



**Site24x7**

Free Online Training - Day 4



# Intro about the training program

All modules of Site24x7 will be covered in 5 sessions.

We offer this training program in three time zones for your convenience.

AUS Time Zone (10:00 AEDT) | UK Time Zone (10:00 BST)| US Time Zone (10:00 PDT)

## Sessions split up:

**Session 1 - Introduction and Deep Dive into Website Monitoring (Mon, Oct 10, 2022)**

**Session 2 - Infrastructure Monitoring and Custom Plugins (Tue, Oct 11, 2022)**

**Session 3 - Network & Virtualization Monitoring and Log Management (Wed, Oct 12, 2022)**

**Session 4 - Application Performance Monitoring and Real User Monitoring (Thu, Oct 13, 2022)**

**Session 5 - Reports, Dashboards, Advanced Configurations, Alerting, and More (Fri, Oct 14, 2022)**



# Scope of the session

- Application Performance Monitoring
  - > Java
  - > .Net
  - > .Net Core
  - > Ruby
  - > PHP Linux
  - > PHP Windows
  - > Node.js
  - > Python
- Real User Monitoring
  - > RUM script deployment
  - > Understanding RUM metrics



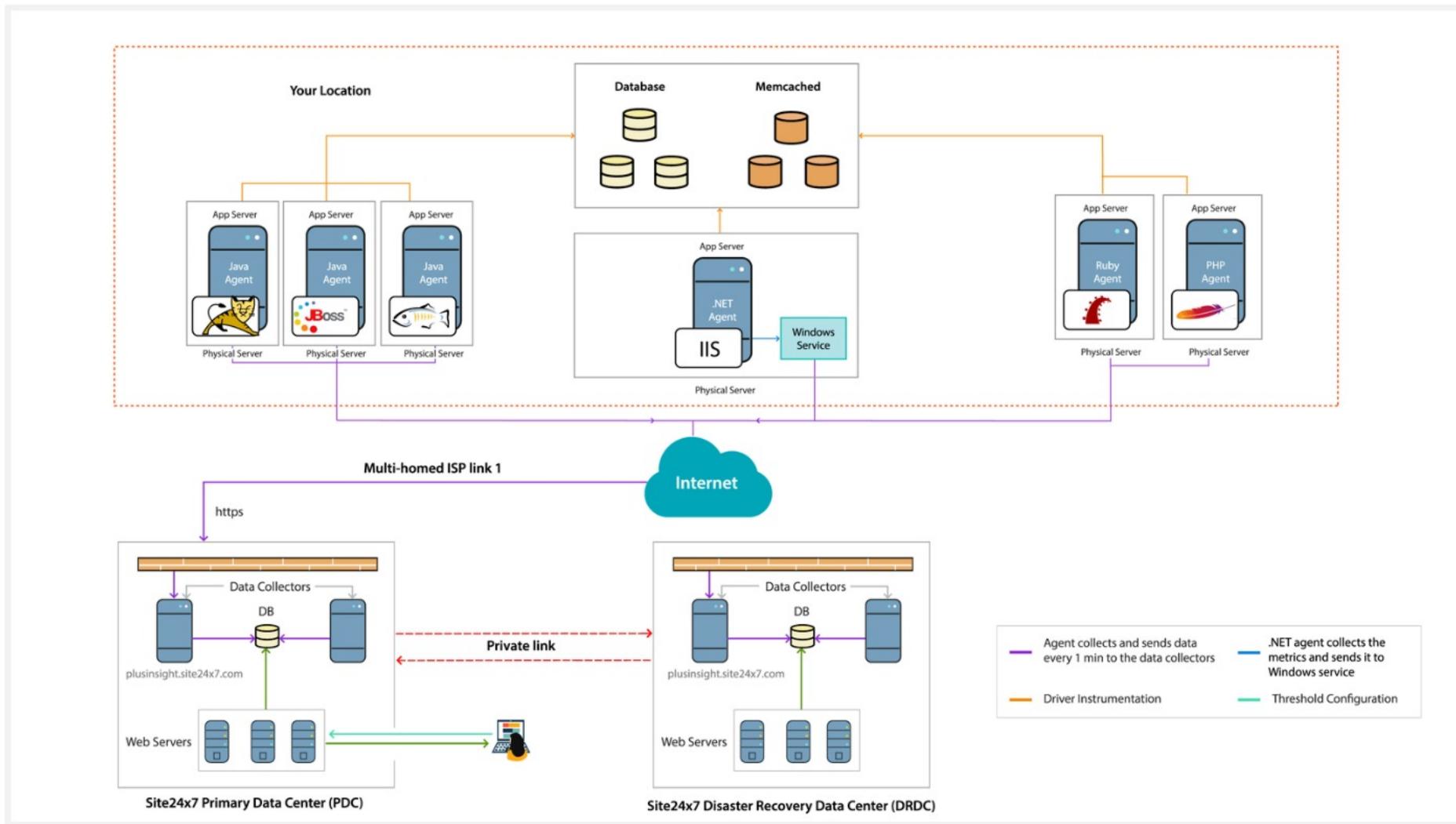
# Application Performance Monitoring



# APM Insight

- Monitor application response time and throughput
- Identify slow queries using traces
- Track all your background transactions
- Comprehensive view on all your DB operations
- Capture exceptions and pinpoint errors as they occur
- Integrate APM Insight with Site24x7 RUM

# APM Architecture





# APM Insight

- Agent needs to be downloaded and installed on every app server
- Data collections happens every one minute
- Data gets pushed to Site24x7 Data Collector through a one-way HTTPS connection
  - plusinsight.site24x7.com
  - HTTPS port 443



# APM Insight - JAVA

- Application Servers running with Java 1.6 or above.
- Application Servers Supported
  - Tomcat 6.x & above
  - Glassfish 3.x & above
  - Oracle Weblogic 10.3.x & above
  - IBM Websphere 7.x & above
  - JBoss AS 4.x & above
  - JBoss EAP 6.2.x & above
  - WildFly 8.x & above
  - Resin 3.1.x & above
  - JOnAS 4.x & above



# APM Insight - JAVA

→ Java Database Connectivity (JDBC) Drivers Supported

## SQL Databases

- MySQL
- Postgres
- Oracle - ojdbc14, ojdbc5, ojdbc6, ojdbc7
- Sybase - jconn2, jconn3, jconn4
- IBM DB2 - db2jcc, jt400
- Informix
- MS-SQL
- Generic JDBC drivers

## No SQL Databases

- Cassandra 2.1.x-3.2
- MongoDB 2.12 -2.14, 3.x



# APM Insight - JAVA

## → Components Supported

- Internal Components
- All framework & user defined method calls are considered as an Internal Components.
  - Struts 1.x 2.x
  - Spring 3.x, 4.x
  - Play 2.0.x- 2.8
  - Restlet 2.2, 2.3
  - Jax-WS
  - JSP
  - Filter
  - EJB 3.x
  - Hibernate 3.x
- External Components
- Components which communicates with any other server/service is categorized as External Components
  - Memcached - ( Redis (Jedis, Jredis)
  - Apache Http Client 3.x, 4.x - Java HttpURLConnection
  - MYSQL - Postgres (JDBC2, JDBC3)
  - Oracle - BM DB2 (db2jcc, jt400)
  - Sybase (jconn2, jconn3, jconn4) - Informix
  - MSSQL - Generic JDBC



# APM Insight - JAVA

- Supported JVM/JDKs

- Oracle Hotspot JDK version 1.6 - 11

- IBM (J9) JDK version 1.6 - 8

- OpenJDK version 1.6 - 11

- HP-UX 11i JRE version 1.6- 8

- We do support the most commonly used JVMs from version 1.6 & above.



# APM Insight - JAVA

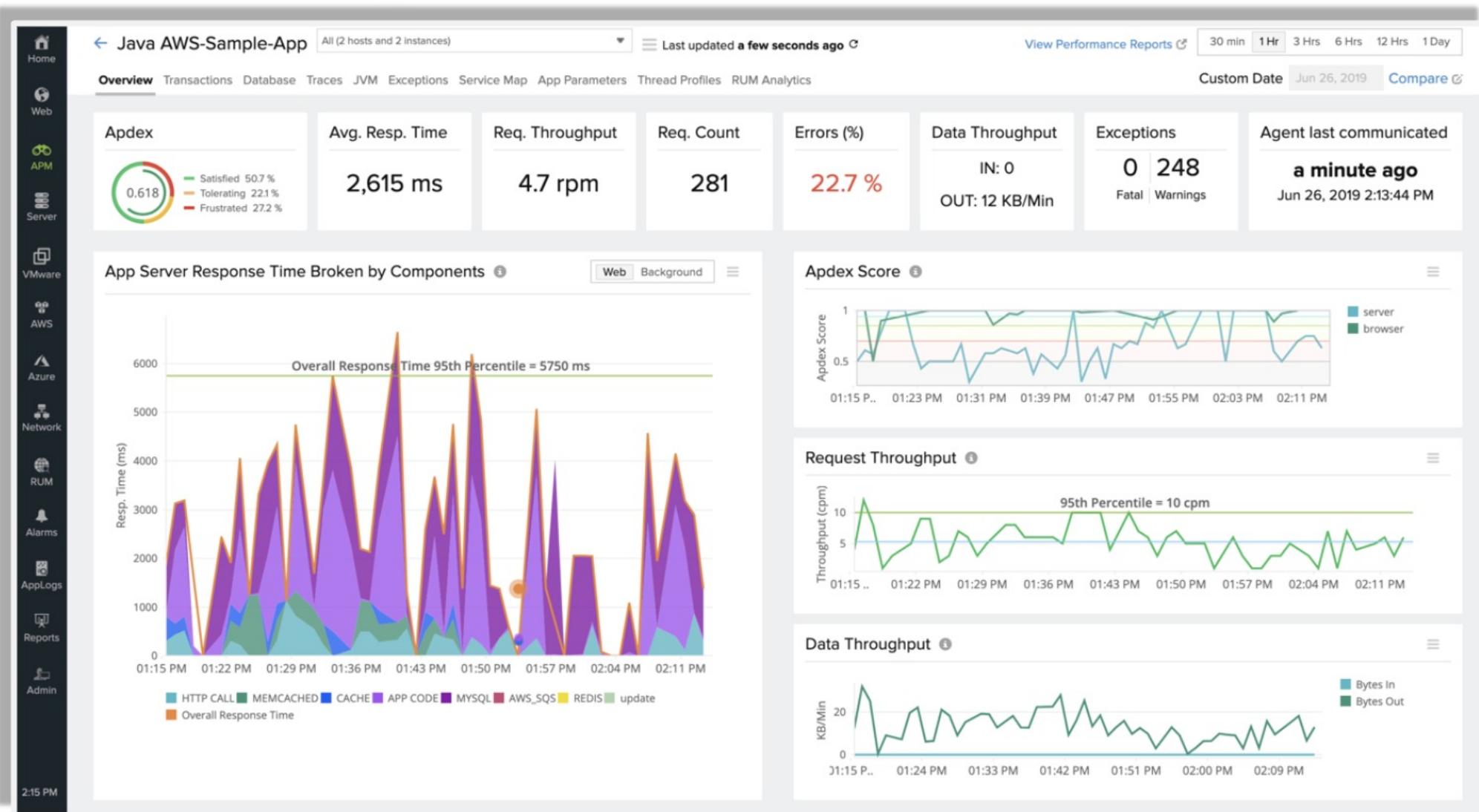




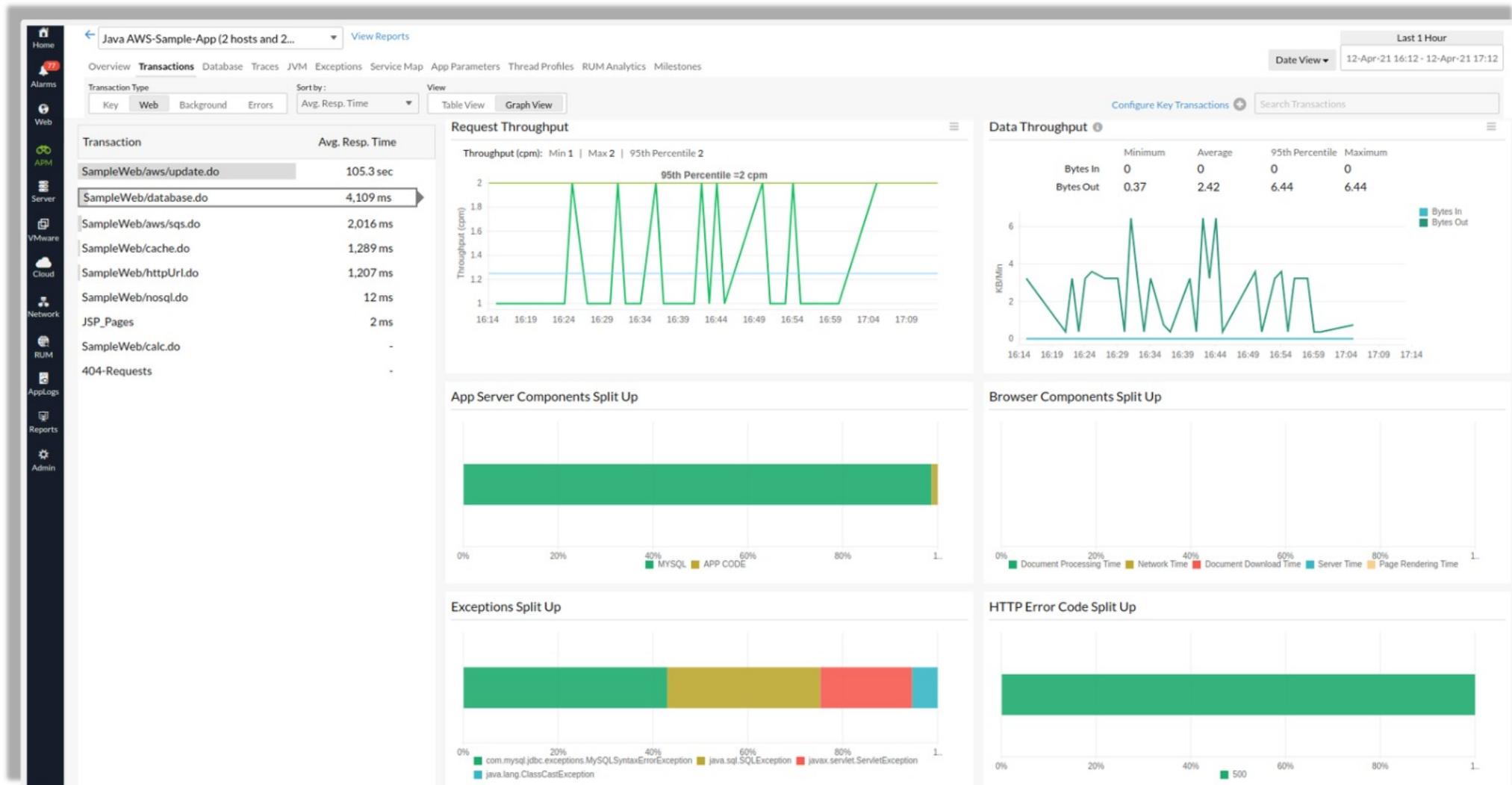
# APM Insight - Overview

- …→ Apdex score, appserver throughput, response time, exceptions, etc.
- …→ Mark Milestones
- …→ Compare view
- …→ Service Maps
- …→ export to PDF
- …→ Historical reports for last 30 days

