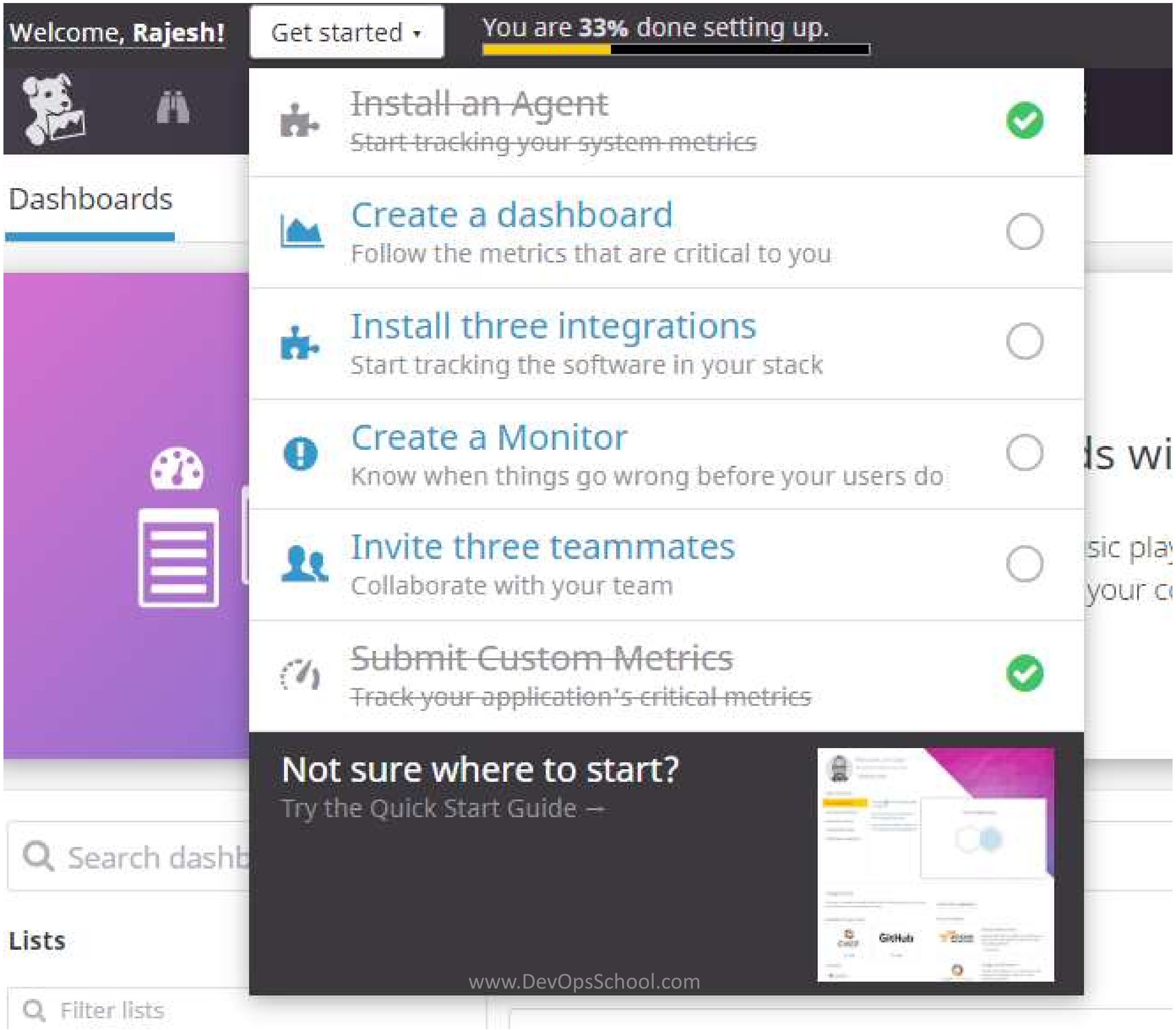
Getting Started in Datadog

Rajesh Kumar

www.DevOpsSchool.com



Welcome, **Rajesh!**

Get started ▾

You are **33%** done setting up.

~~Install an Agent~~
~~Start tracking your system metrics~~ ✓

Create a dashboard
Follow the metrics that are critical to you ○

Install three integrations
Start tracking the software in your stack ○

Create a Monitor
Know when things go wrong before your users do ○

Invite three teammates
Collaborate with your team ○

~~Submit Custom Metrics~~
~~Track your application's critical metrics~~ ✓

Not sure where to start?
Try the Quick Start Guide →

Dashboards
ds wi
sic pla
your c
Search dashb
Lists
Filter lists

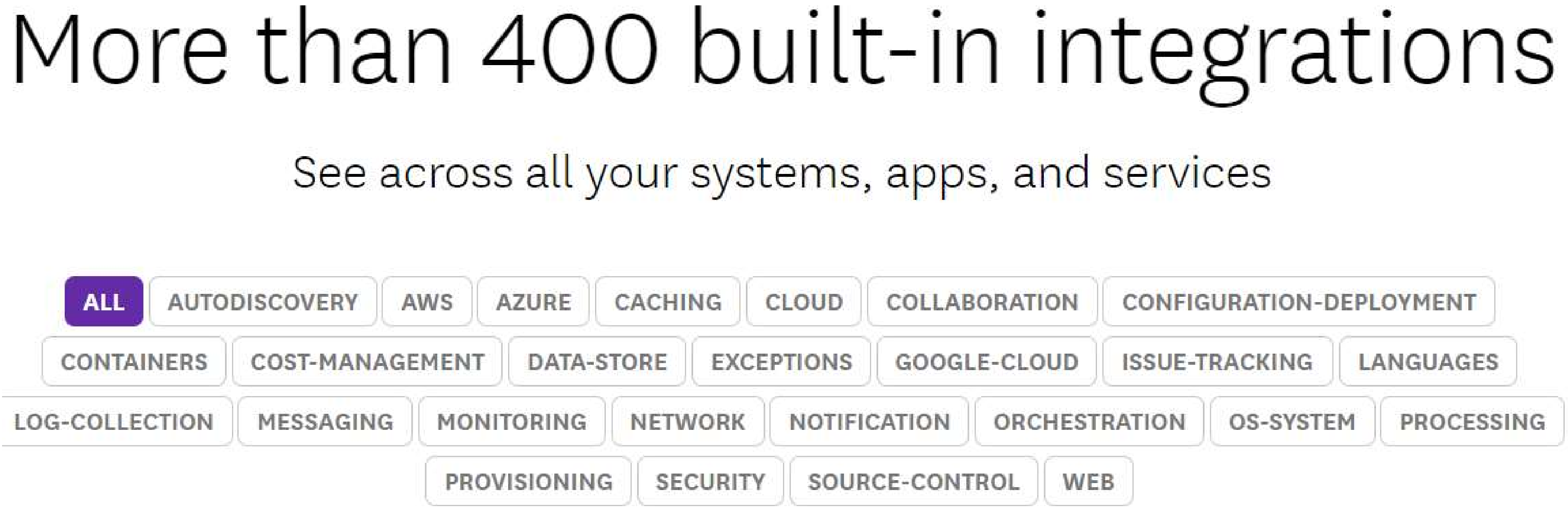
Datadog: Integrations

An integration, at the highest level, is when you assemble a unified system from units that are usually considered separately.

At Datadog, you can use integrations to bring together all of the metrics and logs from your infrastructure and gain insight into the unified system as a whole — you can see pieces individually and also how individual pieces are impacting the whole.

Datadog: Integrations

- Datadog has over 400+ integrations officially listed.
- Custom integrations are available via the Datadog API.
- The Agent is open source.
- Once integrations have been configured, all data is treated the same throughout Datadog, whether it is living in a datacenter or in an online service.



More than 400 built-in integrations

See across all your systems, apps, and services

ALL
AUTODISCOVERY
AWS
AZURE
CACHING
CLOUD
COLLABORATION
CONFIGURATION-DEPLOYMENT
CONTAINERS
COST-MANAGEMENT
DATA-STORE
EXCEPTIONS
GOOGLE-CLOUD
ISSUE-TRACKING
LANGUAGES
LOG-COLLECTION
MESSAGING
MONITORING
NETWORK
NOTIFICATION
ORCHESTRATION
OS-SYSTEM
PROCESSING
PROVISIONING
SECURITY
SOURCE-CONTROL
WEB

https://www.datadoghq.com/product/integrations/#all

Datadog: Integrations

Datadog provides Four types of integrations:

1. **Agent-based integrations** are installed with the Datadog Agent and use a Python class method called check to define the metrics to collect.
2. **Authentication (crawler) based integrations** are set up in the Datadog App where you provide credentials for obtaining metrics with the API. These include popular integrations like Slack,AWS,Azure, and PagerDuty.
3. **Library integrations** use the Datadog API to allow you to monitor applications based on the language they are written in, like Node.js or Python.
4. You can also build a **custom check** to define and send metrics to Datadog from your unique in-house system.

Datadog : Setting up an integration

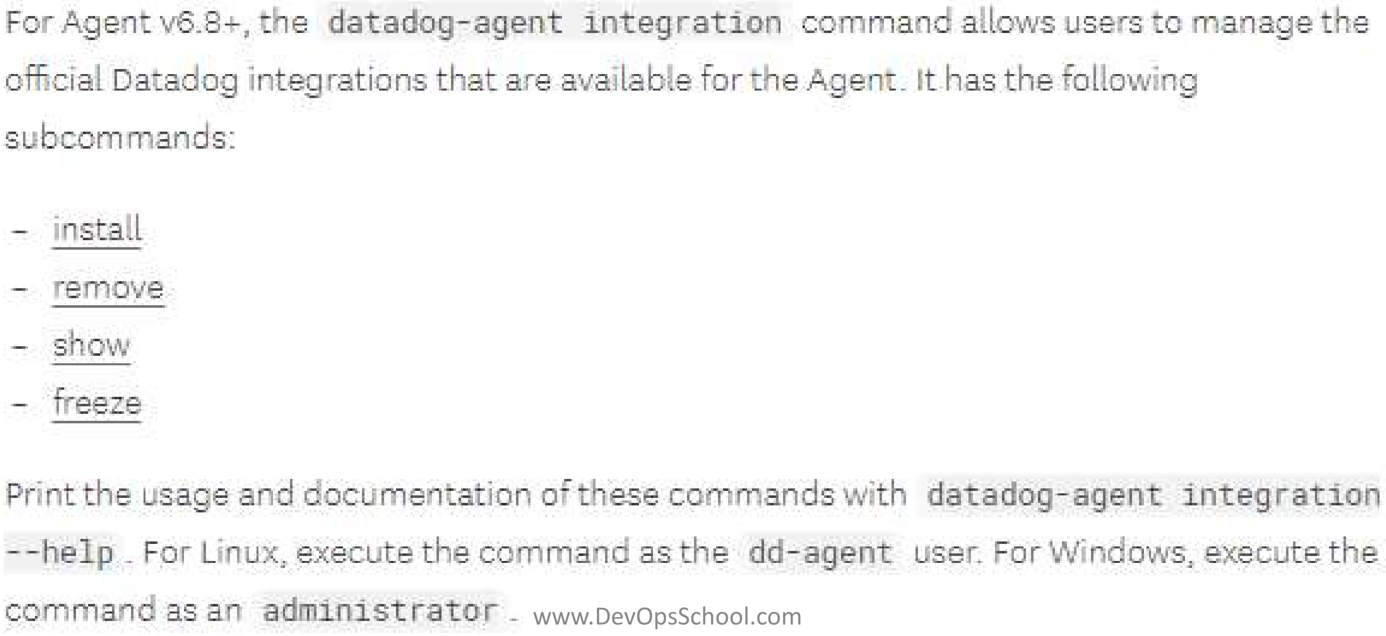
Datadog core integrations:- The Datadog Agent package includes integrations officially supported by Datadog, in integrations core. To use the integrations in integrations core, download the Datadog agent.
Refer - https://github.com/DataDog/integrations-core

