

Full Stack Self-Service Diagnostics with Dynatrace



HOT Day
sponsored by



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Prerequisites

- Personal AWS Account:
 - <https://aws.amazon.com/free/>
- Postman API Client
 - <https://www.getpostman.com/downloads/>
- Download/Clone the Repository:
 - <https://github.com/wmsegar/Dynatrace-Hotday-2019-SelfServiceDiagnostics>
 - or
 - <https://bit.ly/2MkMkgI>

Agenda

- Formalities
 - Introductions
 - What we're covering
 - Level of Expertise required
 - Individual EC2 Instances
 - EasyTravel – Book Exciting travel to far away destinations
- Setup and Launching our EC2 instance with EasyTravel
- Configuration API
- Use Case 1 – CPU Increase
- Use Case 2 – Booking Failure
- Use Case 3 – Slow Login
- Use Case 4 – Homepage Slowdown
- Tips and Tricks

What we're covering/not covering

- This is an exploration of common
- This is not a product tutorial
- This is not a test
- There is no need to be an AWS expert and everything we are covering can be applied to ANY environment (e.g. Azure, GCP, Kubernetes, On-Prem, etc...)
- The goal of this sessions is:
 - Help you become more comfortable using Dynatrace to diagnose application problems
 - Make the diagnosis easy for others in your organization
 - Not everybody needs to be a "Dynatrace Expert"

How we're covering

- We will walk through several Use Case Problem patterns
- Each Student will have their own private EC2 instance running a version of EasyTravel (created via CloudFormation)
- Each Student will have their own private Dynatrace SaaS tenant
 - Tenant ID and Credentials on your attached card
- During the course of this session we will be doing the following:
 - Creating our environment via CloudFormation
 - Performing Dynatrace configurations via the UI and the API
 - Triggering EasyTravel Problem Patterns via the EasyTravel Config UI

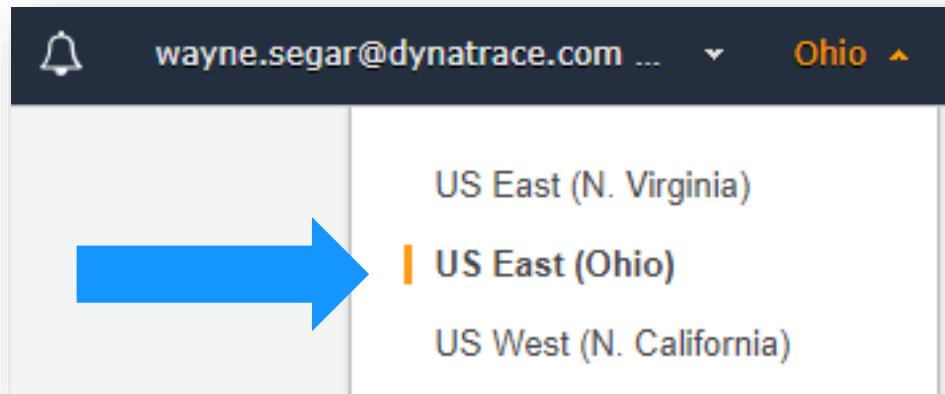
Level of Expertise

- Basic Dynatrace familiarity
- Expert certification not required
- REST API basics

Setup Work

Setup AWS: Default Region

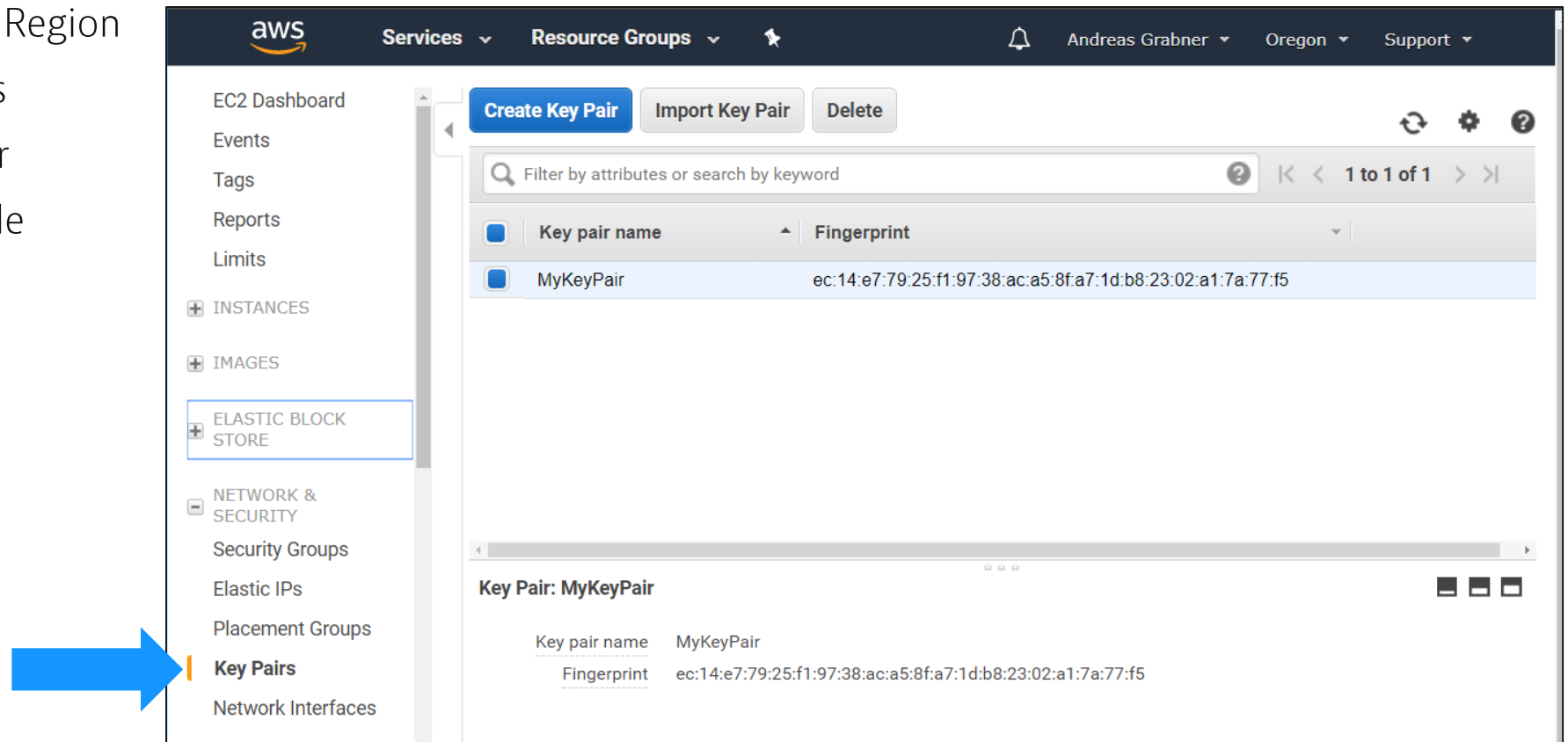
- Login to your AWS Account: <https://aws.amazon.com>
 - Validate and make note of your default region



Setup AWS: EC2 Key Pair

1. Create EC2 Key Pair

1. Go to EC2 – Pick Region
2. Click on Key Pairs
3. Create a new Pair
4. Store the .pem file



The screenshot shows the AWS Management Console interface. In the left-hand navigation menu, the 'Key Pairs' link is highlighted with a blue arrow. The main content area displays the 'Key Pairs' page, which includes a 'Create Key Pair' button, a search bar, and a table listing existing key pairs. The table has two columns: 'Key pair name' and 'Fingerprint'. One key pair, 'MyKeyPair', is listed with its fingerprint: 'ec:14:e7:79:25:f1:97:38:ac:a5:8f:a7:1d:b8:23:02:a1:7a:77:f5'. Below the table, there is a section titled 'Key Pair: MyKeyPair' showing the details of the selected key pair.

