



PHPUGMRN

JUNE 27, 2019

GETTING STARTED WITH BUSINESS METRICS

HELLO
MANNHEIM!



@hollodotme

GREETINGS
FROM DRESDEN!



@phpugdd

CIO AT FORTUNE SOLUTIONS, MEMBER OF THE FORTUNEGLOBE GROUP



@F9T3ch

WHAT ARE

METRICS



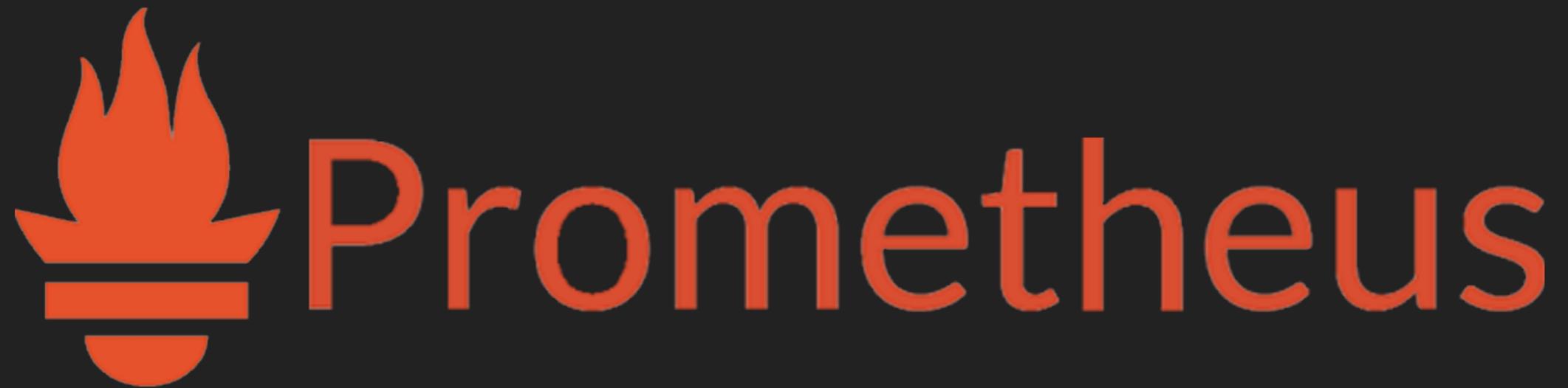
WHAT ARE METRICS?

**CONTINUOUSLY MEASURED VALUES
TO REFLECT THE CURRENT STATE OF A SYSTEM**

- ▶ UP or DOWN
- ▶ CPU USAGE
- ▶ MEMORY USAGE
- ▶ LOAD
- ▶ QUERIES PER SECOND
- ▶ REQUESTS PER SECOND
- ▶ CACHE HIT RATE
- ▶ FREE DISC SPACE
- ▶ PAGE SPEED