Datadog Community-based integrations:- Community-based integrations are in integrations extras, and to use those, you need to download the developer toolkit.
Refer - integrations extras 0 https://github.com/DataDog/integrations-extras
Refer - developer toolkit -
https://docs.datadoghq.com/developers/integrations/new_check_howto/#developer-toolkit

https://docs.datadoghq.com/agent/guide/integration-management/

Datadog : Integration Management

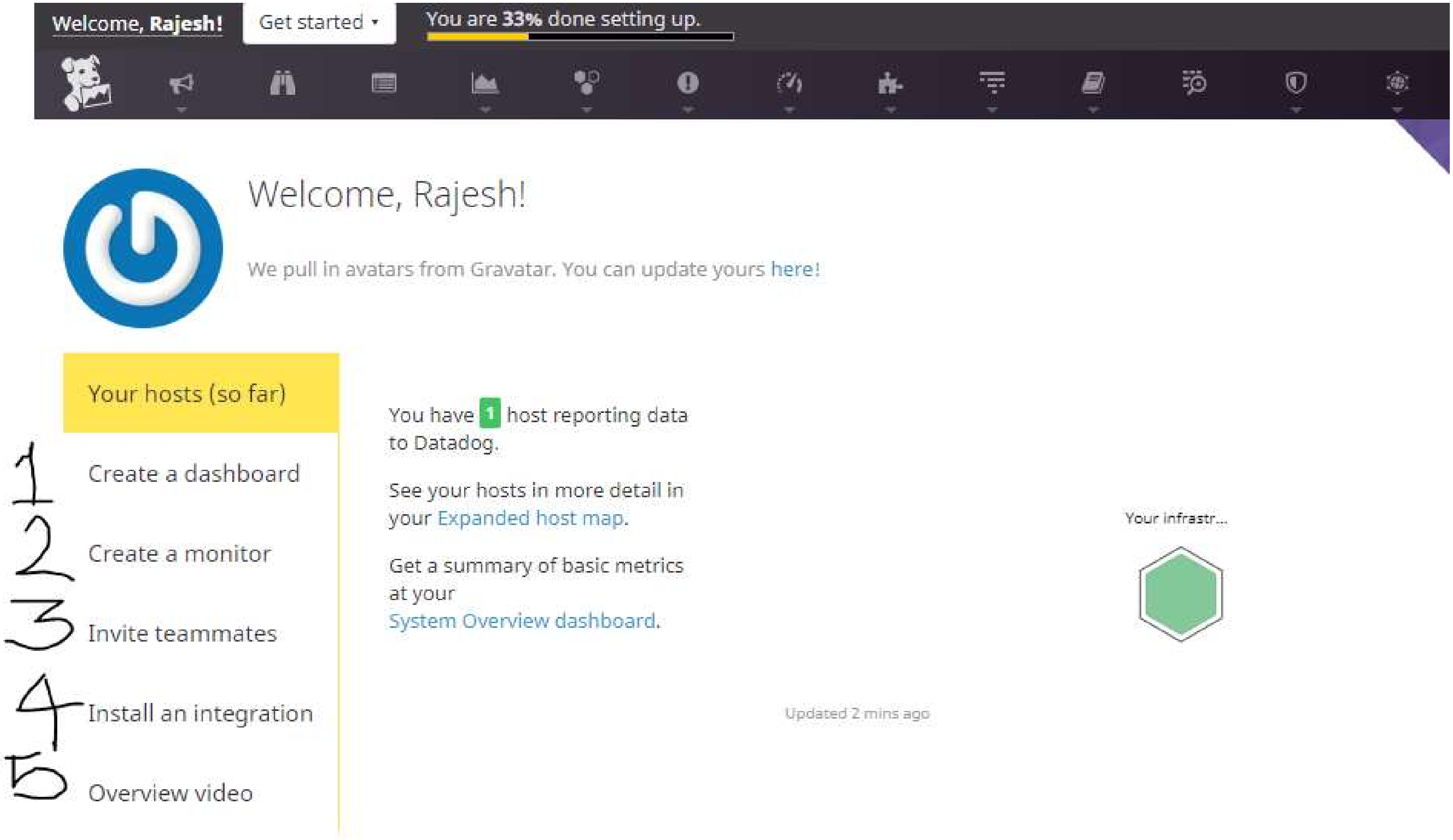
The Agent comes with a set of bundled official Datadog integrations to allow users to start monitoring their applications quickly. These integrations are available as single Python packages, and you can upgrade them separately.



For Agent v6.8+, the `datadog-agent integration` command allows users to manage the official Datadog integrations that are available for the Agent. It has the following subcommands:

- install
- remove
- show
- freeze

Print the usage and documentation of these commands with `datadog-agent integration --help`. For Linux, execute the command as the `dd-agent` user. For Windows, execute the command as an `administrator`.



Welcome, Rajesh!
Get started ▾
You are 33% done setting up.

Welcome, Rajesh!

We pull in avatars from Gravatar. You can update yours here!

Your hosts (so far)

1 Create a dashboard

2 Create a monitor

3 Invite teammates

4 Install an integration

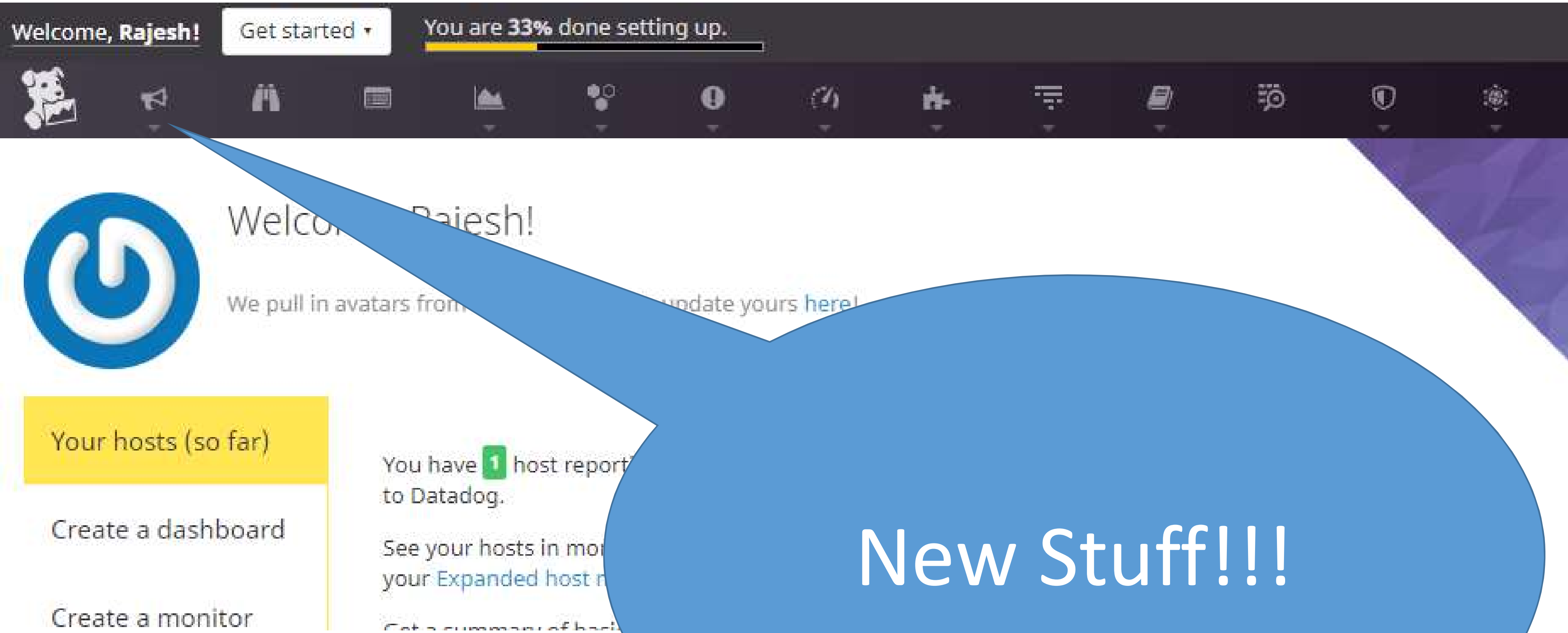
5 Overview video

You have 1 host reporting data to Datadog.

See your hosts in more detail in your Expanded host map.

Get a summary of basic metrics at your System Overview dashboard.

Your infrastr...
Updated 2 mins ago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Your hosts (so far)
Create a dashboard
Create a monitor

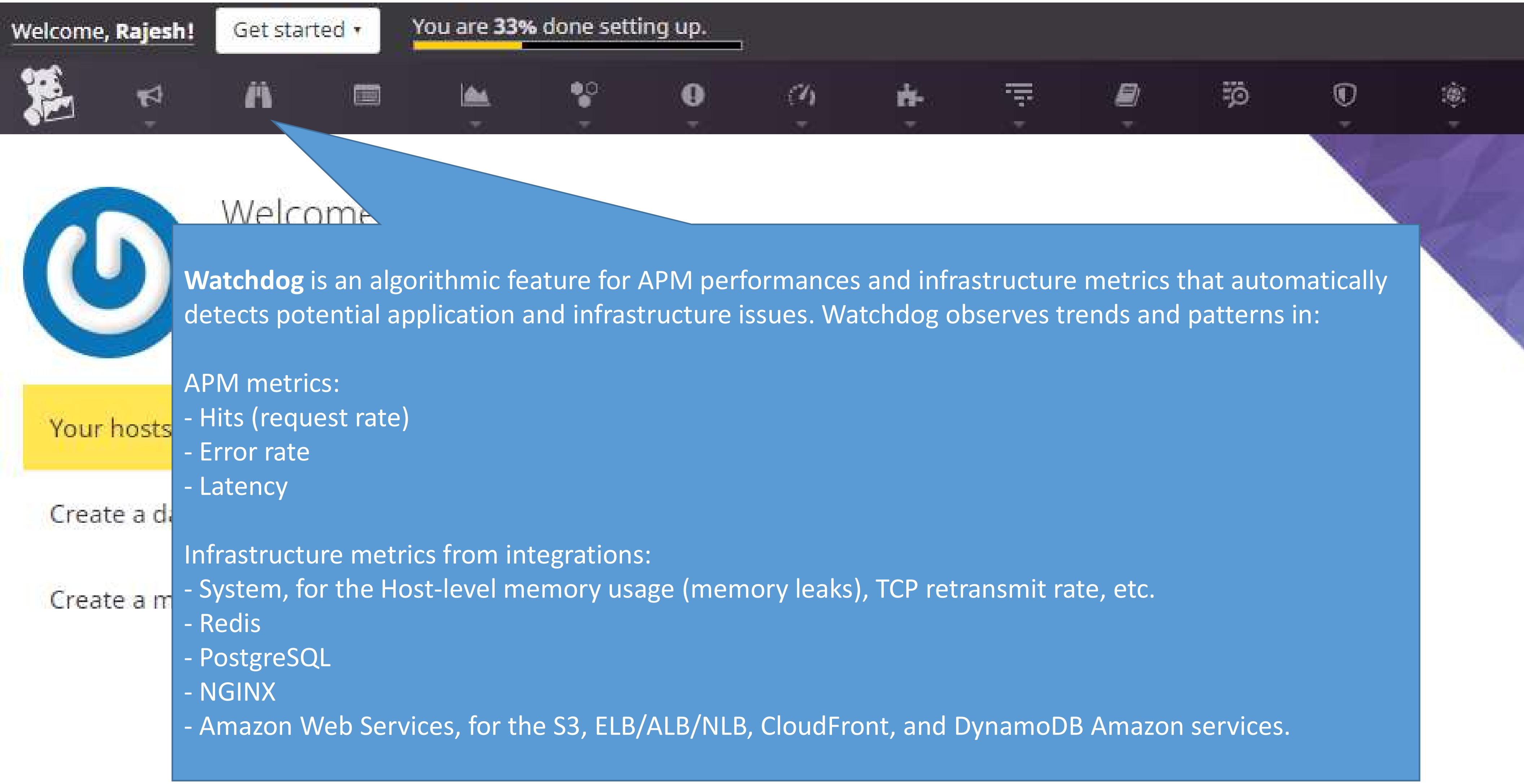
Welco Rajesh!

We pull in avatars fro update yours here!

You have 1 host report
to Datadog.