Key pair name	Fingerprint
MyKeyPair	ec:14:e7:79:25:f1:97:38:ac:a5:8f:a7:1d:b8:23:02:a1:7a:77:f5

Key Pair: MyKeyPair

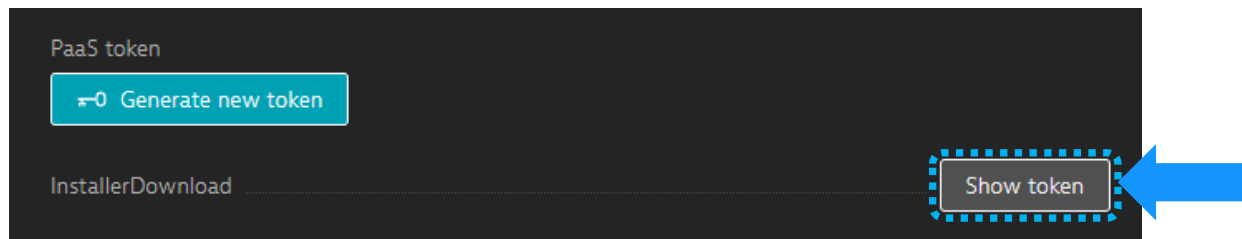
Key pair name	MyKeyPair
Fingerprint	ec:14:e7:79:25:f1:97:38:ac:a5:8f:a7:1d:b8:23:02:a1:7a:77:f5

Setup Dynatrace: Retrieve API Token

- Login to your Dynatrace SaaS Tenant provided to you:

https://<TENANT_ID>.sprint.dynatracelabs.com

- Navigate to:
 - Click "Deploy Dynatrace" from the left side menu
 - Click "Start Installation"
 - Click "Set up PaaS monitoring"
 - Click "Show token"



- Copy your token to your clipboard

Launching our EC2 Instance

Our CloudFormation Template will create a Production Linux server with EasyTravel installed/running and deploy a OneAgent pointing to your Dynatrace SaaS Tenant

Launching the Stack ◀

Upload Template

Filling in the Details

Create and Confirm

Follow Events

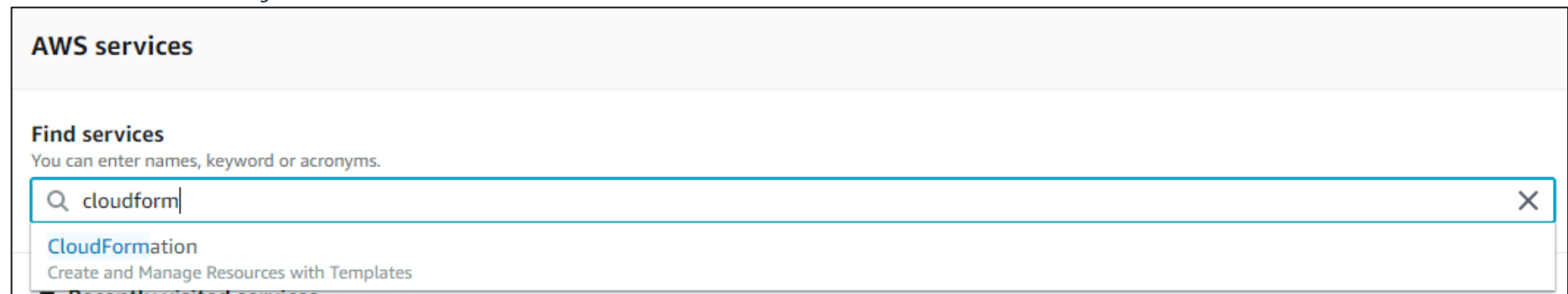
View Outputs

Validate Environment

Cleanup

Launching the CloudFormation Stack

- What is CloudFormation?
 - A declarative way to define AWS Resources, e.g: EC2, CodeDeploy, CodePipeline, Lambda, Roles, ELBs, ...
 - Learn more about CloudFormation:
<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide>
- Our Steps
 - In your AWS Console browse to the CloudFormation Service



Launching the Stack

Upload Template ◀

Filling in the Details

Create and Confirm

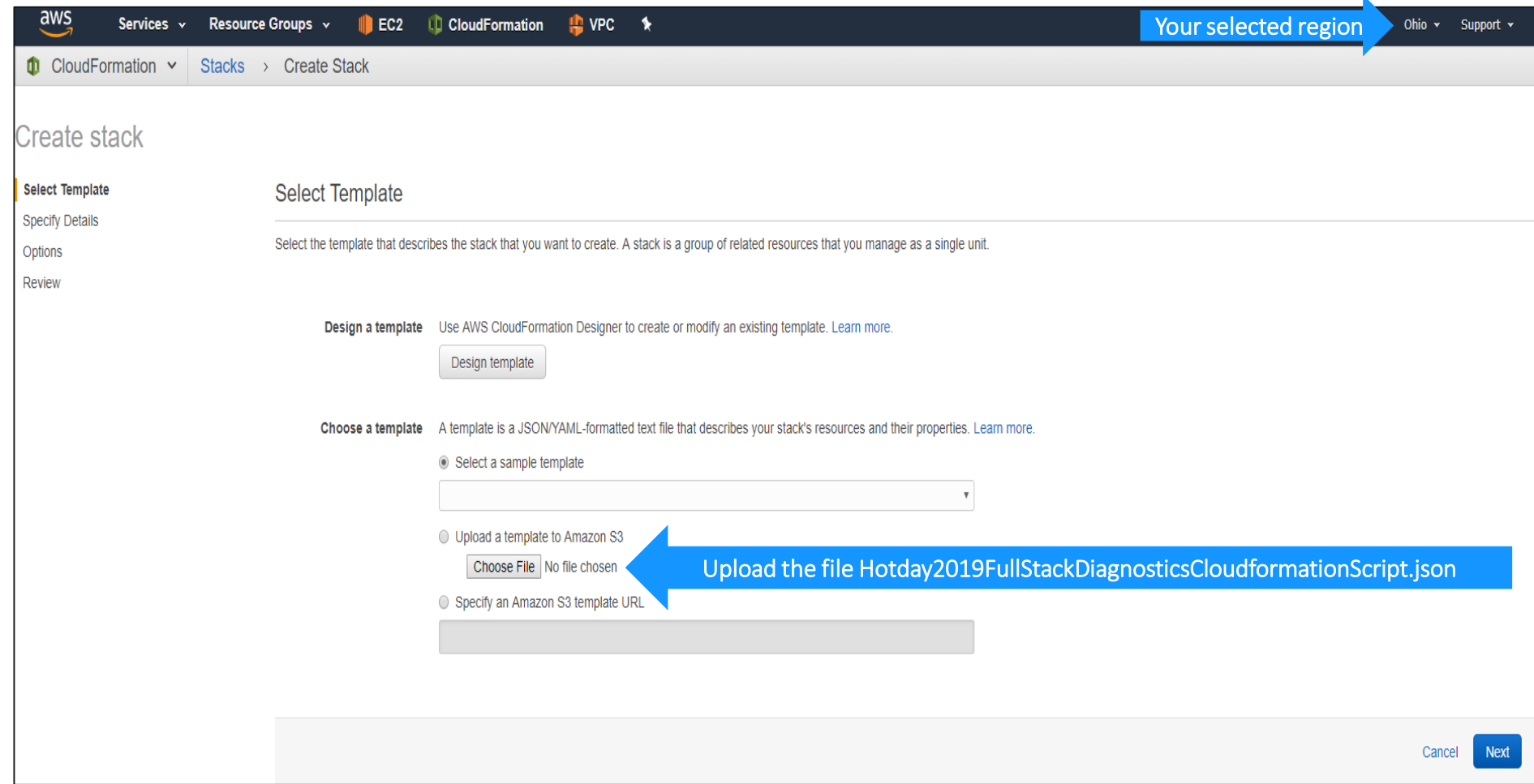
Follow Events

View Outputs

Validate Environment

Cleanup

Upload Template



aws Services ▾ Resource Groups ▾ EC2 CloudFormation VPC ⚡ Your selected region Ohio ▾ Support ▾

CloudFormation ▾ Stacks > Create Stack

Create stack

Select Template

Specify Details

Options

Review

Select Template

Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.