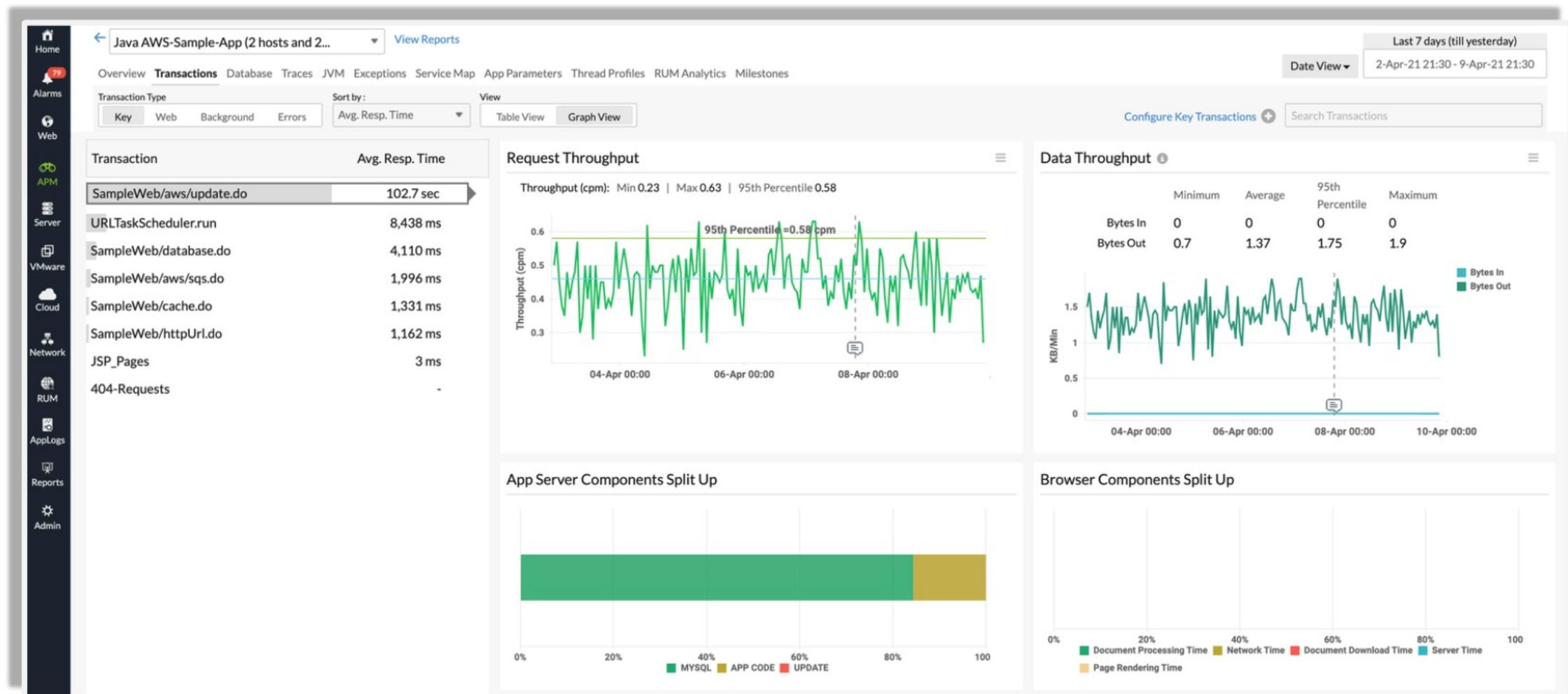
# APM Insight - Overview



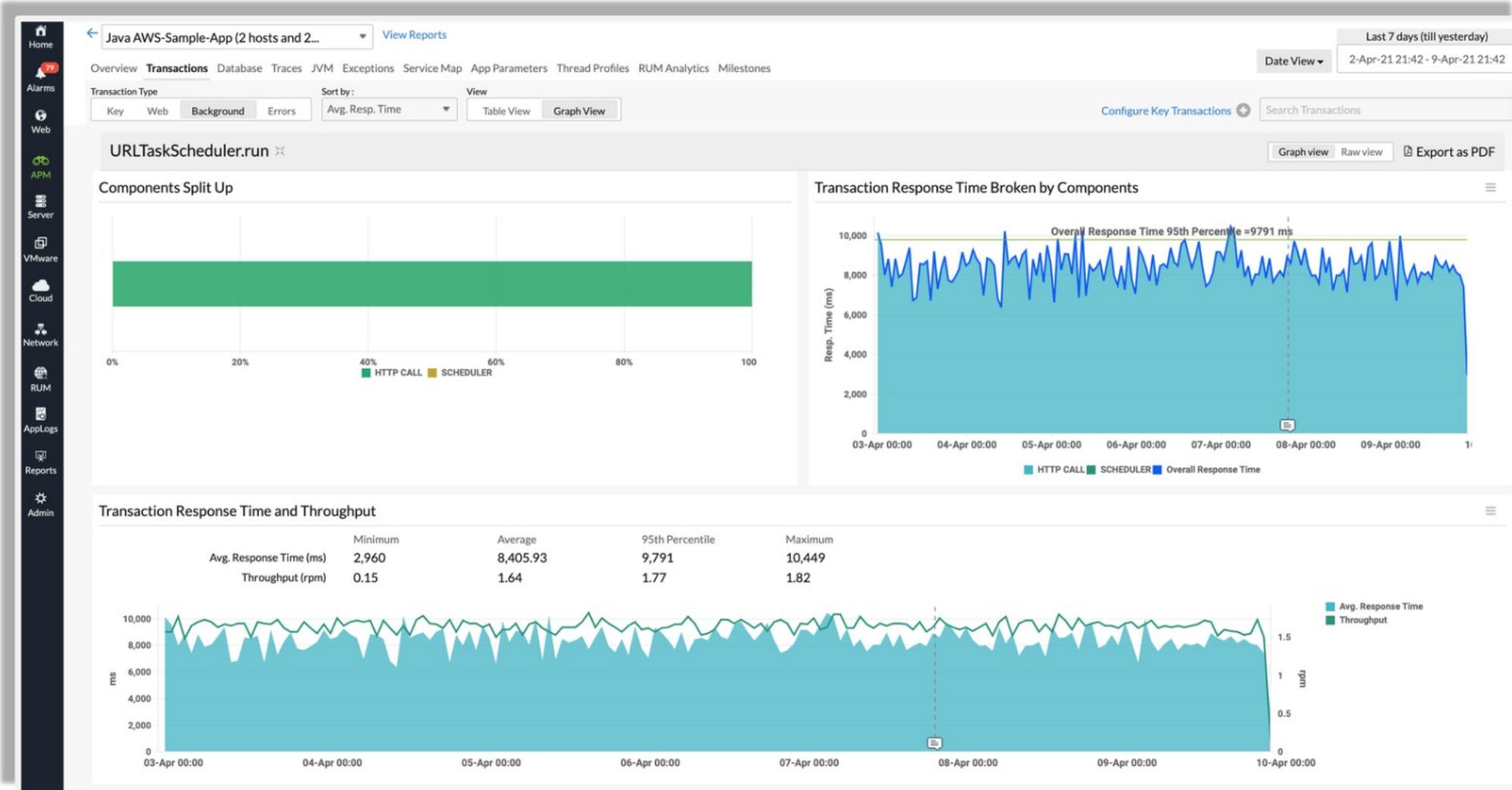
# Web Transactions



# Key Transactions



# Background Transactions



# Database

Java AWS-Sample-App (2 hosts and 2...)

View Reports

Last 7 days (till yesterday)  
2-Apr-21 21:31 - 9-Apr-21 21:31

Date View

Search database calls

Home  
Alarms  
Web  
APM  
Server  
VMware  
Cloud  
Network  
RUM  
AppLogs  
Reports  
Admin

Overview Transactions Database Traces JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones

Sort by: Avg. Resp. Time View Table View Graph View

Database Operation Avg. Resp. Time

| All - All                    | Avg. Resp. Time |
|------------------------------|-----------------|
| CALL - updateRegisteredUsers | 4,001 ms        |
| INSERT - person              | 44 ms           |
| UPDATE - person              | 0 ms            |
| SELECT - person              | 0 ms            |
| SELECT - records             | -               |

Recent 5 Traces of this Database Operation

| Transaction             | Resp. Time |
|-------------------------|------------|
| SampleWeb/aws/update.do | 216.7 sec  |
| SampleWeb/aws/update.do | 173.5 sec  |
| SampleWeb/aws/update.do | 174.3 sec  |
| SampleWeb/aws/update.do | 164.4 sec  |
| SampleWeb/aws/update.do | 161.0 sec  |

Database Operation Response Time

ResponseTime(ms): Min 37 | Max 51 | 95th Percentile 48

Database Operation Throughput

Throughput(cpm): Min 459.38 | Max 1,245.8 | 95th Percentile 1,147.58

INSERT\_person

44.1 ms Avg. Resp. Time 781.9 cpm Throughput 9,006,199 Req. Count 0.0 % Errors

Database Operation by Caller

Splitup (%): Min 8,521 | Max 8,997,678 | 95th Percentile 8,997,678

SampleWeb/aws/update.do  
SampleWeb/database.do

Dashboard View created for Java AWS-Sample-App on April 9, 2021 21:31 Asia/Kolkata for the time period: April 9, 2021 0:00 Asia/Kolkata to April 9, 2021 23:59 Asia/Kolkata.

# Traces

Java AWS-Sample-App (2 hosts and 2...)

View Reports

Last 7 days (till yesterday)  
2-Apr-21 21:47 - 9-Apr-21 21:47

Date View ▾

Overview Transactions Database **Traces** JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones

All Errors Distributed Filter Response Time ▾ is above 2 sec

Search Transaction traces

| Start Time           | Transaction                                  | Resp. Time | CPU Time | External Calls | Exception Count | SQL Time | Avg. Resp. Time | Instance  |
|----------------------|--|------------|----------|----------------|-----------------|----------|-----------------|---|
| Apr 9, 2021 3:15:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,857 ms   | 5 ms     | 8              | 2               | 4,427 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 9, 2021 3:14:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,644 ms   | 11 ms    | 8              | 2               | 4,478 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 9, 2021 11:53:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,451 ms   | 12 ms    | 8              | 3               | 4,223 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 6, 2021 3:14:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,427 ms   | 13 ms    | 8              | 3               | 4,209 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 6, 2021 13:47:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,389 ms   | 11 ms    | 8              | 3               | 4,195 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 3, 2021 17:33:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,379 ms   | 8 ms     | 8              | 3               | 4,188 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 7, 2021 0:16:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,371 ms   | 10 ms    | 8              | 2               | 4,186 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 9, 2021 2:39:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,367 ms   | 10 ms    | 8              | 2               | 4,184 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 4, 2021 17:28:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,363 ms   | 12 ms    | 8              | 4               | 4,176 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 4, 2021 0:11:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,358 ms   | 11 ms    | 8              | 3               | 4,178 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 6, 2021 18:09:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,339 ms   | 11 ms    | 8              | 4               | 4,169 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 7, 2021 5:16:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,338 ms   | 10 ms    | 8              | 3               | 4,168 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 5, 2021 8:40:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,335 ms   | 8 ms     | 8              | 2               | 4,168 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 9, 2021 1:02:53  | SampleWeb/database.do<br>driver=mysql.oracle | 4,328 ms   | 9 ms     | 8              | 2               | 4,165 ms | 4,110 ms        | f9e46209ae112b139acdf066a4a036dbdd6e6a43ae399fea3097b4684bef7451:8080 |
| Apr 4, 2021 21:22:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,325 ms   | 11 ms    | 8              | 3               | 4,163 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |
| Apr 9, 2021 11:54:53 | SampleWeb/database.do<br>driver=mysql.oracle | 4,315 ms   | 11 ms    | 8              | 3               | 4,153 ms | 4,110 ms        | 3f5671b3ad3e24e3e5bc4c4e5179176749304fb89e83126dfe0cd8338aba7b26:8080 |

# Traces- Advanced Filter

The screenshot shows a monitoring dashboard with a sidebar on the left containing various service icons: Alarms, Web, APM, Server, VMware, Cloud, Nutanix, Network, RUM, Metrics, AppLogs, Reports, Admin, and Edit.

The main header includes navigation links: Overview, Transactions, Database, Traces (selected), JVM, Exceptions, Service Map, App Parameters, Thread Profiles, RUM Analytics, Milestones, Server Metrics, and Outages. It also shows a Date View dropdown set to 15-Feb-22 12:22 - 15-Feb-22 12:50.

The central area displays a table of trace data. The columns are: Start Time, Transaction, Resp. Time, CPU Time, External Calls, Exception Count, SQL Time, Avg. Resp. Time, Memory Used, and Instance. The table shows three rows of data:

| Start Time               | Transaction      | Resp. Time | CPU Time | External Calls | Exception Count | SQL Time | Avg. Resp. Time | Memory Used | Instance   |
|--------------------------|------------------|------------|----------|----------------|-----------------|----------|-----------------|-------------|------------|
| Feb 15, 2022 12:40:54 PM | zylker/settings/ | 3,916 ms   | 2,759 ms | 128            | 1               | 363 ms   | 367 ms          | 1.83 GB     | [redacted] |
| Feb 15, 2022 12:39:37 PM | zylker/settings/ | 3,519 ms   | 2,775 ms | 119            | 1               | 12 ms    | 367 ms          | 1.71 GB     | [redacted] |
| Feb 15, 2022 12:23:54 PM | zylker/settings/ | 2,321 ms   | 1,782 ms | 157            | 1               | 20 ms    | 367 ms          | 1.10 GB     | [redacted] |

At the top of the table, there are filters: All, Errors, Distributed, Filter, Response Time (is above 2 sec), Advanced Filter, Transaction Name: zylker/settings/, Exception Class: java.lang.NullPointerException, Add Filters, and Jira Integration.