See your hosts in mo
your Expanded host

New Stuff!!!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Get started
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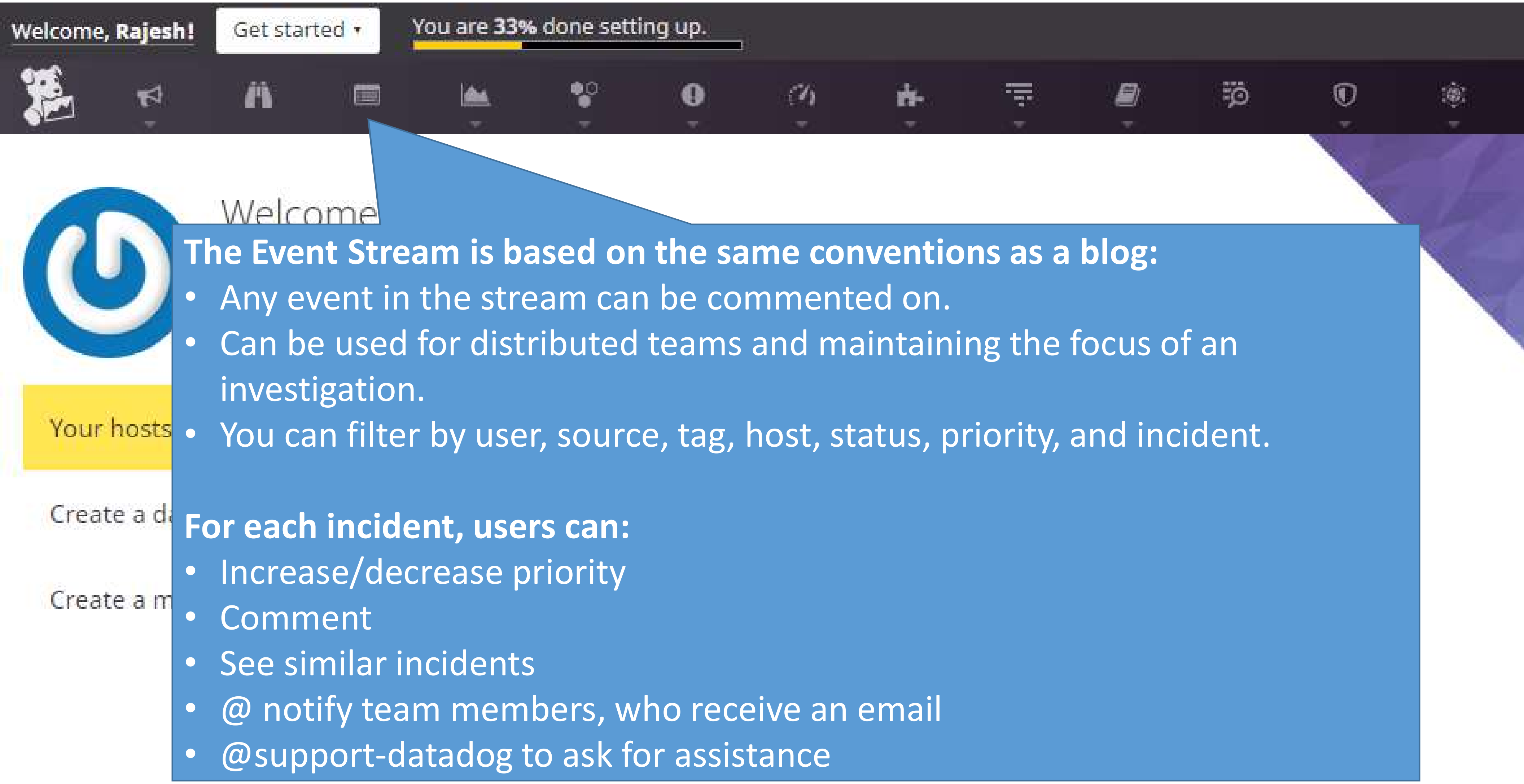
Welcome
Your hosts
Create a d
Create a m

Watchdog is an algorithmic feature for APM performances and infrastructure metrics that automatically detects potential application and infrastructure issues. Watchdog observes trends and patterns in:

APM metrics:
- Hits (request rate)
- Error rate
- Latency

Infrastructure metrics from integrations:
- System, for the Host-level memory usage (memory leaks), TCP retransmit rate, etc.
- Redis
- PostgreSQL
- NGINX
- Amazon Web Services, for the S3, ELB/ALB/NLB, CloudFront, and DynamoDB Amazon services.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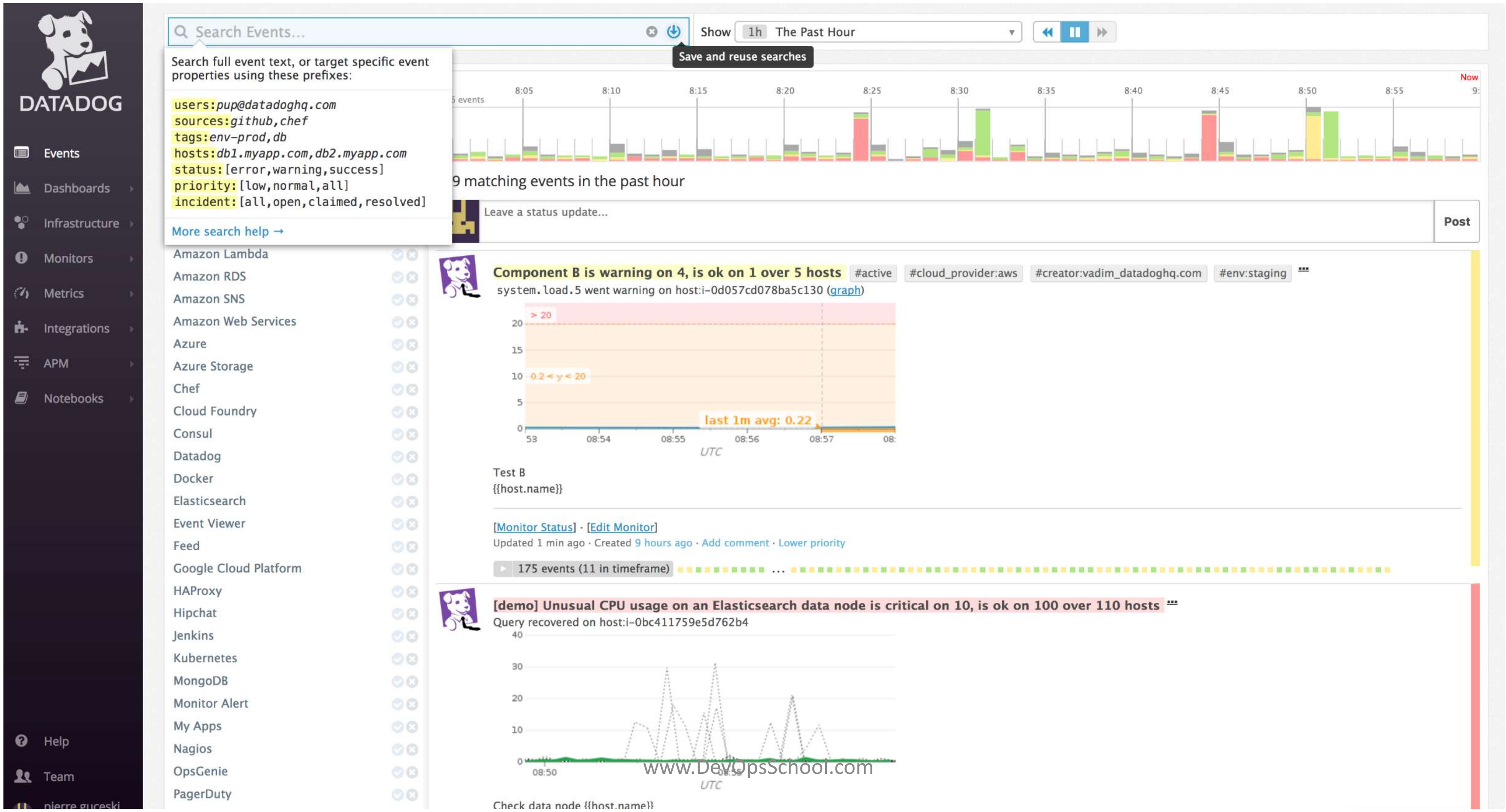
The Event Stream is based on the same conventions as a blog:

- Any event in the stream can be commented on.
- Can be used for distributed teams and maintaining the focus of an investigation.
- You can filter by user, source, tag, host, status, priority, and incident.

For each incident, users can:

- Increase/decrease priority
- Comment
- See similar incidents
- @ notify team members, who receive an email
- @support-datadog to ask for assistance

Datadog: Events


DATADOG
Events
Dashboards
Infrastructure
Monitors
Metrics
Integrations
APM
Notebooks
Help
Team
pierre guceski
Search Events...
Show
1h
The Past Hour
Save and reuse searches
Now
8:05
8:10
8:15
8:20
8:25
8:30
8:35
8:40
8:45
8:50
8:55
Amazon Lambda
Amazon RDS
Amazon SNS
Amazon Web Services
Azure
Azure Storage
Chef
Cloud Foundry
Consul
Datadog
Docker
Elasticsearch
Event Viewer
Feed
Google Cloud Platform
HAProxy
Hipchat
Jenkins
Kubernetes
MongoDB
Monitor Alert
My Apps
Nagios
OpsGenie
PagerDuty
Leave a status update...
Post
> 20
0.2 < y < 20
last 1m avg: 0.22
20
15
10
5
0
08:54
08:55
08:56
08:57
UTC
40
30
20
10
0
08:50
UTC

Search full event text, or target specific event properties using these prefixes:

users:*pup@datadoghq.com*
sources:*github,chef*
tags:*env-prod,db*
hosts:*db1.myapp.com,db2.myapp.com*
status:[error,warning,success]
priority:[low,normal,all]
incident:[all,open,claimed,resolved]

More search help →

9 matching events in the past hour

Component B is warning on 4, is ok on 1 over 5 hosts #active #cloud_provider:aws #creator:vadim_datadoghq.com #env:staging

system.load.5 went warning on host:i-0d057cd078ba5c130 (graph)

Test B
{{host.name}}

[Monitor Status] · [Edit Monitor]

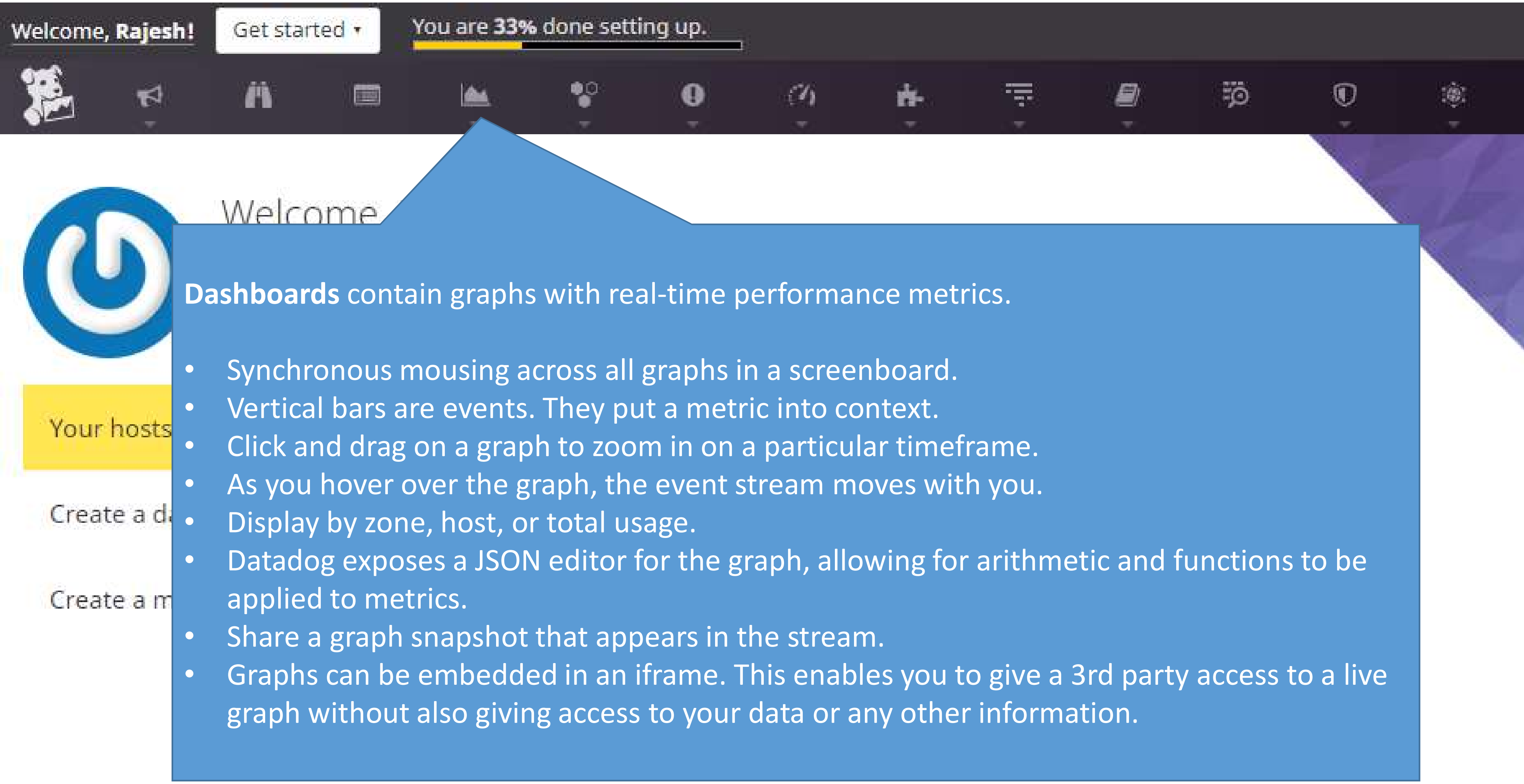
Updated 1 min ago · Created 9 hours ago · Add comment · Lower priority

175 events (11 in timeframe)

[demo] Unusual CPU usage on an Elasticsearch data node is critical on 10, is ok on 100 over 110 hosts