Design a template Use AWS CloudFormation Designer to create or modify an existing template. [Learn more.](#)

Choose a template A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. [Learn more.](#)

☒ Select a sample template

☐ Upload a template to Amazon S3

No file chosen

☐ Specify an Amazon S3 template URL

CloudFormation can be found in the GitHub repository

Launching the Stack

Upload Template

Filling in the Details ◀

Create and Confirm

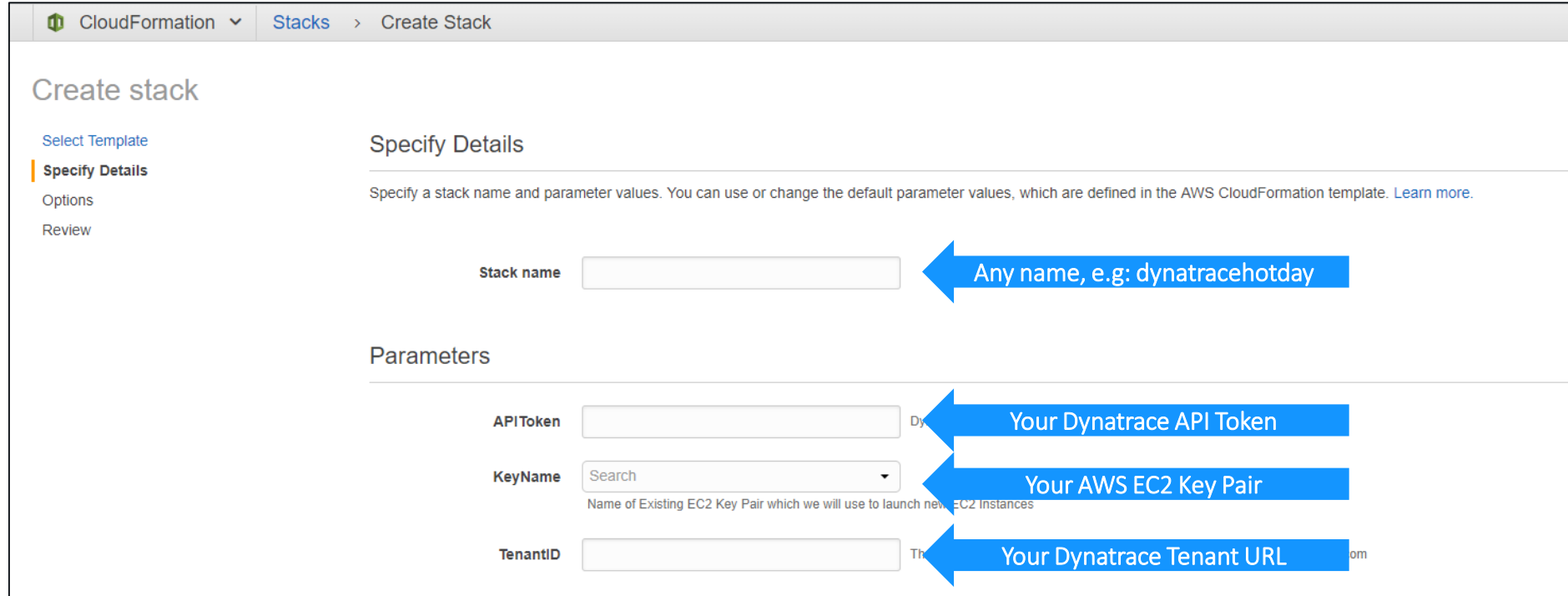
Follow Events

View Outputs

Validate Environment

Cleanup

Filling in the Details



The screenshot shows the 'Create Stack' page in the AWS CloudFormation console. The breadcrumb navigation at the top reads 'CloudFormation > Stacks > Create Stack'. On the left, a sidebar contains links for 'Select Template', 'Specify Details' (which is highlighted with an orange bar), 'Options', and 'Review'. The main content area is titled 'Create stack' and is divided into two sections: 'Specify Details' and 'Parameters'.

In the 'Specify Details' section, there is a text input field for 'Stack name'. A blue arrow points to this field with the text 'Any name, e.g: dynatracehotday'.

The 'Parameters' section contains three fields:

- 'APIToken': A text input field with a blue arrow pointing to it labeled 'Your Dynatrace API Token'.
- 'KeyName': A dropdown menu with 'Search' as the selected option. A blue arrow points to it with the text 'Your AWS EC2 Key Pair'. Below the dropdown, a small text label reads 'Name of Existing EC2 Key Pair which we will use to launch new EC2 instances'.
- 'TenantID': A text input field with a blue arrow pointing to it labeled 'Your Dynatrace Tenant URL'.

Create and Confirm

Launching the Stack

Upload Template

Filling in the Details

Create and Confirm ◀

Follow Events

View Outputs

Validate Environment

Cleanup

Review

Template

Template URL

https://s3.us-east-2.amazonaws.com/cf-templates-19yzke3lizb8f-us-east-2/2018365GfD-Wayne_Perform2019.json

Description

Dynatrace Perform 2019: Full Stack Self-Service Diagnostics with Dynatrace

Estimate cost

Cost

Details

Stack name:

test

APIToken

asdfas

KeyName

WayneSegarKeyPair

TenantID

asdfasf

Options

Tags

No tags provided

Rollback Triggers

No monitoring time provided

No rollback triggers provided

Advanced

Notification

Termination Protection

Disabled

Timeout

none

Rollback on failure

Yes

Quick Create Stack

(Create stacks similar to this one, with most details auto-populated)

Cancel

Previous

Create



Follow Events

Launching the Stack

Upload Template

Filling in the Details

Create and Confirm

Follow Events ◀

View Outputs

Validate Environment

Cleanup

CloudFormation

Stacks

Create Stack

Actions

Design template

Filter: Active

By Stack Name

Showing 1 stack

Stack Name	Created Time	Status	Drift Status	Description
<input checked="" type="checkbox"/> test	2018-12-31 14:33:07 UTC-0500	CREATE_COMPLETE	NOT_CHECKED	Dynatrace Perform 2019: Full Stack Self-Service Diagnostics with Dynatrace

Overview

Outputs

Resources

Events

Template

Parameters

Tags

Stack Policy

Change Sets

Rollback Triggers

Filter by: Status

Search events

2018-12-31	Status	Type	Logical ID	Status Reason
▶ 14:33:54 UTC-0500	CREATE_COMPLETE	AWS::CloudFormation::Stack	test	
▶ 14:33:51 UTC-0500	CREATE_COMPLETE	AWS::EC2::Instance	ProductionInstance	
▶ 14:33:20 UTC-0500	CREATE_IN_PROGRESS	AWS::EC2::Instance	ProductionInstance	Resource creation Initiated
▶ 14:33:18 UTC-0500	CREATE_IN_PROGRESS	AWS::EC2::Instance	ProductionInstance	
▶ 14:33:16 UTC-0500	CREATE_COMPLETE	AWS::EC2::SecurityGroup	InstanceSecurityGroup	
▶ 14:33:15 UTC-0500	CREATE_IN_PROGRESS	AWS::EC2::SecurityGroup	InstanceSecurityGroup	Resource creation Initiated
▶ 14:33:10 UTC-0500	CREATE_IN_PROGRESS	AWS::EC2::SecurityGroup	InstanceSecurityGroup	
▶ 14:33:07 UTC-0500	CREATE_IN_PROGRESS	AWS::CloudFormation::Stack	test	User Initiated

Watch as AWS Resources get created

View Outputs

CloudFormation ▾ Stacks

Create Stack ▾ Actions ▾ Design template

Filter: Active ▾ By Stack Name

Showing 1 stack

	Stack Name	Created Time	Status	Drift Status	Description
<input checked="" type="checkbox"/>	test	2018-12-31 14:33:07 UTC-0500	CREATE_COMPLETE	NOT_CHECKED	Dynatrace Perform 2019: Full Stack Self-Service Diagnostics with Dynatrace

Overview Outputs Resources Events Template Parameters Tags Stack Policy Change Sets Rollback Triggers

Key	Value	Description	Export Name
EasyTravelConfigUI	http://ec2-18-216-147-39.us-east-2.compute.amazonaws.com:8094	Endpoint for EasyTravel Config UI	
MyStackRegion	us-east-2	The region where the stack was created.	
EasyTravelUI	http://ec2-18-216-147-39.us-east-2.compute.amazonaws.com:8079	Endpoint for EasyTravel UI	