# Traces - Summary

Java AWS-Sample-App (2 hosts and 2... [View Reports](#)

Overview Transactions Database **Traces** JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones

SampleWeb/aws/update.do [This transaction's performance](#) | [Delete trace](#) | [Export as PDF](#) X

Total Calls: 61 Method Call(s) + 2000 SQL(s) | POST | 200

|                      |            |                     |           |          |             |                  |                                  |  |
|----------------------|------------|---------------------|-----------|----------|-------------|------------------|----------------------------------|--|
| Apr 9, 2021 11:50:56 | 216.7 sec  | 130F-NSDNF-KSNDK-CN | 35        | 422 ms   | 11 MB       | 1968             | -   3 KB                         | 1e2heuigf632df...<br>gi...<br>Instance |
| Request Time         | Resp. Time | Thread Name         | Thread Id | CPU Time | Memory Used | No.of.DB Queries | Total Bytes In   Total Bytes Out |  |

[Summary](#) [Trace Details](#) [SQL Statements](#) [Remote\(External\) Calls](#) [Other traces of this transaction](#)

**Slowest Method Calls**

Slowest Method Calls and Count

| Slowest Method Calls                        | Count | Duration  | Percentage (%) |
|---|-------|-----------|----------------|
| MySQL - INSERT - person - 172.20.10.10:3306 | 1,966 | 201.0 sec | 92.75          |
| Un-Instrumented Block of code               | 19    | 15.4 sec  | 7.13           |
| com/sample/web/action/AWSAction.execute()   | 1     | 202 ms    | 0.09           |
| [CUSTOM] Pure execution                     | 9     | 36 ms     | 0.02           |
| [CUSTOM] Loop in execute                    | 1     | 22 ms     | 0.01           |
| others                                      |       | 11 ms     | 0.01           |

**External Calls**

Total External Calls Count

| External Calls | Total Time | Total Count |
|----------------|------------|-------------|
| MySQL          | 201.0 sec  | 1968        |

# Trace Details

Java AWS-Sample-App (2 hosts and 2... [View Reports](#)

Overview Transactions Database **Traces** JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones

SampleWeb/aws/update.do [This transaction's performance](#) | [Delete trace](#) | [Export as PDF](#) X

Total Calls: 61 Method Call(s) + 2000 SQL(s) | POST | 200

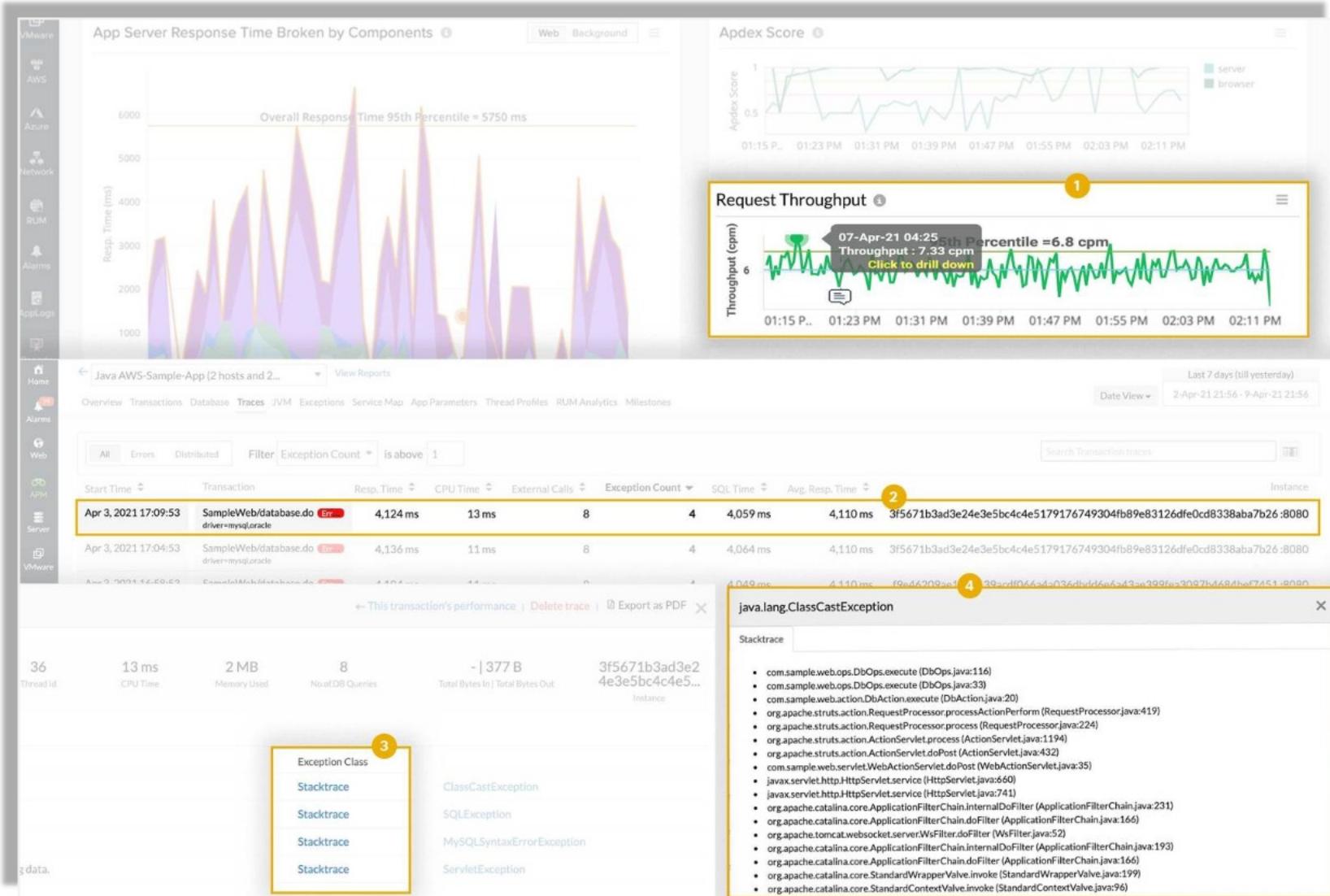
| Timestamp(sec) | Metric: Expand All   Collapse All                       | Exclusive() | Total(sec) |
|----------------|---|-------------|------------|
| 0              | ▼Total Calls: 61 Method Call(s) + 2000 SQL(s)           | 0           | 216.732    |
| 0              | ▼org/apache/catalina/core/StandardHostValve.invoke()    | 0           | 216.732    |
| 0              | ▼org/apache/tomcat/websocket/server/WsFilter.doFilter() | 0           | 216.732    |
| 0              | ▼org/apache/struts/action/ActionServlet.doPost()        | 0.003       | 216.732    |
| 0.001          | ▼com/sample/web/action/AWSAction.execute()              | 0.202       | 216.729    |
| 0.002          | MYSQL Query - 172.20.10.10:3306                         | SQL         | 0.004      |
| 0.006          | MYSQL Query - 172.20.10.10:3306                         | SQL         | 0.002      |
| 0.009          | ▼[CUSTOM] Loop in execute                               | 0.022       | 216.521    |
| 0.009          | ►com/sample/web/ops/aws/Update.executeUpdate()          | 0           | 6.766      |
| 6.775          | ►com/sample/web/ops/aws/Update.executeUpdate()          | 0           | 9.413      |
| 16.188         | ►com/sample/web/ops/aws/Update.executeUpdate()          | 0           | 8.562      |
| 24.75          | ►com/sample/web/ops/aws/Update.executeUpdate()          | 0           | 10.999     |



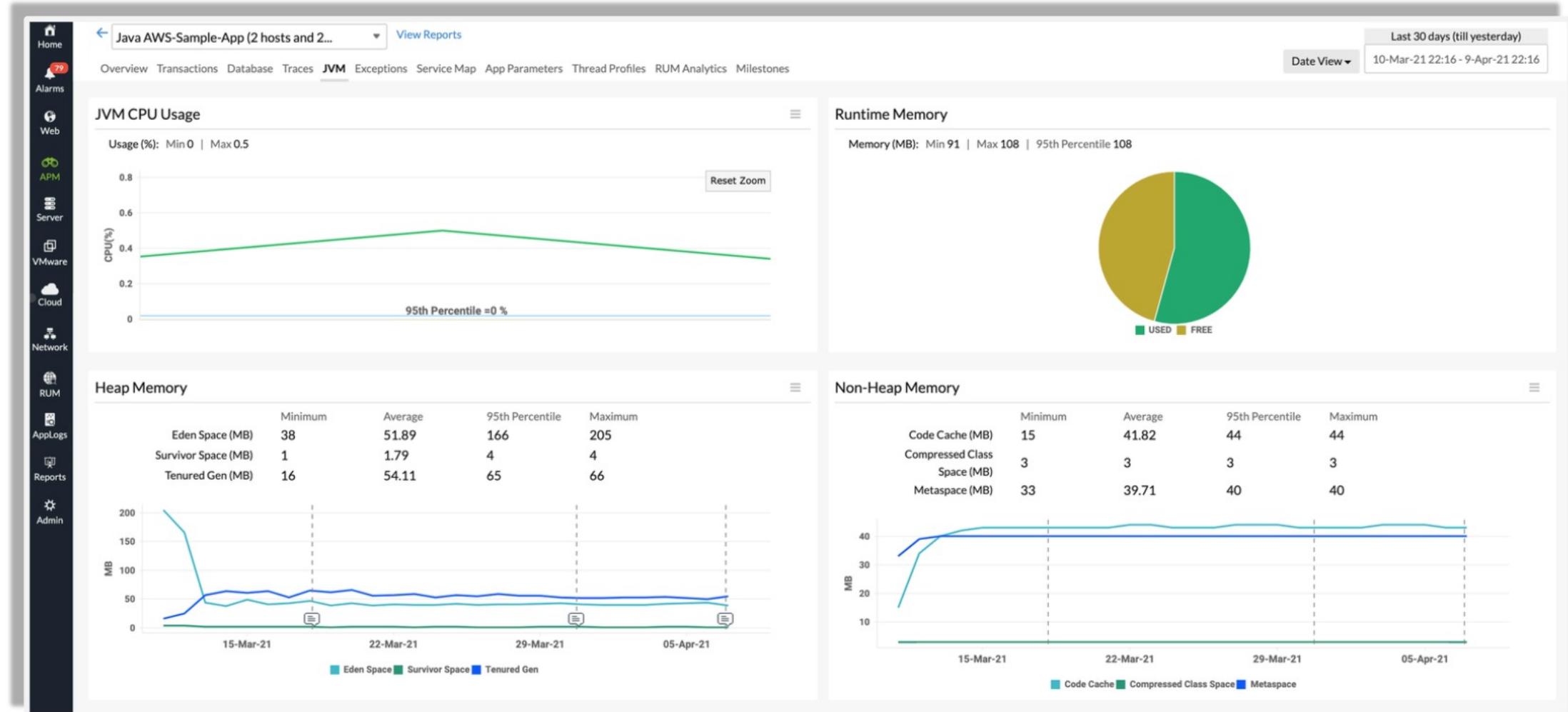
# Use Case

- Inspecting the stack trace of error transactions helps in drilling down faster
- For instance, you can click on any spike - be it average response time or throughout, at any given point of time, to directly drill down to the line of error with the help of traces

# Use Case



# APM Insight - Java



# Errors & Exceptions

The screenshot shows a monitoring interface for a Java AWS-Sample-App. The top navigation bar includes links for Home, Alarms (with 79 notifications), Web, APM, Server, VMware, Cloud, Network, RUM, AppLogs, Reports, and Admin. The main menu has sections for Overview, Transactions, Database, Traces, JVM, Exceptions (selected), Service Map, App Parameters, Thread Profiles, RUM Analytics, and Milestones. A search bar at the top right is set to "Last 7 days (till yesterday)" from "2-Apr-21 21:58 - 9-Apr-21 21:58".

**Top Exceptions:**

| Exception Type                           | Count  |
|--|--------|
| java.lang.ArithmaticException            | 14,441 |
| javax.servlet.ServletException           | 9,345  |
| java.net.SocketTimeoutException          | 8,575  |
| com.mysql.jdbc.exceptions.My...          | 8,540  |
| net.spy.memcached.Operation...           | 7,671  |
| java.sql.SQLException                    | 6,042  |
| com.datastax.driver.core.excep...        | 5,634  |
| com.amazonaws.AmazonClien...             | 4,072  |
| java.net.ConnectException                | 3,690  |
| java.lang.ClassCastException             | 1,451  |
| java.net.MalformedURLException           | 1,298  |
| java.lang.ArrayIndexOutOfBoundsException | 1,222  |
| java.net.NoRouteToHostException          | 84     |

**Recent 5 Exception Traces:**

| Transaction Name      | Exception Count |
|-----------------------|-----------------|
| SampleWeb/database.do | 4               |

**Top Errorcodes:**

| Errorcode | Count |
|-----------|-------|
| 500       | 8,040 |
| 404       | 3,633 |

**Recent 5 Error Transactions:**

| Transaction Name      | Error Code |
|-----------------------|------------|
| SampleWeb/database.do | 500        |



# Milestone Marker

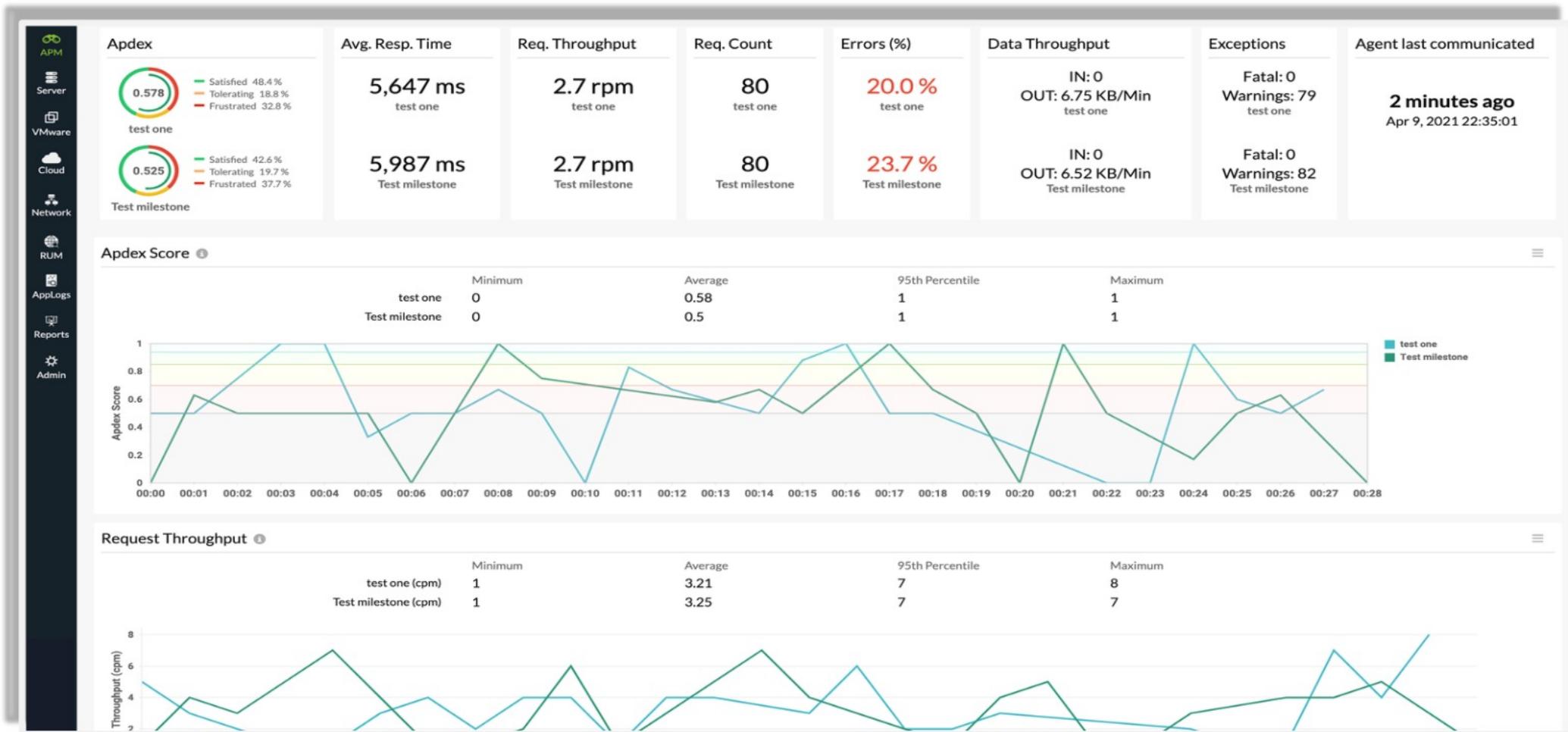
- Mark milestones before and after an update or feature enhancement, to assess the performance impact, if any
- In APM Insight, you can also compare two milestone markers to analyze the application performance.



