


# Azure DevOps Monitor with DataDog

Datadog is the essential monitoring platform for cloud infrastructure, applications, and logs.



They bring together data from servers, containers, databases, and third-party services to make your stack entirely observable.

By adding this extension, we'll be able to utilize any monitors in Datadog to stop problematic deployments in their tracks by adding Datadog Monitors as gates in your Azure Pipelines.



## Datadog Monitors as Deployment Gates

Datadog | 85 installs | ★★★★★ (0) | Free

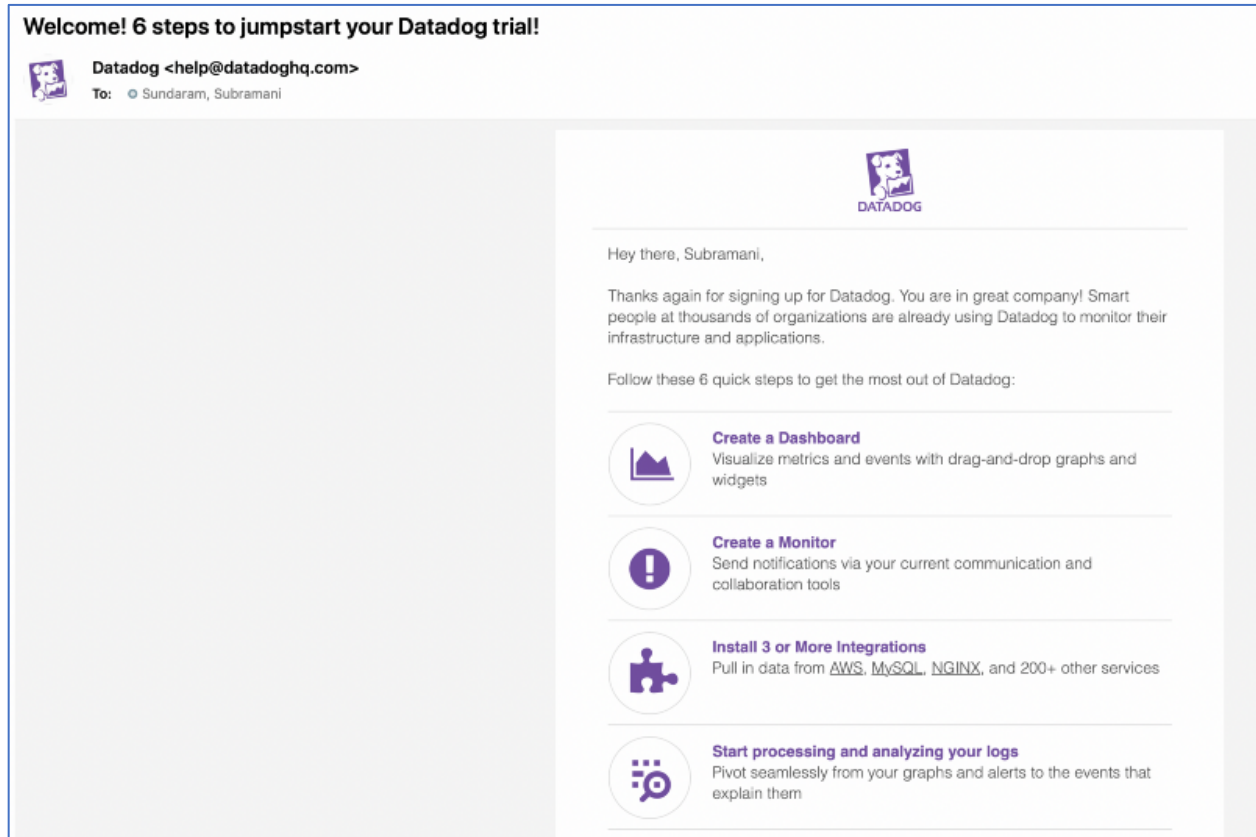
Query Datadog monitors to check for problems before proceeding with a deployment stage

Get it free

<https://marketplace.visualstudio.com/items?itemName=Datadog.datadog-monitors>

How to install and work on Datadog agent :