View Output URLs

Note: It will take roughly 10 minutes for EasyTravel to fully come up

Launching the Stack

Upload Template

Filling in the Details

Create and Confirm

Follow Events

View Outputs ◀

Validate Environment

Cleanup

Launching the Stack

Upload Template

Filling in the Details

Create and Confirm

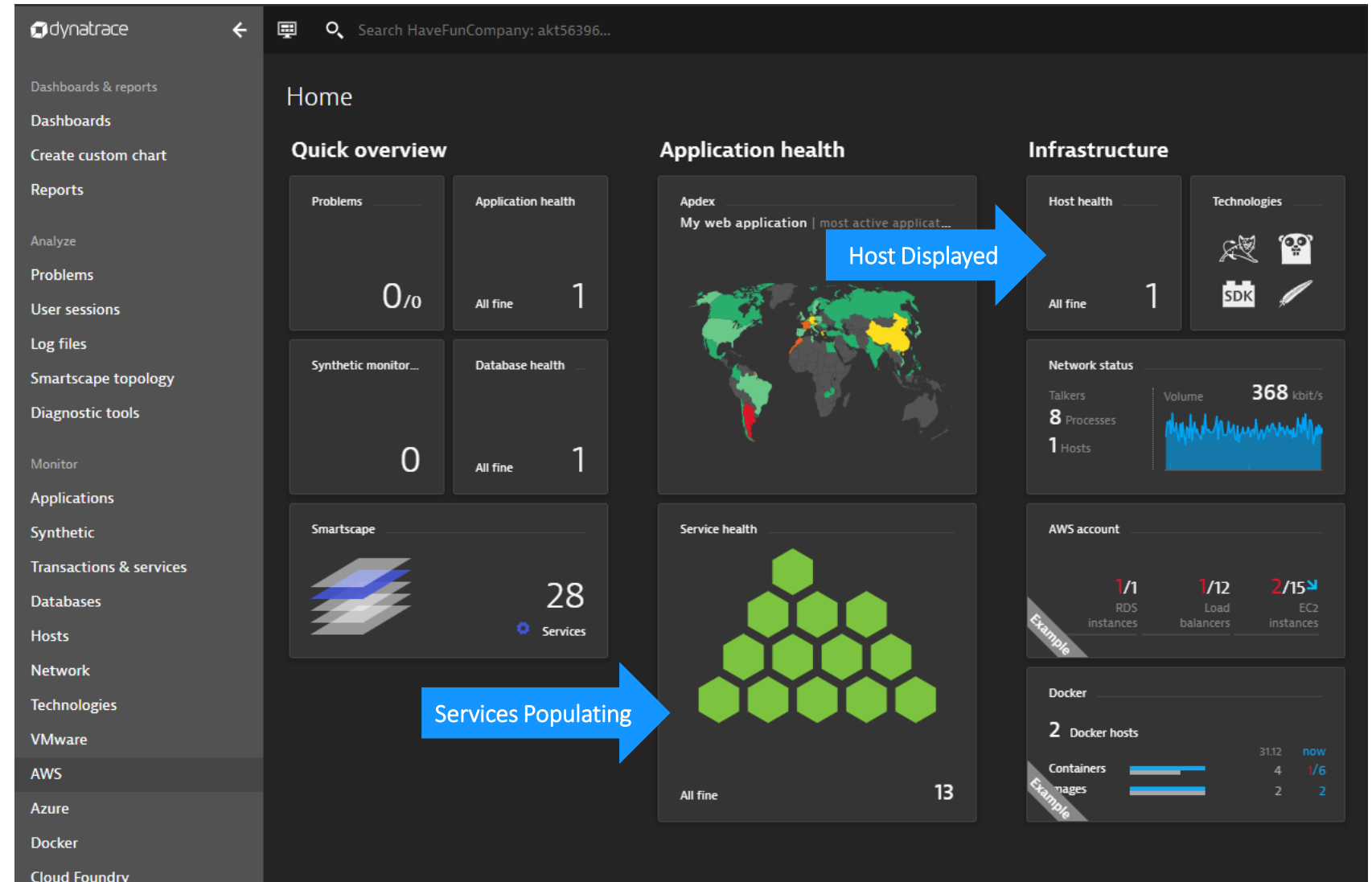
Follow Events

View Outputs

Validate Environment ◀

Cleanup

Validate Environment



Launching the Stack

Upload Template

Filling in the Details

Create and Confirm

Follow Events

View Outputs

Validate Environment

Cleanup ◀

Would it be nice if this was automated via the ConfigAPI?
Vote for RFE: <https://bit.ly/2RGytHF>

technologies > select weblauncher.jar > process group
details > Edit > Disable for the host.

Automatically monitor processes

☒ Off
 ☐ Use defaults


Set to Off

Automatically inject real user monitoring JavaScript tag

☒ Enable to inject JavaScript tag into each HTML request processed by this process group.

Enable process monitoring for specific hosts

Enable/disable monitoring of this process group on individual hosts.
To manage your process monitoring settings please use [Process group monitoring](#)

Host	Monitoring: Off / On
 com.dynatrace.easytravel.weblauncher.jar easytravel-*-* on ip-172-31-43-194.ec2.internal	<div> <input checked="" type="radio"/> Off <input type="radio"/> Use defaults </div> <p>Set to Off</p>

Launching the Stack

Upload Template

Filling in the Details

Create and Confirm

Follow Events

View Outputs

Validate Environment

Cleanup ◀

Cleanup

- Enable Java Hotsensor Placement
 - We will be creating Custom Services in the next section so we will need this in order to avoid a required restart of the Java Processes
 - Settings > Server-side > service monitoring > Custom service detection > Enable real-time updates to Java and PHP services

Custom service detection

Dynatrace automatically detects and monitors most server-side services in your environment with no configuration required. If your application doesn't rely on standard frameworks, you can set up custom services.

With a custom service you can instruct Dynatrace which method, class, or interface it should use to gain access to each of your application's custom server-side services.

Enable this setting to have changes to your custom services applied to Java and PHP processes in real-time with no required restart. [More...](#)

☒ Enable real-time updates to Java and PHP services

Set to Enabled

Java services

.NET services

PHP services

Define Java services

Configuration API

Dynatrace Configuration API

- The Dynatrace Configuration API allows API consumers to globally read and write the configuration settings of any Dynatrace environment
- The primary use cases for the Configuration API are:
 - Read and copy an existing environment configuration over to a new environment.
 - Create or change individual configuration settings via the API when setting up a new environment.
 - Read and store configurations, along with their histories, in a version management system (for example, Git).
 - Provide a mechanism to automate Monitoring/Performance-as-a-Service
 - Provide easy access to meaningful data to Application Owners with creation of Management Zones
 - Simplify complex environment with auto tagging rules
 - Extract specific business context information with request attributes

View the Configuration API Explorer

- In your Dynatrace tenant navigate to:
 - Settings > Integration > Dynatrace API
 - Click "Dynatrace API Explorer"

Dynatrace API

You can use our API to export Dynatrace monitoring data into your 3rd party reporting and analysis tools. Multiple API tokens can be created for different purposes.

Use the [Dynatrace API Explorer](#) or [read the API documentation](#) for use-cases and examples.

Create API Token to use the Config API

- In the Dynatrace API screen, click "Generate token"
- Enter a name for your token (ex. MyToken)
- Make sure to enable the following switches
- Click the "Generate" button

My Dynatrace API tokens

Generate a secure access API token that enables access to your Dynatrace monitoring data via our REST-based API.

Use the switches below to define the access scope of your Dynatrace API token.