Query recovered on host:i-0bc411759e5d762b4

Check data node {{host.name}}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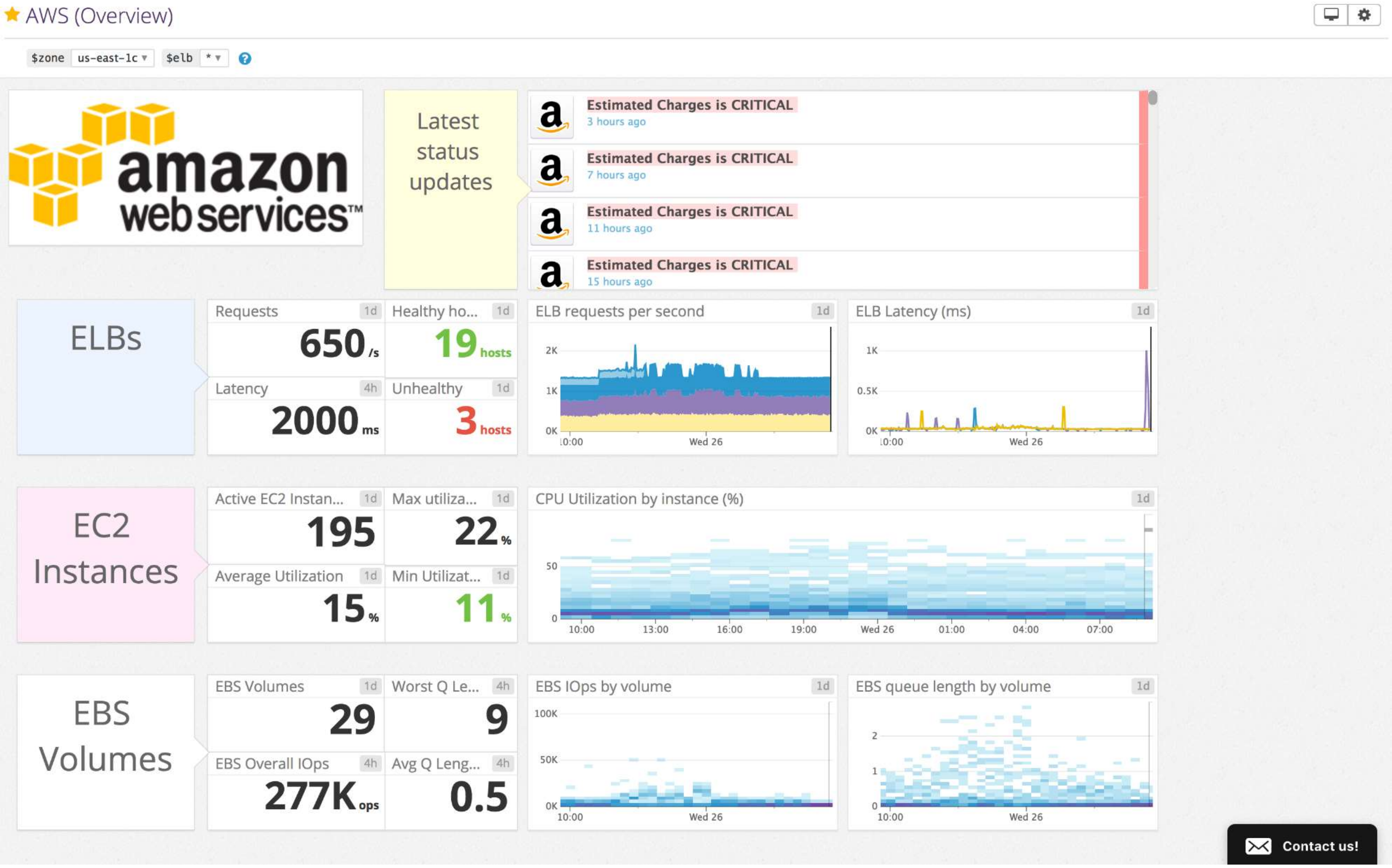
Dashboards contain graphs with real-time performance metrics.

- Synchronous mousing across all graphs in a screenboard.
- Vertical bars are events. They put a metric into context.
- Click and drag on a graph to zoom in on a particular timeframe.
- As you hover over the graph, the event stream moves with you.
- Display by zone, host, or total usage.
- Datadog exposes a JSON editor for the graph, allowing for arithmetic and functions to be applied to metrics.
- Share a graph snapshot that appears in the stream.
- Graphs can be embedded in an iframe. This enables you to give a 3rd party access to a live graph without also giving access to your data or any other information.

Datadog: Dashboards



AWS (Overview)

$zone us-east-1c $elb *

Latest status updates

Estimated Charges is CRITICAL
3 hours ago

Estimated Charges is CRITICAL
7 hours ago

Estimated Charges is CRITICAL
11 hours ago

Estimated Charges is CRITICAL
15 hours ago

ELBs

Requests 1d: 650/s

Healthy ho... 1d: 19 hosts

Latency 4h: 2000 ms

Unhealthy 1d: 3 hosts

EC2 Instances

Active EC2 Instan... 1d: 195

Max utiliza... 1d: 22%

Average Utilization 1d: 15%

Min Utilizat... 1d: 11%

EBS Volumes

EBS Volumes 1d: 29

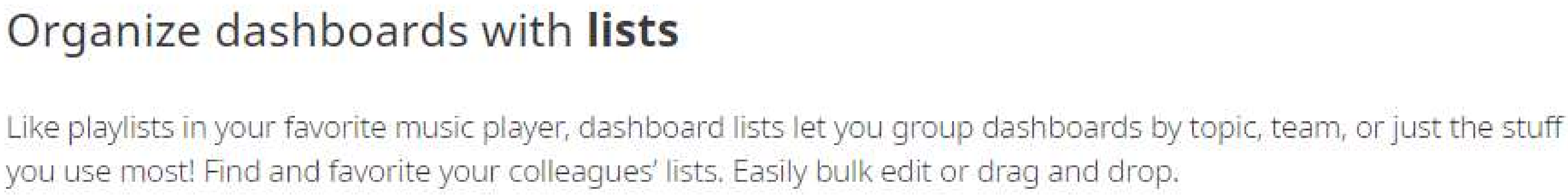
Worst Q Le... 4h: 9

EBS Overall IOps 4h: 277K ops

Avg Q Leng... 4h: 0.5

amazon web services™
ELB requests per second 1d
2K
1K
0K
10:00
Wed 26
ELB Latency (ms) 1d
1K
0.5K
0K
10:00
Wed 26
CPU Utilization by instance (%) 1d
50
0
10:00
13:00
16:00
19:00
Wed 26
01:00
04:00
07:00
EBS IOps by volume 1d
100K
50K
0K
10:00
Wed 26
EBS queue length by volume 1d
2
1
0
10:00
Wed 26
Contact us!

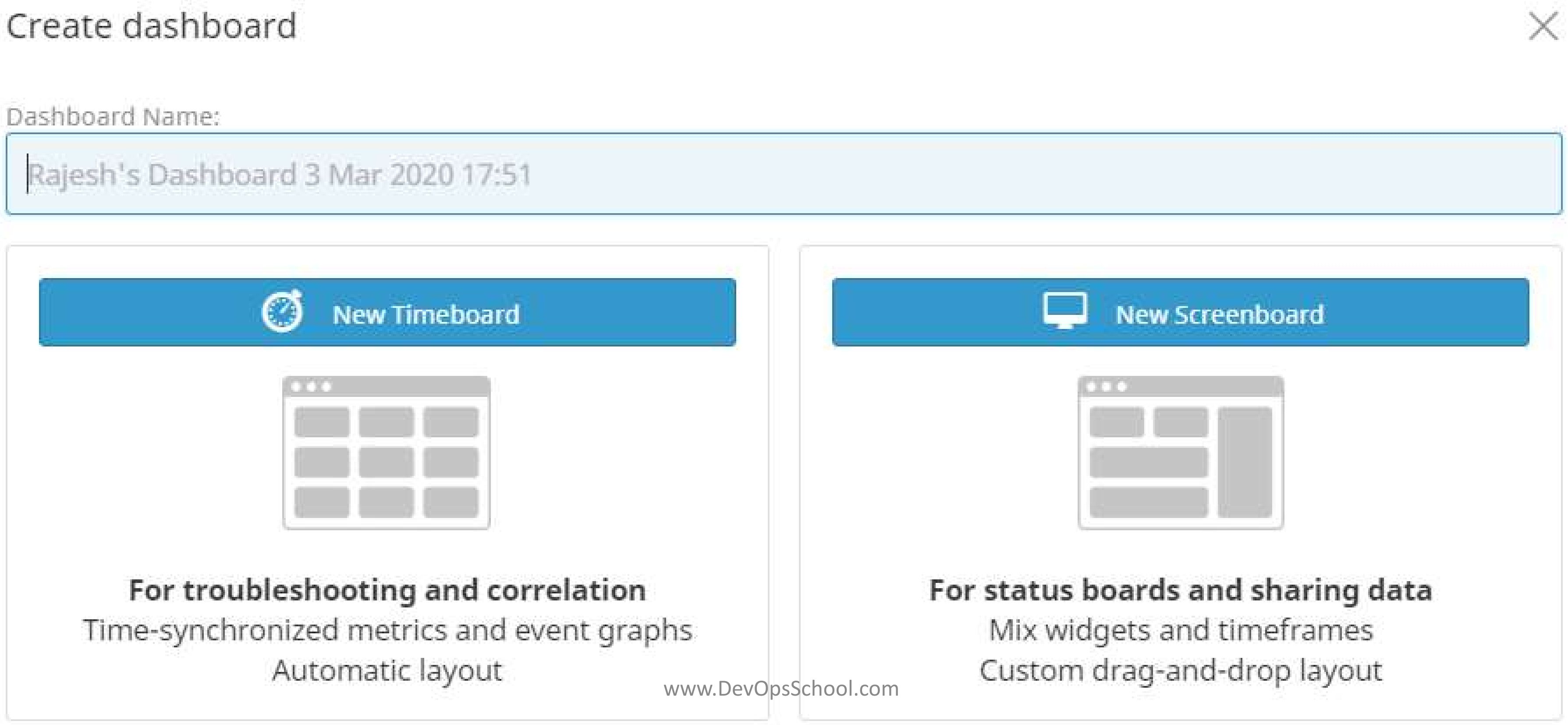
Datadog: Dashboards



Organize dashboards with **lists**

Like playlists in your favorite music player, dashboard lists let you group dashboards by topic, team, or just the stuff you use most! Find and favorite your colleagues' lists. Easily bulk edit or drag and drop.

Datadog: Dashboards

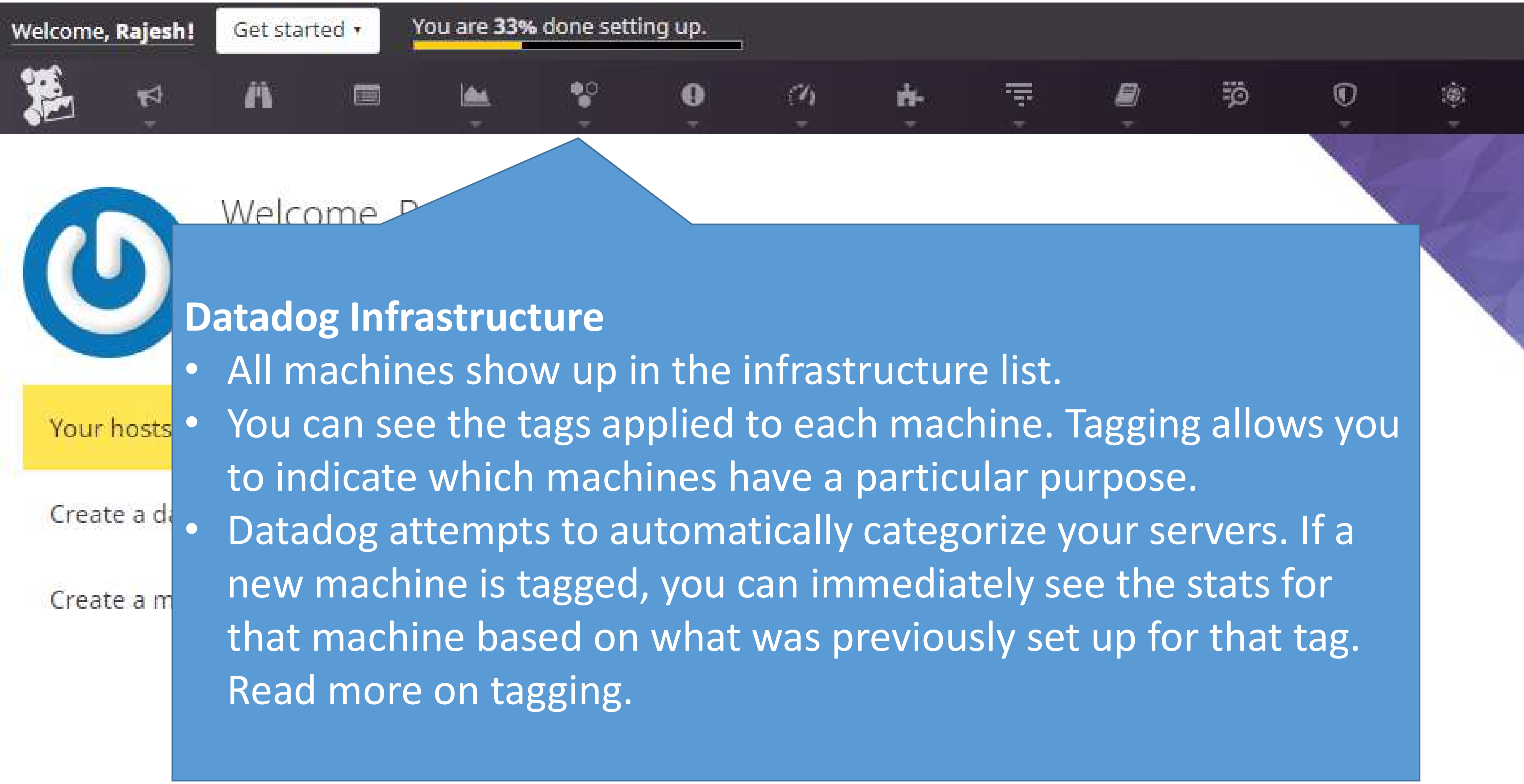

New Timeboard
New Screenboard

Create dashboard

Dashboard Name: Rajesh's Dashboard 3 Mar 2020 17:51

For troubleshooting and correlation
Time-synchronized metrics and event graphs
Automatic layout