A.K.A
TELEMETRY

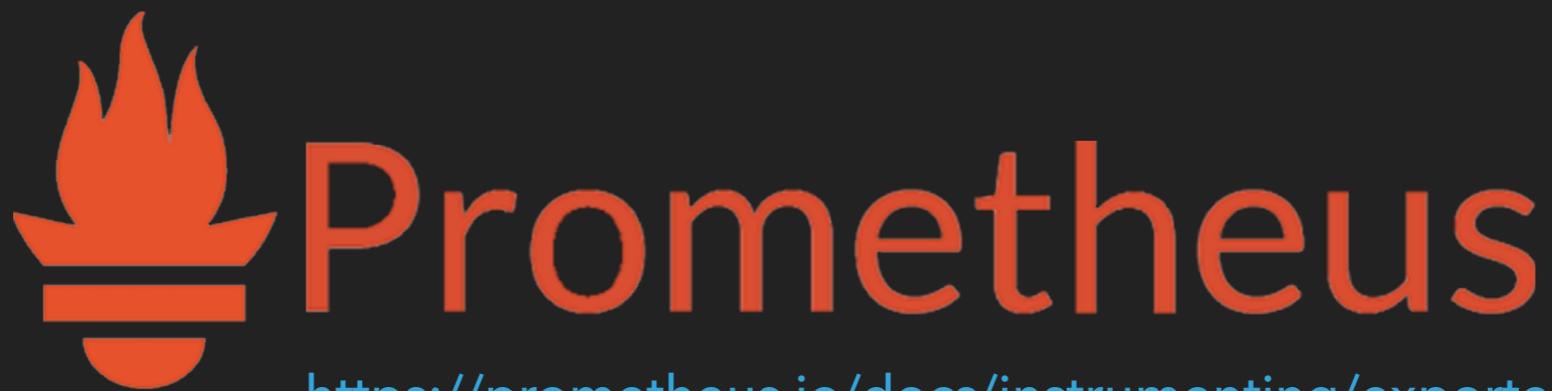




- ▶ <https://prometheus.io>
- ▶ <https://hub.docker.com/r/prom/prometheus>

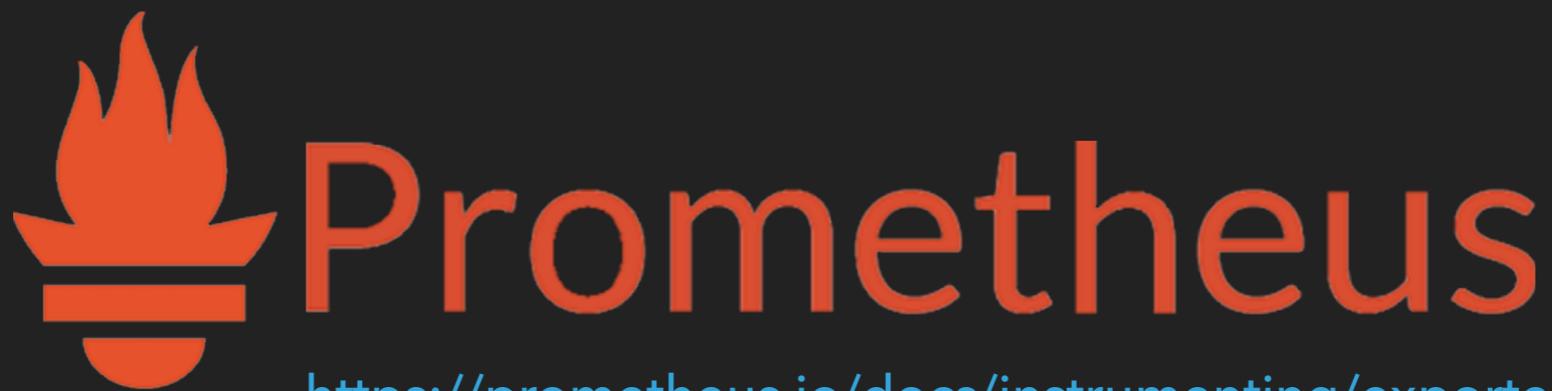
```
prometheus:  
  image: prom/prometheus:latest  
  
  restart: 'on-failure'  
  volumes:  
    - ./prometheus.yml:/etc/prometheus/prometheus.yml  
    - ./data:/prometheus  
  
  command:  
    - '--config.file=/etc/prometheus/prometheus.yml'  
    - '--storage.tsdb.path=/prometheus'  
    - '--storage.tsdb.retention=32d'  
    - '--web.enable-lifecycle'
```

```
global:  
  scrape_interval: 15s  
  scrape_timeout: 10s  
  evaluation_interval: 15s  
  
scrape_configs:  
  
  # Prometheus self-monitoring  
  - job_name: prometheus  
    metrics_path: /metrics  
    scheme: http  
    static_configs:  
      - targets:  
        - localhost:9090
```