- ☒ Access problem and event feed, metrics, topology and RUM JavaScript tag management
- ☒ Access logs
- ☒ Configure maintenance windows
- ☒ Create and configure synthetic monitors
- ☒ Read configuration
- ☒ Write configuration
- ☐ Change data privacy settings
- ☒ Capture request data
- ☐ User session query language
- ☐ Anonymize user session data for [data privacy](#) reasons
- ☐ Log import

Generate

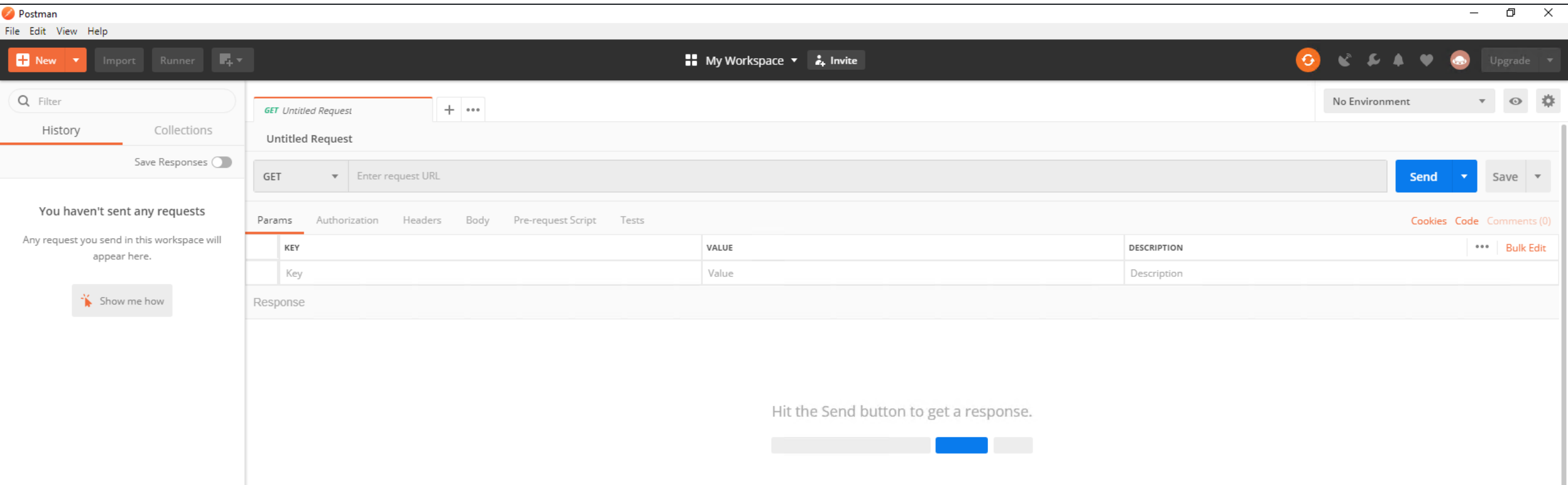
Cancel

Using the ConfigAPI via Postman

- We will be using Postman to run a series of API requests to the ConfigAPI in order to do the following:
 - Create Auto Tagging rules
 - Create Management Zones
 - Application setup (URL Grouping and Framework support)
 - Create Custom Services
 - Create Request Attributes
 - Create Synthetics Monitors
- You can use any API client to interact with any of the Dynatrace APIs, however, for this course we are using Postman because it is simple to share a collection of API requests.

Setup Postman

- If this is the first time you are using Postman, after you download and install, you will need to create a free account.
 - You can press "setup later"/"skip" on the Preferences and Team screens



Setup Postman (cont.)

Create 2 Variables EXACTLY as they appear here

Click the  icon

MANAGE ENVIRONMENTS

Add Environment

PerformHotday

<input type="checkbox"/>	VARIABLE	INITIAL VALUE ⓘ	CURRENT VALUE ⓘ	...	Persist All	Reset All
<input checked="" type="checkbox"/>	Api-Token	Api-Token PuFkS2yMQn0YnOk3mfre	Api-Token PuFkS2yMQn0YnOk3mfre			
<input checked="" type="checkbox"/>	EnvUrl	https://akt56597.sprint.dynatracelabs.com	https://akt56597.sprint.dynatracelabs.com			
	Add a new variable					

ⓘ Use variables to reuse values in different places. The current value is used while sending a request and is never synced to Postman's servers. The initial value is auto-updated to reflect the current value. [Change this behaviour from Settings.](#) [Learn more about variable values](#)

Cancel

Add

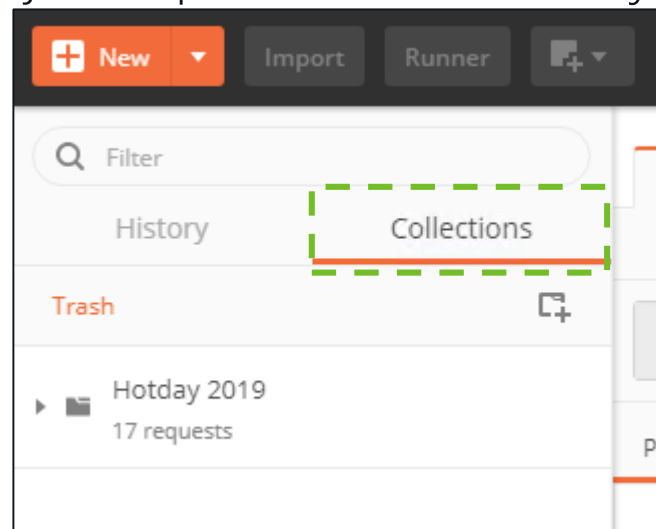
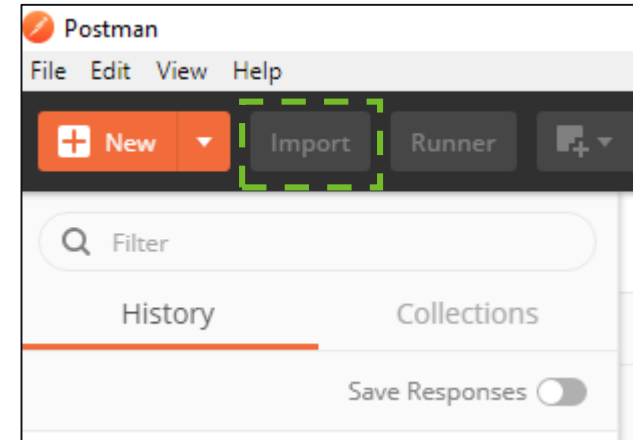
Enter a name for your Environment

Populate the values with your Full Tenant URL and API-Token

Click "Add" to create the Variables

Importing the Config API Collection

- Click the "Import" button in the upper left corner
- In the Import dialog box, click "Choose Files"
- Browse to the location where you downloaded the Github repository, and select the file: "Hotday 2019.postman_collection.json"
- After the file is uploaded, select "Collections" in the upper left corner and you should now see the collect that was just imported titled "Hotday 2019"



Running the API Collect

- In the “Hotday 2019” collection
- The Collection Runner should

Collection Runner

Choose a collection or folder

Search for a collection or folder

Hotday 2019

- Application Settings
- Custom Service Creation
- Auto Tagging Rules
- Management Zones
- Request Attributes