1. We need to first register ourself on the Datadog with the details such as email id and name and other details.



2. Then we need to install the agent on our local machine whether we are using Windows or Mac or Linux .
3. Download the agent and then run the script given below :

```

Subramanis-MacBook-Pro:Desktop subramanisundaram$ cd ../Downloads/
Subramanis-MacBook-Pro:Downloads subramanisundaram$ mkdir datadog-agent
Subramanis-MacBook-Pro:Downloads subramanisundaram$ cd datadog-agent/
Subramanis-MacBook-Pro:datadog-agent subramanisundaram$ DD_AGENT_MAJOR_VERSION=7 DD_API_KEY=9cb1be2ba211586627ed03207540f951 bash -c "$(curl -L https://raw.githubusercontent.com/DataDog/datadog-agent/master/cmd/agent/install_mac_os.sh)"
| % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
|           |          |         Dload  Upload   Total   Spent    Left   Speed
| 100  6536  100  6536    0      0  20203      0 --:--:-- --:--:-- --:--:-- 20235
* Downloading datadog-agent
##### 100.0%
* Installing datadog-agent, you might be asked for your sudo password...
Password:
Password:

[ - Mounting the DMG installer...

[ - Unpacking and copying files (this usually takes about a minute) ...

[ - Unmounting the DMG installer ...

* A datadog.yaml configuration file already exists. It will not be overwritten.

Your Agent is running properly. It will continue to run in the
background and submit metrics to Datadog.

You can check the agent status using the "datadog-agent status" command
or by opening the webui using the "datadog-agent launch-gui" command.

If you ever want to stop the Agent, please use the Datadog Agent App or
the launchctl command. It will start automatically at login.

```

4. Then we need to start the Datadog agent by running the command and then we can see the agent is running and then we can start configuring the Integrations.

```

Subramanis-MacBook-Pro:bin subramanisundaram$ datadog-agent --help

The Datadog Agent faithfully collects events and metrics and brings them
to Datadog on your behalf so that you can do something useful with your
monitoring and performance data.

Usage:
  datadog-agent [command]

Available Commands:
  check          Run the specified check
  config         Print the runtime configuration of a running agent
  configcheck    Print all configurations loaded & resolved of a running agent
  diagnose       Execute some connectivity diagnosis on your system
  dogstatsd-stats Print basic statistics on the metrics processed by dogstatsd
  flare          Collect a flare and send it to Datadog
  health         Print the current agent health
  help           Help about any command
  hostname       Print the hostname used by the Agent
  import         Import and convert configuration files from previous versions of the Agent
  integration    Datadog integration manager
  jmx
  launch-gui     starts the Datadog Agent GUI
  run            Run the Agent
  secret         Print information about decrypted secrets in configuration.
  status         Print the current status
  stop           Stops a running Agent
  tagger-list    Print the tagger content of a running agent
  version        Print the version info

Flags:
  -c, --cfgpath string  path to directory containing datadog.yaml
  -h, --help            help for datadog-agent
  -n, --no-color        disable color output

Subramanis-MacBook-Pro:bin subramanisundaram$ vi /opt/datadog-agent/etc/datadog.yaml
Subramanis-MacBook-Pro:bin subramanisundaram$ datadog-agent run
2020-06-01 13:34:04 +04 | CORE | INFO | (cmd/agent/app/run.go:179 in StartAgent) | Starting Datadog Agent v7.19.2
2020-06-01 13:34:04 +04 | CORE | INFO | (cmd/agent/app/run.go:210 in StartAgent) | Hostname is: Subramanis-MacBook-Pro.local
2020-06-01 13:34:05 +04 | CORE | ERROR | (cmd/agent/app/run.go:239 in StartAgent) | Error while starting GUI: listen tcp 127.0.0.1:5002: bind: address already in use
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/forwarder/forwarder.go:231 in Start) | Forwarder started, sending to 1 endpoint(s) with 1 worker(s) each: "https://7-19-2-app.agent.datadoghq.com" (1 api key(s))
2020-06-01 13:34:05 +04 | CORE | ERROR | (pkg/dogstatsd/server.go:136 in NewServer) | can't listen: listen udp 127.0.0.1:8125: bind: address already in use
2020-06-01 13:34:05 +04 | CORE | ERROR | (cmd/agent/app/run.go:262 in StartAgent) | Could not start dogstatsd: listening on neither udp nor socket, please check your configuration
2020-06-01 13:34:05 +04 | CORE | INFO | (cmd/agent/app/run.go:277 in StartAgent) | logs-agent disabled
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/tagger/tagger.go:152 in tryCollectors) | docker tag collector successfully started
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/collector/runner/runner.go:92 in NewRunner) | Runner started with 4 workers.
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/collector/python/init.go:303 in Initialize) | Initializing rtloader with python3 /opt/datadog-agent/embedded
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/collector/python/datadog_agent.go:120 in LogMessage) | - | (ddyaml.py:123) | monkey patching yaml.load...
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/collector/python/datadog_agent.go:120 in LogMessage) | - | (ddyaml.py:127) | monkey patching yaml.load_all...
2020-06-01 13:34:05 +04 | CORE | INFO | (pkg/collector/python/datadog_agent.go:120 in LogMessage) | - | (ddyaml.py:131) | monkey

