



**APPDYNAMICS**

# What is an APM ?

APM - Application performance management

Monitoring and Management of performance of the Applications

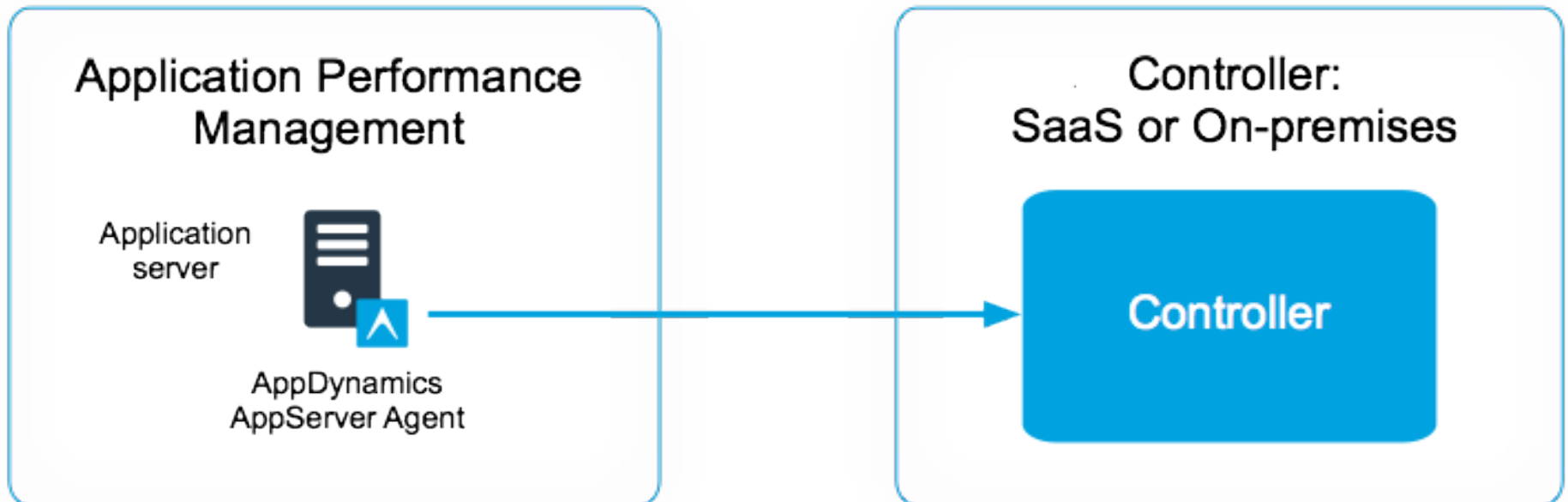
To minimize the risk of outage of the Application