Environment: PerformHotday

Iterations: 1

Delay: 1000 ms

Log Responses: For all requests

Data: Select File

☐ Keep variable values

Run Hotday 2019

the popout menu

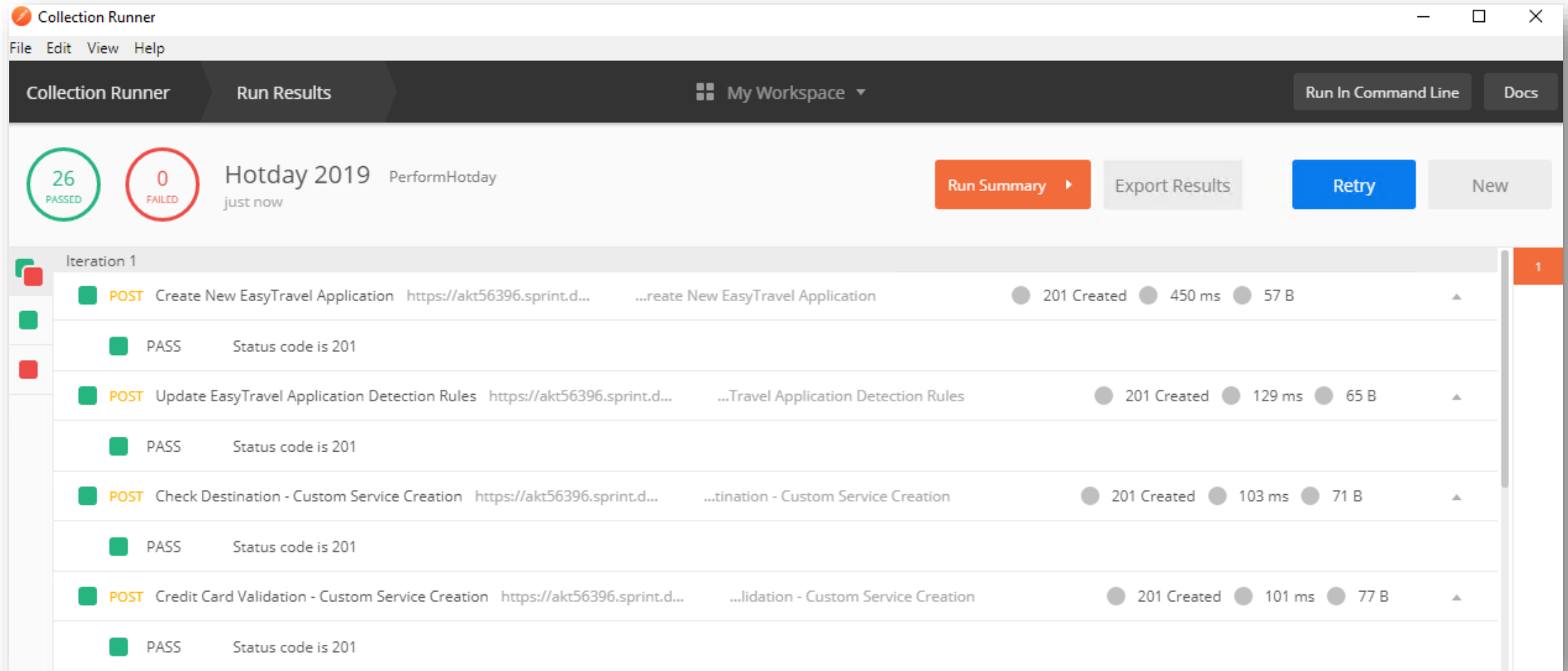
Select the Environment you created from the dropdown

Enter 1000ms Delay

Click “Run Hotday 2019”

Run Validation

- After running the collection, a Run Results window should popup with all requests successful



Collection Runner Run Results My Workspace Run In Command Line Docs

26 PASSED 0 FAILED Hotday 2019 PerformHotday just now

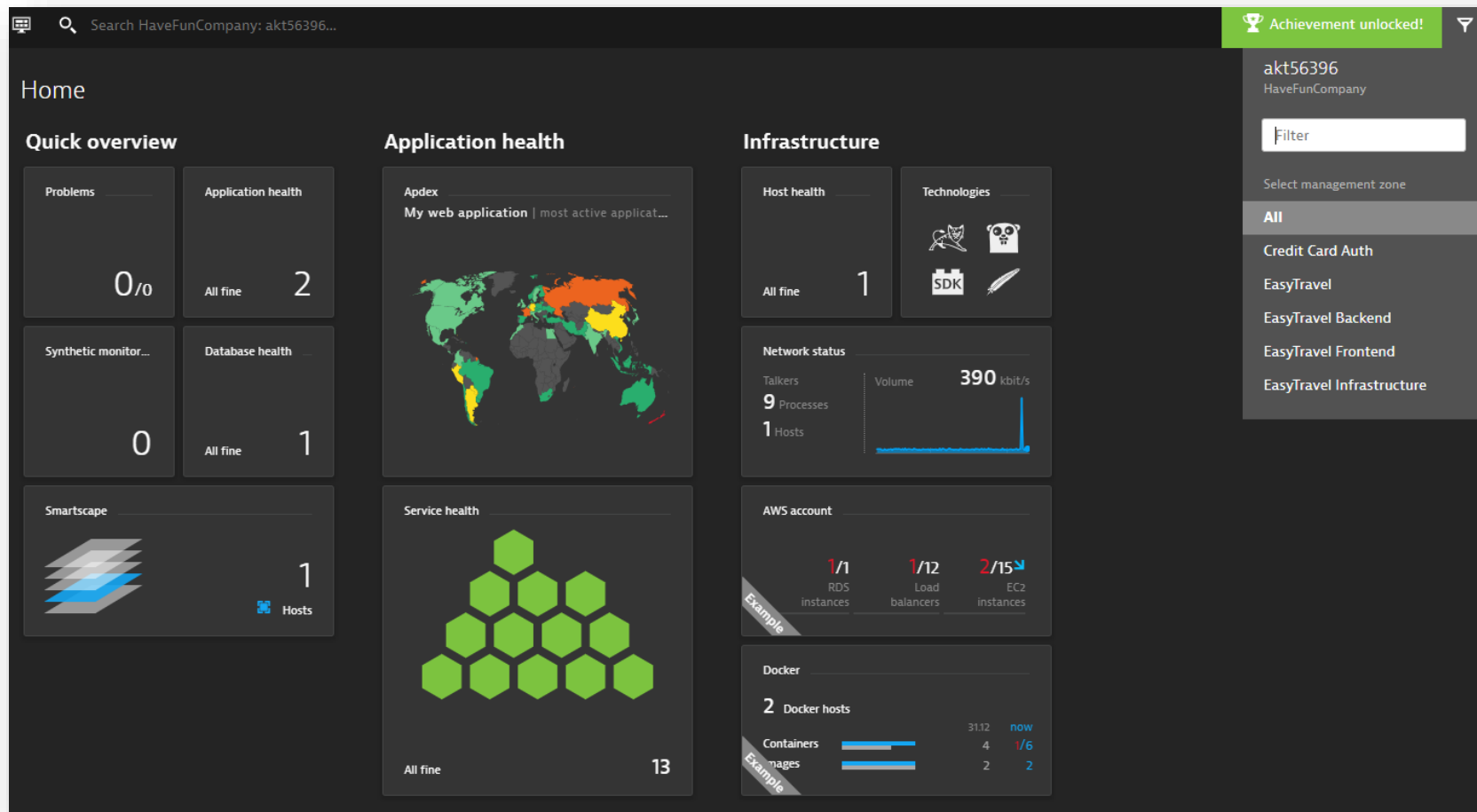
Run Summary Export Results Retry New

Iteration 1

POST	Create New EasyTravel Application	https://akt56396.sprint.d...	...reate New EasyTravel Application	201 Created	450 ms	57 B
PASS	Status code is 201					
POST	Update EasyTravel Application Detection Rules	https://akt56396.sprint.d...	...Travel Application Detection Rules	201 Created	129 ms	65 B
PASS	Status code is 201					
POST	Check Destination - Custom Service Creation	https://akt56396.sprint.d...	...tination - Custom Service Creation	201 Created	103 ms	71 B
PASS	Status code is 201					
POST	Credit Card Validation - Custom Service Creation	https://akt56396.sprint.d...	...lidation - Custom Service Creation	201 Created	101 ms	77 B
PASS	Status code is 201					

Verify the Results


- Back in your Dynatrace tenant, you should now see the results of the Config API (ex. Management Zones, Tags, etc...)



Use Case #1 – CPU Increase

Problem Pattern #1 – CPU Increase

- How to trigger Problem:
 1. Navigate to the EasyTravelConfigUI – This URL was Output as part of the CloudFormation script
 2. Once in the EasyTravelConfigUI, enable “Show Problem Patterns”



[Dynatrace](#)

easyTravel 2.0.0.3058 Build Date: 2019-01-08

Traffic

☒ Generated visits
☐ Manual visits

Show Properties
 Show Scenario File
☒ Show Problem Patterns
 Show Logfile

Customer Frontend:

☒ Web: <http://localhost:8079/> : ~5 web visits/min
☒ Mobile App: <http://localhost:8079/> : ~2 mobile app visits/min
☒ Mobile Web: <http://localhost:8079/> : ~5 mobile web visits/min
☐ Business2Business Frontend (.NET): N/A

UEM*

Production

Problem Patterns

☒ Filter: search here

☒ All ☐ Enabled ☐ Disabled

☐ AngularJSGalleryApplication


This plugin enables links on the main page to the Image Gallery AngularJS application.

☐ BadCacheSynchronization

Activating this plugin causes synchronization problems in the customer frontend and uses a lot of CPU by doing an inefficient cache lookup. Activating this plugin should show a class 'CacheLookup' as doing lots of synchronization.

Problem Pattern #1 – CPU Increase (cont.)