# Milestone Markers

- Mark milestones before and after an update or feature enhancement, to assess the performance impact, if any
- In APM Insight, you can also compare two milestone markers to analyze the application performance. (Screenshot to be added)

# Compare View



# Compare view

Java AWS-Sample-App (f9e46209ae112...)

JAVA Agent Version : 4.9 | View Reports

Milestone View ▾ Compare Milestone: Mar 19, 2021 01:00 AM Today, 10:35 PM, Range 30 min

Overview Transactions Database Traces JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones

Transaction Type Sort by: View

Key Web Background Errors Avg. Resp. Time Table View Graph View

Configure Key Transactions + Search Transactions

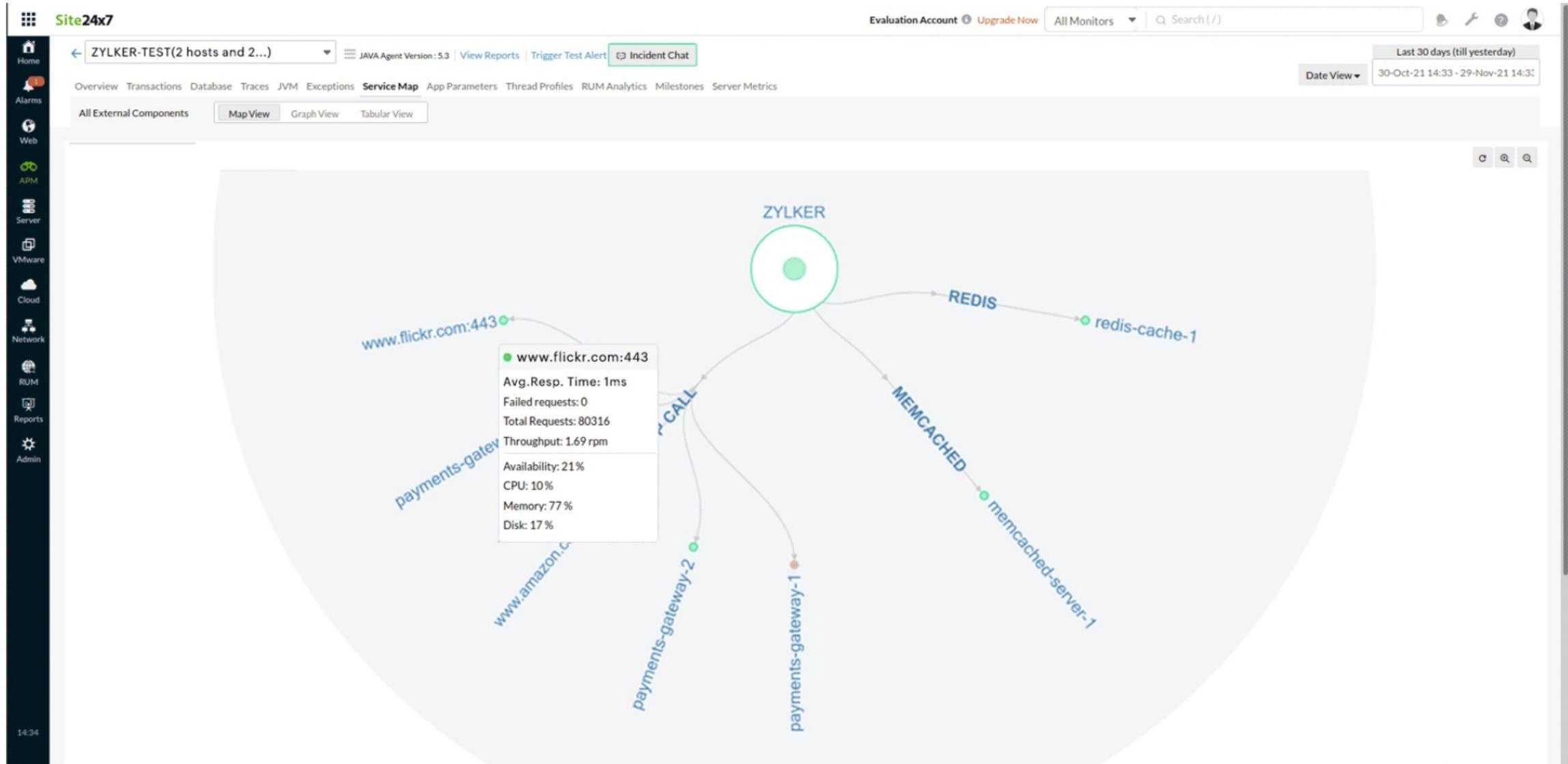
Agent downloaded successfully. Please restart your Application Server for new agent to take effect.

| Transaction             | Milestone Name | Apdex | Count | Errors (%) | Avg Resp Time | Avg. CPU Time | Fatal | Avg. Bytes In | Avg. Bytes Out |
|-------------------------|----------------|-------|-------|------------|---------------|---------------|-------|---------------|----------------|
| SampleWeb/aws/update.do | test one       | 0     | 3     | 0.0        | 94.9 sec      | 446 ms        | 0     | 0             | 3.00 KB        |
|                         | Test milestone | 0     | 3     | 0.0        | 95.6 sec      | 436 ms        | 0     | 0             | 3.00 KB        |
| SampleWeb/database.do   | test one       | 0     | 14    | 42.8       | 4,127 ms      | 18 ms         | 0     | 0             | 2.00 KB        |
|                         | Test milestone | 0     | 13    | 53.8       | 4,080 ms      | 22 ms         | 0     | 0             | 1.69 KB        |
| SampleWeb/aws/sqs.do    | test one       | 0.5   | 5     | 0.0        | 2,012 ms      | 10 ms         | 0     | 0             | 3.01 KB        |
|                         | Test milestone | 0.5   | 5     | 0.0        | 2,015 ms      | 12 ms         | 0     | 0             | 3.01 KB        |
| SampleWeb/cache.do      | test one       | 0.444 | 18    | 0.0        | 1,395 ms      | 4 ms          | 0     | 0             | 3.12 KB        |
|                         | Test milestone | 0.364 | 22    | 0.0        | 1,597 ms      | 4 ms          | 0     | 0             | 3.13 KB        |
| SampleWeb/httpUrl.do    | test one       | 0.5   | 7     | 0.0        | 1,185 ms      | 5 ms          | 0     | 0             | 3.23 KB        |
|                         | Test milestone | 0.5   | 7     | 0.0        | 1,200 ms      | 4 ms          | 0     | 0             | 3.23 KB        |
| SampleWeb/nosql.do      | test one       | 1     | 6     | 0.0        | 24 ms         | 12 ms         | 0     | 0             | 3.27 KB        |
|                         | Test milestone | 1     | 9     | 0.0        | 14 ms         | 8 ms          | 0     | 0             | 3.27 KB        |
| JSP_Pages               | test one       | 1     | 17    | 0.0        | 3 ms          | 2 ms          | 0     | 0             | 2.92 KB        |
|                         | Test milestone | 1     | 9     | 0.0        | 3 ms          | 2 ms          | 0     | 0             | 2.92 KB        |



# Service Map

- Gives a holistic view of all the components that your application is connected with
- Gives you an idea of the component status (Up, Down, Trouble) at a single glance





# App Parameters

- Monitor application specific metrics, in addition to the default metrics using App Parameters.
- For example, with App parameters, you can monitor the frequency of hits to DB calls, service calls, or user-defined framework calls. Based on the report in App Parameters, you can troubleshoot performance degradation caused by an overload of hits.

# App Parameters

Site24x7 Your evaluation expires in 24 days [Upgrade Now](#) Search Monitors/Groups/Tags

Home Web Server AWS Azure Network APM RUM Alarms Reports Admin

App Parameters ZYLKER JAVA Agent Version : 3.9 Last 3 Hours

Overview Web Transaction Database Background Traces JVM Thread Profiles Exceptions RUM Analytics Service Map App Parameters View Performance Reports

**App Parameters**

Search App params

Select All Select None

- ✓ cass-query-duration-average
- ✓ cass-query-duration-wm\_notification\_alar...
- ✓ cass-query-duration-wm\_status\_data\_aver...
- ✓ DCTime-APM-Insight-Instance-

**Views**

Search Views

View 17 View1

**View 17**

cass-data-growth-sum

| Time  | cass-data-growth-sum |
|-------|----------------------|
| 10:49 | 40000                |
| 10:59 | 35000                |
| 11:09 | 42000                |
| 11:19 | 10000                |
| 11:29 | 35000                |
| 11:39 | 35000                |
| 11:49 | 35000                |
| 11:59 | 35000                |
| 12:09 | 38000                |
| 12:19 | 40000                |
| 12:29 | 32000                |
| 12:39 | 10000                |
| 12:49 | 40000                |
| 12:59 | 35000                |
| 13:09 | 35000                |
| 13:19 | 35000                |
| 13:29 | 35000                |
| 13:39 | 35000                |

Edit View Delete



# Group Similar Transactions

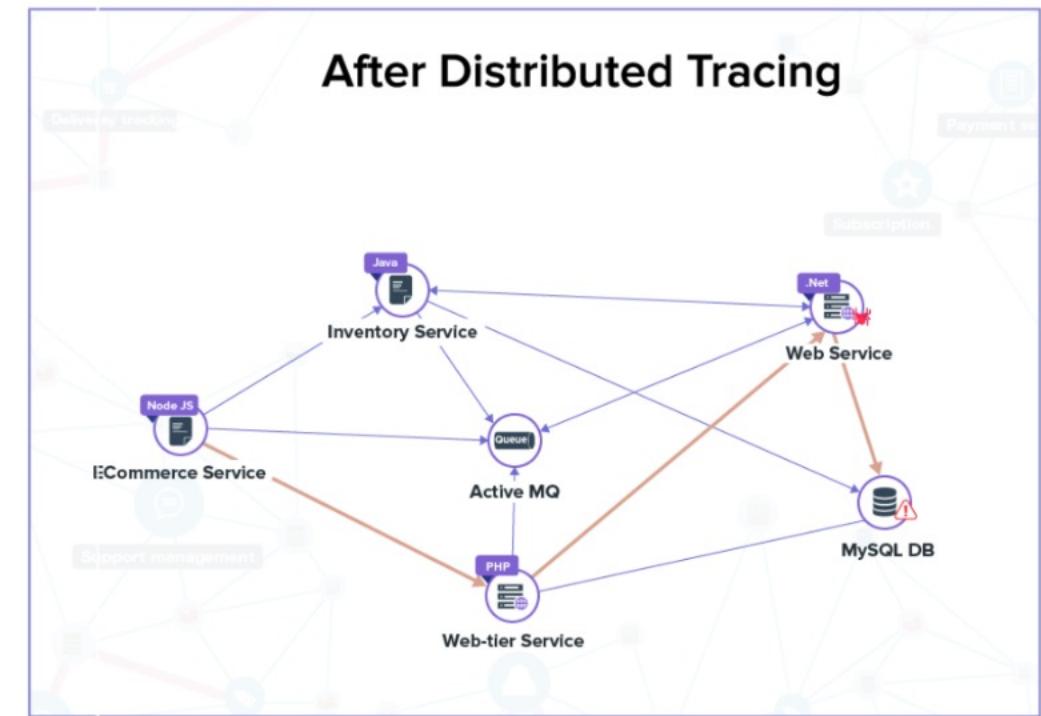
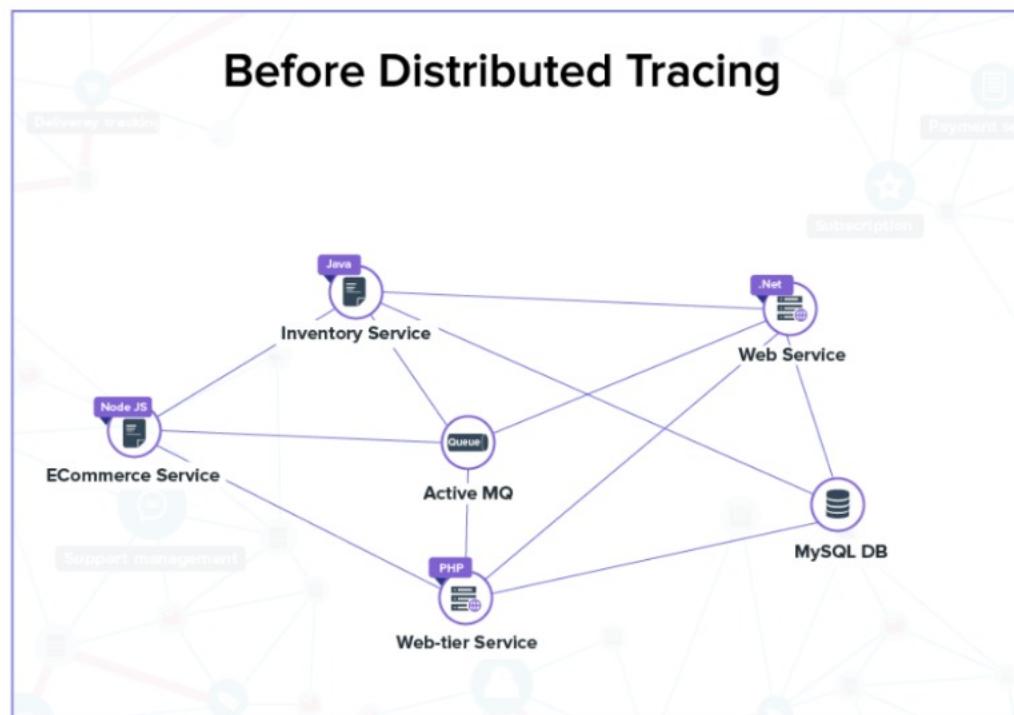
- Create a new file named "transaction\_merge\_patterns.conf" in the conf directory
- Open the file in a text editor and add key value pairs as per the below syntax.
  - Regular expression of URLs/web transaction=new name to be assigned
- Restart the agent.