<https://prometheus.io/docs/instrumenting/exporters/>

Databases	Hardware related	Messaging systems	APIs	Other monitoring systems	Miscellaneous
Aerospike exporter	apcupsd exporter	Beanstalkd exporter	AWS ECS exporter	Akamai Cloudmonitor exporter	ACT Fibernet Exporter
ClickHouse exporter	BIG-IP exporter	EMQ exporter	AWS Health exporter	Alibaba Cloudmonitor exporter	BIND exporter
Consul exporter (official)	Collins exporter	Gearman exporter	AWS SQS exporter	AWS CloudWatch exporter (official)	Blackbox exporter (official)
Couchbase exporter	IBM Z HMC exporter	IBM MQ exporter	Cloudflare exporter	Azure Monitor exporter	BOSH exporter
CouchDB exporter	IoT Edison exporter	Kafka exporter	DigitalOcean exporter	Cloud Foundry Firehose exporter	cAdvisor
ElasticSearch exporter	IPMI exporter	NATS exporter	Docker Cloud exporter	Collectd exporter (official)	Cachet exporter
EventStore exporter	knxd exporter	NSQ exporter	Docker Hub exporter	Google Stackdriver exporter	ccache exporter
Memcached exporter (official)	Netgear Cable Modem Exporter	Mirth Connect exporter	GitHub exporter	Graphite exporter (official)	Dovecot exporter
MongoDB exporter	Netgear Router exporter	MQTT blackbox exporter	InstaClustr exporter	Heka dashboard exporter	Dnsmasq exporter
MSSQL server exporter	Node/system metrics exporter (official)	RabbitMQ exporter	Mozilla Observatory exporter	Heka exporter	eBPF exporter
MySQL server exporter (official)	NVIDIA GPU exporter	RabbitMQ Management	OpenWeatherMap exporter	InfluxDB exporter (official)	Ethereum Client exporter
OpenTSDB Exporter	ProSAFE exporter	Plugin exporter	Pagespeed exporter	JavaMelody exporter	Hostapd Exporter
Oracle DB Exporter	Ubiquiti UniFi exporter	HTTP		Rancher exporter	JMeter plugin
PgBouncer exporter				Speedtest exporter	Kannel exporter
PostgreSQL exporter	Issue trackers and continuous integration			Munin exporter	Kemp LoadBalancer exporter
Presto exporter		Apache exporter		Nagios / Naemon exporter	Kibana Exporter
ProxySQL exporter		HAProxy exporter (official)		New Relic exporter	kube-state-metrics
RavenDB exporter	Bamboo exporter	Nginx metric library		NRPE exporter	Meteor JS web framework exporter
Redis exporter	Bitbucket exporter	Nginx VTS exporter		Osquery exporter	Minecraft exporter module
RethinkDB exporter	Confluence exporter	Passenger exporter		OTC CloudEye exporter	OpenStack exporter
SQL exporter	Jenkins exporter	Squid exporter		Pingdom exporter	PHP-FPM exporter
Tarantool metric library	JIRA exporter	Tinyproxy exporter		scollector exporter	PowerDNS exporter
Twemproxy	Storage		Varnish exporter	Sensu exporter	Process exporter
		WebDriver exporter		SNMP exporter (official)	rTorrent exporter
	Ceph exporter	Logging		StatsD exporter (official)	SABnzbd exporter
	Ceph RADOSGW exporter	Fluentd exporter			Script exporter
	Gluster exporter	Google's mtail log data extractor			Shield exporter
	Hadoop HDFS FSImage exporter	Grok exporter			Smokeping prober
	Lustre exporter				SMTP/Maildir MDA blackbox prober
	ScaleIO exporter				SoftEther exporter
					Transmission exporter
					Unbound exporter
					Xen exporter



<https://prometheus.io/docs/instrumenting/exporters/>

Software exposing Prometheus metrics

Some third-party software exposes metrics in the Prometheus format, so no separate exporters are needed:

App Connect Enterprise
Ballerina
Ceph
Collectd
Concourse
CRG Roller Derby Scoreboard (direct)
Docker Daemon
Doorman (direct)
Envoy
Etcd (direct)
Flink
FreeBSD Kernel
Grafana
JavaMelody
Kong

Kubernetes (direct)
Linkerd
mgmt
MidoNet
midonet-kubernetes (direct)
Minio
Netdata
Pretix
Quobyte (direct)
RobustIRC
ScyllaDB
Skipper
SkyDNS (direct)
Telegraf
Traefik
VerneMQ
Weave Flux