To Enhance the performance of the Application



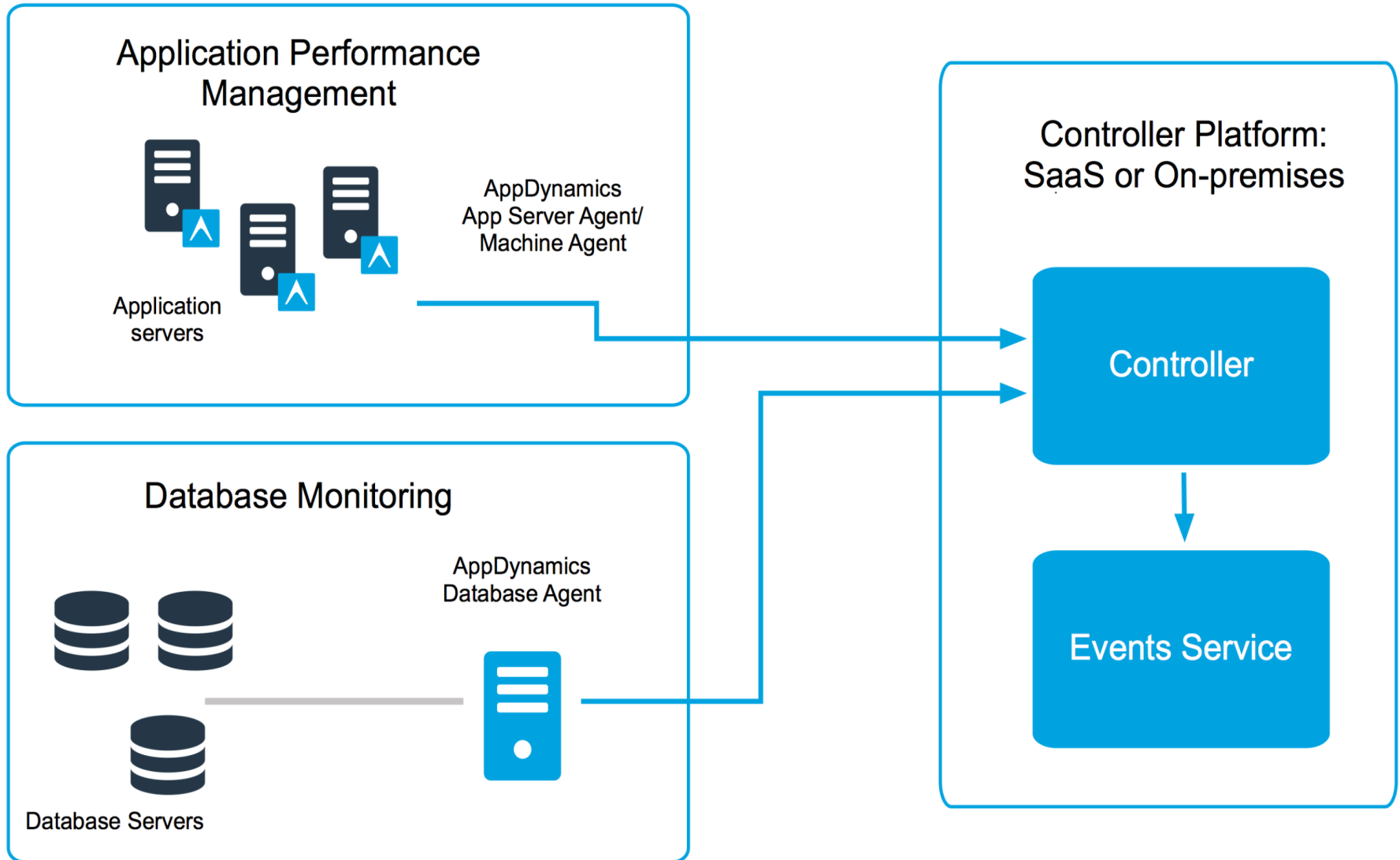
# APPDYNAMICS OVERVIEW

- ❑ AppDynamics APM Platform enables
  - ❑ To monitor and manage your entire application
    - Backend databases and Application servers
  - ❑ A single view across your application landscape
  - ❑ Gives you end-to-end visibility into the performance of your applications