```

5. Then login to this site (<https://app.datadoghq.com/>) with the username and password that we will receive over the email .

6. Click on the Integrations section and choose which one we wanted to get integrated with . In my case i have choosen the GITHUB and AZURE DEVOPS.

There are more than 100+ options available for Azure , AWS , Docker , Ansible, etc etc . We can choose which one we want and based on that we need to do our configurations .

Integrations


APIs

Agent

Embeds

Q Search for an integration...

Installed



Azure DevOps





























































✓ Installed

GitHub

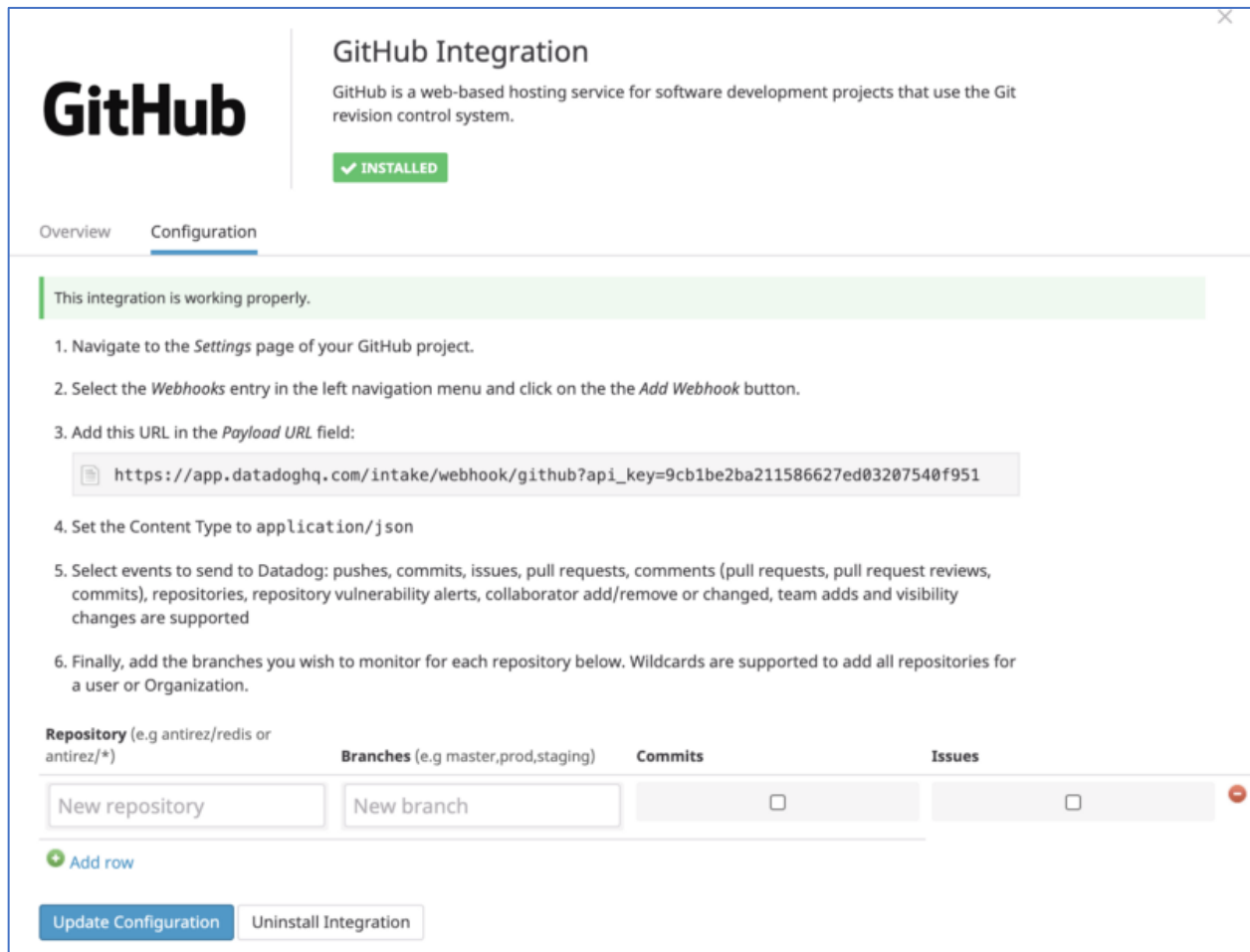
GitHub

✓ Installed

Available

 Microsoft .NET CLR Available	 Active Directory Available	 ActiveMQ Available	 Aerospike Available	 Airbrake Available	 Airflow Available	 Akamai Available	 mPulse Available	 Alibaba Cloud Available	 Amazon EKS Available	 Amazon Fargate Available	 Amazon Kinesis Available
 Amazon MSK Available	 Amazon Web Services Available	 Amazon EventBridge Available	 Amazon Sagemaker Available	 Analog Available	 Analog Available	 Apache Available	 Apache Available	 Apache Available	 Apache Available	 ASP.NET Available	 Auth0 Available
 AWS App Mesh Available	 AWS Pricing Available	 Azure Available	 Azure Analysis Services Available	 Azure API Management Available	 Azure App Service Environment Available	 Azure App Service Plan Available	 Azure Application Gateway Available	 Azure Cognitive Services Available	 Azure Container Instances Available	 Azure Container Service Available	 Azure Container Insights Available
 Azure Data Factory Available	 Azure Data Lake Analytics Available	 Azure Data Lake Store Available	 Azure DB for MySQL Available	 Azure Event Grid Available	 Azure Express Route Available	 Azure File Storage Available	 Azure HD Insight Available	 Azure Key Vault Available	 Azure Network Interface Available	 Azure Notification Hubs Available	 Azure Public IP Address Available