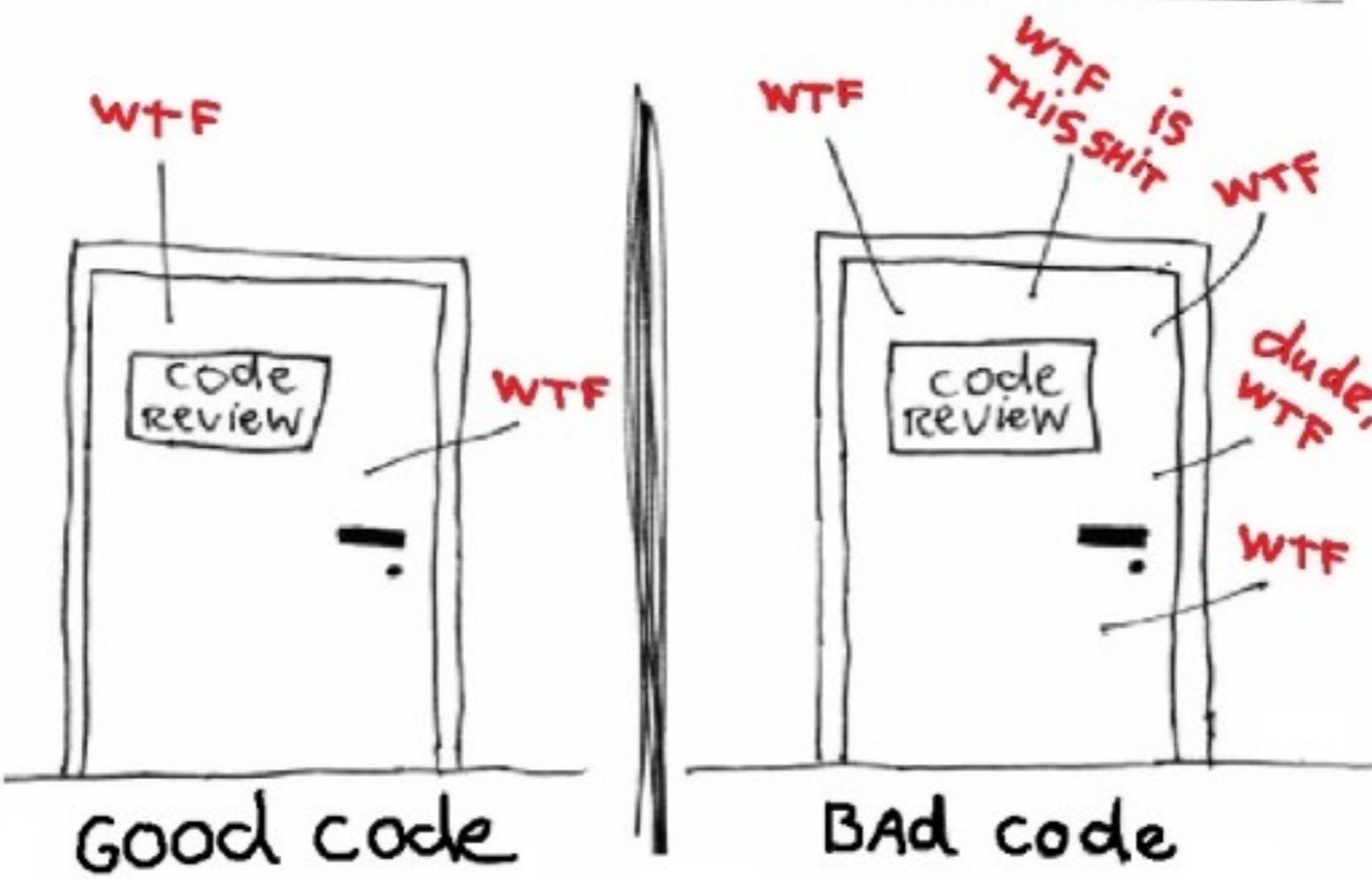
DEMO

WHAT ARE

BUSINESS METRICS



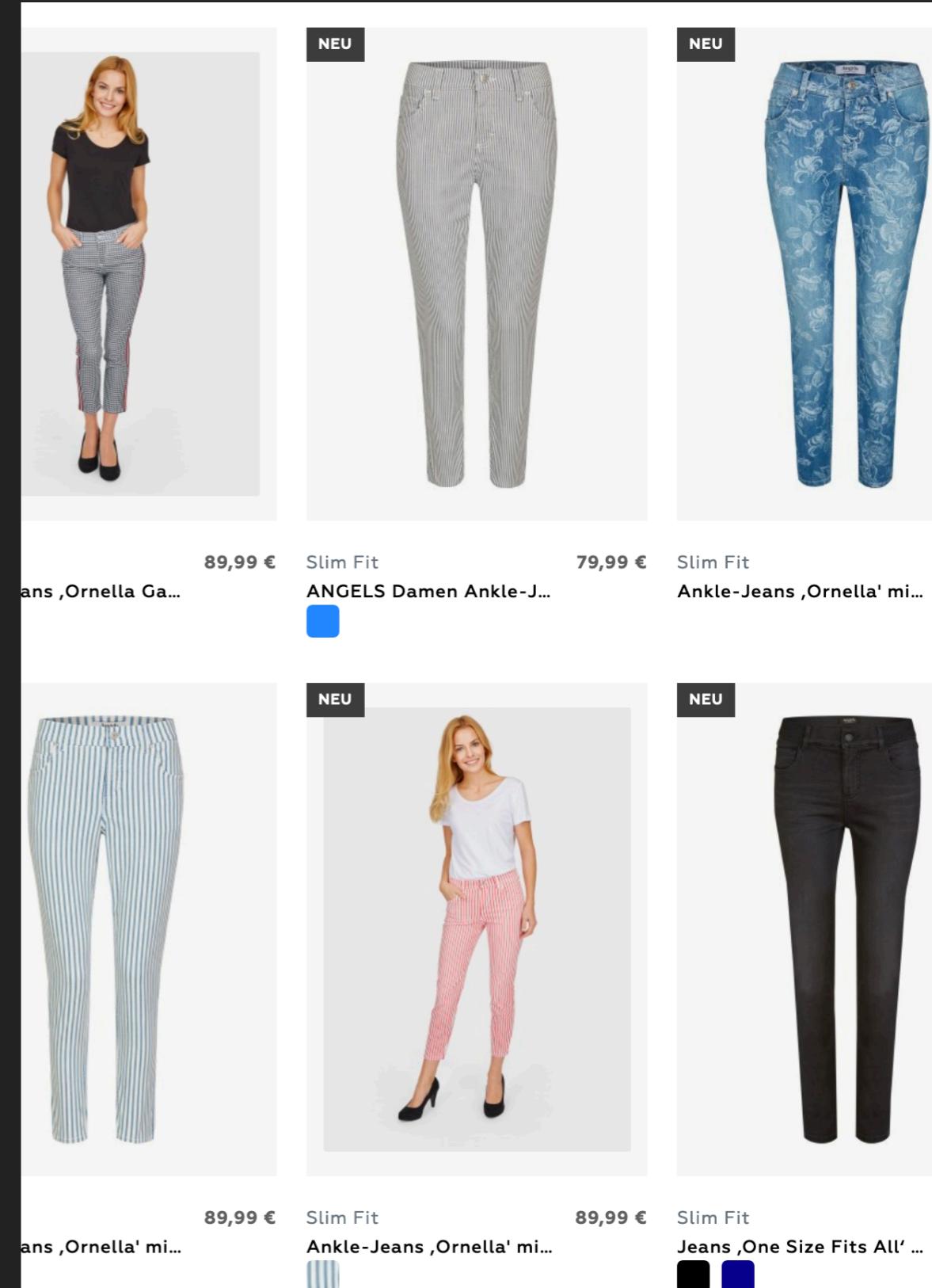
The ONLY VALID MEASUREMENT OF CODE QUALITY: WTFs/MINUTE