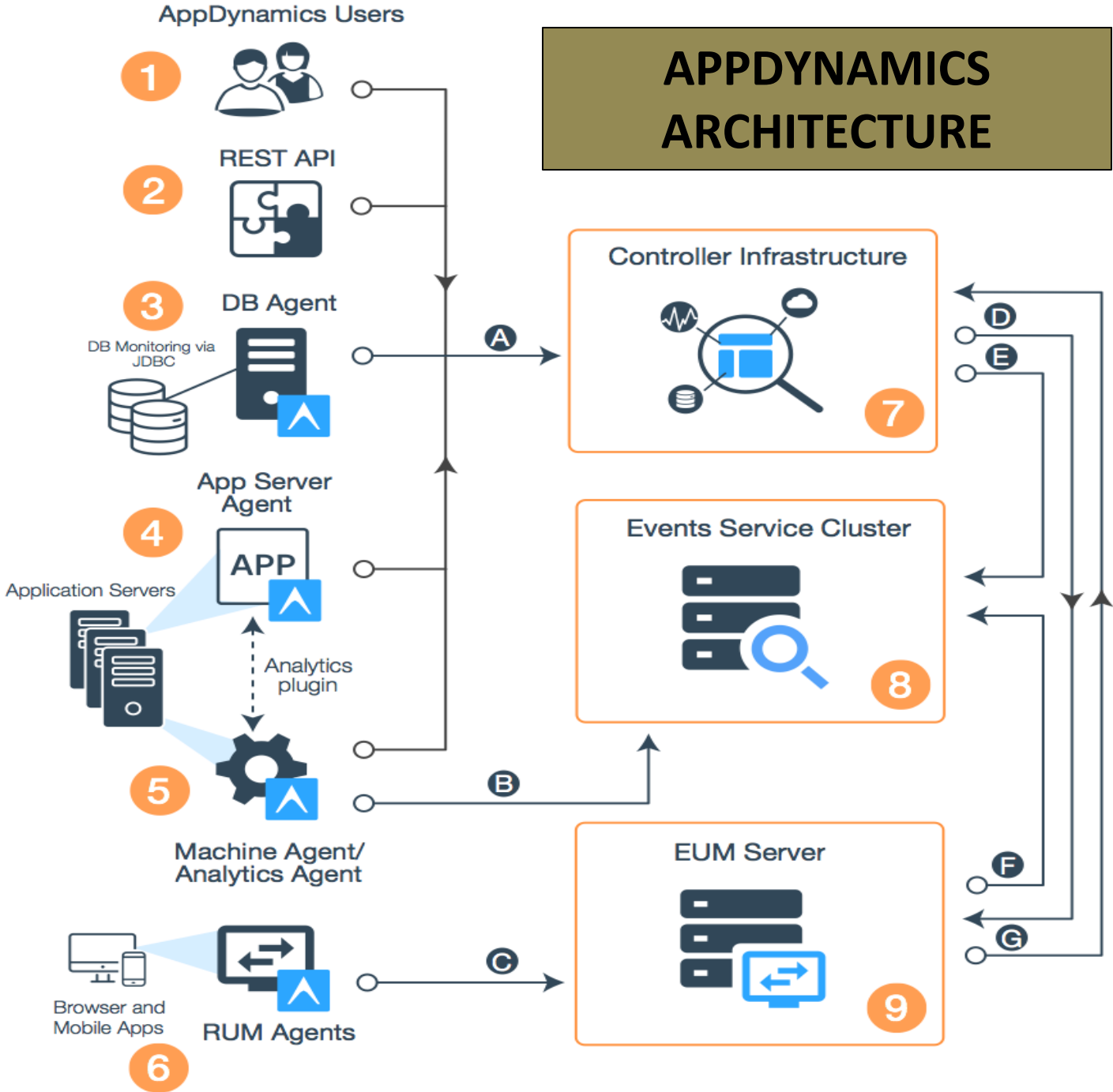




# FLOW OF APPDYNAMICS



# APPDYNAMICS ARCHITECTURE





# APPDYNAMICS PRE-REQUIREMENTS

## ❑ **AGENTS : App Agent & Machine Agent**

- Agents are plug-ins or extensions that monitor the performance of your application code, runtime, and behavior.
- The Controller receives metrics from Agents and sends them instructions.
- Once deployed, Agents immediately monitor every line of code.
- This allows AppDynamics to trace every transaction from start to finish

## ❑ **CONTROLLER :**

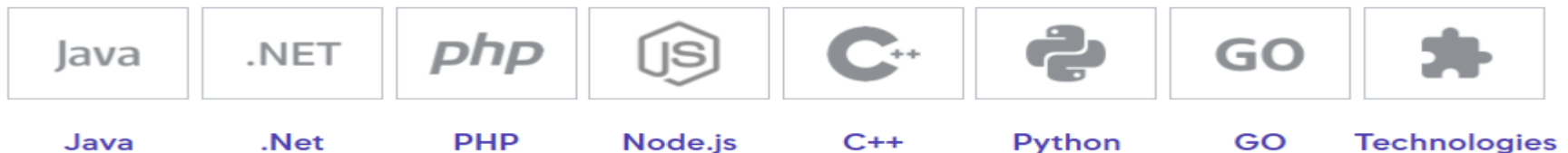
- Agents capture performance activity across application code, servers and network nodes with minimal overhead.
- The Controller helps monitor, troubleshoot and analyze your entire application landscape—from backend infrastructure to the end user—in one simple interface



# APPDYNAMICS PRE-REQUIREMENTS

- The agent supports your application environment (Below supported Languages)
- The application host with a user account
- The application host has network connectivity to the Controller - **FIREWALL**
- The connection between the agent and Controller is a **ONE –WAY** connection initiated by the agent.
- Controller host: The hostname of the Controller to connect to.
- Controller port: The port on which the Controller listens for agent traffic.
- Account name, Account access key & SSL enabled
- On-Premises & SaaS Controller