 Azure Stream Analytics Available	 Bitbucket Available	 Blue Notepad Available	 Bonsai Available	 Btrfs Available	 Buddy Available	 Bugsnap Available	 Cacti Available	 Campfire Available	 Capistrano Available	 Cassandra Available	 Catchpoint Available

7. After choosing the GITHUB , we need to click on the configuration tab and see what is the configuration that we need to do on the GITHUB side .



The screenshot shows the 'GitHub Integration' configuration page in Datadog. The page has a header with the GitHub logo and a status 'INSTALLED'. Below the header, there are two tabs: 'Overview' and 'Configuration'. The 'Configuration' tab is active. A green message bar states 'This integration is working properly.' Below this, there are six numbered steps for configuration. Step 3 includes a text box with a URL: 'https://app.datadoghq.com/intake/webhook/github?api\_key=9cb1be2ba211586627ed03207540f951'. Step 4 mentions setting the Content Type to 'application/json'. Step 5 lists events to send to Datadog. Step 6 mentions adding branches to monitor. At the bottom, there is a table with columns: 'Repository (e.g antirez/redis or antirez/\*)', 'Branches (e.g master,prod,staging)', 'Commits', and 'Issues'. The 'Repository' column has a text input 'New repository'. The 'Branches' column has a text input 'New branch'. The 'Commits' and 'Issues' columns have checkboxes. Below the table is a '+ Add row' button. At the very bottom, there are two buttons: 'Update Configuration' and 'Uninstall Integration'.

**GitHub Integration**

GitHub is a web-based hosting service for software development projects that use the Git revision control system.

✓ INSTALLED

Overview Configuration

This integration is working properly.