- How to trigger Problem:
 1. In the Filter bar search for the Problem Pattern “CPULoad”
 2. Click the “CPULoad” Problem Pattern to trigger the problem

UEM*	<div>Filter: CPULoad</div> <div><input type="radio"/> All <input type="radio"/> Enabled <input type="radio"/> Disabled</div>
Production	
Problem Patterns	<div> CPULoad</div> <div>Causes high CPU usage in the business backend process to provoke an unhealthy host health state. The additional CPU time is triggered in 8 separate threads independent of any searching/booking activity.</div>

Use Case #1 – CPU Increase

Background

EasyTravel is the main revenue generating application for booking travel. After a recent deployment to one of the backend components, your team notices that CPU usage is much higher than usual. This of course could impact users attempting to book travel on our site.

1. Investigate and figure out why this is happening
2. How would you instruct the Dev team to go about finding the problem and triaging it?

Use Case #1 – CPU Increase (cont.)


How to investigate the problem:

- Navigate to Diagnostic Tools and select the CPU Profiler (filter by Management Zone or Tag)
- View the Service with the Highest CPU consumption
- Navigate to the code level breakdown to determine what piece of code is causing increase in CPU consumption

Use Case #2 – Booking Failure

Problem Pattern #2 – Booking Failure

- How to trigger Problem:
 1. In the Filter bar search for the Problem Pattern "CreditCardCheckError500"
 2. Click the "CreditCardCheckError500" Problem Pattern to trigger the problem

UEM*	Filter: CreditCardCheckError500	<input type="radio"/> All <input type="radio"/> Enabled <input type="radio"/> Disabled
Production		
Problem Patterns	<div data-bbox="479 746 519 786"></div> <div data-bbox="529 742 848 768">CreditCardCheckError500</div> <div data-bbox="529 781 2277 806">Simulates an exception while communicating with the native application. This is triggered when the credit card is validated as part of booking a journey in the customer web frontend.</div>	

Use Case #2 – Booking Failure

Background

The Marketing Department just called in a panic that bookings dropped to near zero over the past few minutes! Obviously, this is a pretty big issue because the core business is being impacted.

1. Investigate and figure out why this is happening
2. How would you instruct the Dev team to go about finding the problem and triaging it?

Use Case #2 – Booking Failure (cont.)



How to investigate the problem:

- Navigate to Diagnostic Tools and select the Exception Analysis (filter by Management Zone or Tag)
- Determine the exception message that is "most likely" the culprit
- Determine which Service is causing this Exception and what should be done

Use Case #3 – Slow User Login

Problem Pattern #3 – Slow User Login

- How to trigger Problem:
 1. In the Filter bar search for the Problem Pattern “DBSpammingAuthWithAppDeployment”
 2. Click the “DBSpammingAuthWithAppDeployment” Problem Pattern to trigger the problem

UEM*	<div> <div>  Filter: DBSpammingAuthWithAppDeployment <div> <input type="radio"/> All <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled </div> </div> <div> <div>  DBSpammingAuthWithAppDeployment </div> <div> Plugin causes two things: simulates upgrade of the web application (by deploying a new easyTravelMonitor.war file on business backend) and enables database spamming when user is authenticated. Database spamming is started aproximately after 1 minute after deployment. It also reduces the number of cached entries in the hibernate cache in order to increase the number of DB Statements. </div> </div> </div>
Production	
Problem Patterns	

Use Case #3 – Slow User Login

Background

After a recent deployment to a component of EasyTravel customers are beginning to call the helpdesk and complain that logging in to view/book travel is "slow".

1. Investigate and figure out why this is happening
2. How would you instruct the Dev team to go about finding the problem and triaging it?

Use Case #3 – Slow User Login (cont.)

How to investigate the problem:

- Navigate to Diagnostic Tools and Select Top Database Statements
- Determine if there are any slow running queries are impacts from the recent change
- Determine what Service is responsible for this
- Is this a Database Slowdown issue?

Use Case #4 – Homepage Slowdown

Problem Pattern #4 – Homepage Slowdown

- How to trigger Problem:
 1. In the Filter bar search for the Problem Pattern "JourneyUpdateSlow"
 2. Click the "JourneyUpdateSlow" Problem Pattern to trigger the problem


UEM*

Production

Problem Patterns

✖ Filter: JourneyUpdateSlow

☐ All
 ☐ Enabled
 ☐ Disabled


JourneyUpdateSlow

This plugin updates the amount of journeys one after another. This shows the effect of using non-batched JDBC, which is usually much slower.

Use Case #4 – Homepage Slowdown

Background

The Operations team is claiming that the 'Special-Offers.jsp' and 'CalculateRecommendations' pages are experiencing a significant increased response time. VP of Operations is not happy. Your job is to find out what's going on with these pages. Some other pages may also be affected.

1. Investigate and figure out why this is happening
2. How would you instruct the Dev team to go about finding the problem and triaging it?

Use Case #4 – Homepage Slowdown (cont.)


How to investigate the problem:


- In Diagnostic Tools, view the Top Web Requests and search for Special-Offers.jsp and CalculateRecommendations Web Requests
- View the Service Flow and look for the highest % of contribution
- Determine if this is a Database issue or an Application issue or both


Tips & Tricks


Returning HTTP 200 on Failure

- Try to avoid returning a HTTP 200 to the user, when the transaction actually fails:

✓  /orange-booking-payment.jsf
EasyTravelWebserver:8079

✓  /orange-booking-payment.jsf
easyTravel Customer Frontend

✓  checkCreditCard
BookingService

 SocketNativeApplication.sendAndReceive
Credit Card Validation

/orange-booking-payment.jsf

Summary

Timing

Errors

Code level

Analyze

Topology

Service	EasyTravelWebserver:8079
Request	/orange-booking-payment.jsf
Host	ip-172-31-81-2.ec2.internal
Process	Apache Web Server easyTravel
Proxy	ip-172-31-81-2.ec2.internal (172.31.81.2)
Service type	Web request service
Service main technology	Apache HTTP Server
Technology	Apache HTTP Server (2.4.29)
Operating system	Linux (x86)
Bitness	64-bit

Metadata

URI	/orange-booking-payment.jsf?journeyId=5461
HTTP method	POST
Response status	200 - OK
Context root	/

Show in fullscreen

Close details

HTTP 200
Returned to user

Finding your code in the CPU Profiler

Diagnostic tools

CPU profiler (code level)