## Languages we support



# SAMPLE APPLICATION



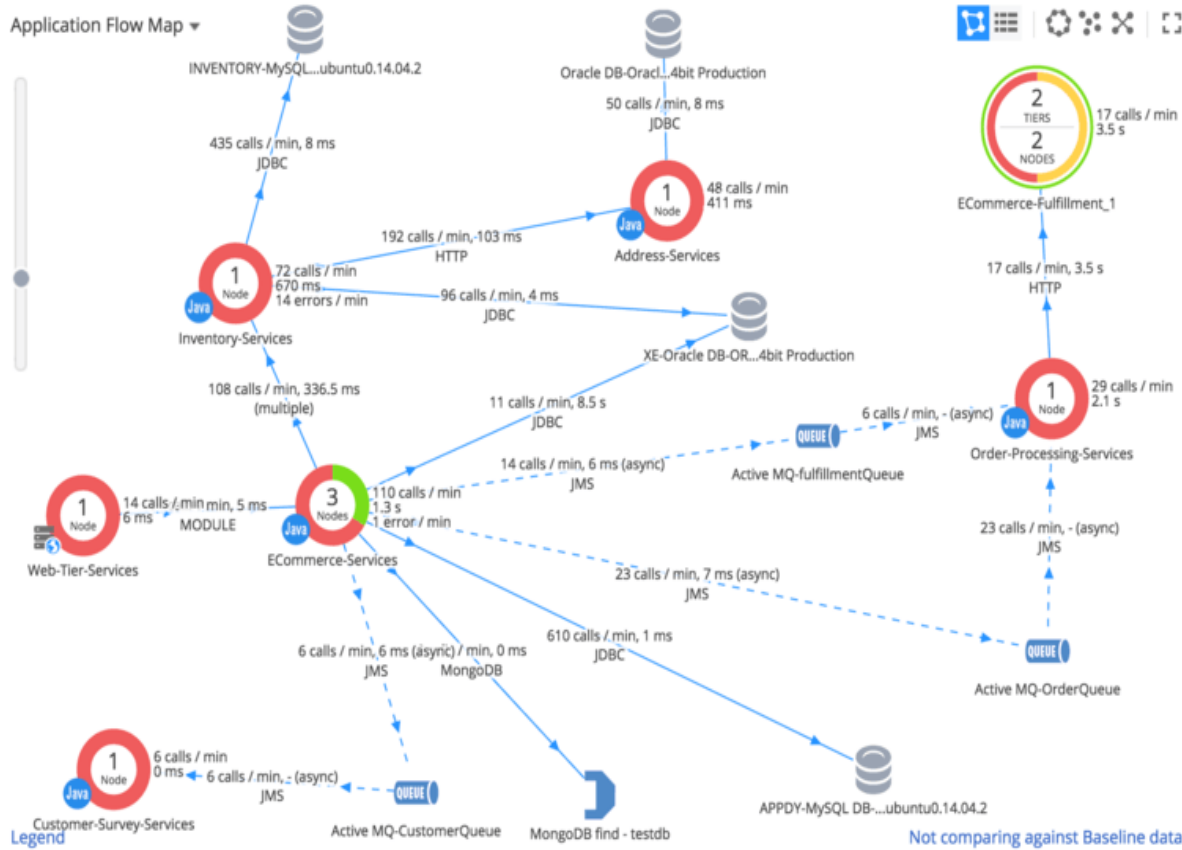
ECommerce

ECommerce

Baseline... last 15 minutes ?