1. Navigate to the *Settings* page of your GitHub project.
2. Select the *Webhooks* entry in the left navigation menu and click on the the *Add Webhook* button.
3. Add this URL in the *Payload URL* field:  
`https://app.datadoghq.com/intake/webhook/github?api_key=9cb1be2ba211586627ed03207540f951`
4. Set the Content Type to `application/json`
5. Select events to send to Datadog: pushes, commits, issues, pull requests, comments (pull requests, pull request reviews, commits), repositories, repository vulnerability alerts, collaborator add/remove or changed, team adds and visibility changes are supported
6. Finally, add the branches you wish to monitor for each repository below. Wildcards are supported to add all repositories for a user or Organization.

Repository (e.g antirez/redis or antirez/*)	Branches (e.g master,prod,staging)	Commits	Issues
<input type="text" value="New repository"/>	<input type="text" value="New branch"/>	<input type="checkbox"/>	<input type="checkbox"/>

+ Add row

Update Configuration Uninstall Integration

After copying this Webhook from here , i need to go to Github and go to settings and then paste it there so that i can get all the changes done on the GITHUB to the Datadog and i can monitor it as events across.



subramaniaym / nodejs-docs-hello-world

forked from Azure-Samples/nodejs-docs-hello-world

Watch 0

Star 0

Fork 959

<> Code

Pull requests 0

Actions

Projects 0

Wiki

Security 0

Insights

Settings

Options

Manage access

Branches

Webhooks

Notifications

Integrations

Deploy keys

Secrets

Actions

Moderation

Interaction limits

Webhooks / Add webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in our [developer documentation](#).

Payload URL \*

https://app.datadoghq.com/intake/webhook/github?api\_key=9cb

Content type

application/json

Secret

SSL verification

By default, we verify SSL certificates when delivering payloads.

Enable SSL verification

Disable (not recommended)

Which events would you like to trigger this webhook?

Just the push event.

Send me everything.

Let me select individual events.

Active

We will deliver event details when this hook is triggered.

Add webhook

subramaniaym / nodejs-docs-hello-world

forked from Azure-Samples/nodejs-docs-hello-world

Watch 0

Star 0

Fork 959

<> Code

Pull requests 0

Actions

Projects 0

Wiki

Security 0

Insights

Settings

Options

Manage access

Branches

Webhooks

Notifications

Integrations

Deploy keys

Secrets

Actions

Moderation

Interaction limits

Webhooks

Add webhook

Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

https://snyk.io/webhook/github/5da8a89d-18af-4afe-a12b-e366b313cf09 (pull\_request and push)

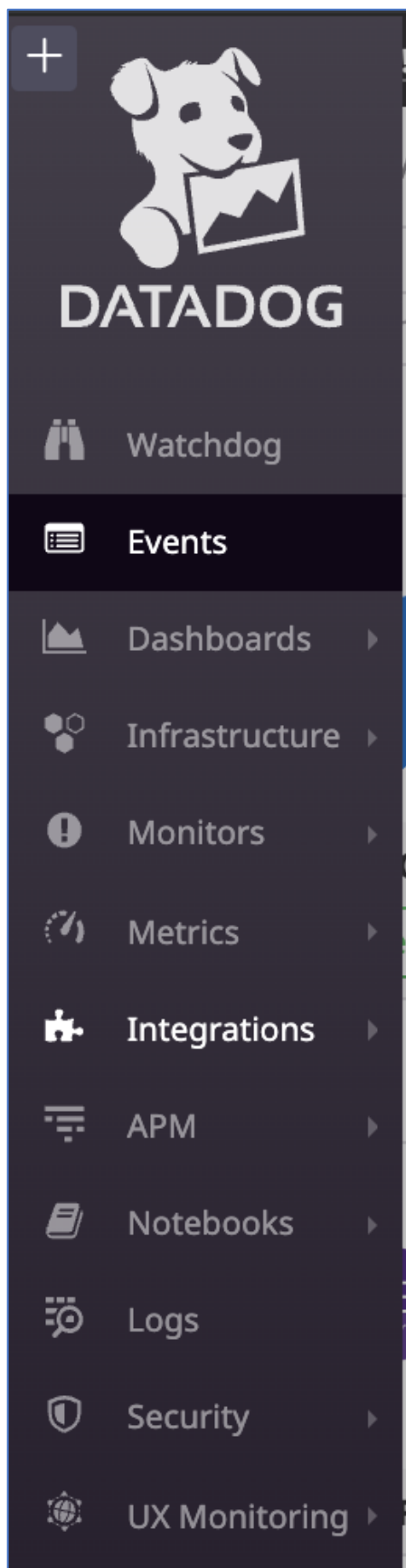
EditDelete

https://app.datadoghq.com/intake/webhook/github (all events)

EditDelete

8. Now after the above setup , we need to go to the below events and check the items that we are doing on GITHUB will be reflected here .