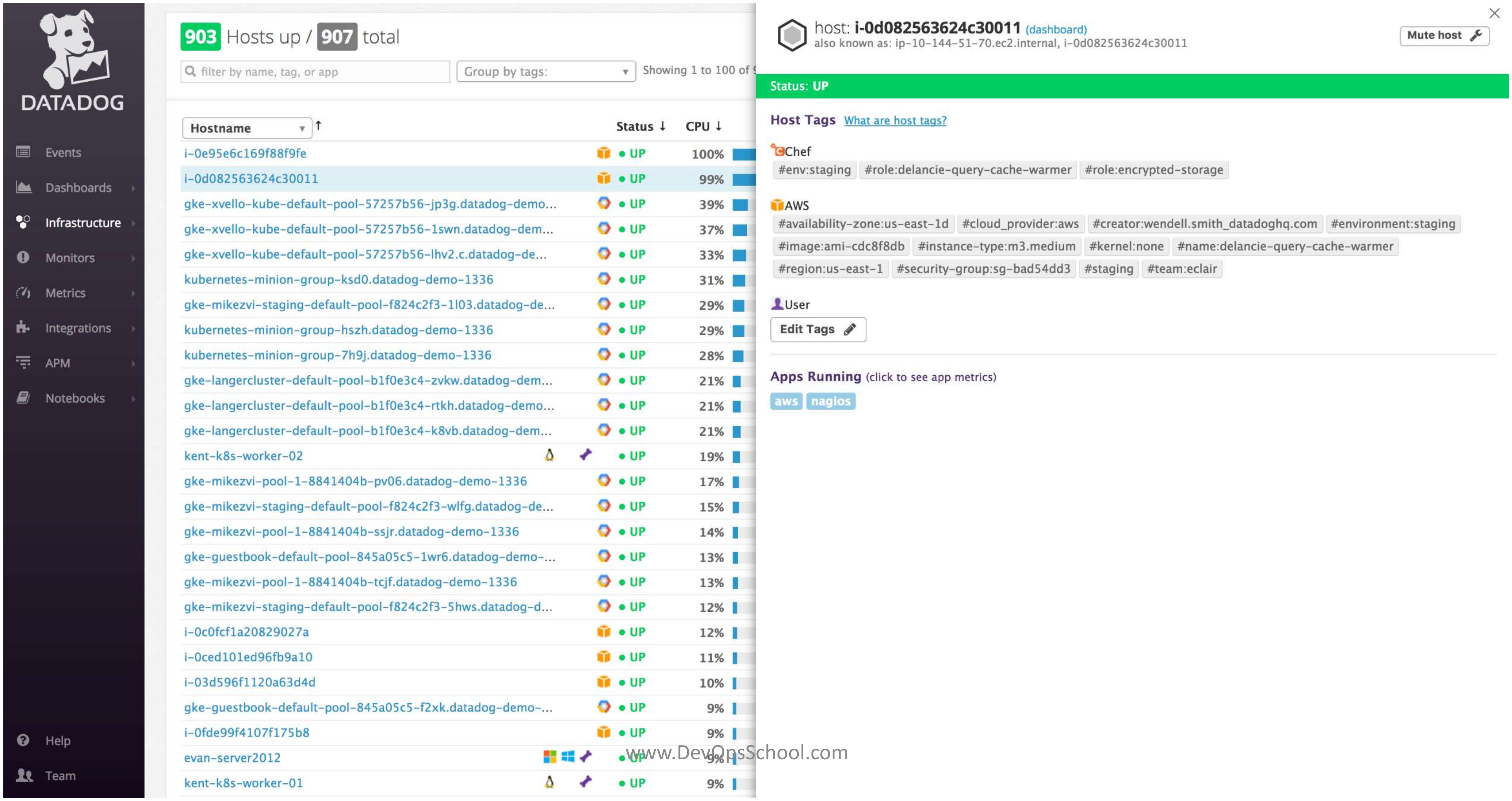
For status boards and sharing data
Mix widgets and timeframes
Custom drag-and-drop layout


Welcome, Rajesh!
Get started ▾
You are 33% done setting up.
Welcome, R
Your hosts
Create a d
Create a m

Datadog Infrastructure

- All machines show up in the infrastructure list.
- You can see the tags applied to each machine. Tagging allows you to indicate which machines have a particular purpose.
- Datadog attempts to automatically categorize your servers. If a new machine is tagged, you can immediately see the stats for that machine based on what was previously set up for that tag. Read more on tagging.

Datadog: Infrastructure



903 Hosts up / 907 total

Showing 1 to 100 of

Hostname	Status	CPU
i-0e95e6c169f88f9fe	● UP	100%
i-0d082563624c30011	● UP	99%
gke-xvello-kube-default-pool-57257b56-jp3g.datadog-demo...	● UP	39%
gke-xvello-kube-default-pool-57257b56-1swn.datadog-dem...	● UP	37%
gke-xvello-kube-default-pool-57257b56-lhv2.c.datadog-de...	● UP	33%
kubernetes-minion-group-ksd0.datadog-demo-1336	● UP	31%
gke-mikezvi-staging-default-pool-f824c2f3-1l03.datadog-de...	● UP	29%
kubernetes-minion-group-hszh.datadog-demo-1336	● UP	29%
kubernetes-minion-group-7h9j.datadog-demo-1336	● UP	28%
gke-langercluster-default-pool-b1f0e3c4-zvkw.datadog-dem...	● UP	21%
gke-langercluster-default-pool-b1f0e3c4-rtkh.datadog-demo...	● UP	21%
gke-langercluster-default-pool-b1f0e3c4-k8vb.datadog-dem...	● UP	21%
kent-k8s-worker-02	● UP	19%
gke-mikezvi-pool-1-8841404b-pv06.datadog-demo-1336	● UP	17%
gke-mikezvi-staging-default-pool-f824c2f3-wlfg.datadog-de...	● UP	15%
gke-mikezvi-pool-1-8841404b-ssjr.datadog-demo-1336	● UP	14%
gke-guestbook-default-pool-845a05c5-1wr6.datadog-demo-...	● UP	13%
gke-mikezvi-pool-1-8841404b-tcjf.datadog-demo-1336	● UP	13%
gke-mikezvi-staging-default-pool-f824c2f3-5hws.datadog-d...	● UP	12%
i-0c0fcf1a20829027a	● UP	12%
i-0ced101ed96fb9a10	● UP	11%
i-03d596f1120a63d4d	● UP	10%
gke-guestbook-default-pool-845a05c5-f2xk.datadog-demo-...	● UP	9%
i-0fde99f4107f175b8	● UP	9%
evan-server2012	● UP	9%
kent-k8s-worker-01	● UP	9%

host: **i-0d082563624c30011** (dashboard)
also known as: ip-10-144-51-70.ec2.internal, i-0d082563624c30011

Status: UP

Host Tags What are host tags?

Chef
#env:staging #role:delancie-query-cache-warmer #role:encrypted-storage

AWS
#availability-zone:us-east-1d #cloud_provider:aws #creator:wendell.smith_datadoghq.com #environment:staging
#image:ami-cdc8f8db #instance-type:m3.medium #kernel:none #name:delancie-query-cache-warmer
#region:us-east-1 #security-group:sg-bad54dd3 #staging #team:eclair

User

Apps Running (click to see app metrics)

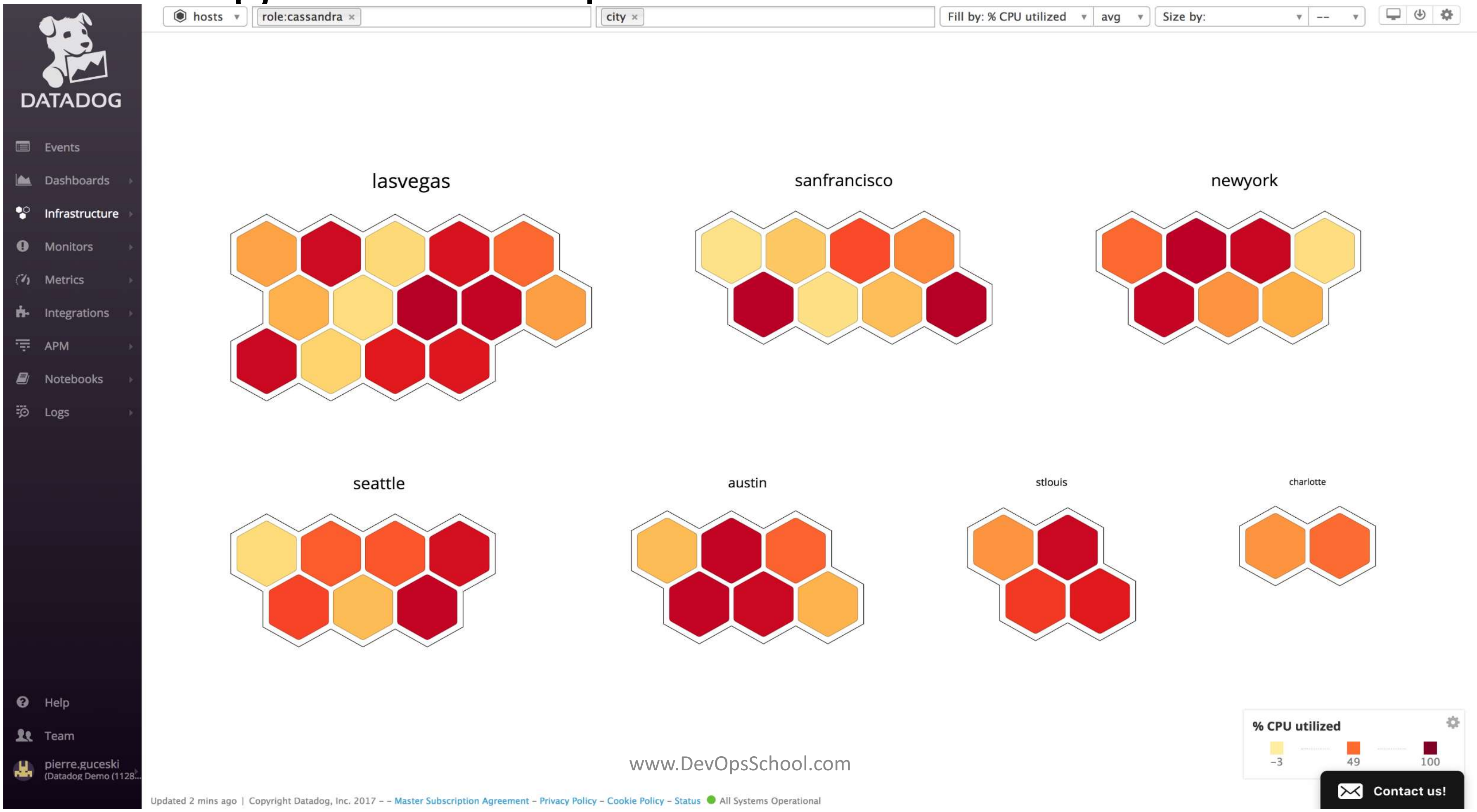
aws nagios

Datadog: Host Map

The Host Map can be found under the Infrastructure menu. It offers the ability to:

- Quickly visualize your environment
- Identify outliers
- Detect usage patterns
- Optimize resources