- Application Dashboard
- Business Transactions
- Service Endpoints
- Tiers & Nodes
- Servers
- Database Calls
- Remote Services
- Troubleshoot
- More

Dashboard Events Top Business Transactions Transaction Snapshots Transaction Score Actions



Events  
No Events in selected time range

Business Transaction Health  
0 critical, 0 warning, 46 normal

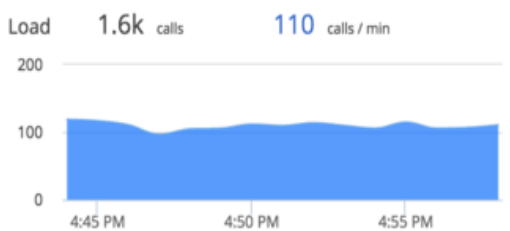
Node Health  
7 critical, 0 warning, 1 normal

Servers  
0 critical, 0 warning, 7 normal

Transaction Scorecard

Normal	97.0 %	1.6k
Slow	1.0 %	16
Very Slow	0.9 %	14
Stall	0.0 %	-
Errors	1.2 %	20

Exceptions  
10,000 total 667 / min  
HTTP Error Codes - total - / min  
Error Page Redirects - total - / min



Not comparing against Baseline data





# APPD NAVIGATION BAR



Application Dashboard



Business Transactions



Service Endpoints



Tiers & Nodes



Servers



Containers



Database Calls



Remote Services



Troubleshoot



More



Alert & Respond

Metric Browser

Configuration

View in User Experience

## BUSINESS TRANSACTIONS :

A Business Transaction is made up of all the required services within your environment that are called upon to fulfill and deliver a response to a user-initiated request.

These are typically things like login, search, checkout, etc

## FLOW MAPS :

Flow Maps show the tiers, nodes, message queues, and databases in the environment, and highlight the Business Transactions that flow through them.

## BASELINE:

Every agent monitoring a Business Transaction sends detailed performance and business metrics back to the Controller, which, through machine learning, automatically creates a dynamic Baseline for each metric.

## Transaction Scorecard

Normal	<div style="width: 97.0%;"></div>	97.0 %	1.6k
Slow	<div style="width: 1.0%;"></div>	1.0 %	16
Very Slow	<div style="width: 0.9%;"></div>	0.9 %	14
Stall	<div style="width: 0.0%;"></div>	0.0 %	-
Errors	<div style="width: 1.2%;"></div>	1.2 %	20

## Exceptions

Exceptions	10,000 total	667 / min
HTTP Error Codes	- total	- / min
Error Page Redirects	- total	- / min

## TRANSACTION SCORECARD :

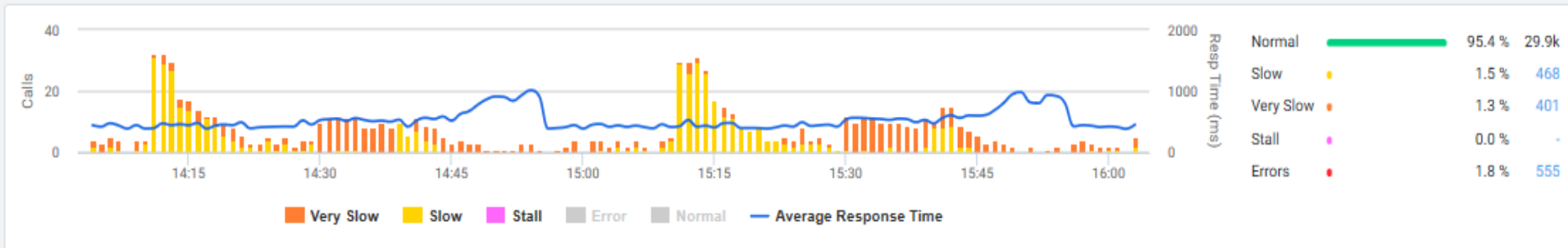
The transaction scorecard summarizes the performance of a business transaction at the application, tier, or node level within a specified time range.