FROM	
All	
Azure DevOps	<input checked="" type="checkbox"/> <input type="checkbox"/>
Datadog	<input checked="" type="checkbox"/> <input type="checkbox"/>
Github	<input checked="" type="checkbox"/> <input type="checkbox"/>
Monitor Alert	<input checked="" type="checkbox"/> <input type="checkbox"/>
My Apps	<input checked="" type="checkbox"/> <input type="checkbox"/>
Users	<input checked="" type="checkbox"/> <input type="checkbox"/>

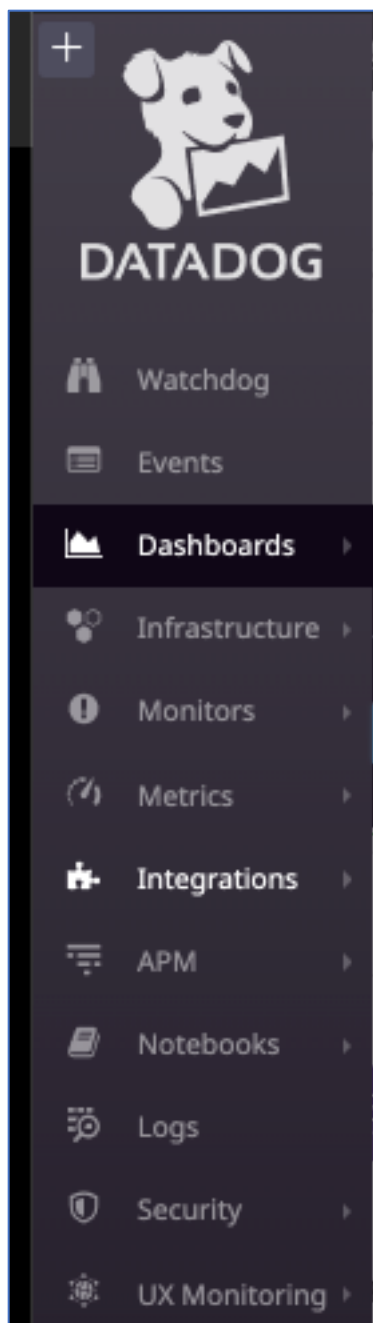
PRIORITY	
All	
Normal	
Low	

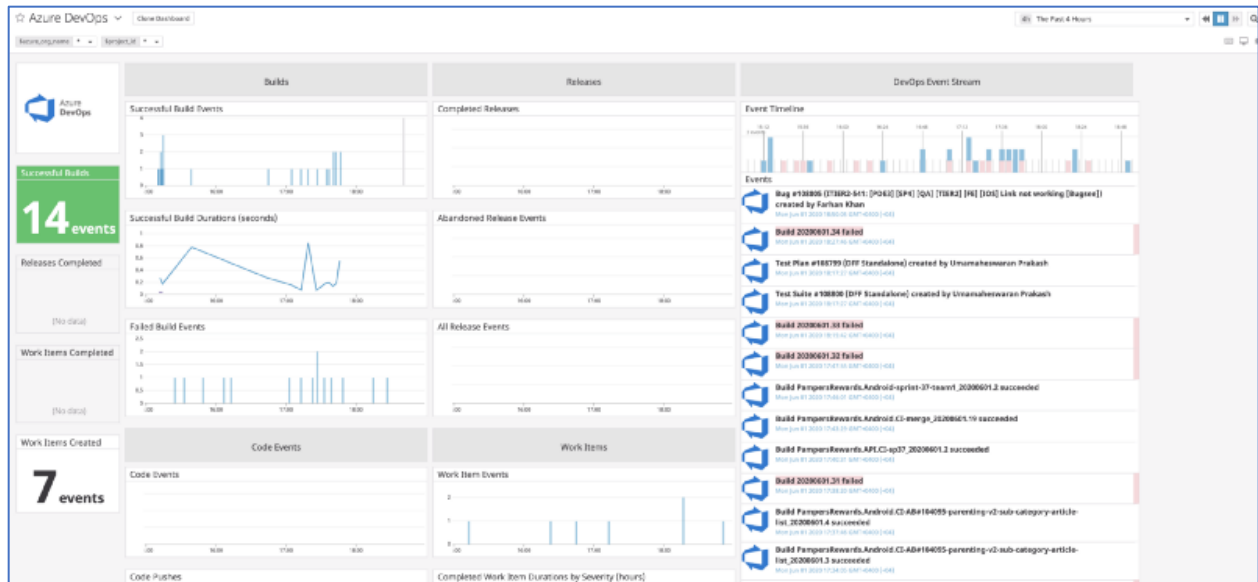
STATUS	
All	
Error	
Warning	
Success	
Info	

