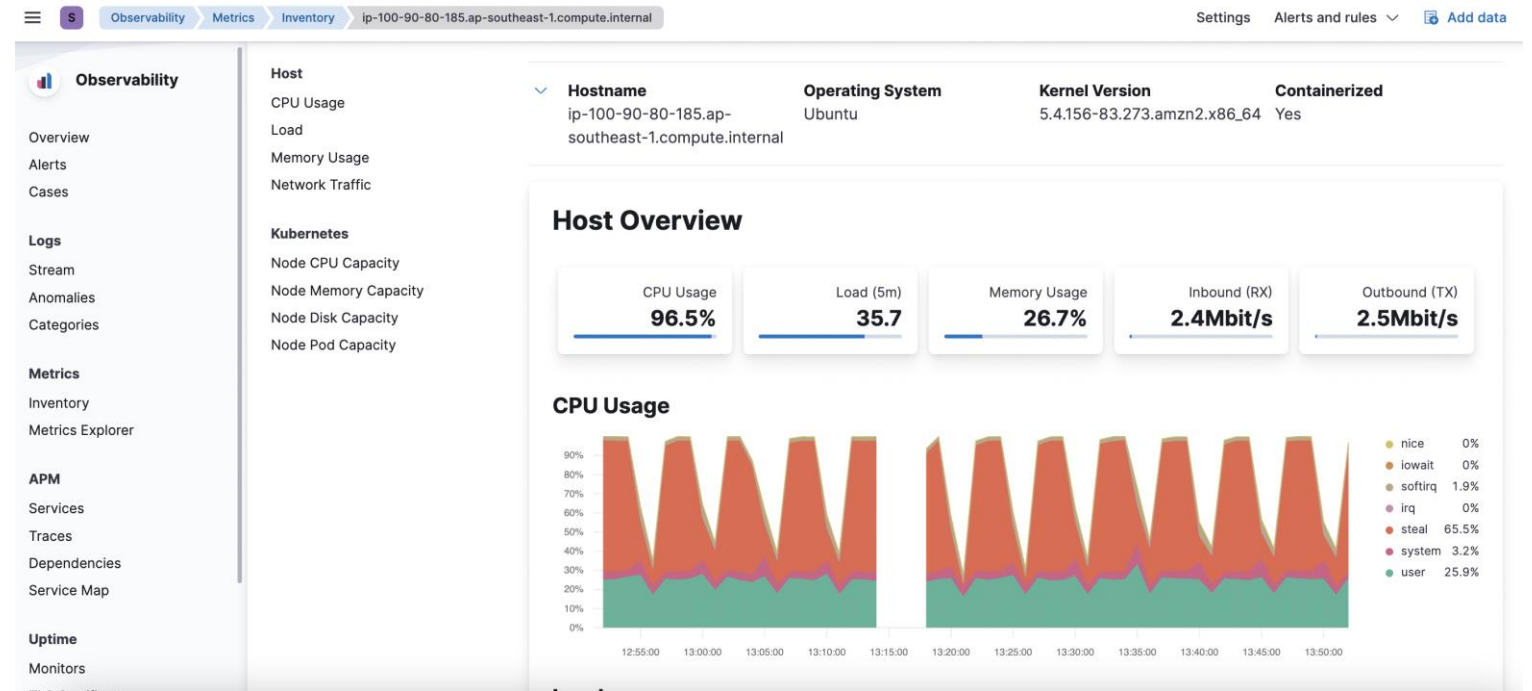
stackops_sre@hive.gov.sg

Join us in Slack for announcements (Scan the QR code below)