**TYPES of CALLS :** Normal , Slow, Very Slow, Stall &

## Slow Response Times

Baseline... last 2 hours

Slow Transactions Slowest DB & Remote Service Calls



## Slow Transaction Snapshots

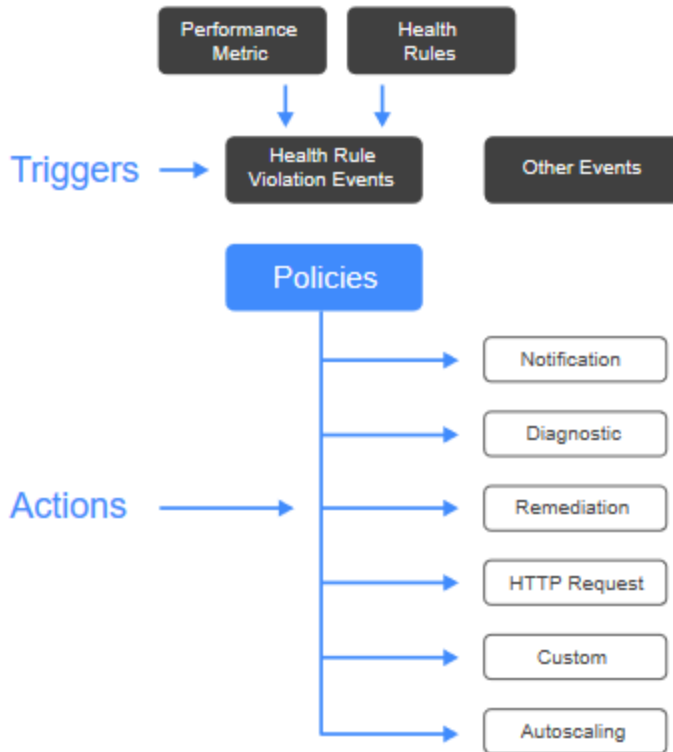
Details Filters Analyze Actions Configure

Showing 600 of 600 Fetch more...

	Time ↓	Exe Time (ms)	URL	Business Transaction	Tier	Node
⚠	10/02/20 16:04:39	3,940	http://loginservices:5000/checkout	/checkout	LoginServices	LoginServices
⚠	10/02/20 16:04:38	5,453	http://loginservices:5000/checkout	/checkout	LoginServices	LoginServices
⚠	10/02/20 16:03:54	3,877	http://loginservices:5000/checkout	/checkout	LoginServices	LoginServices
⚠	10/02/20 16:03:52	5,458	http://loginservices:5000/checkout	/checkout	LoginServices	LoginServices

# ALERT & RESPOND

## Alert and Respond Overview



### Policies >

Configure Policies to send alerts, perform diagnostics, or execute scripts when Health Rules are violated, Anomalies are detected, or events such as server crashes occur.

### Health Rules >

Health Rules compare performance metrics against their baselines or other thresholds. When performance fails to satisfy Health Rules, Health Rule violation events are created. You can create Health Rules to alert you to problems whose logic is clear-cut, including violations of Service Level Agreements (SLAs).

### Actions >

Actions are the responses you direct AppDynamics to take when Policies are violated. They include sending notifications by email or SMS, taking snapshots, creating thread dumps, and executing scripts.

# ACTIONS

## Create Action



Select what type of action to create:

### Notifications

- Send an email  Use template?
- Send an SMS message

### Diagnostics

- Start a Diagnostic Session on the selected Business Transactions
- Take a thread dump

### Remediation

- Run a script or executable on problematic Nodes

### Issue Tracking System Integrations

- Create or Update a JIRA Ticket

### HTTP Request

- Make an HTTP Request

### Custom Action

- Run a Custom Action that has been uploaded to the Controller

Cancel

OK

# HEALTH RULES

## Health Rules

Online\_Retail



Evaluate Health Rules



Type	Name ↑	Enabled
	Business Transaction Combined User Experi... Business Transaction Performance	<input checked="" type="checkbox"/>
	Business Transaction Slow User Experience Business Transaction Performance	<input checked="" type="checkbox"/>
	Business Transaction Very Slow User Experi... Business Transaction Performance	<input checked="" type="checkbox"/>
	Business Transaction error rate is much high... Business Transaction Performance	<input checked="" type="checkbox"/>
	Business Transaction response time is much ... Business Transaction Performance	<input checked="" type="checkbox"/>
	CLR Garbage Collection Time is too high Node Health - Hardware, JVM, CLR	<input checked="" type="checkbox"/>
	CPU utilization is too high Node Health - Hardware, JVM, CLR	<input checked="" type="checkbox"/>
	JVM Garbage Collection Time is too high Node Health - Hardware, JVM, CLR	<input checked="" type="checkbox"/>
	JVM Heap utilization is too high Node Health - Hardware, JVM, CLR	<input checked="" type="checkbox"/>

