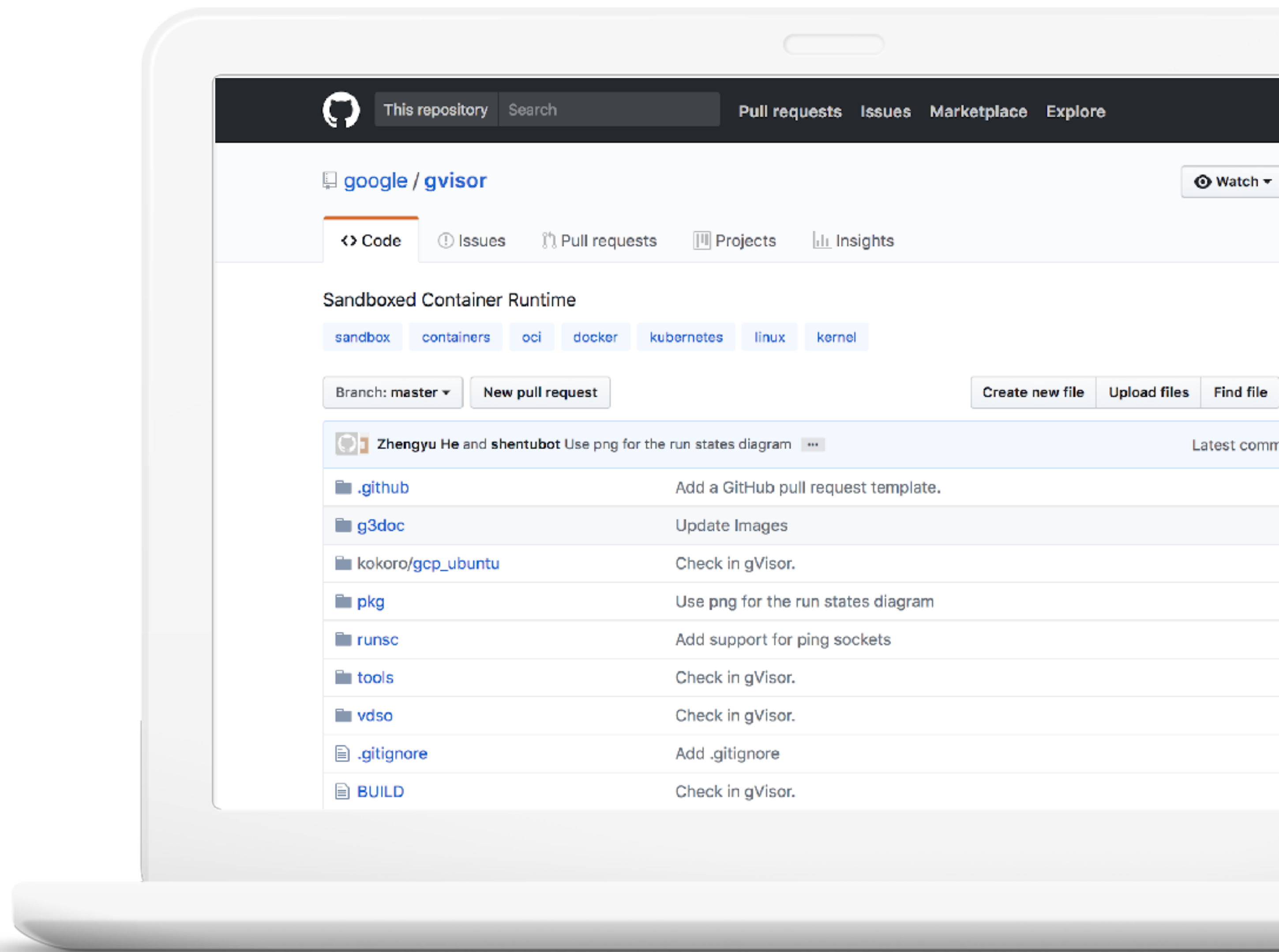Craig Box,
Kubernetes Advocacy Lead

# Cloud Native Observability & Security

Google Cloud

```
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runc# ls -lh
total 8.0K
-rw-r--r--  1 root root 2.7K May  2 07:17 config.json
drwxr-xr-x 22 root root 4.0K May  2 07:17 rootfs
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runc# head -n20 config.json
{
        "ociVersion": "1.0.0",
        "process": {
                "terminal": true,
                "user": {
                        "uid": 1000,
                        "gid": 1000