Datadog: Host Map

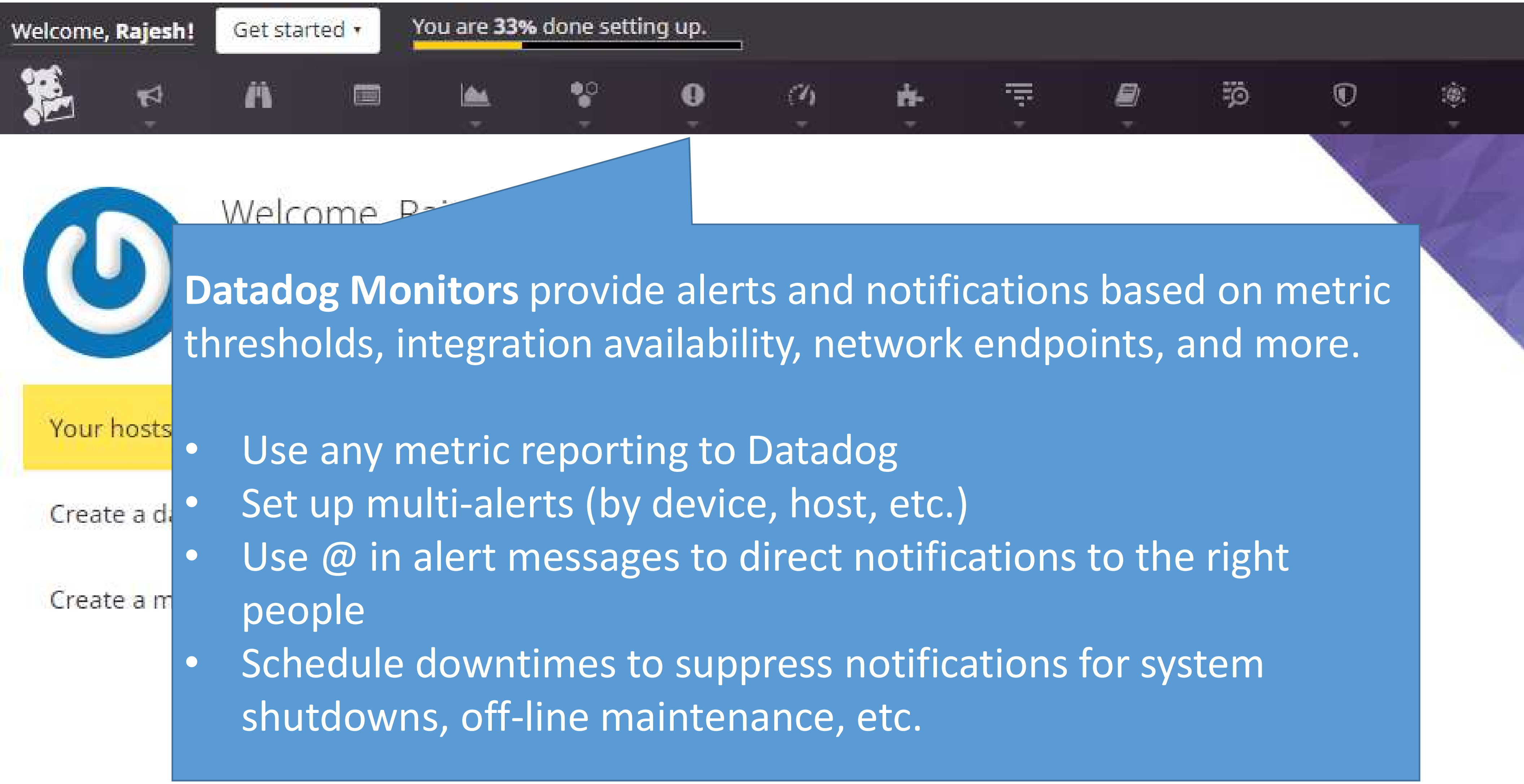


hosts ▾ role:cassandra × city ×

Fill by: % CPU utilized ▾ avg ▾ Size by: ▾ -- ▾

DATADOG
Events
Dashboards
Infrastructure
Monitors
Metrics
Integrations
APM
Notebooks
Logs
Help
Team
pierre.guceski
(Datadog Demo (1128
lasvegas
sanfrancisco
newyork
seattle
austin
stlouis
charlotte
% CPU utilized
-3
49
100
Contact us!

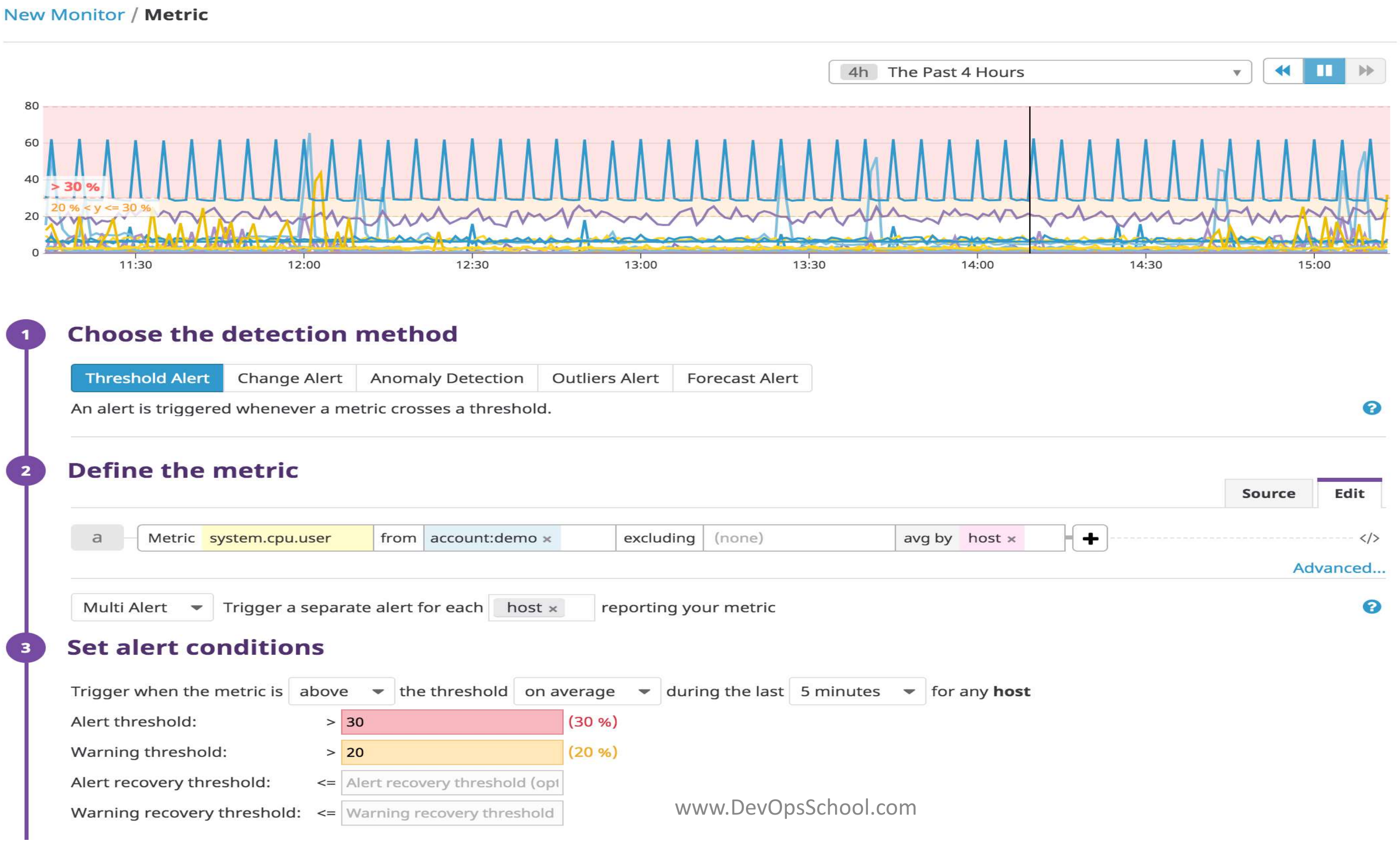
Updated 2 mins ago | Copyright Datadog, Inc. 2017 – – Master Subscription Agreement – Privacy Policy – Cookie Policy – Status ● All Systems Operational


Welcome, Rajesh!
Get started ▾
You are 33% done setting up.
Welcome, Ra
Your hosts
Create a d
Create a m

Datadog Monitors provide alerts and notifications based on metric thresholds, integration availability, network endpoints, and more.

- Use any metric reporting to Datadog
- Set up multi-alerts (by device, host, etc.)
- Use @ in alert messages to direct notifications to the right people
- Schedule downtimes to suppress notifications for system shutdowns, off-line maintenance, etc.

Datadog: Monitors


New Monitor / Metric
4h The Past 4 Hours
80
60
40
20
0
> 30 %
20 % < y <= 30 %
11:30
12:00
12:30
13:00
13:30
14:00
14:30
15:00

1 **Choose the detection method**

Threshold Alert | Change Alert | Anomaly Detection | Outliers Alert | Forecast Alert

An alert is triggered whenever a metric crosses a threshold.

2 **Define the metric**

Source
Edit

a Metric system.cpu.user from account:demo × excluding (none) avg by host ×

Advanced...

Multi Alert Trigger a separate alert for each host × reporting your metric

3 **Set alert conditions**

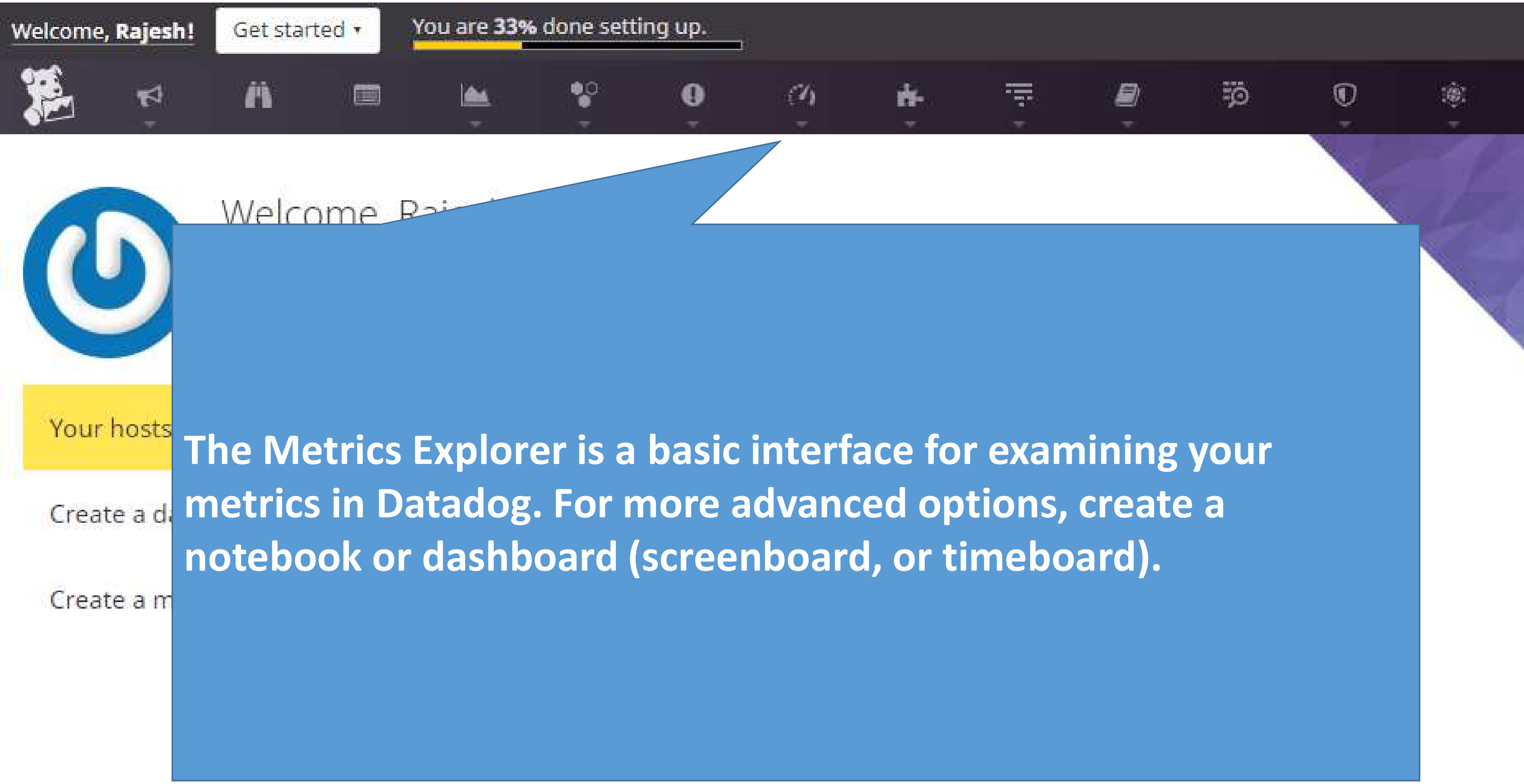
Trigger when the metric is above the threshold on average during the last 5 minutes for any **host**

Alert threshold: > 30 (30 %)

Warning threshold: > 20 (20 %)