# POLICIES

## Create Policy



Trigger    Health Rule Scope    Object Scope    Actions

Name

Enabled

Execute actions in batch

This Policy will fire when any of these Events occur

Health Rule Violation Events

- Health Rule Violation Started - Warning
- Health Rule Violation Started - Critical
- Health Rule Violation Continues - Warning
- Health Rule Violation Continues - Critical
- Health Rule Violation Upgraded - Warning to Critical
- Health Rule Violation Downgraded - Critical to Warning
- Health Rule Violation Ended - Warning
- Health Rule Violation Ended - Critical
- Health Rule Violation Canceled - Warning
- Health Rule Violation Canceled - Critical

Other Events

- >  Slow Transactions
- >  Code Problems
- >  Application Changes
- >  Server Crashes
- >  AppDynamics Config Warnings
- >  Discovery
- >  Synthetic Availability
- >  Synthetic Performance
- >  Mobile Crash
- Errors

Custom Events



Type	Properties
No Custom Events Selected	

Cancel

Save

# DASHBOARDS

Dashboards provide a graphical overview of the selected data made available for quick access. Custom dashboards helps to create and arrange widgets to give users a visual overview of the data of interest.

## TYPES OF LAYOUT :

- a. GRID layout
- b. ABSOLUTE layout

### Create Dashboard

Name

Canvas  Grid Layout  
 Absolute Layout

[Advanced](#)



# REPORTS

**AppDynamics** can extract data from dashboards and create scheduled reports.

Scheduled **reports are created automatically** on a regular interval. AppDynamics helps create reports with the data pulled out from **Dashboards** and sends it to the configured list of **email recipients**, as scheduled

Sample report where it is scheduled on weekly basis i.e on **Friday** at **07:00 AM IST** starting from 06th June 2019 and end date for the report is not mentioned. Recipients to be added for whom the report is to be sent.

### Create Scheduled Report ✕

Report Title:

Report Subtitle:

Show Title Page:

Report Type:

**Schedule** | Report Data | Recipients

Repeats:

Send at:

Time Zone:

Repeats on:  S  M  T  W  T  F  S


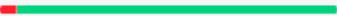




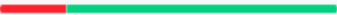





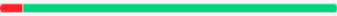
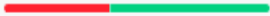














Starts: 06/14/19

Ends:  Never  On

# HEALTH STATUS

Health status : Normal, Warning & Critical

## Applications

<span>Details</span>   <span>Create Application</span>   <span>Actions</span>   <span>View Options</span>   <span>View</span>							
Name	Health	Business Transaction Health	Node Health	Calls ↓	Calls / min	Response Time (ms)	Error %
AD-DevOps		 1 critical, 0 warning, 18 normal	 5 critical, 2 warning, 17 normal	37.61k	316	1.16k	4.6
AD-Travel		 0 critical, 0 warning, 28 normal	 0 critical, 0 warning, 10 normal	32.87k	276	994	9.3
Online_Retail		 4 critical, 0 warning, 16 normal	 0 critical, 0 warning, 7 normal	30.64k	257	499	1.7
ECommerce		 1 critical, 1 warning, 27 normal	 0 critical, 0 warning, 5 normal	28.54k	240	1k	4.8
AD-Financial		 2 critical, 0 warning, 26 normal	 6 critical, 0 warning, 9 normal	24.75k	208	1.58k	0.4
Movie Tickets Online		 4 critical, 5 warning, 28 normal	 0 critical, 5 warning, 1 normal	17.02k	143	528	6.8
AD-DevOps-Offers		 2 critical, 0 warning, 20 normal	 0 critical, 0 warning, 9 normal	16.13k	136	830	0
AD-MovieTickets-Core		 0 critical, 0 warning, 7 normal	 0 critical, 0 warning, 2 normal	5.34k	45	601	4.8
AD-Financial-Cloud		 0 critical, 0 warning, 10 normal	 0 critical, 0 warning, 7 normal	2.85k	32	394	0
ECommerce-Fulfillment		 0 critical, 0 warning, 2 normal	 0 critical, 0 warning, 1 normal	1.84k	15	3.87k	0