WHAT ARE **BUSINESS METRICS**?

**CONTINUOUSLY MEASURED VALUES
TO REFLECT THE CURRENT
SUCCESS OF YOUR BUSINESS**

- ▶ ARTICLES ONLINE
- ▶ ORDERS PER HOUR
- ▶ SALES VOLUME
- ▶ ITEMS SHIPPED IN SLA
- ▶ CONVERSION RATE
- ▶ STOCK TURN DEVELOPMENT
- ▶ CUSTOMER SATISFACTION
- ▶ COST PER OPERATION (CPO)





- ▶ COUNTERS (can only go up)

```
orders_total 1234.000000
orders_total 1235.000000 1559024925

orders_total{shop="My-Shop"} 999.000000
orders_total{shop="Your-Shop"} 235.000000

orders_total{shop="My-Shop"} 999.000000 1559024925
orders_total{shop="Your-Shop"} 236.000000 1559024925
```

- ▶ GAUGES (can go up and down)

```
average_order_value 140.250000
average_order_value 141.500000 1559024925

average_order_value{shop="My-Shop"} 123.450000
average_order_value{shop="Your-Shop"} 156.780000

average_order_value{shop="My-Shop"} 101.020000 1559024925
average_order_value{shop="Your-Shop"} 199.890000 1559024925
```