# Distributed Tracing in Site24x7

- Distributed Tracing maps the entire flow of the transaction, including all the calls it makes from one component to another
- In Site24x7 transaction that exceeds the specified threshold limit is captured as a trace
- When a transaction trace involves multiple application components, it is captured along with its method calls and stack trace with the help of Distributed Tracing
- Distributed Tracing is supported in APM Insight Java, .NET, .NET Core, and Node.js agents

# Distributed Tracing (Before & After)



# Distributed Tracing in Site24x7

Screenshot of the Site24x7 Distributed Tracing interface for a transaction named "ZYLKER/httpUrl.do".

**Summary:** Transaction details: Aug 21, 2019 12:15:32 PM, Request Time: 8,883 ms, Thread Name: SZID-27367436-thread-100, Thread Id: 128, CPU Time: 28 ms, Memory Used: 2 MB, No.ofDB Queries: 0, Total Bytes In | Total Bytes Out: 57 B | 3 KB, Instance: pawan-2008:8082.

**Distributed Tracing:** Shows a table of remote calls with their start time, transaction name, response time, and application name.

| Start Time               | Transaction          | Resp. Time | Application Name                          |
|--------------------------|----------------------|------------|---|
| Aug 21, 2019 12:15:17 PM | dynamodb/createtable | 3,623 ms   | Zylker Payments<br>Host - zylker-pay:0080 |
| Aug 21, 2019 12:15:21 PM | oracle/viewdetails   | -          | Zylker Payments<br>Host - zylker-pay:0080 |
| Aug 21, 2019 12:15:40 PM | /customers/add       | -          | Zylker Travels<br>Host - zylker-test:0080 |

**Slowest Method Calls:** A horizontal bar chart showing the distribution of slowest method calls. The legend includes:

- HTTP Call - http://localhost:4300/customers/add (Green)
- HTTP Call - http://site24x7-win2012:85/EmpApp/Oracle/details (Yellow)
- HTTP Call - http://www.site24x7.com/index.html (Red)
- HTTP Call - http://site24x7-win2012:85/EmpApp/DynamoDb/CreateTable (Blue)
- Client-HttpCompo - com/sample/web/ops/HttpURLOps.execute() (Grey)
- others (Black)

**Slowest Method Calls and Count:** A table listing the slowest method calls with their count, duration, and percentage.

| Slowest Method Calls                                       | Count | Duration | Percentage (%) |
|--|-------|----------|----------------|
| HTTP Call - zylker-test:87/zylker/Oracle/details           | 1     | 4,536 ms | 51.06          |
| HTTP Call - zylker-test:87/zylker/DynamoDb/CreateTable     | 1     | 3,719 ms | 41.87          |
| HTTP Call - zylker-test:87/zylker/index.html               | 1     | 617 ms   | 6.95           |
| HTTP Call - http://localhost:4300/customers/add            | 1     | 3 ms     | 0.03           |
| Client-HttpCompo - com/sample/web/ops/HttpURLOps.execute() | 1     | 3 ms     | 0.03           |
| others   |       | 5 ms     | 0.06           |

**Total External Calls Count:** A table showing the total count of external calls.

| External Calls | Total Count |
|----------------|-------------|
| HTTP CALL      | 4           |



# APM Insight Alerting

Monitor Type **APM Insight Application**

Display Name **2222**

---

Threshold Configuration

Average Response Time threshold

1 ms Notify As Trouble

Error count threshold

1 Notify As Trouble

Exception count threshold

1 Notify As Trouble



# [New] APM Insight - Server Integration

Site24x7

Evaluation Account [Upgrade Now](#) All Monitors [View Reports](#) [Trigger Test Alert](#) [Incident Chat](#)

Last 30 Min Date View ▾ 7-Dec-21 20:22 - 7-Dec-21 20:52

| Monitor Name                        | Availability(%) | CPU(%) | Disk(%) | Memory(%) | Operating System   | OS Architecture |
|-------------------------------------|-----------------|--------|---------|-----------|--------------------|-----------------|
| ZYLKER-S1<br>LINUX   192.99.20.21   | 75.921%         | 8.6    | 19%     | 90.09%    | Ubuntu 20.04.2 LTS | x86_64          |
| ZYLKER-Demo<br>LINUX   192.99.21.11 | 67.356%         | 8.8    | 18%     | 82.23%    | Ubuntu 20.04.1 LTS | x86_64          |

Dashboard View created for Site24x7 on December 7, 2021 8:52 PM Asia/Kolkata for the time period: December 7, 2021 8:22 PM Asia/Kolkata to December 7, 2021 8:52 PM Asia/Kolkata.

Home Alarms Web APM Server VMware Cloud Network RUM

# [New] APM Insight - Server Integration

Home  
Alarms  
Web  
APM  
Server  
VMware  
Cloud  
Network  
RUM  
AppLogs  
Reports  
Admin  
Edit

ZYLKER-TEST(2 hosts and 2...) JAVA Agent Version: 5.3 | View Reports | Trigger Test Alert | Incident Chat

Last 30 Min Date View 7-Dec-21 20:19 - 7-Dec-21 20:49

Overview Transactions Database Traces JVM Exceptions Service Map App Parameters Thread Profiles RUM Analytics Milestones Server Metrics Outages

ZYLKER-S1 LINUX | [Version - 18.2.0] | Server Monitor

75.921 % Availability 8.22 % CPU 90.31 % Memory 19 % Disk 1 Downtimes Duration: 14 Mins 26 Secs - NA - SLA Achieved

Events Timeline

07:50 07:55 08 PM 08:05 08:10 08:15 08:20 08:25 08:30 08:35 08:40 08:45

■ Down ■ Critical ■ Trouble ■ Maintenance ■ Anomaly ■ Suspended

Snapshot

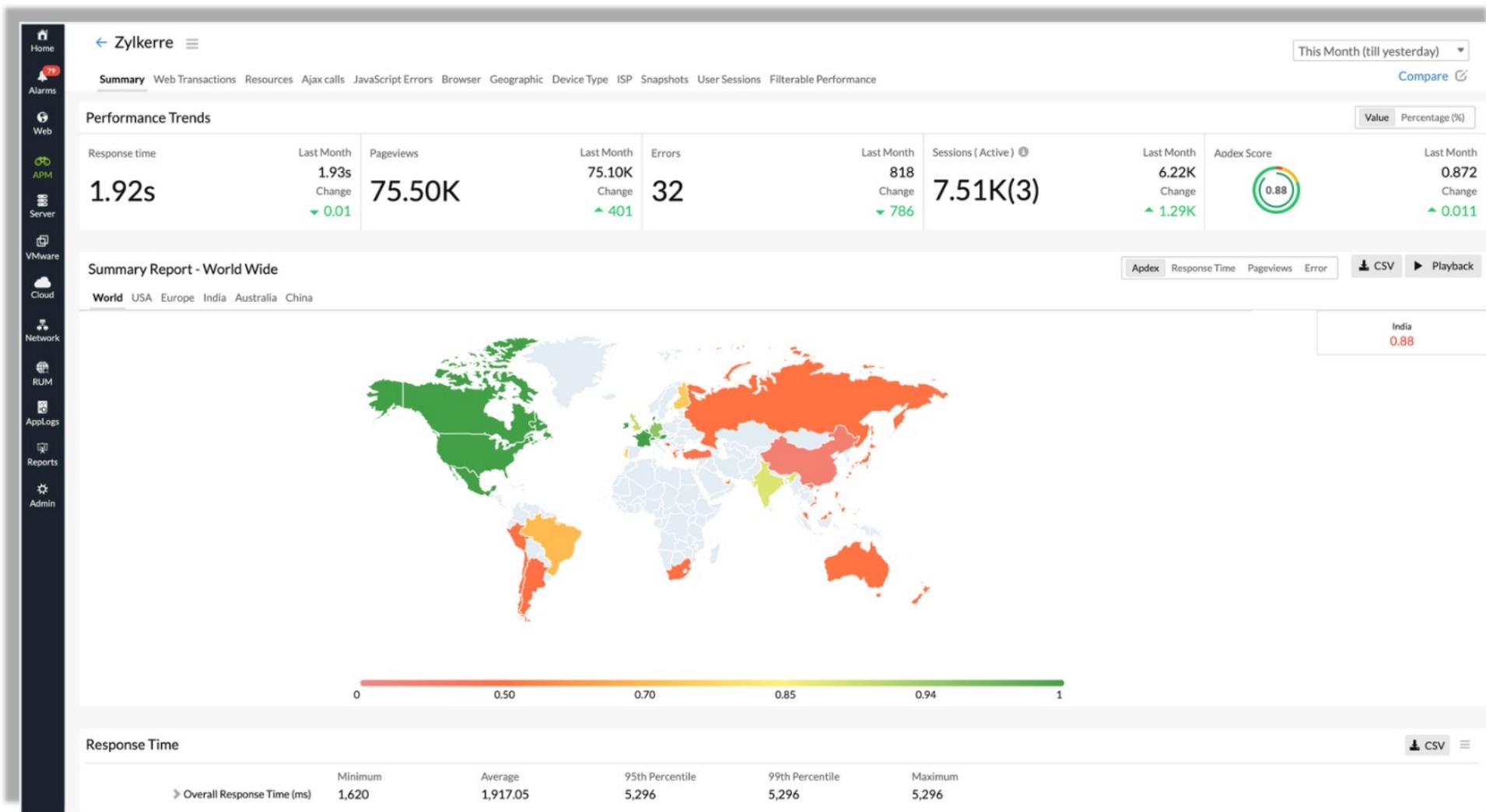
|                     |                  |                          |  |
|---------------------|------------------|--------------------------|--|
| Processes 0 Add New | NICs 5/7         | Disks 24                 | Server Details<br>raveena-8765<br>192.168.1.20<br>Ubuntu 20.04.2 LTS x86_64<br>16 CPU Cores / 15226 MB RAM<br>AMD Ryzen 7 PRO 4750U with Radeon Graphics |
| Plugins 0 Add New   | Checks 0 Add New | Sys Log Errors 0 Add New | System Statistics<br>Total Process : 505<br>Uptime : 10 hr(s) 47 min(s) 3 sec(s)<br>Login Count : 1<br>Open Port Count : 27                              |



# APM - RUM Integration

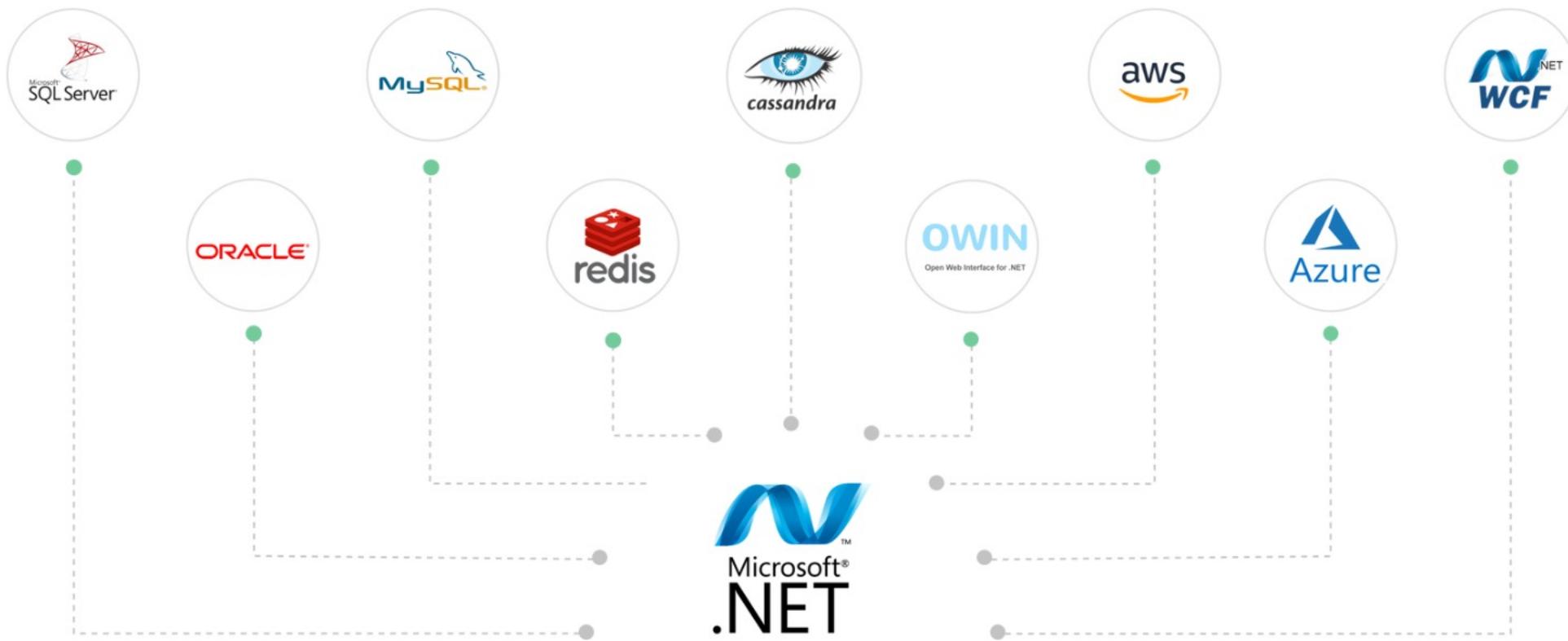
- Integrated Browser time and the Server time helps in analyzing the metrics together
- From the click on the browser, to the time taken for displaying the response, along with the backend time taken in processing the transaction.