Alert recovery threshold: <= Alert recovery threshold (opt

Warning recovery threshold: <= Warning recovery threshold


Welcome, Rajesh!
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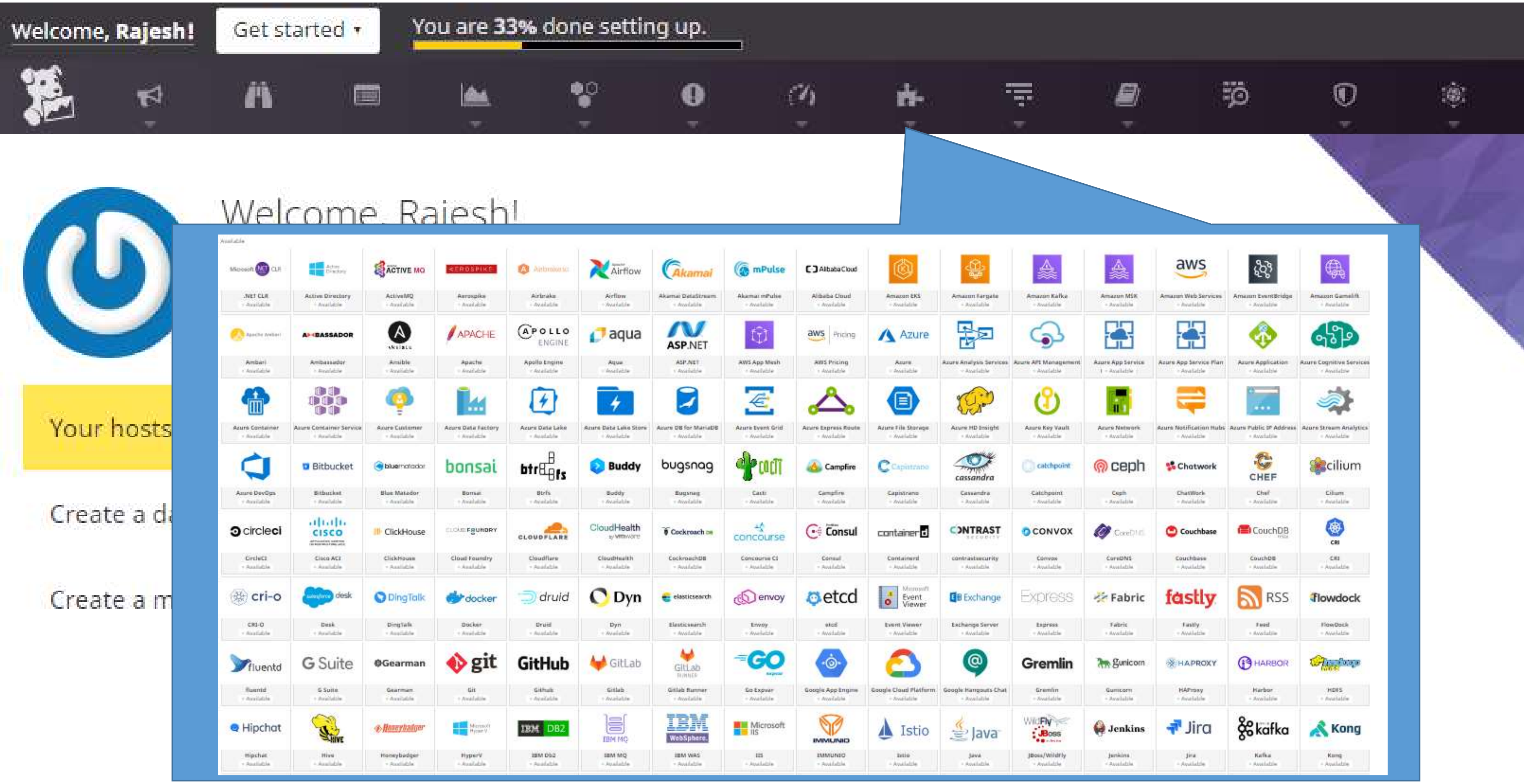
The Metrics Explorer is a basic interface for examining your metrics in Datadog. For more advanced options, create a notebook or dashboard (screenboard, or timeboard).


.NET CLR
Active Directory
ActiveMQ
Aerospike
Airbrake
Airflow
Akamai DataStream
Akamai mPulse
Alibaba Cloud
Amazon EKS
Amazon Fargate
Amazon Kafka
Amazon MSK
Amazon Web Services
Amazon EventBridge
Amazon Gamelift
Ambari
Ambassador
Ansible
Apache
Apollo Engine
Aqua
ASP.NET
AWS App Mesh
AWS Pricing
Azure
Azure Analysis Services
Azure API Management
Azure App Service
Azure App Service Plan
Azure Application
Azure Cognitive Services
Azure Container
Azure Container Service
Azure Customer
Azure Data Factory
Azure Data Lake
Azure Data Lake Store
Azure DB for MariaDB
Azure Event Grid
Azure Express Route
Azure File Storage
Azure HD Insight
Azure Key Vault
Azure Network
Azure Notification Hubs
Azure Public IP Address
Azure Stream Analytics
Azure DevOps
Bitbucket
Blue Matador
Bonsai
Btrfs
Buddy
Bugsnag
Cacti
Campfire
Capistrano
Cassandra
Catchpoint
Ceph
ChatWork
Chef
Cilium
CircleCI
Cisco ACI
ClickHouse
Cloud Foundry
Cloudflare
CloudHealth
CockroachDB
Concourse CI
Consul
Containerd
contrastsecurity
Convox
CoreDNS
Couchbase
CouchDB
CRI
CRI-O
Desk
DingTalk
Docker
Druid
Dyn
Elasticsearch
Envoy
etcd
Event Viewer
Exchange Server
Express
Fabric
Fastly
Feed
FlowDock
Fluentd
G Suite
Gearman
Git
Github
Gitlab
Gitlab Runner
Go Expvar
Google App Engine
Google Cloud Platform
Google Hangouts Chat
Gremlin
Gunicorn
HAProxy
Harbor
HDFS
Hipchat
Hive
Honeybadger
HyperV
IBM Db2
IBM MQ
IBM WAS
IIS
IMMUNIO
Istio
Java
JBoss/WildFly
Jenkins
Jira
Kafka
Kong