We can choose the Azure DevOps and GitHub events from the above checkbox and then we can start seeing the events on what ever is happening on both the tools.



Then we need to go to the Menu and Dashboards and then choose the Azure DevOps Dashboard accordingly.





## Create a service hook for Azure DevOps Services and TFS with Datadog :

- Before we do the above step and above integration , we need to follow this one like we need to setup the service end point .
- Create events and metrics in Datadog in response to events from Azure DevOps Services. Use these metrics and events in Datadog to create dashboards, troubleshoot issues, and create monitors to alert you of critical issues. Accepts all Azure DevOps event types.
- We need to get the Datadog API key and then put it on the service hook of Azure Devops .

Settings · Service hooks (Fabrikam) +

dev.azure.com/fabrikam / Fabrikam%20Fiber/\_settings/serviceHooks

Azure DevOps

fabrikam / Fabrikam Fiber / Settings / Service hooks

**FF Fabrikam Fiber** +

- Overview
- Boards
- Repos
- Pipelines
- Test Plans
- Artifacts

**Project Settings**

Fabrikam Fiber

**General**

- Overview
- Teams
- Permissions
- Notifications
- Service hooks**
- Dashboards

**Boards**

- Project configuration
- Team configuration
- GitHub connections

**Pipelines**

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections

**Repos**

- Repositories
- Policies

**Test**

- Retention

**Service Hooks**

Integrate with your favorite services by no

**+ Create subscription**

**1** Project settings

**2** Service hooks

**3** Create subscription

## Service

Select a service to integrate with. [Discover more integrations](#)

App Center

AppVeyor

Azuqua

Azure App Service

Azure Service Bus

Azure Storage

Bamboo

Campfire

Datadog

Flowdock

Grafana

HipChat

HockeyApp

Jenkins

### Datadog

A monitoring and analytics platform for modern cloud environments.

**Supported events:**

All events

**Supported actions:**

Post an event in Datadog

[Learn more about this service](#)

Previous

Next

Test

Finish

Cancel



NEW SERVICE HOOKS SUBSCRIPTION

# Action

Select and configure the action to perform.

Perform this action

Post an event in Datadog

Create an event and corresponding metric(s) in Datadog whenever this service hook is triggered.

## SETTINGS

Datadog API Key ⓘ

required

✓

Datadog Account Type ⓘ

required

US Datadog Account

✓

Previous

Next

Test

Finish

Cancel

NEW SERVICE HOOKS SUBSCRIPTION

Action

Select and configure the action to perform.

Perform this action

Post an event in Datadog

Create an event and corresponding metric(s) in Datadog whenever this service hook is triggered.

SETTINGS

Datadog API Key ⓘ

required

✓

Datadog Account Type ⓘ

required

US Datadog Account

US Datadog Account

EU Datadog Account

✓

Previous

Next

Test

Finish

Cancel

- Test the service hook subscription and finish the wizard.
- Repeat steps 2–5 for each event type you want to send to Datadog. Datadog accepts and encourages users to send all event types.
- Now that the service hooks are configured, go to Datadog to see events and metrics start to flow into your environment.

## Datadog Monitors as Deployment Gates:

Consider a canary deployment that updates an e-commerce website in stages across different regions. To ensure the update was successful before rolling it out to the next region, you might want to check the status of various health indicators in the recently updated region, such as:

- the memory and CPU utilization of hosts in that region
- the number of error logs from your shopping cart application
- the results of an automated browser check, which verifies that the website's regional endpoint loads quickly and responds correctly to simulated user actions

In Datadog, we can create individual monitors for everything you want to know about, and then combine them using a composite monitor, using simple logic statements to specify a desired combination of monitor conditions.