# APM - RUM Integration





# APM Insight - .NET



Microsoft  
.NET



# APM Insight - .NET Installation

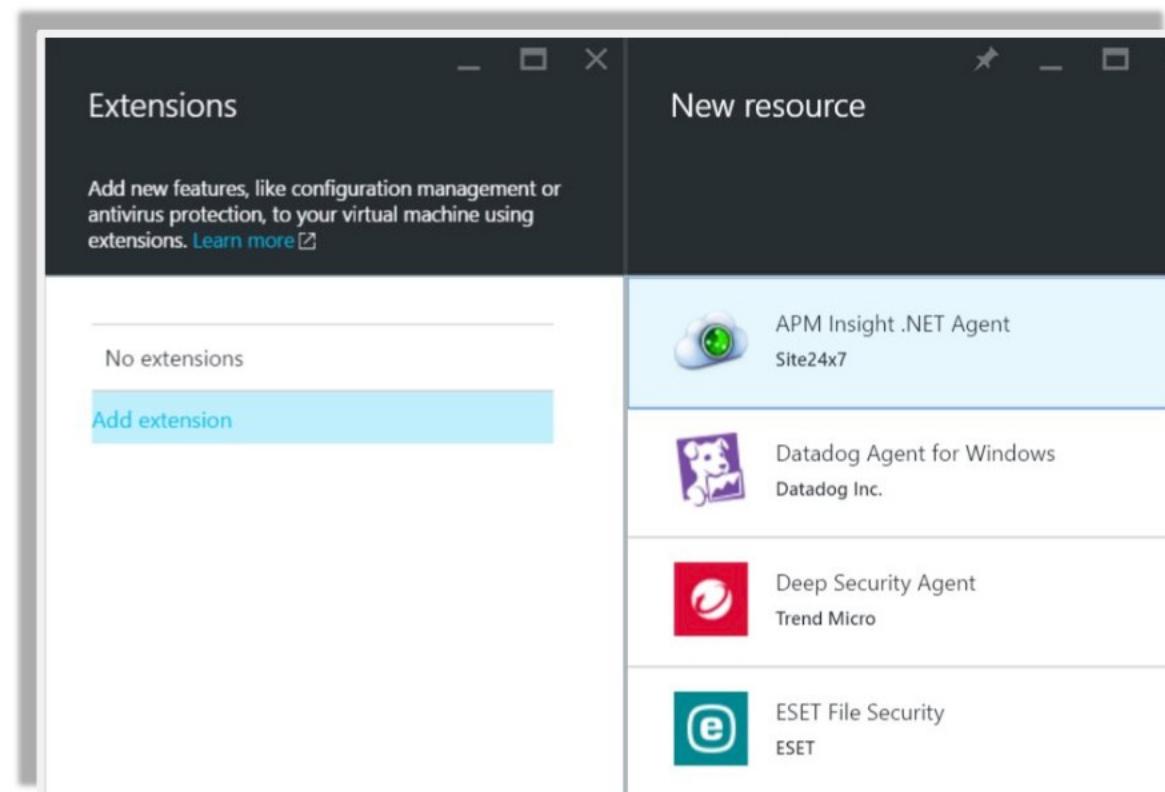
- .NET applications in Microsoft .NET Framework version 4.0 and above
- IIS 7.0 and above.



# APM Insight - .NET Installation in Azure environment

## → Azure VM Extension

- .NET 4.0 & above
- IIS 7.0 & above.





# APM Insight - .NET Application filters

APM Insight .NET Agent Configuration

General Advanced App filters Transaction Merge Background Transaction

General Settings

License Key

Application Name

Multi Monitor (Use App filters tab to select applications for monitoring)

Logical name of your application to group the data from different agents

Specify the Application Name

Settings

Apxd threshold (second)

Capture database SQL queries

Enable transaction tracing

Transaction trace threshold (second)

Parametrize SQLs in transaction trace

Stacktrace threshold for SQL in transaction trace (second)

Logging

Enable Logging

Specify the log level at which the APM Insight agent should record Logging information.

Log level



## APM Insight - .NET Custom instrumentation

- Track user defined methods in a web application.
- It helps instrument specified methods in the web application DLLs for monitoring its performance.
- It helps you to identify the root cause of the performance issue.
  
- Custom instrumentation configuration
  - Using .NET Agent API
  - Using Custom Instrumentation Tool
  - Manual configuration Files

# Application Code Method

0 references

```
public class PayRollController
{
    0 references
    public Stream GetPayRoll(string uri)
    {
        Stream stream = null;
        HttpWebRequest fileReq = (HttpWebRequest)HttpWebRequest.Create(uri);
        fileReq.ContentType = "application/octet-stream";
        fileReq.Method = "POST";
        HttpWebResponse fileResp = (HttpWebResponse)fileReq.GetResponse();
        stream = fileResp.GetResponseStream();
        return stream;
    }
}
```

# Custom Instrumentation Tool

The screenshot shows a software interface for monitoring application components. On the left, a tree view lists various application parts, many of which have checkboxes next to them, indicating they are being monitored. A central pane displays a list of tracked methods, each with its name and the full .NET method signature.

**Monitored Components (Left Tree View):**

- User
- MockDatabase
- UserRepository
- BasePage
- FileUpload
- BundleConfig
- FilterConfig
- RouteConfig
- Startup
- MvcApplication
- ContentManagement
- MyHtmlHelper
- Util
- Movie
- Actor
- AddressConverter
- Address
- ExceptionModel
- UserProfile

**Tracked Methods (Central List):**

| Method Name       | Method Signature  |
|-------------------|---|
| AccountController | <code>EmpApp.Controllers.AccountController.Home() : System.Web.Mvc.ActionResult</code>  |
| AccountController | <code>EmpApp.Controllers.AccountController.LazilyFetchOrCreateDescriptors(TDescriptor[]&amp;, Func`2, Func`3, TArgument) : TDescriptor[]</code>         |
| AccountController | <code>EmpApp.Controllers.AccountController.Load(ControllerContext, ITempDataProvider) : System.String</code>  |
| LOGIN_SERVICE     | <code>EmpApp.Controllers.AccountController.Login(String) : System.Web.Mvc.ActionResult</code>   |
| LOGIN_SERVICE     | <code>EmpApp.Controllers.AccountController.Login(Login, String) : System.Web.Mvc.ActionResult</code>  |
| LOGIN_SERVICE     | <code>EmpApp.Controllers.AccountController.LoginUser(String, String, Boolean, RedirectToRouteResult&amp;) : System.Web.Mvc.RedirectToRouteResult</code> |
| AccountController | <code>EmpApp.Controllers.AccountController.LogOff() : System.Web.Mvc.ActionResult</code>  |
| AccountController | <code>EmpApp.Controllers.AccountController.MyLogin(String) : System.Web.Mvc.ActionResult</code>   |
| AccountController | <code>EmpApp.Controllers.AccountController.MyTaskAsync(String[]) : System.IAsyncResult</code>   |
| AccountController | <code>EmpApp.Controllers.AccountController.MyTaskCompletedCallback(IAsyncResult) : System.Void</code>   |

Buttons between the tree and the list:  
">>>  
<<

# Instrumented Methods in Site24x7

| Metric: <a href="#">Expand All</a>   <a href="#">Collapse All</a>   | Exclusive (ms) | Total (ms) |
|---|----------------|------------|
| ▼System.Web.HttpApplication+CallHandlerExecutionStep : CallHandlerExecutionStep.System.Web.HttpApplication.IExecutionStep.Execute() | 2              | 5,085      |
| ▼System.Web.Mvc.Async.AsyncControllerActionInvoker : EmpApp.Controllers.PayRollController.GetPayRoll()                              | 138            | 5,082      |
| ▼ [custom]EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.GetPayRoll()                                  | 333            | 4,271      |
| ▼ [custom]EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.GetEmployeeDetails()                          | 134            | 1,156      |
| [custom]EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.FindEmployee()                                  | 1,022          | 1,022      |
| ▼ [custom] EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.GetEmployeeSalary()                          | 55             | 1,681      |
| [custom]EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.FetchBasicSalary()                              | 689            | 689        |
| SqlCommand.ExecuteNonQuery() storedprocedure - [dbo].[sp_GetSalaryDetails]  | SQL            | 936        |
| ▼ [custom] EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.FetchHRA()                                   | 195            | 1,099      |
| SqlCommand.ExecuteNonQuery() storedprocedure - [dbo].[sp_GetSalaryDetails]  | SQL            | 904        |
| [custom]EmpApp.Controllers.PayRollController : EmpApp.Controllers.PayRollController.FormatPayRollDetails()                          | 672            | 672        |

# Instrumented Methods - Before & After

The image displays two side-by-side screenshots of a tracing tool interface, likely from a Zylker application, illustrating the impact of instrumenting methods.

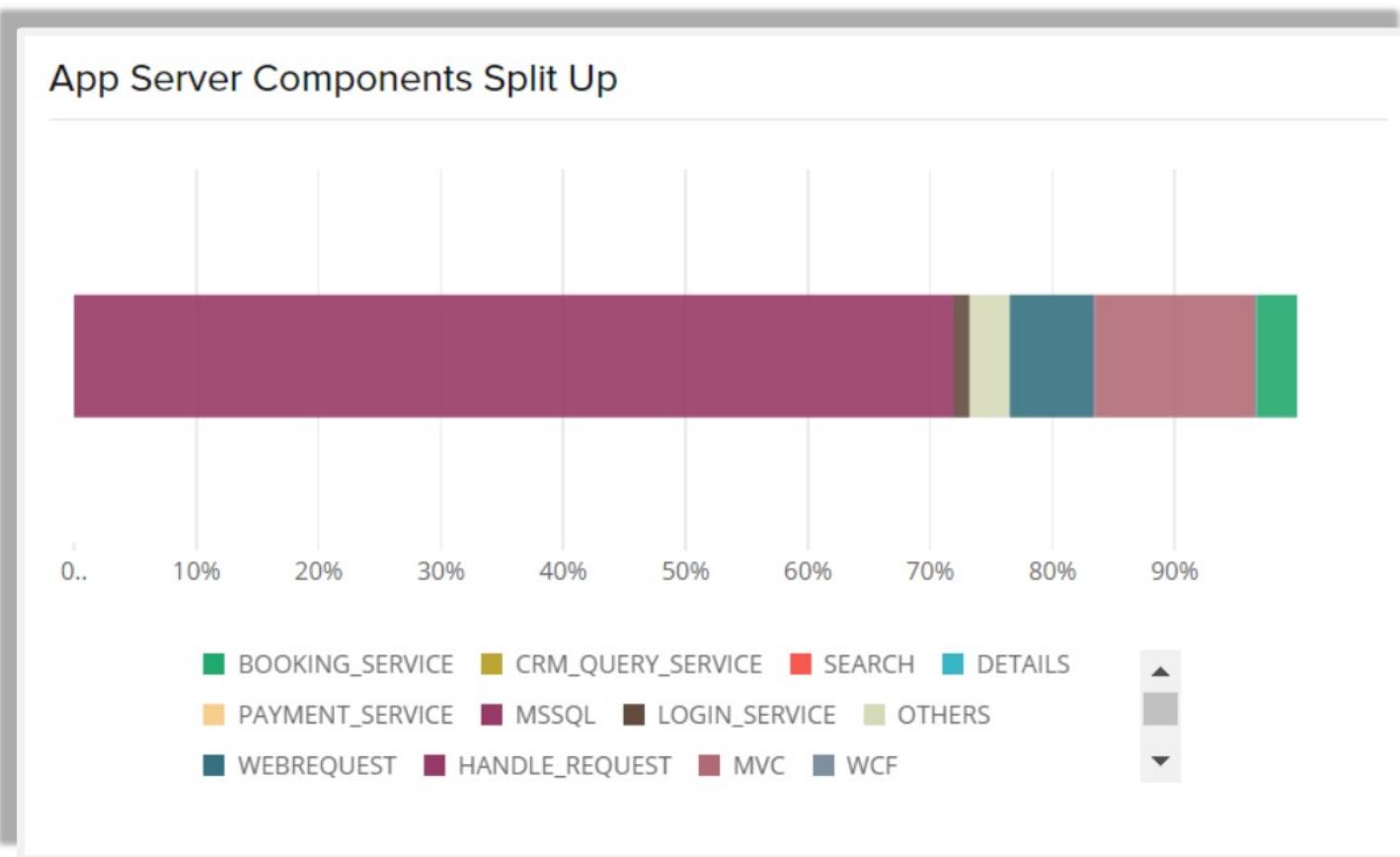
**Left Screenshot (Before Instrumentation):**

- Header:** ZYLKER, Overview, Transactions, Database, **Traces**, JVM, Exceptions, Service Map, App Parameters, Thread Profiles, RUM Analyt.
- Trace Details:** SampleWeb/httpUrl.do, Total Calls: 4 Method Call(s) + 2 External Call(s), POST, 200.
- Timestamps:** Feb 17, 2020 10:59:02 PM, 2,419 ms, SZID-82642728-thread-287, 83587.
- Metrics:** Request Time, Resp. Time, Thread Name, Thread Id.
- Navigation:** Summary, **Trace Details** (selected), SQL Statements, Exceptions, Remote(External) Calls, Other traces of this transaction.
- Views:** Tree View, Components View.
- Call Tree:** Shows the call stack with metrics:
  - 0 ms: ▼Total Calls: 4 Method Call(s) + 2 External Call(s)
  - 0 ms: ▼org/apache/catalina/core/StandardHostValve.invoke()
  - 0 ms: ▼org/apache/tomcat/websocket/server/WsFilter.doFilter()
  - 0 ms: ▼org/apache/struts/action/ActionServlet.doPost()
  - 0 ms: ▼com/sample/web/action/HttpURLAction.execute()
  - 1 ms: HTTP Call - https://www.zylker.com
  - 1288 ms: Un-Instrumented Block of Code
  - 1616 ms: HTTP Call - https://www.static.zylker.com
  - 2188 ms: Un-Instrumented Block of Code

**Right Screenshot (After Instrumentation):**

- Header:** ZYLKER, Overview, Transactions, Database, **Traces**, JVM, Exceptions, Service Map, App Parameters, Thread Profiles, RUM Analyt.
- Trace Details:** SampleWeb/httpUrl.do, Total Calls: 6 Method Call(s) + 2 External Call(s), POST, 200.
- Timestamps:** Feb 17, 2020 10:47:42 PM, 2,273 ms, SZID-65861399-thread-400, 80081.
- Metrics:** Request Time, Resp. Time, Thread Name, Thread Id.
- Navigation:** Summary, **Trace Details** (selected), SQL Statements, Exceptions, Remote(External) Calls, Other traces of this transaction.
- Views:** Tree View, Components View.
- Call Tree:** Shows the call stack with metrics:
  - 0 ms: ▼Total Calls: 6 Method Call(s) + 2 External Call(s)
  - 0 ms: ▼org/apache/catalina/core/StandardHostValve.invoke()
  - 0 ms: ▼org/apache/tomcat/websocket/server/WsFilter.doFilter()
  - 0 ms: ▼org/apache/struts/action/ActionServlet.doPost()
  - 0 ms: ▼com/sample/web/action/HttpURLAction.execute()
  - 0 ms: ▼com/sample/web/ops/HttpURLOps.execute() (highlighted in white box)
  - 308 ms: HTTP Call - https://www.zylker.com
  - 1930 ms: ▼com/sample/web/ops/HttpURLOps.execute()
  - 1930 ms: HTTP Call - https://www.static.zylker.com

# Custom Components Split Up





# APM Insight - .NET

## Cloud environment Components Support

### ⇒ Azure

- Azure Blobs
- Azure Tables
- Azure Queues
- Azure Service Bus
  - Queues
  - Topics
  - Relays
  - Event Hubs
- Azure SQL Database
- Azure Redis Cache

### ⇒ Amazon Web Services

- Amazon DynamoDB
- Amazon SimpleDB
- Amazon Simple Storage Service (S3)
- Amazon Simple Mail Service (SES)
- Amazon Simple Queue Service (SQS)
- Amazon Glacier
- Amazon Cloud Front
- Amazon RDS



# APM Insight - .NET Health monitor

→ Self diagnostic tool helps identifying and troubleshooting configuration issues.