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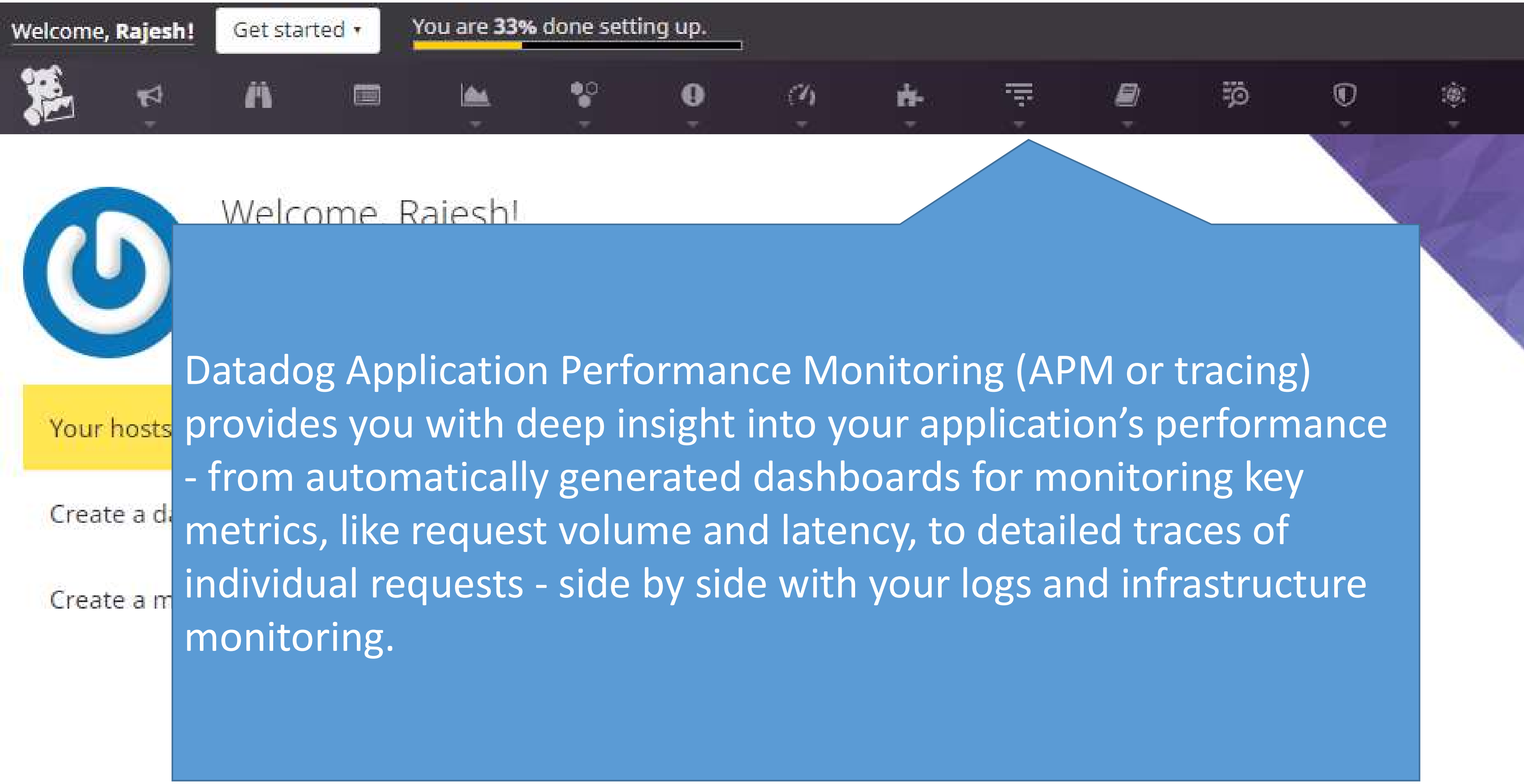
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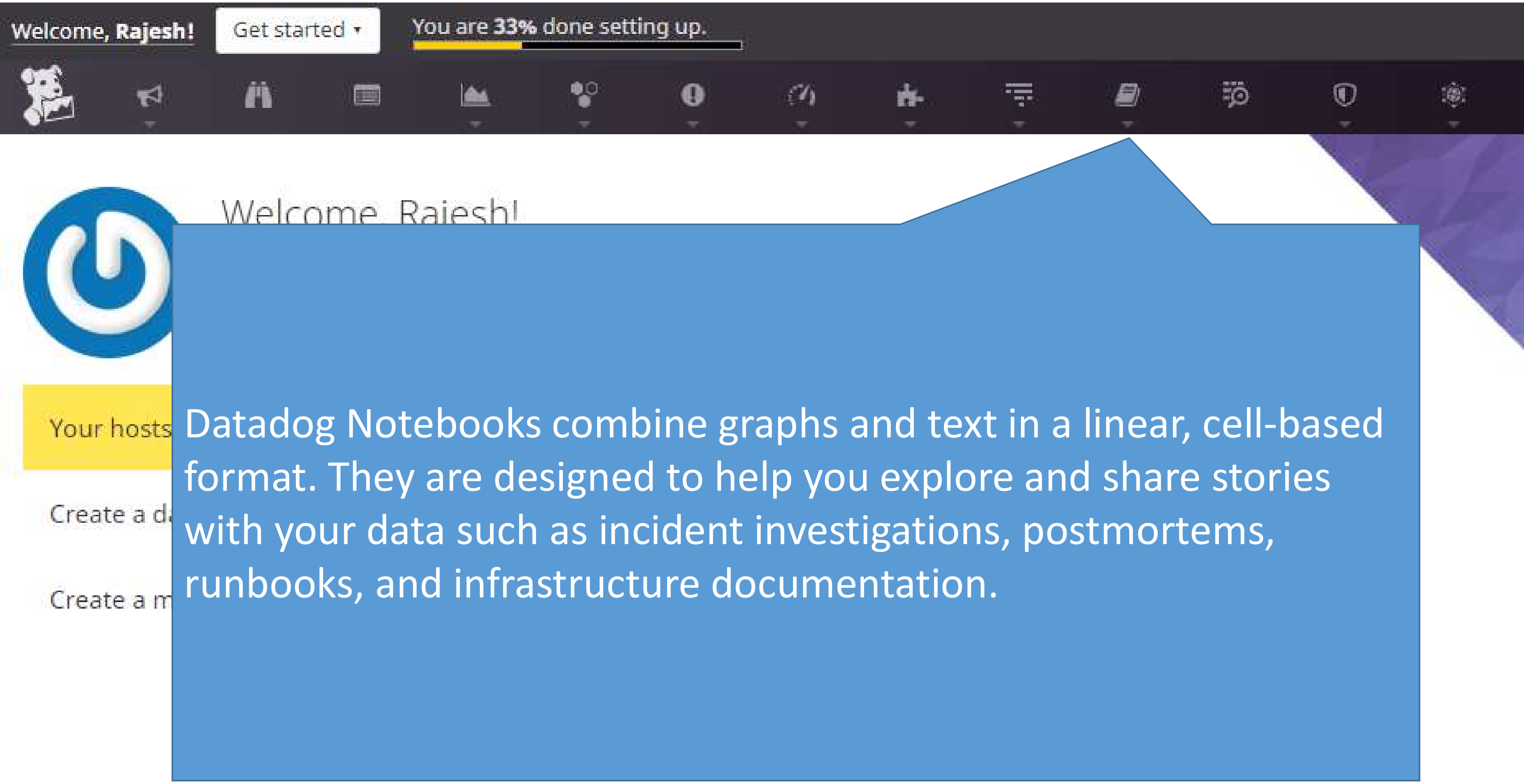
Datadog Application Performance Monitoring (APM or tracing) provides you with deep insight into your application’s performance - from automatically generated dashboards for monitoring key metrics, like request volume and latency, to detailed traces of individual requests - side by side with your logs and infrastructure monitoring.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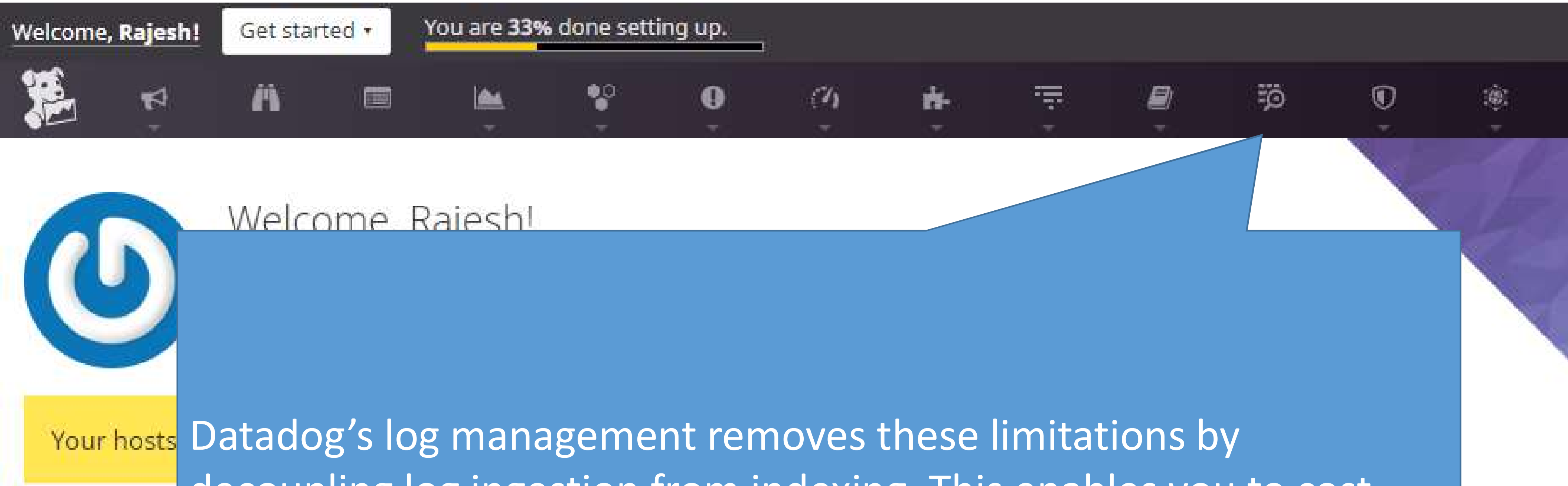
Datadog Notebooks combine graphs and text in a linear, cell-based format. They are designed to help you explore and share stories with your data such as incident investigations, postmortems, runbooks, and infrastructure documentation.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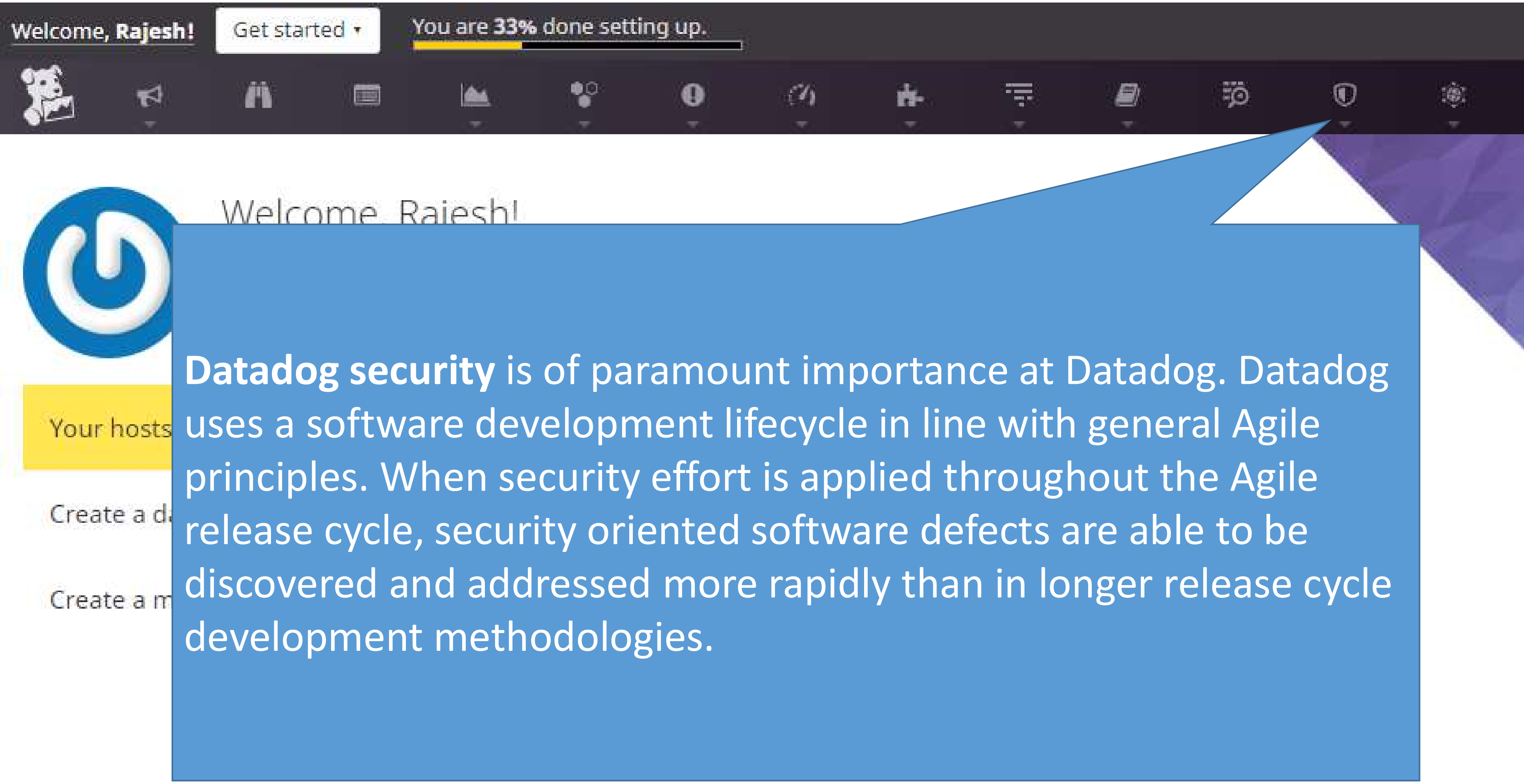
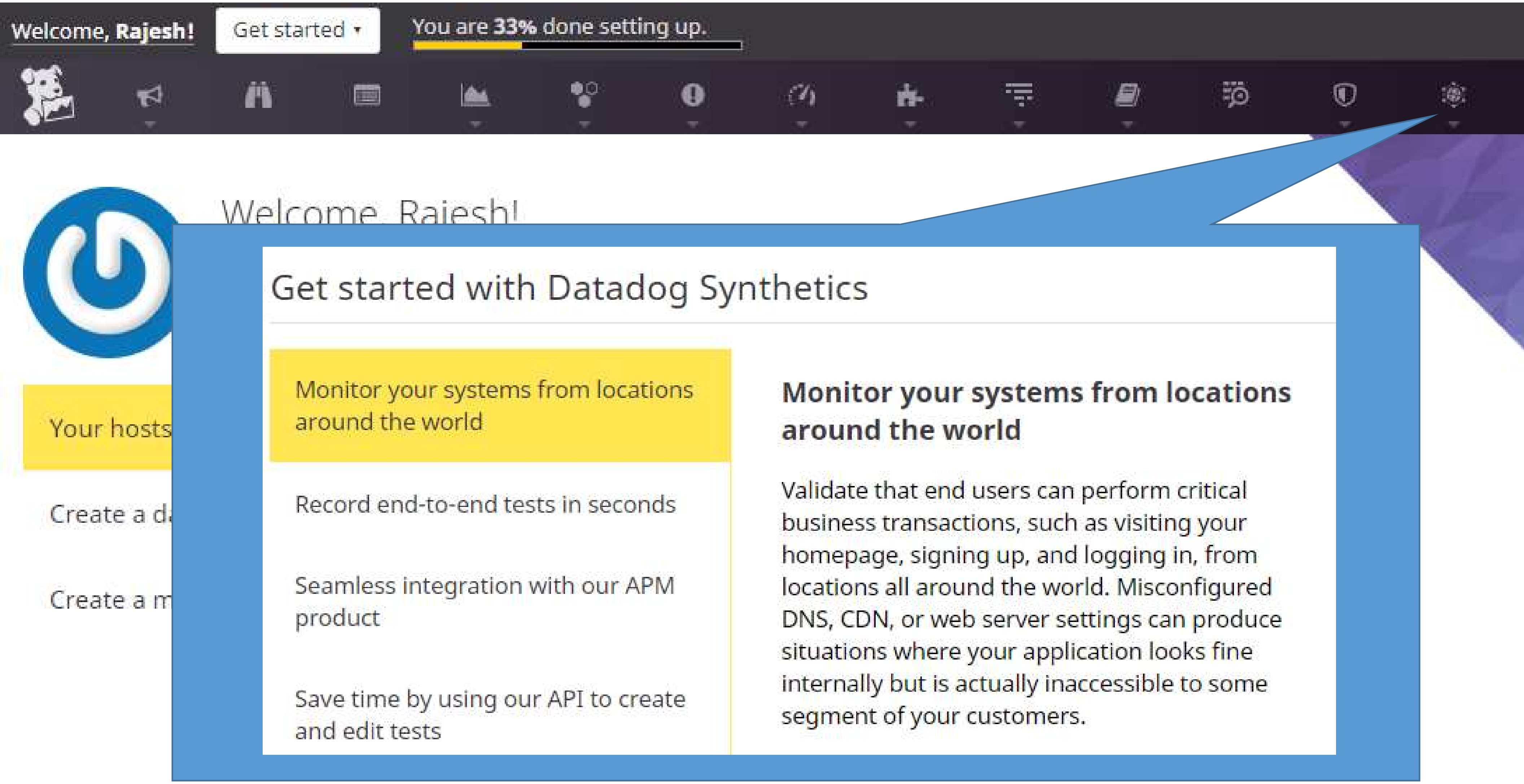
You are 33% done setting up.
Welcome, Rajesh!
Your hosts
Create a d
Create a m

Datadog’s log management removes these limitations by decoupling log ingestion from indexing. This enables you to cost-effectively collect, process, archive, explore, and monitor all your logs with no log limits. This is called Logging without Limits*.


Welcome, Rajesh!
Get started ▾
You are 33% done setting up.
Welcome, Rajesh!
Your hosts
Create a d
Create a m

Datadog security is of paramount importance at Datadog. Datadog uses a software development lifecycle in line with general Agile principles. When security effort is applied throughout the Agile release cycle, security oriented software defects are able to be discovered and addressed more rapidly than in longer release cycle development methodologies.


Welcome, Rajesh!
Get started ▾
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Get started with Datadog Synthetics

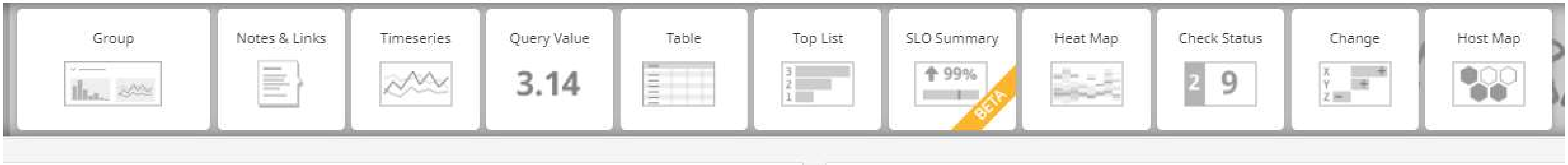
- Monitor your systems from locations around the world
- Record end-to-end tests in seconds
- Seamless integration with our APM product
- Save time by using our API to create and edit tests

Monitor your systems from locations around the world

Validate that end users can perform critical business transactions, such as visiting your homepage, signing up, and logging in, from locations all around the world. Misconfigured DNS, CDN, or web server settings can produce situations where your application looks fine internally but is actually inaccessible to some segment of your customers.

Step 1- Install Datadog Agents

Step 2- Create a Dashboard


Group
Notes & Links
Timeseries
Query Value
3.14
Table
Top List
3
2
1
SLO Summary
99%
BETA
Heat Map
Check Status
2
9
Change
X
Y
Z
Host Map

Step 3- Install Three Integrations

Step 4- Create a Monitor

Step 5- Invite Three Teammates

Step 6- Submit Custom Metrics