Screenshots

4 golden signals



Logs

Observability

Overview

Alerts

Cases

Logs

Stream

Anomalies

Categories

Metrics

Inventory

Metrics Explorer

APM

Services

Traces

Dependencies

Service Map

Uptime

Monitors

TLS Certificates

User Experience

Dashboard

Stream

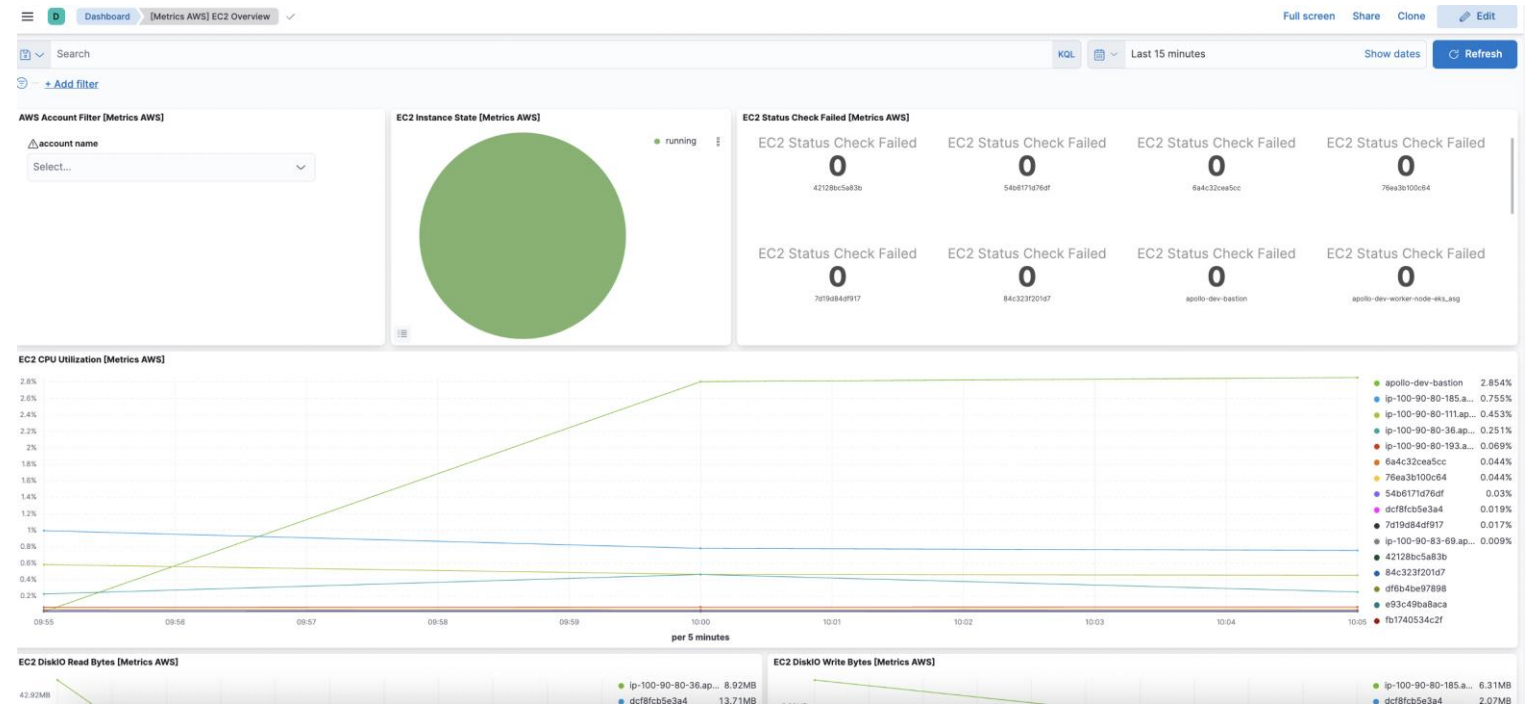
Search for log entries... (e.g. host.name:host-1)