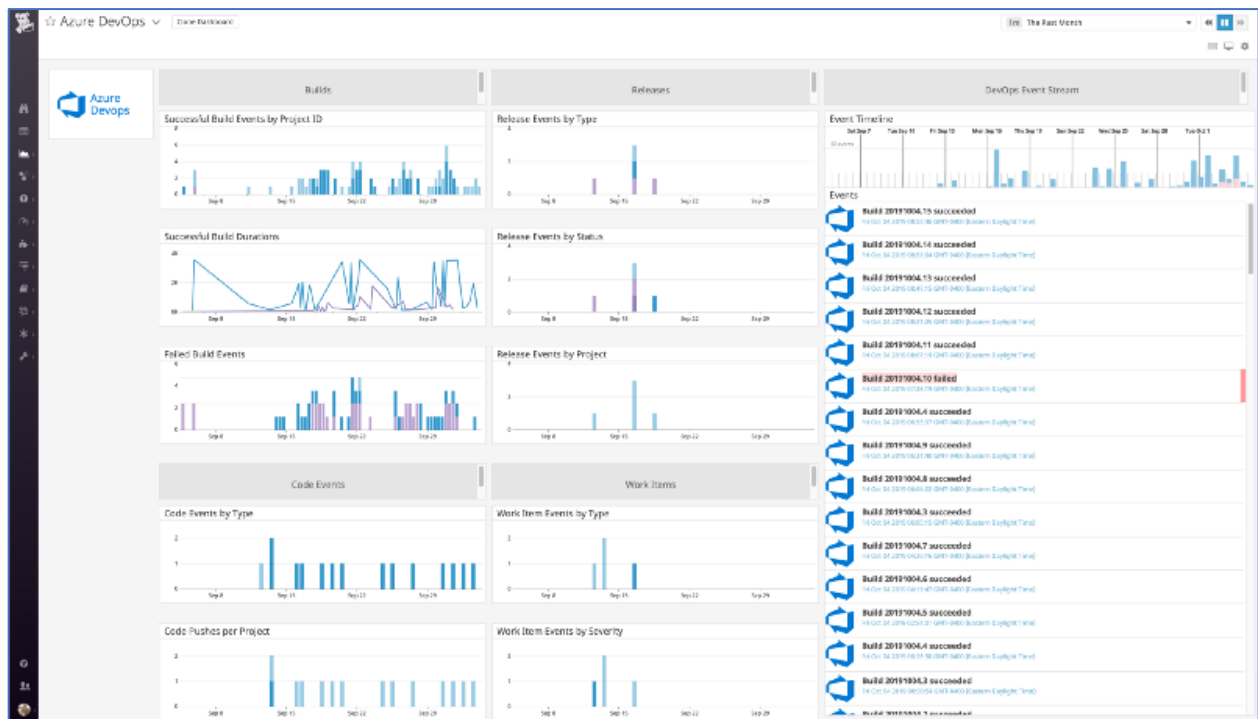
Then, we can set that composite monitor as a gate between the two stages of a pipeline to automatically stop a deployment if an unhealthy state is detected in Datadog.

The screenshot displays the Datadog CI/CD interface for a pipeline named 'steve-test-app - CD'. The pipeline configuration shows a sequence of stages: 'Drop', 'US West' (1 job, 1 task), and 'US East' (1 job, 0 task). The 'US West' stage is highlighted, and its configuration is shown in a sidebar on the right. The sidebar includes a 'Cates' section with a toggle for 'Enabled' and a 'The delay before evaluation' field set to 5 minutes. Below this, the 'Deployment gates' section is expanded, showing a 'Verify US West' gate. This gate is configured with the following details:

- Task version:** g\*
- Display name:** Verify US West
- Datadog:** Steve's Datadog Account
- Monitor ID:** 8229087
- Severity threshold:** Alert

We can define the health of our service, using Datadog monitors as gates in Azure DevOps can help you ensure that your deployments go off without a hitch.

Once after all the steps are completed , we will be seeing the below Dashboard which is our real time monitoring .



For any DevSecOps Assessment Services or Migration of DevOps tools please reach out to me on the below details.

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