▶ Type-hinting and description

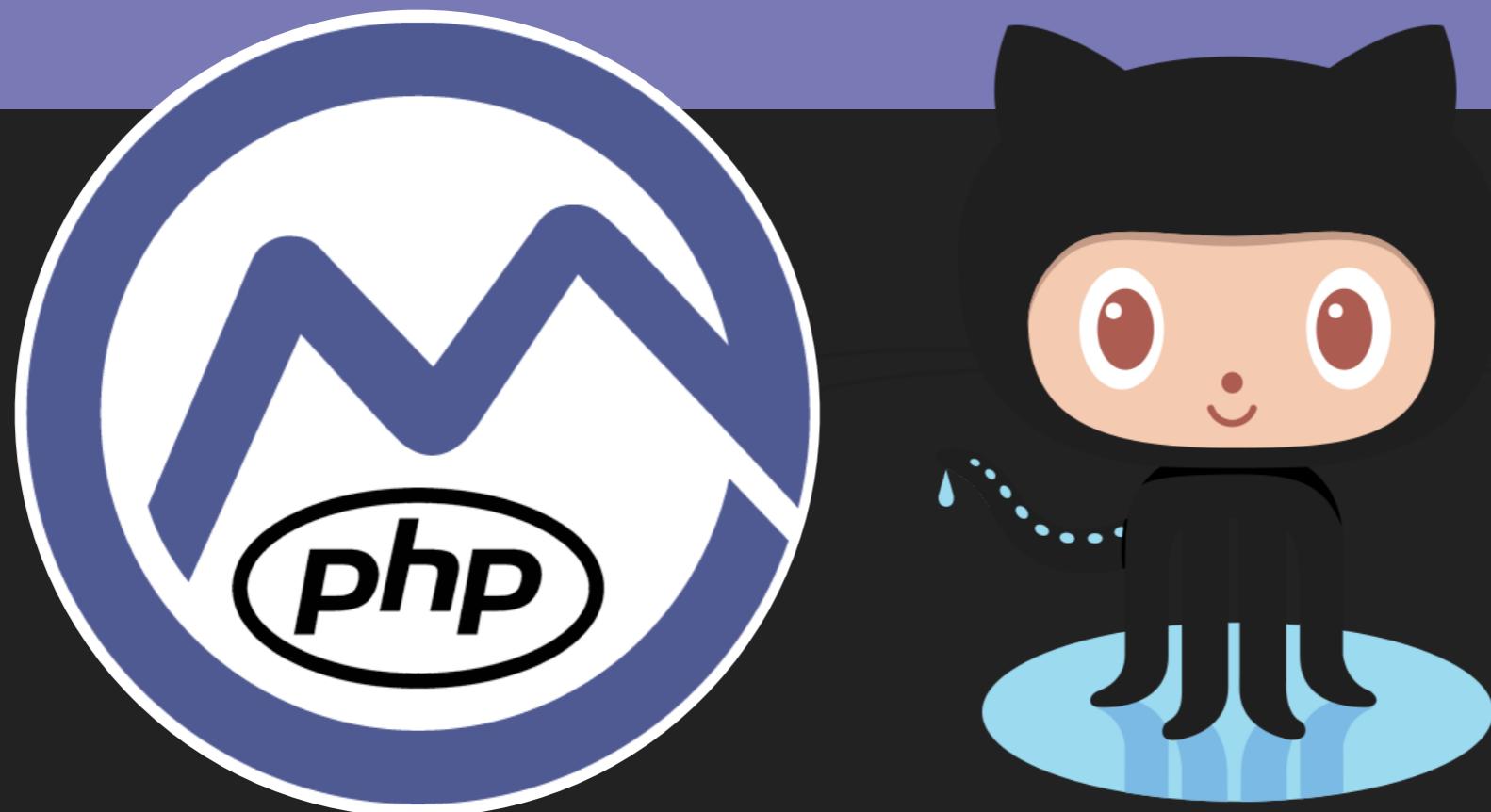
```
# TYPE orders_total counter
# HELP orders_total Total number of placed orders

orders_total 1234.000000
orders_total 1235.000000 1559024925