Customize Highlights

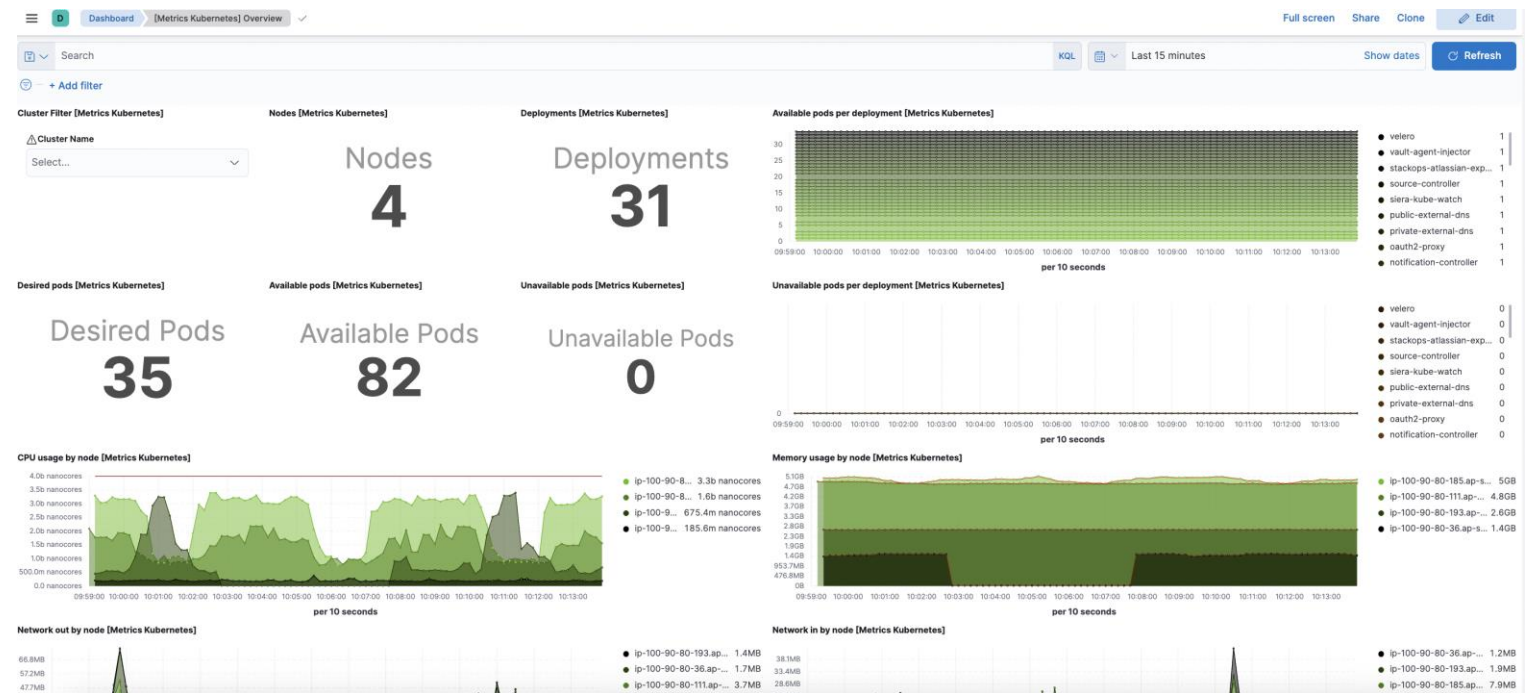
Last 1 day Stream live

Aug 29, 2022	event.dataset	Message	
		57200202D636F6E6669672E79617468002F6574632F6578706F727465722F70726F636573735F6578706F727465722F70726F636573732D6578706F727465722D636F6E66696775726174696F6E2E79616D6C002D2D7765	03 PM
14:10:32.603		type=SYSCALL msg=audit(1661753432.210:1136806): arch=c000003e syscall=159 success=yes exit=0 a0=c0005714f8 a1=0 a2=0 a3=8 items=0 ppid=1 pid=1426 auid=4294967295 uid=0 gid=0 euid=0 suid=0 fsuid=0 egid=0 sgid=0 fsgid=0 tty=(none) ses=4294967295 comm="node_exporter" exe="/usr/local/bin/prometheus/node_exporter" subj=system_u:system_r:node_prometheusd_exporter_t:s0 key="time-change"	06 PM
14:10:32.603		type=PROCTITLE msg=audit(1661753432.210:1136806): proctitle="/usr/local/bin/prometheus/node_exporter"	
14:10:33.105		2022-08-29 06:10:33 [INFO] [active_model_serializers] Rendered ActiveModel::Serializer::CollectionSerializer with ActiveModelSerializers::Adapter::JsonApi (261.17ms)	09 PM
14:10:33.106		2022-08-29 06:10:33 [INFO] [b9ca5bc6-e579-457a-9178-166cf955aa72] {"method":"GET","path":"/api/v2/organizations/code-mars-dev/workspaces","format":"jsonapi","status":200,"duration":313.28,"view":227.13,"db":68.5,"uid":"b9ca5bc6-e579-457a-9178-166cf955aa72","remote_ip":"8.29.230.18, 52.74.58.122, 10.211.244.233","request_id":"b9ca5bc6-e579-457a-9178-166cf955aa72","user_agent":"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/104.0.0.0 Safari/537.36","user":"orson_oh","organization":"code-mars-dev","dd":{"trace_id":"2723822751623141797","span_id":"1630430565908429995","env":"","service":"puma: cluster worker 1: 1 [app]","version":"","ddsource":["ruby"],"auth_source":"ui"}	Mon 29