→ Functions

- Create Diagnostic zip file
- View Service settings
- Check Network connectivity
- Check Application filters
- Monitor worker processes
- Verify monitor status
- Verify profiler status

The screenshot shows the APM Insight .NET Agent interface. On the left, there's a sidebar with service control buttons ('Stop' and 'Restart') and a description of the agent: 'Receives data from applications and sends to collector.' Below this is a 'Create Diagnostics zip file' button and an unchecked checkbox for 'Include Event Logs'. The main area has tabs for 'APM Insight .NET Agent Diagnostics' and 'Overview'. Under 'Agent mode is Multi-monitor', it lists several successful monitoring metrics:

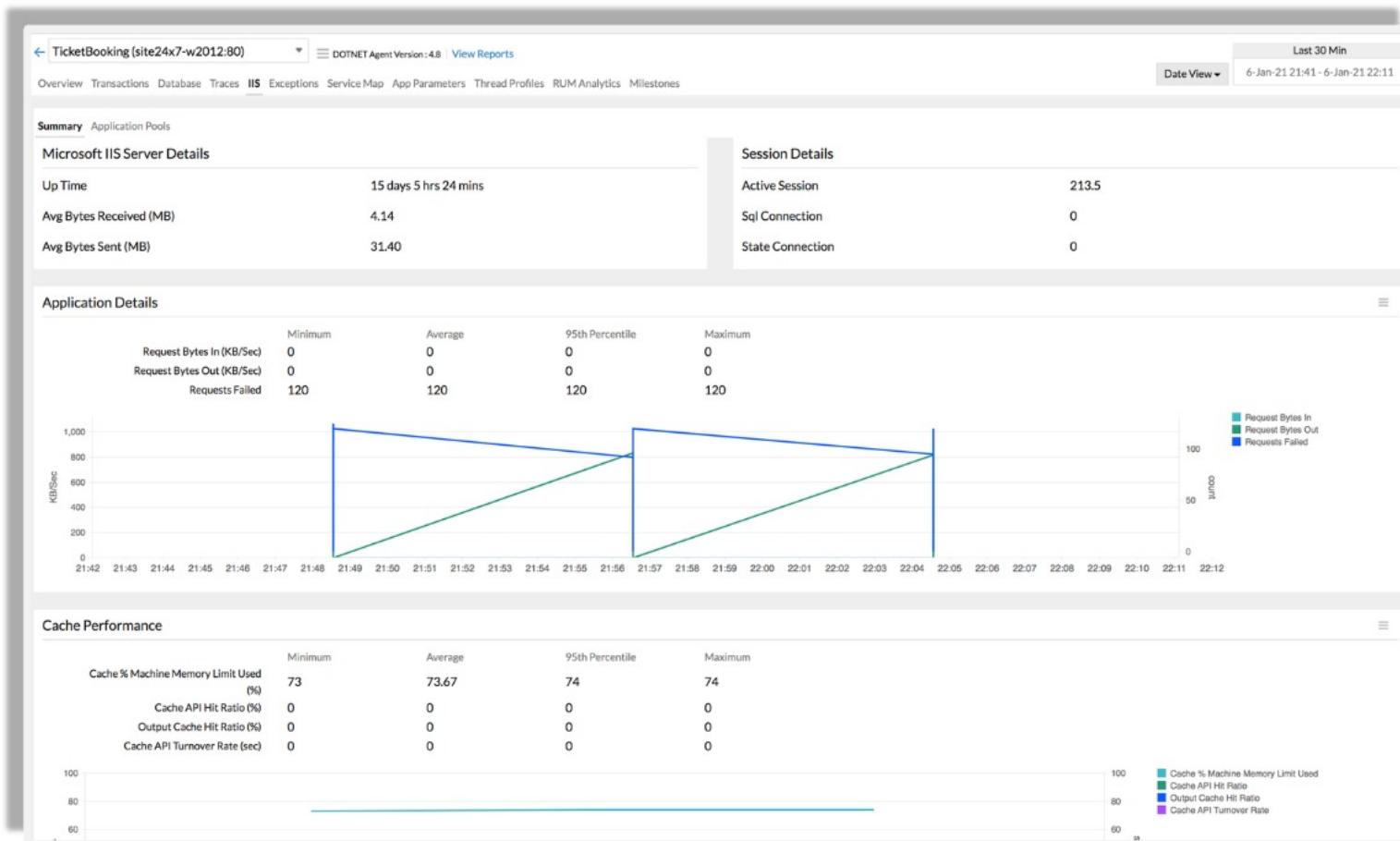
- Application installed successfully
- Service running
- Network connection is available
- No. of apps included for monitoring: 1
- No. of W3WP Processes (32 bit) : 0
- No. of W3WP Processes (64 bit) : 0



## APM Insight - .NET IIS monitor integration

- Enable IIS Monitor from APM Insight / APM Insight from IIS Monitor
- IIS Monitor collects performance details of the overall IIS server
- Consolidated view of the IIS server's health and performance bottlenecks.
- View IIS data from APM Insight
  - Up time, Network statistics, Cache performance, CLR & Heap performance, etc.

# APM Insight - .NET IIS monitor integration





# APM Insight - Ruby

- Ruby applications 1.8.7 and higher
- Rails - 3.0 and higher
- Sinatra- 1.4.0 and higher
  
- Ruby Agent installation can be done in two ways:
  - Install from RubyGems by using the command "gem install site24x7\_apminsight" in the system where Ruby is installed
  - Download the site24x7\_apminsight.gem file from Site24x7 account in Site24x7 or from the RubyGem website and run the command "gem install site24x7\_apminsight.gem."



# APM Insight - PHP

## → Requirements

- PHP 5.3 to 8.0 (In both Linux and Windows), Linux OS 64 bit and Windows

## → Webservers supported

- IIS, Apache2 NGINX or any other FPM based webserver

## → Frameworks supported

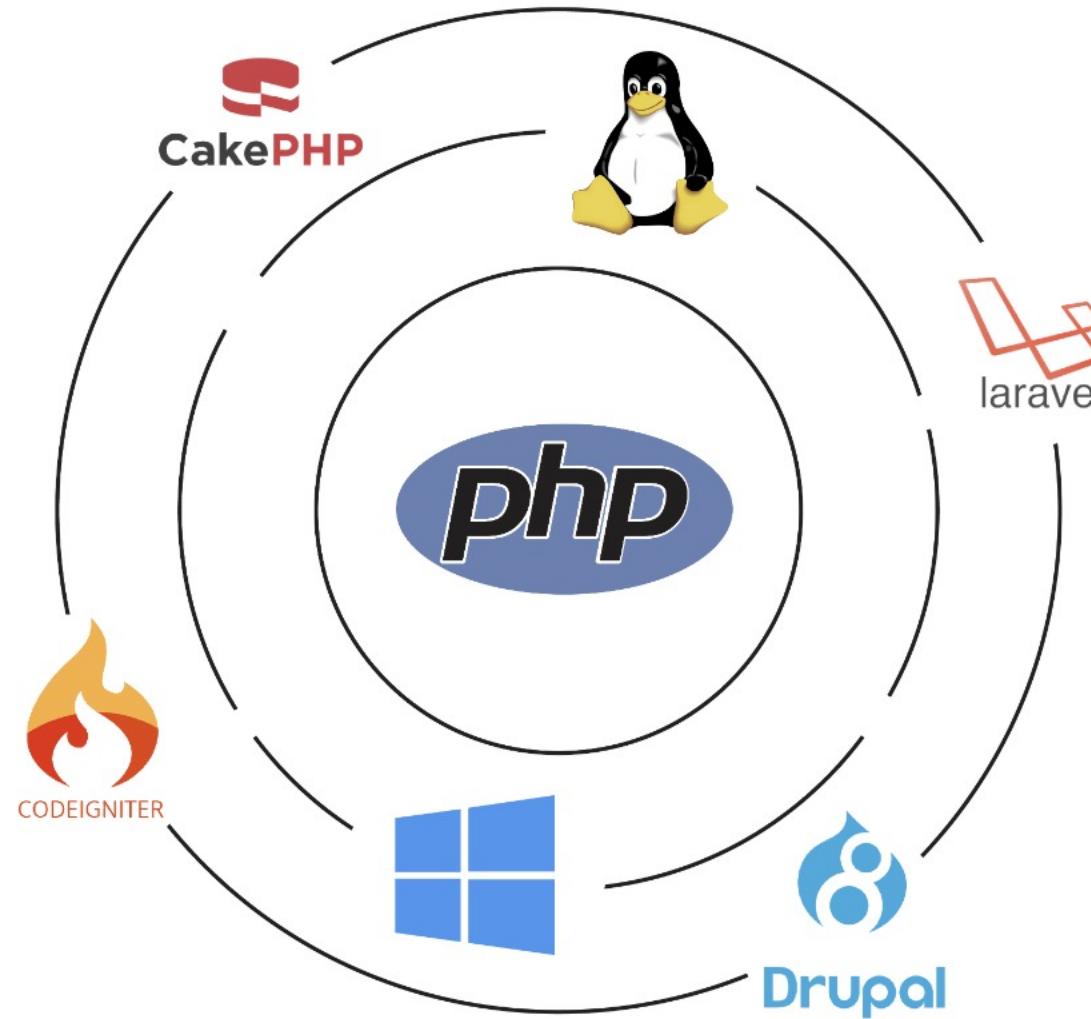
- Codeigniter, CakePHP, Laravel, Drupal, Joomla, WordPress, Magento, Symfony

## → Databases supported

- MySql drivers, SQLite and PDO based db queries.



# APM Insight - PHP





# APM-Insight - Node.Js

- **Requirements:** Node.js version 4 and above
- **Frameworks supported:** Express
- **Databases supported:** MySQL, PostgreSQL, MSSQL, MongoDB, Oracle DB





# APM-Insight - Python

- …→ **Requirements:** Python version 3.5.0 and above
- …→ **Frameworks supported:** Django and Flask
- …→ **Databases supported:** PyMySQL, Psycopg2, Pymemcache, Redis, SQLite, Jinja2, and Cassandra



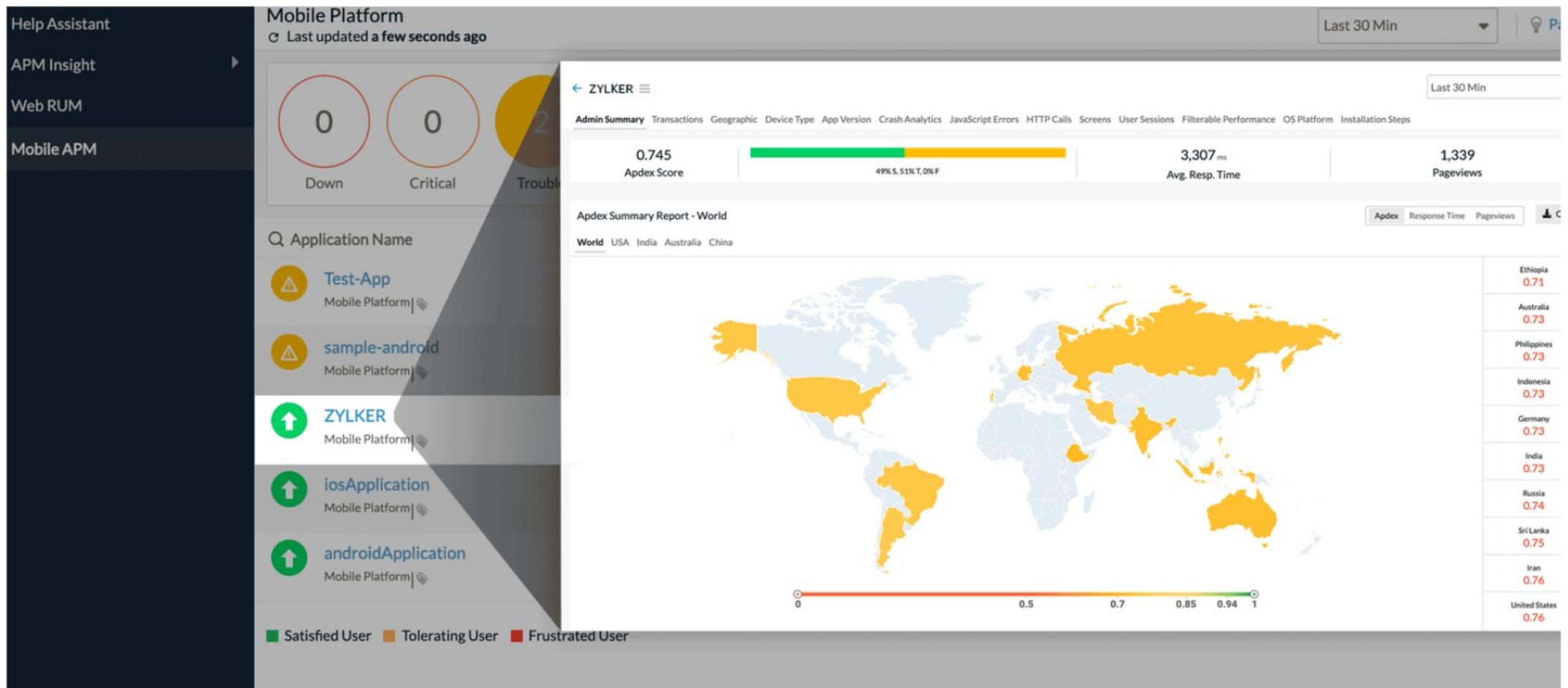
# Mobile APM



# Mobile App Monitoring

- You can monitor your mobile applications built in Android, iOS, or cross-native platforms like React Native.