                },
                "args": [
                        "/dirtycow.github.io/pokemon",
                        "/etc/passwd",
                        "spam"
                ],
                "env": [
                        "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin",
                        "TERM=xterm"
                ],
                "cwd": "/",
                "capabilities": {
                        "bounding": [
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runc# 
```

```
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runsc# ls -lh
total 8.0K
-rw-r--r--  1 root root 2.7K May  2 07:17 config.json
drwxr-xr-x 22 root root 4.0K May  2 07:17 rootfs
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runsc# head -n20 config.json
{
        "ociVersion": "1.0.0",
        "process": {
                "terminal": true,
                "user": {
                        "uid": 1000,
                        "gid": 1000
                },
                "args": [
                        "/dirtycow.github.io/pokemon",
                        "/etc/passwd",
                        "spam"
                ],
                "env": [
                        "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin",
                        "TERM=xterm"
                ],
                "cwd": "/",
                "capabilities": {
                        "bounding": [
root@dirty-cow:/home/kubecondemo/tmp/pokemon-oci-runsc#
```
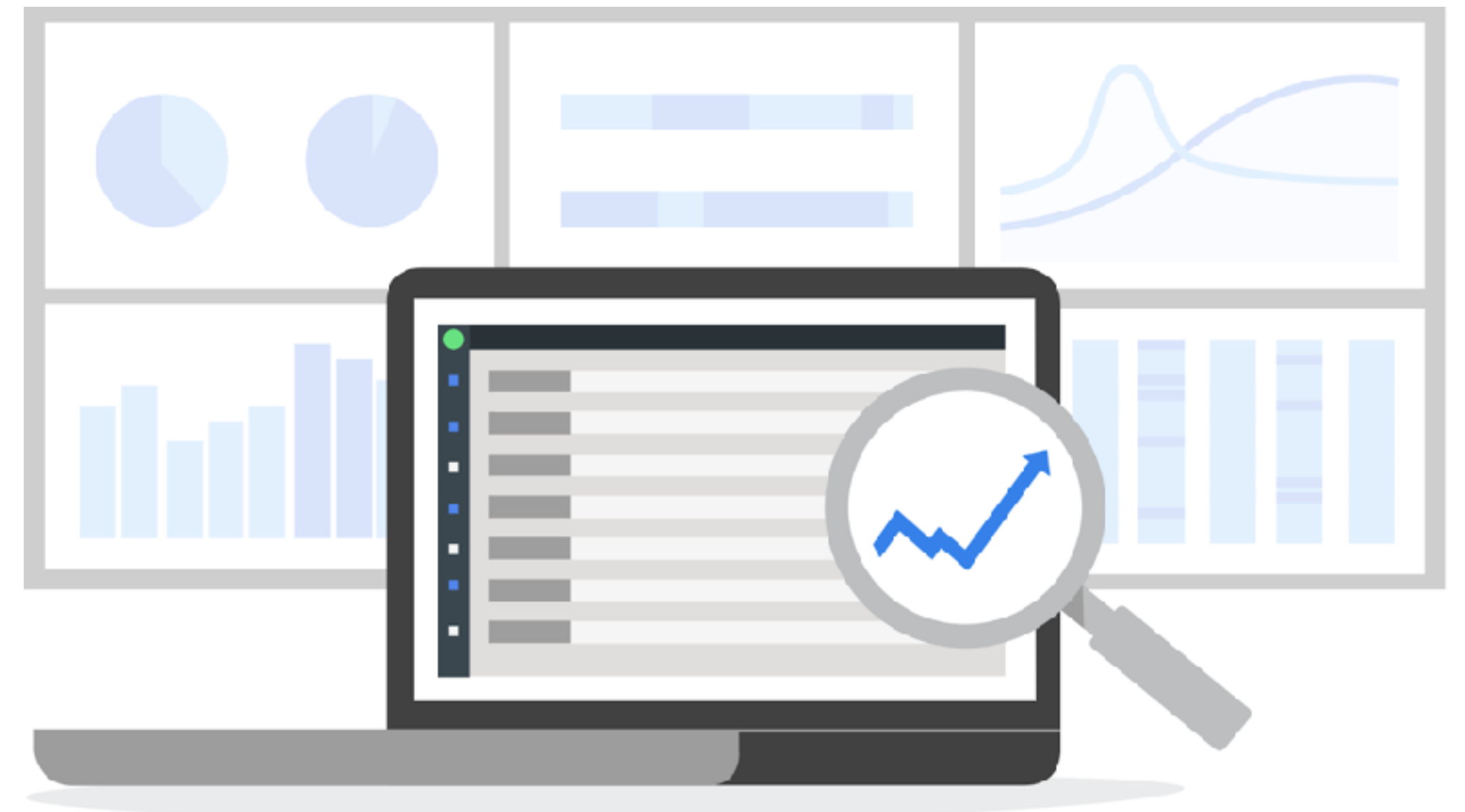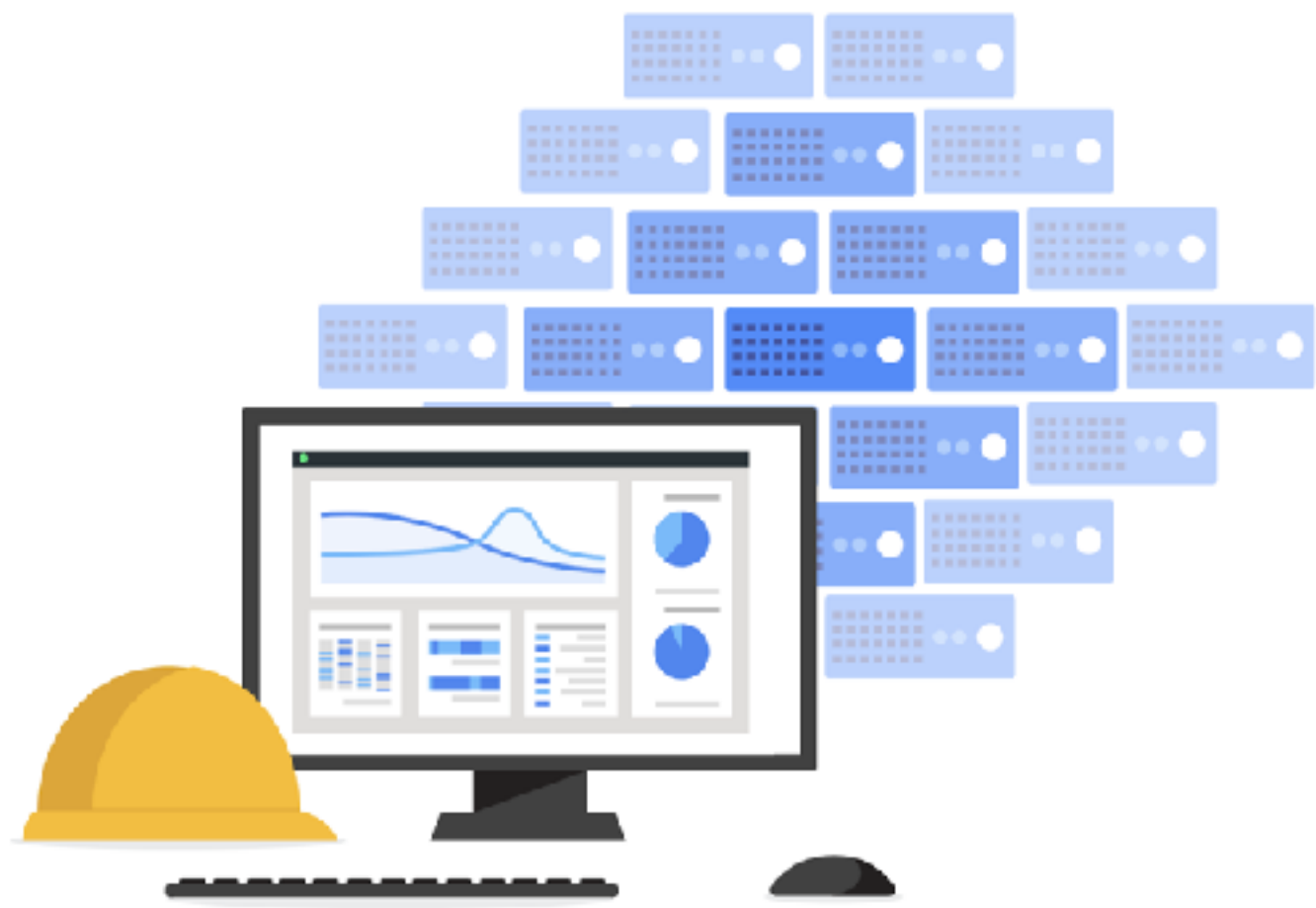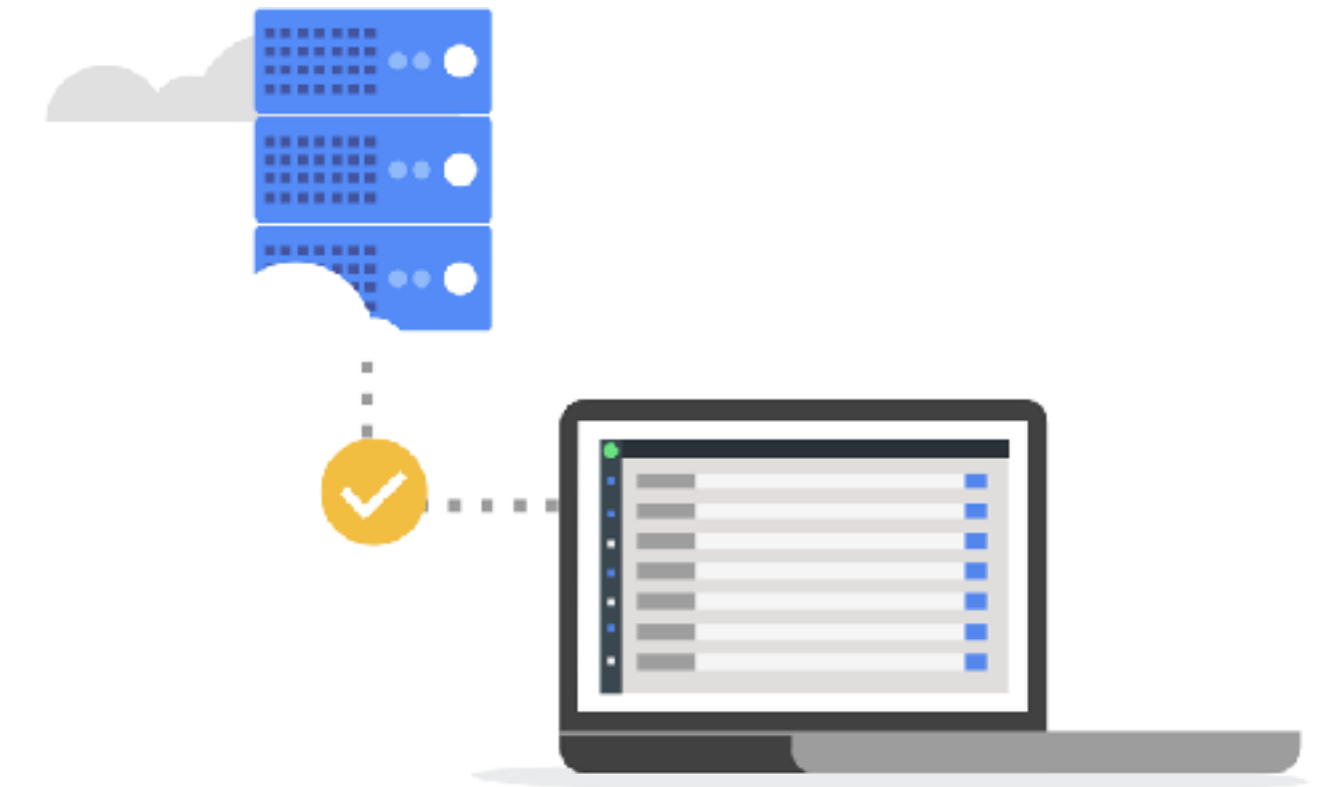
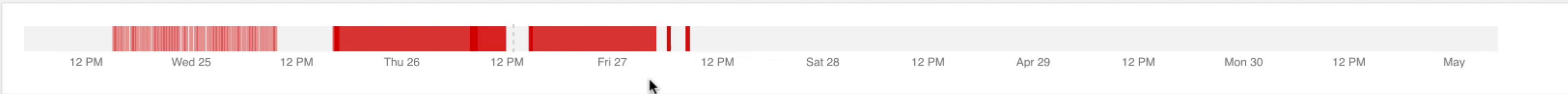# Stackdriver Kubernetes Monitoring