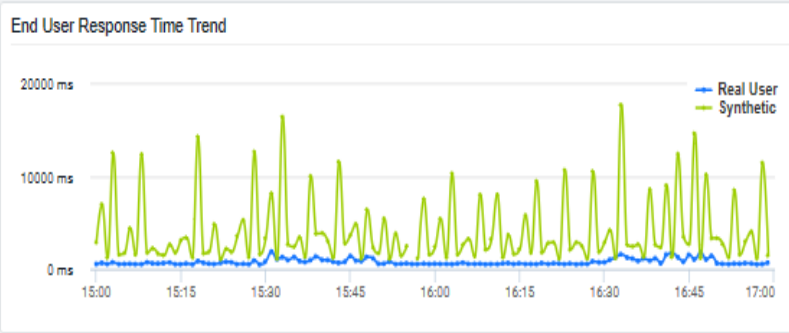
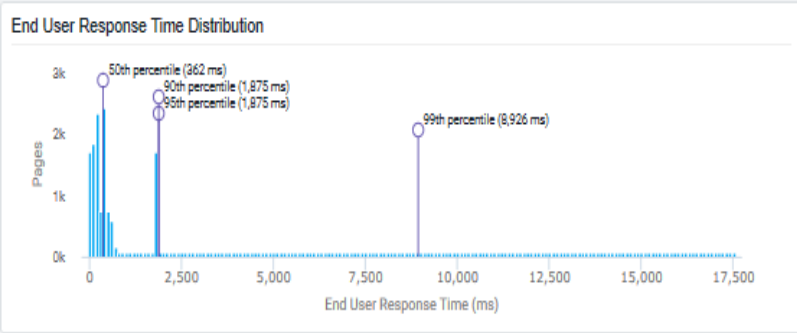
# END USER MONITORING

- ECommerce
- Browser App Dashboard
- Resource Performance
- REAL USERS
  - Sessions
  - Pages & AJAX Requests
  - Analyze
- SYNTHETIC
  - Jobs
  - Sessions
  - Pages
  - On-Demand
- Health Rule Violations
- Events

## ECommerce

- Overview
- Geo Dashboard
- Browser Snapshots
- Usage Stats

last 2 hours

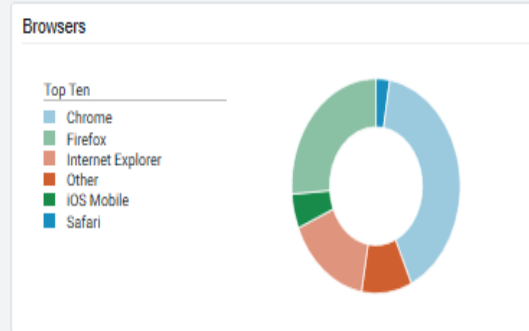
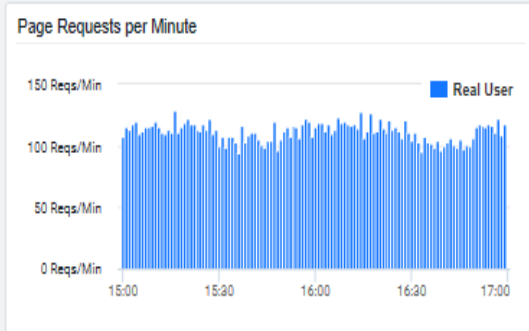
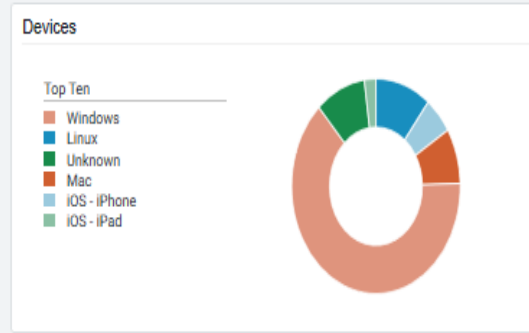


### Top 5 Pages by Total Requests

Page	Total Requests
www.ecommerce.com/angular	1,679 reqs
#login	1,679 reqs
#	1,678 reqs
#cart	1,678 reqs
#fetchcatalog	1,678 reqs

### Top 5 Countries by Total Page Requests

Country	Total Page Requests
United States	2,269 reqs
France	1,781 reqs
United Kingdom	1,239 reqs
Canada	798 reqs
Brazil	510 reqs



- Alert & Respond
- Metric Browser
- Configuration
- View in Applications