Hotspots

✕

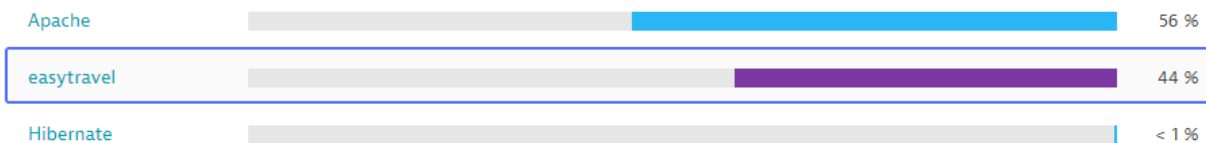
▼

▲

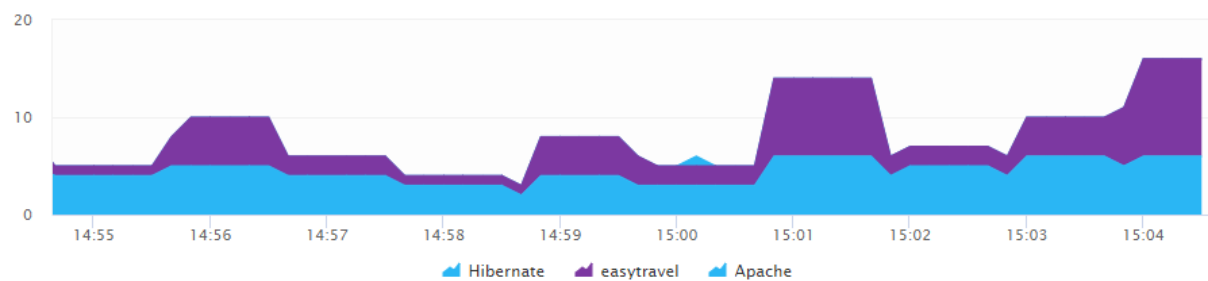
1/70 results

<div>✓</div> <div>HiddenHttpMethodFilter.doFilterInternal</div> <div> <div>■</div> <div>Spring org.springframework.web.filter</div> </div>		664	...
3 stack frames expand			
<div>✓</div> <div>HttpServlet.service</div> <div> <div>■</div> <div>Java javax.servlet.http</div> </div>		664	...
<div>✓</div> <div>AxisServlet.doPost</div> <div> <div>■</div> <div>Apache org.apache.axis2.transport.http</div> </div>		642	...
<div>✓</div> <div>HTTPTransportUtils.processHTTPPostRequest</div> <div> <div>■</div> <div>Apache org.apache.axis2.transport.http</div> </div>		641	...
2 stack frames expand			
<div>✓</div> <div>AbstractInOutMessageReceiver.invokeBusinessLogic</div> <div> <div>■</div> <div>Apache org.apache.axis2.receivers</div> </div>		641	...
<div>✓</div> <div>RPCMessageReceiver.invokeBusinessLogic</div> <div> <div>■</div> <div>Apache org.apache.axis2.rpc.receivers</div> </div>		639	...
<div>✓</div> <div>RPCUtil.invokeServiceClass</div> <div> <div>■</div> <div>Apache org.apache.axis2.rpc.receivers</div> </div>		638	...
<div>✓</div> <div>Method.invoke</div> <div> <div>■</div> <div>Reflection java.lang.reflect</div> </div>		638	...
<div>✓</div> <div>DelegatingMethodAccessorImpl.invoke</div> <div> <div>■</div> <div>Java sun.reflect</div> </div>		638	...
<div>✓</div> <div>GeneratedMethodAccessor.invoke</div> <div> <div>■</div> <div>Java sun.reflect</div> </div>		632	...
<div>✓</div> <div>JourneyService.findJourneys</div> <div> <div>■</div> <div>Java com.dynatrace.easytravel.business.webservice</div> </div>		543	...
<div>➤</div> <div>GenericPluginList.execute</div> <div> <div>■</div> <div>Java com.dynatrace.easytravel.spring</div> </div>		529	...

Execution time breakdown



Top APIs



Filtered by API: easytravel

Call tree

Hotspots

Top contributors

Method	Contribution	Stacktrace samples
easytravel com.dynatrace.easytravel.database JourneyUpdate.doExecute	<div></div>	200
Java java.net SocketInputStream.socketRead0	<div></div>	77
Java <agent> CorrelationNative.registerCachedString	<div></div>	1

Calling methods of hotspot 'JourneyUpdate.doExecute'

Search

Method	Contribution	Stacktrace samples	Actions
easytravel com.dynatrace.easytravel.database JourneyUpdate.doExecute	<div></div>	507	...
2 stack frames expand			
easytravel com.dynatrace.easytravel.spring GenericPluginList.execute	<div></div>	507	...
easytravel com.dynatrace.easytravel.business.webservice JourneyService.findJourneys	<div></div>	491	...

Properly Se

- Get Process
 - Including
- Services CAM
 - Service M
- Process Group
- Tagging rule

-qa
Last call 46 seconds ago
Smartscape view
...

Properties and tags

dev
← Tagged as Dev

Detected name Tomcat/localhost

Type Web request service

Process group -dev ← Process Group QA

Service main technology Apache Tomcat

Process technology Apache Tomcat (8.5.28.0), Java (OpenJDK 1.8.0_181), Java (OpenJDK 1.8.0_191), and MUSLC

Web server name Tomcat/localhost

Context root /

0 Applications

0 Services

1 Network client

26 /min Throughput

3 Apache To...

0 Services

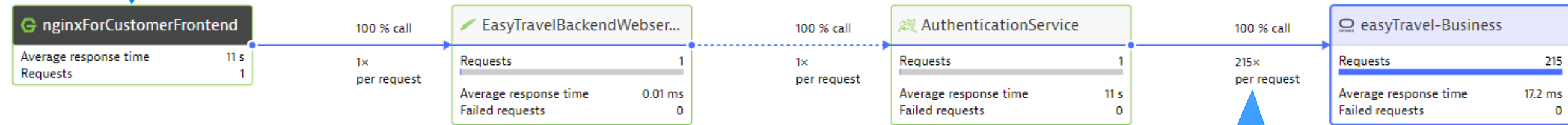
3 Databases

Processes and hosts

Process	Runs on	State
-qa		Unmonitored 18 hours 21 minutes ago
-dev ← QA and Dev mixed		Available
-dev		Available

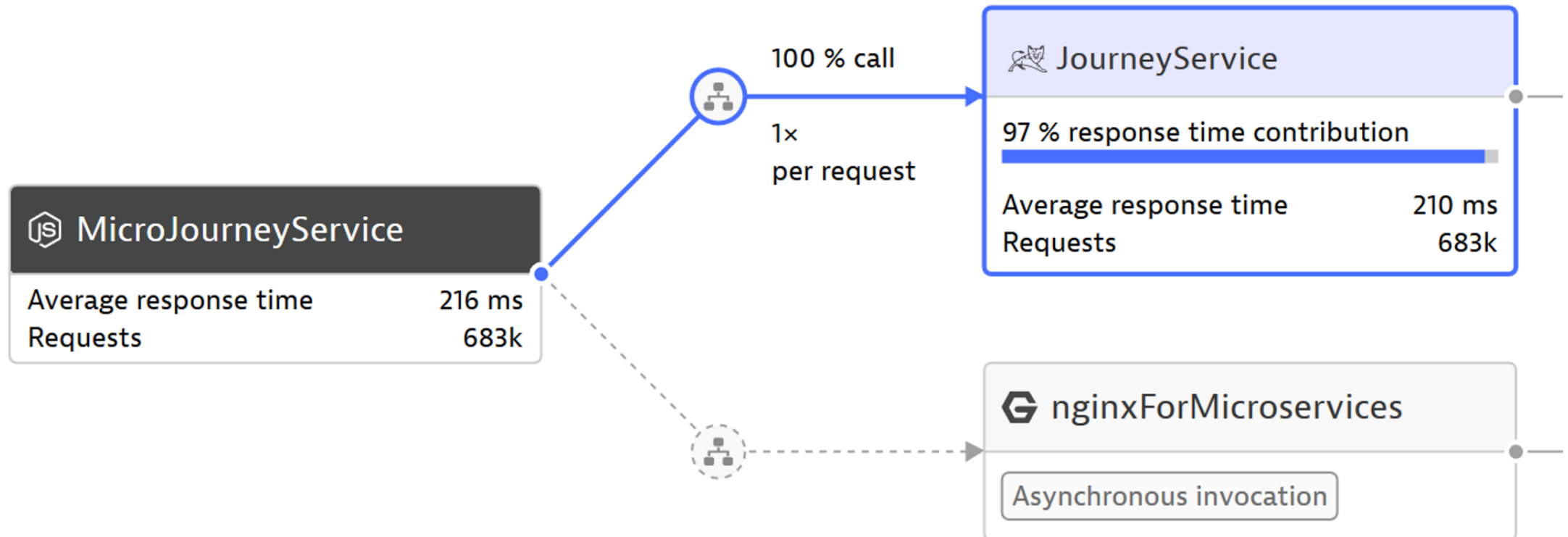
DB Spamming

Total Transaction
took 11s, for a
single request



Single request
spawns 215 DB
queries!

Microservices – Considerations for tightly coupled services



Don't forget about the Logs

- Using Log Event Detection can help find application errors
 - Common Use Cases:
 - Detect Application Errors in Native Processes
 - Detect Errors with the Application Infrastructure (syslog, Windows Event Logs, etc...)
 - Detect Errors in CloudTrail logs

Event name

Details

OS Process Error

Text pattern

OS Process Error


Detection condition

Generates Log Error Problem if number of occurrences is higher than 0/min

Detection scope

CouchDB_ET 1 log on 1 host selected

Pattern occurrences in last 24 hours



Time	Occurrences (per hour)
15:00	0
18:00	0
21:00	~3.5
25. Jan 03:00	0
06:00	0
09:00	0
12:00	0

Delete rule

Edit rule

Remember to Delete your AWS Resources!!!

Q & A

Thank you



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