orders_total{shop="My-Shop"} 999.000000
orders_total{shop="Your-Shop"} 235.000000

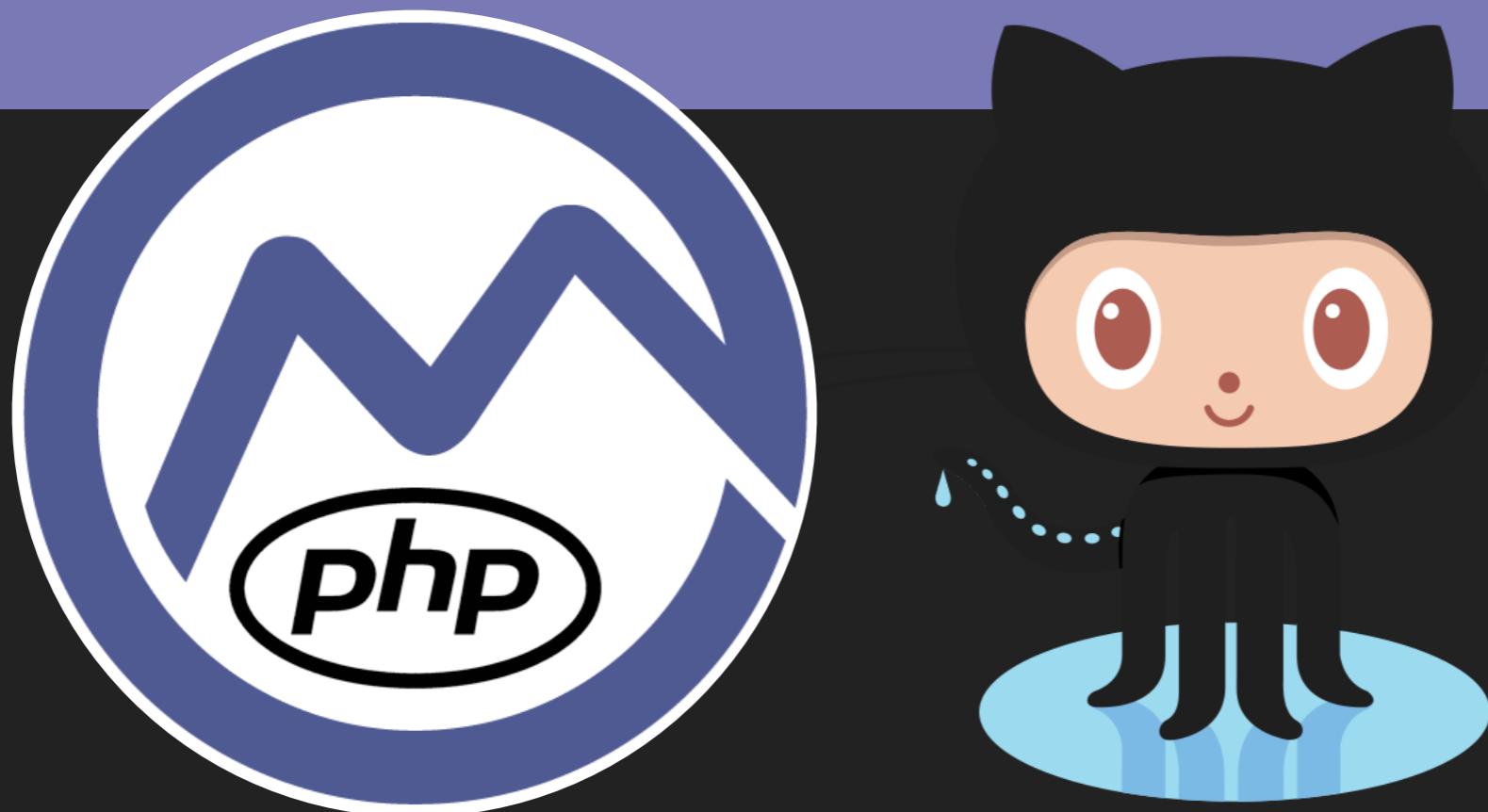
orders_total{shop="My-Shop"} 999.000000 1559024925
orders_total{shop="Your-Shop"} 236.000000 1559024925
```