**Observability at scale**

**Prometheus support**

**Works anywhere**

Google Cloud

# Kubernetes

12 PM        Wed 25        12 PM        Thu 26        12 PM        Fri 27        12 PM        Sat 28        12 PM        Apr 29        12 PM        Mon 30        12 PM        May

**Infrastructure**        Workloads        Services

| NAME | RESOURCE TYPE | READY | INCIDENTS | CPU UTILIZATION | MEMORY UTILIZATION |
|------|---------------|-------|-----------|-----------------|---------------------|
| ▶ ● helloworld-prometheus | Cluster | 15 ✓ | 0 ✓ | 2.00 ⎯⎯ 3% | ⎯⎯ 0.45B |
| ▼ ● petclinic-cluster | Cluster | 45 ✓ | 0 ✓ | 12.00 ⎯⎯ 5% | ⎯⎯ 0.41B |
| ▶ ◉ gke-petclinic-cluster-default-pool | Node | 6 ✓ | 0 ✓ | 2.00 ⎯⎯ 5% | ⎯⎯ 0.50B |
| ▼ ◉ gke-petclinic-cluster-default-pool | Node | 7 ✓ | 0 ✓ | 2.00 ⎯⎯ 3% | ⎯⎯ 0.39B |
| ▼ ◉ customers-service-c5b4cdb49-ı | Pod | ✓ | 0 ✓ | 0.20 ⎯⎯ 2% | ⎯⎯ 0.79B |
| • customers-service | Container | ✓ | 0 ✓ | 2.00 ⎯⎯ 2% | ⎯⎯ 0.79B |
| ▶ ◉ kube-proxy-gke-petclinic-cluste | Pod | ✓ | 0 ✓ | 0.10 ⎯⎯ 4% | ⎯⎯ |
| ▶ ◉ shell-demo | Pod | ✓ | 0 ✓ | 0.10 ⎯⎯ 0 | ⎯⎯ 0 |
| ▶ ◉ stackdriver-metadata-agent-lrtr | Pod | ✓ | 0 ✓ | 0.10 ⎯⎯ 4% | ⎯⎯ 0.02B |
| ▶ ◉ visits-service-6779fcf4f4-8c7nt | Pod | ✓ | 0 ✓ | 0.20 ⎯⎯ 2% | ⎯⎯ 0.73B |
| ▶ ◉ istio-pilot-67d6ddbdf6-qgm44 | Pod | ✓ | 0 ✓ | No data is availabl... | ⎯⎯ 0 |
| ▶ ◉ gke-petclinic-cluster-default-pool | Node | 9 ✓ | 0 ✓ | 2.00 ⎯⎯ 5% | ⎯⎯ 0.55B |
| ▶ ◉ gke-petclinic-cluster-default-pool | Node | 7 ✓ | 0 ✓ | 2.00 ⎯⎯ 5% | ⎯⎯ 0.43B |
| ▶ ◉ gke-petclinic-cluster-default-pool | Node | 6 ✓ | 0 ✓ | 2.00 ⎯⎯ 4% | ⎯⎯ 0.44B |
| ▶ ◉ gke-petclinic-cluster-default-pool | Node | 10 ✓ | 0 ✓ | 2.00 ⎯⎯ 5% | ⎯⎯ 0.07B |