14:10:33.107		10.211.244.233 - - [29/Aug/2022:06:10:33 +0000] "GET /api/v2/organizations/code-mars-dev/workspaces?fields%5Bworkspace%5D%5B%5D=current_run&fields%5Bworkspace%5D%5B%5D=latest_change_at&fields%5Bworkspace%5D%5B%5D=name&fields%5Bworkspace%5D%5B%5D=vcs_repo_identifier&fields%5Bworkspace%5D%5B%5D=locked&fields%5Bworkspace%5D%5B%5D=tag_names&fields%5Bworkspace%5D%5B%5D=status&include=current_run&organization_name=code-mars-dev&page%5Bnumber%5D=1&page%5Bsize%5D=20&sort=name HTTP/1.1" 304 0 "https://tfe.dev.gcc.hive.gov.sg/app/code-mars-dev/workspaces" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/104.0.0.0 Safari/537.36"	03 AM
14:10:33.422		type=AVC msg=audit(1661753432.972:2063822): avc: denied { getattr } for pid=1410 comm="docker_exporter" path="/var/lib/docker/containers/a08be0a71f25edf263e7a27dcb724610674d02290e76bb5446d770c9c82c8167/aa08be0a71f25edf263e7a27dcb724610674d02290e76bb5446d770c9c82c8167-json.log" dev="nvme3n1p1" ino=590838598 context=system_u:system_r:docker_prometheusd_exporter_t:s0 tcontext=system_u:object_r:container_var_lib_t:s0 tclass=file permissive=0	06 AM
14:10:33.422		type=SYSCALL msg=audit(1661753432.972:2063822): arch=c000003e syscall=262 success=no exit=-13 a0=ffffffffffff9c a1=c00035e160 a2=c003a87a38 a3=100 items=1 ppid=1 pid=1410 auid=4294967295 uid=0 gid=0 euid=0 suid=0 fsuid=0 egid=0 sgid=0 fsgid=0 tty=(none) ses=4294967295 comm="docker_exporter" exe="/usr/local/bin/prometheus/docker_exporter" subj=system_u:system_r:docker_prometheusd_exporter_t:s0 key=(null)	09 AM
14:10:33.422		type=CWD msg=audit(1661753432.972:2063822): cwd="/"	12 PM
14:10:33.477		type=PATH msg=audit(1661753432.972:2063822): item=0 name="/var/lib/docker/containers/aa08be0a71f25edf263e7a27dcb724610674d02290e76bb5446d770c9c82c8167-json.log"	

EC2 Overview



EKS Overview



UX Dashboard