PHP

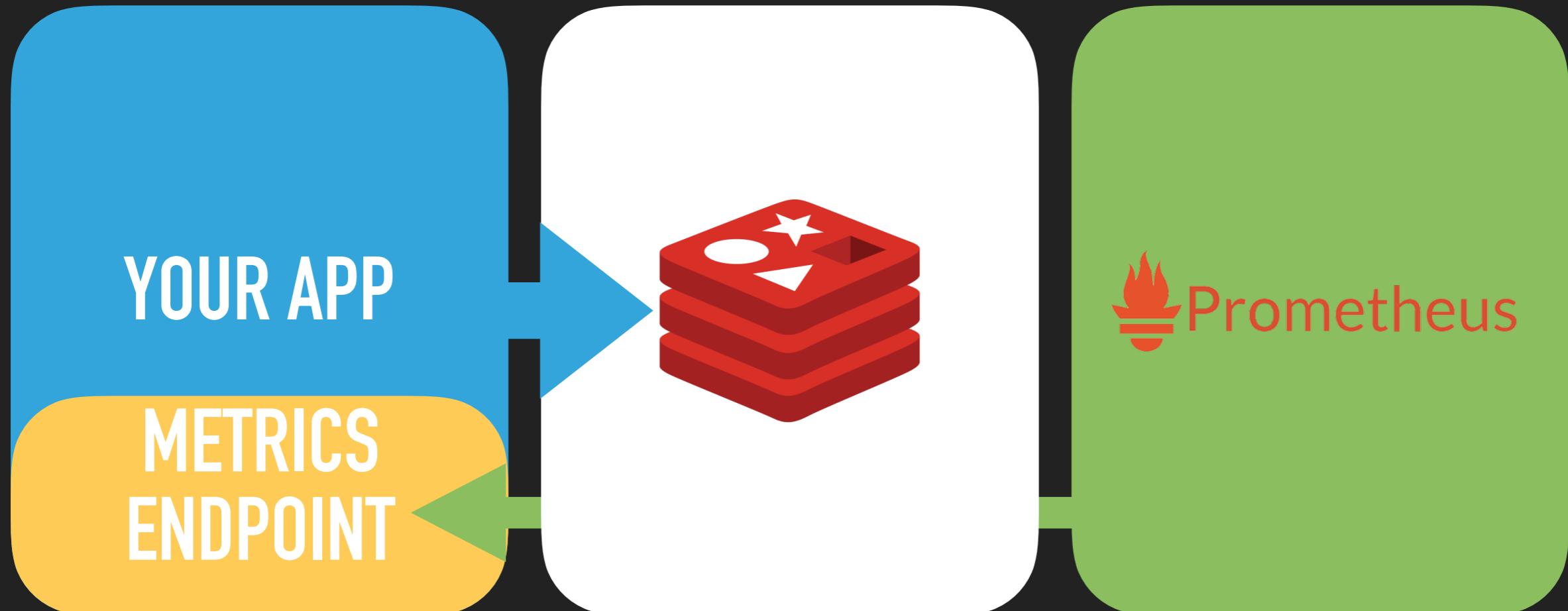


openmetrics-php/exposition-text

PHP



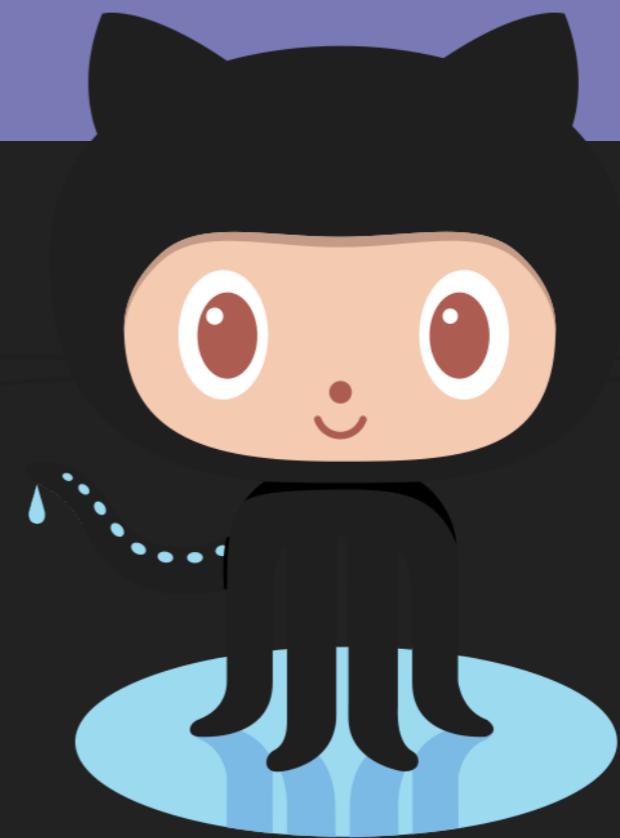
openmetrics-php/exposition-text
(openmetrics-php/???)



COLLECT METRICS IN REDIS
WHENEVER SOMETHING
HAPPENS IN YOUR APP
& FLUSH THEM AS SOON AS
PROMETHEUS CALLED THE ENDPOINT

PHP

JIMDO



jimdo/prometheus_client_php





Grafana

- ▶ <https://grafana.com>
- ▶ <https://hub.docker.com/r/grafana/grafana>

```
grafana:  
  image: grafana/grafana:latest  
  restart: 'on-failure'  
  volumes:  
    - ./data/grafana:/var/lib/grafana  
  depends_on:  
    - prometheus
```



Grafana

Dashboards

Official & community built dashboards

Filter by:

Data Source

All ▾

Panel Type

All ▾

Category

All ▾

Collector

All ▾

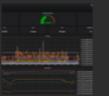
Search within this list

cadvisor

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	1. Kubernetes Deployment Statefulset Daemonset metrics by prat0318 Monitors Kubernetes deployments in cluster using Prometheus. Shows overall cluster CPU / Memory... 	Downloads: 18459 Reviews: 0
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	Docker Host & Container Overview by uschtwill A simple overview of the most important Docker host and container metrics. (cAdvisor/Prometheus)  	Downloads: 9903 Reviews: 0



Grafana

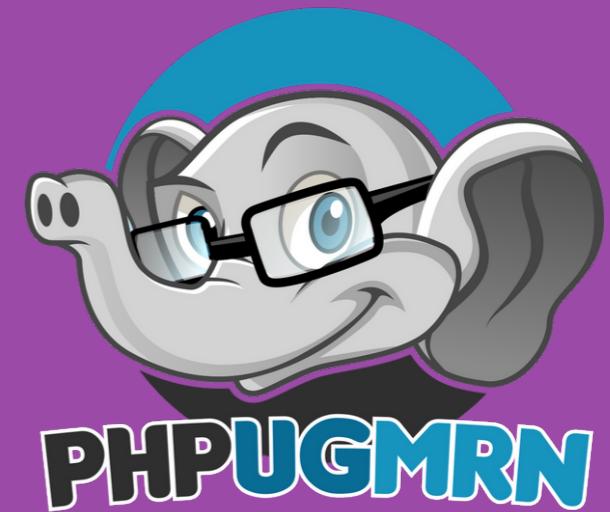
DEMO



[php-usergroup-dresden/business-metrics-for-starters](https://github.com/php-usergroup-dresden/business-metrics-for-starters)

QUESTIONS?

THANK
YOU!



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