# Metrics Explorer

**METRIC**     VIEW OPTIONS

1h   6h   1d   1w   1m   6w

### Find resource type and metric ⓘ

```
instance, cpu usage, etc.
```
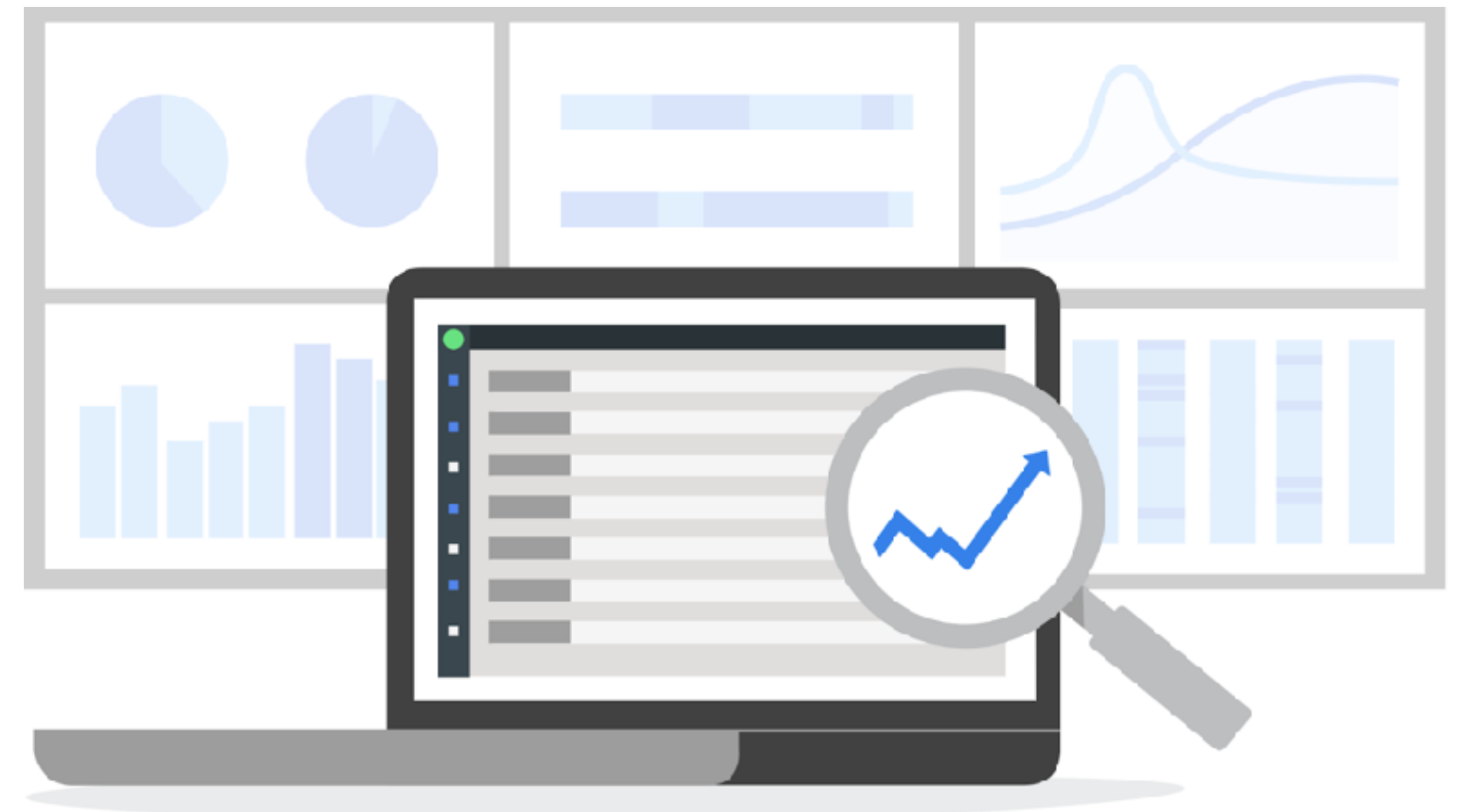
＋ ADD METRIC

Select a metric to start

6:20   6:25   6:30   6:35   6:40   6:45   6:50   6:55   7 AM   7:05   7:10   7:15

# Stackdriver Kubernetes Monitoring

Craig Box,
Kubernetes Advocacy Lead

**Thank you**
g.co/kubecon

Google Cloud