# Mobile APM - To view data



# Mobile APM - User Sessions

Admin Summary Transactions Geographic Device Type App Version Crash Analytics JavaScript Errors HTTP Calls Screens **User Sessions** Filterable Performance OS Platform Installation Steps

User Sessions 

Add Filters 

| Total Sessions | Total Users | Avg.Pages Navigated | Avg.Viewing Time |
|----------------|-------------|---------------------|------------------|
| 25             | 17          | 51.72               | 4 Mins 45 Secs   |

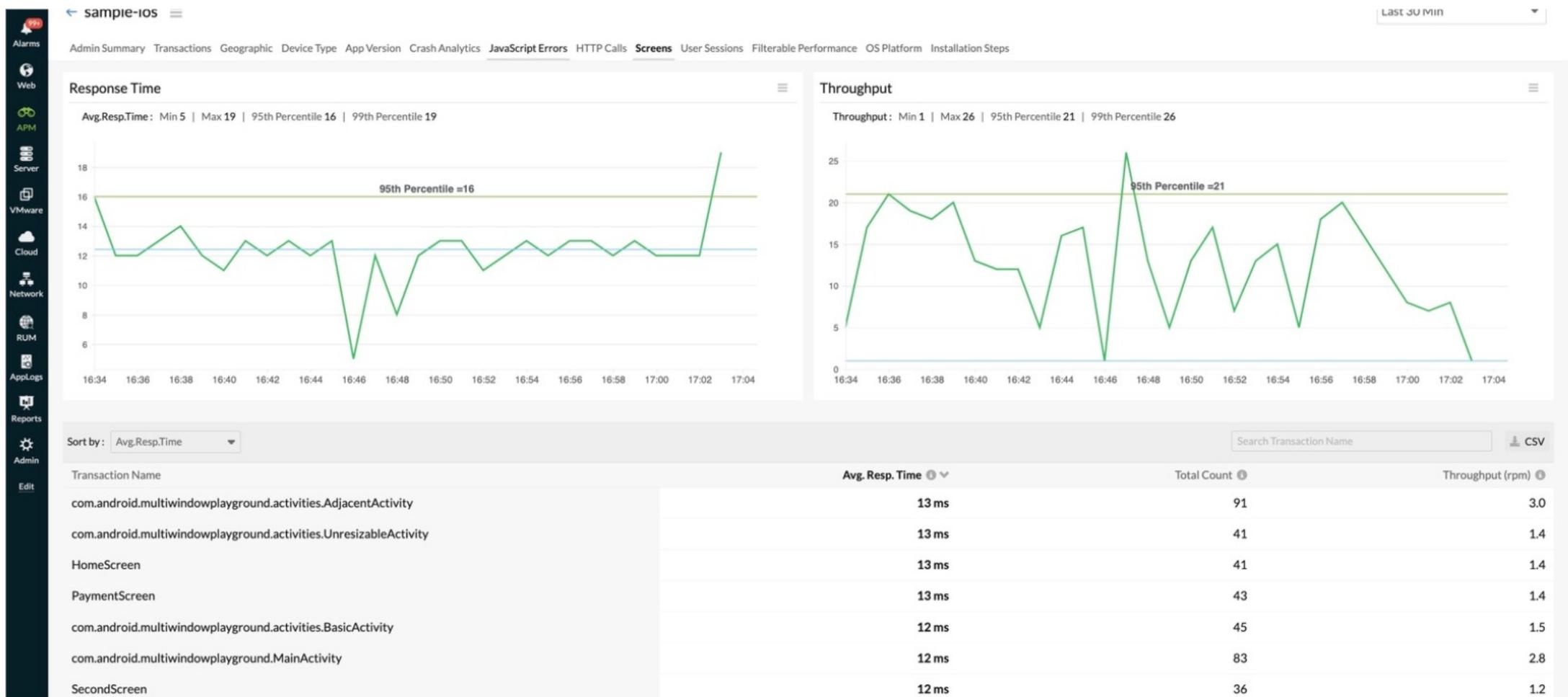
Total Sessions: 25 | Total Users: 17 | Avg.Pages Navigated: 51.72 | Avg.Viewing Time: 4 Mins 45 Secs

User Sessions  

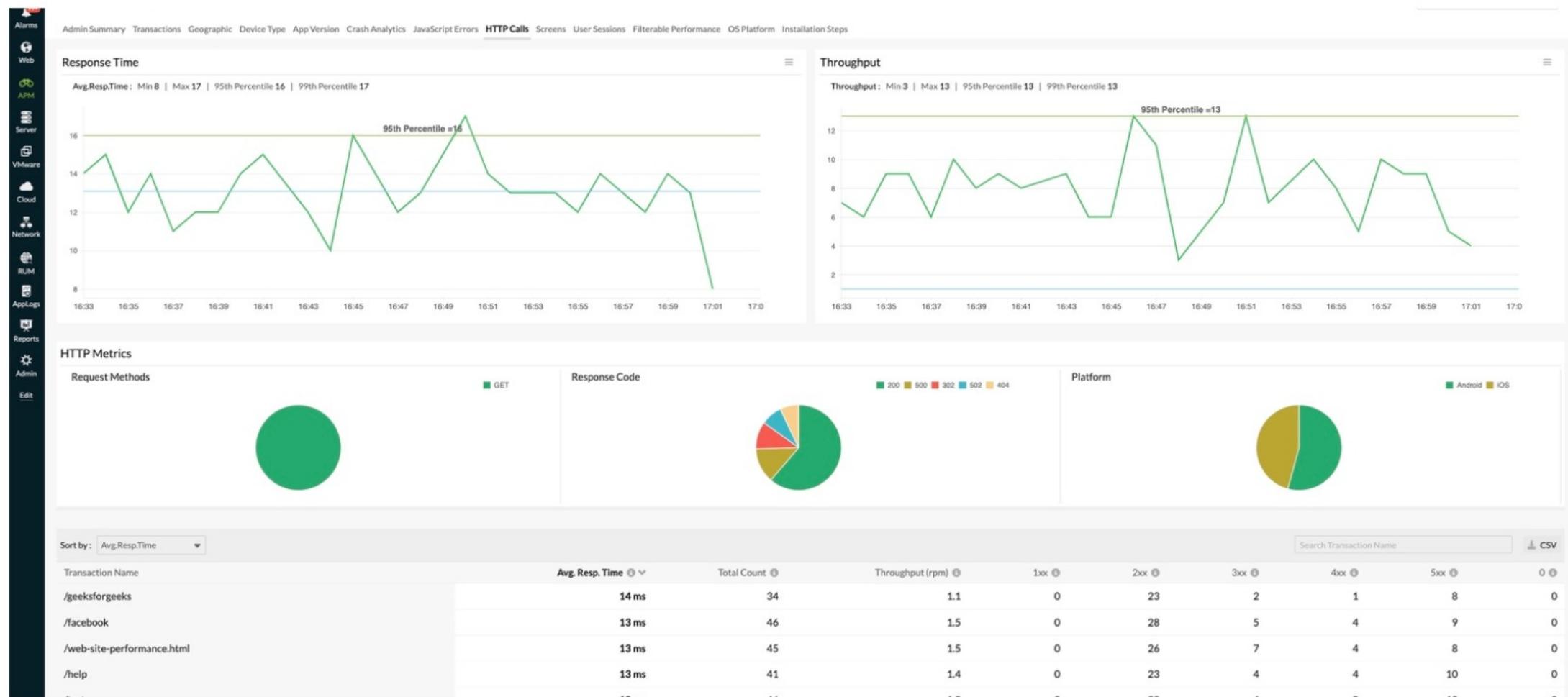
| Start Time            | User Name      | App Version | Device   | Country / Region | User Experience | Screens Navigated | Viewing Time   |
|-----------------------|----------------|-------------|----------|------------------|-----------------|-------------------|----------------|
| Mar 18, 2022 17:55:50 | Site24x7User21 | 10          | iPhone 7 | Ethiopia         | Satisfied       | 6                 | 0 Mins 2 Secs  |
| Mar 18, 2022 17:53:10 | Site24x7User49 | 9           | iPhone 7 | Australia        | Satisfied       | 47                | 3 Mins 38 Secs |
| Mar 18, 2022 17:51:34 | Site24x7User17 | 10          | GT-I1922 | United States    | Satisfied       | 68                | 4 Mins 28 Secs |
| Mar 18, 2022 17:51:34 | Site24x7User43 | 5           | iPhone 7 | Sri Lanka        | Satisfied       | 72                | 5 Mins 17 Secs |
| Mar 18, 2022 17:50:30 | Site24x7User23 | 2           | GT-I1922 | Iran             | Satisfied       | 26                | 2 Mins 10 Secs |
| Mar 18, 2022 17:47:50 | Site24x7User23 | 5           | GT-I1922 | Philippines      | Satisfied       | 56                | 4 Mins 28 Secs |
| Mar 18, 2022 17:47:18 | Site24x7User10 | 9           | GT-I1922 | India            | Satisfied       | 62                | 3 Mins 39 Secs |
| Mar 18, 2022 17:46:15 | Site24x7User12 | 4           | iPhone 7 | Indonesia        | Tolerating      | 84                | 6 Mins 11 Secs |
| Mar 18, 2022 17:44:38 | Site24x7User6  | 2           | iPhone 7 | Iran             | Tolerating      | 58                | 3 Mins 38 Secs |
| Mar 18, 2022 17:41:59 | Site24x7User12 | 7           | GT-I1922 | Australia        | Satisfied       | 37                | 2 Mins 47 Secs |

Page 1 Rows per page: 10 1-10 of 25 < >

# Mobile APM - Screens



# Mobile APM - HTTP Calls

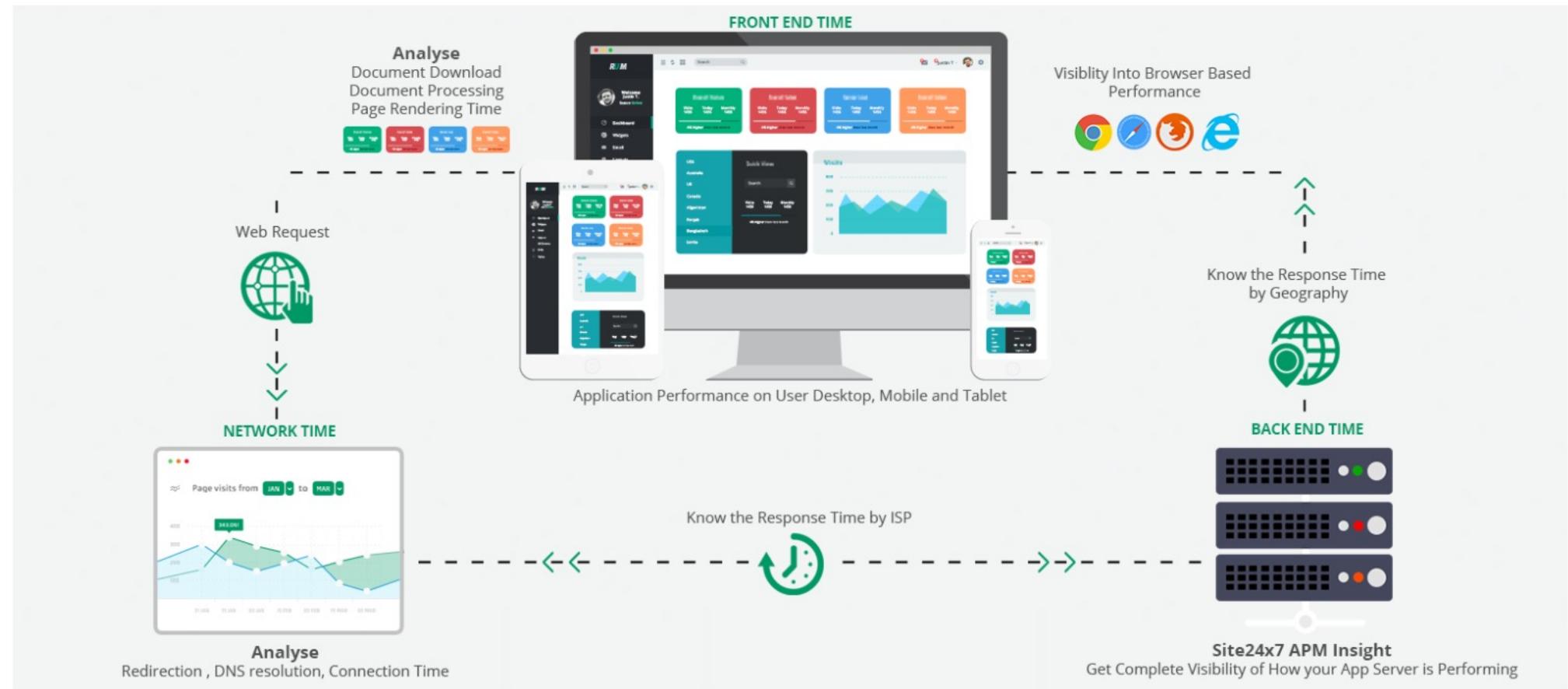




# Real User Monitoring



# RUM Architecture





# How to configure RUM?

- …→ Generate a JavaScript snippet from Site24x7 console
- …→ Insert it in the the header or footer of the HTML code of a common/index page of the web application that needs to be monitored
- …→ 

```
<script type="text/javascript">var
rumMOKey='xxxxxxxxxxxxxx';(function(){if(window.performance &&
window.performance.timing && window.performance.navigation) {var
site24x7_rum_beacon=document.createElement('script');site24x7_rum_beacon.asy
nc=true;site24x7_rum_beacon.setAttribute('src','//static.site24x7rum.com/beacon/sit
e24x7rum-min.js?appKey='+rumMOKey);document.getElementsByTagName('head'
)[0].appendChild(site24x7_rum_beacon);}})(window)</script>
```
- …→ Access all performance data from your Site24x7 console

# Real User Monitoring Browsers supported

| Browsers           | Minimum Version Required |
|--------------------|--------------------------|
| Internet Explorer  | 9                        |
| Firefox            | 31                       |
| Chrome             | 31                       |
| Safari             | 8                        |
| Opera              | 25                       |
| Android Browser    | 4.1                      |
| Chrome for Android | 39                       |
| Edge Browser       | 12                       |

# Real User Monitoring Reports Summary

Zylkerre

Last 30 Min

Performance Trends

|               | Yesterday     |        | Yesterday    |              | Yesterday | Yesterday | Yesterday | Yesterday         | Yesterday  | Yesterday   |
|---------------|---------------|--------|--------------|--------------|-----------|-----------|-----------|-------------------|------------|-------------|
| Response time | 1.59s         | Change | Pageviews    | 151          | Change    | Errors    | 0         | Sessions (Active) | 58         | Adex Score  |
| <b>2.49s</b>  | <b>▲ 0.90</b> |        | <b>1.03K</b> | <b>▲ 884</b> |           | <b>1</b>  | <b>NA</b> | <b>383(30)</b>    | <b>325</b> | <b>0.79</b> |

Events Timeline

No Outages Occurred

12:25 12:30 12:35 12:40 12:45 12:50 12:55 13 13:05 13:10 13:15 13:20

■ Down ■ Critical ■ Trouble ■ Maintenance ■ Anomaly ■ Suspended

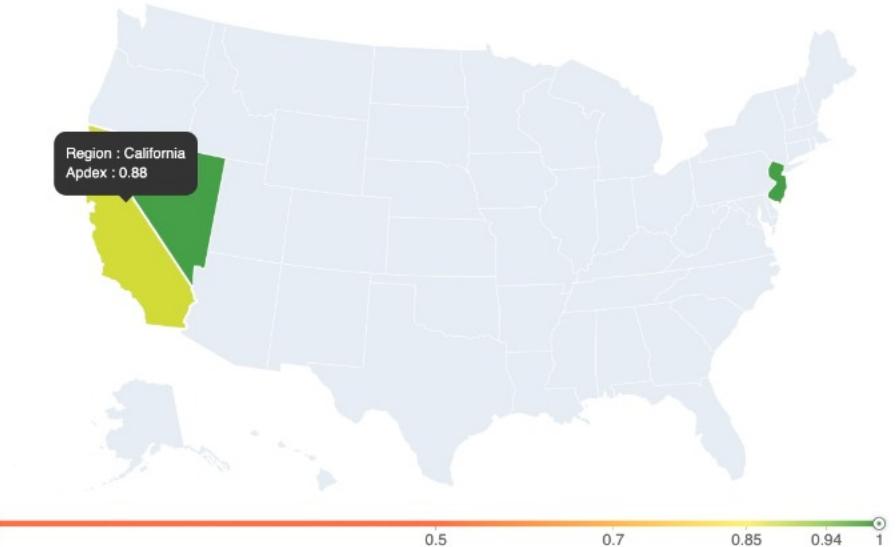
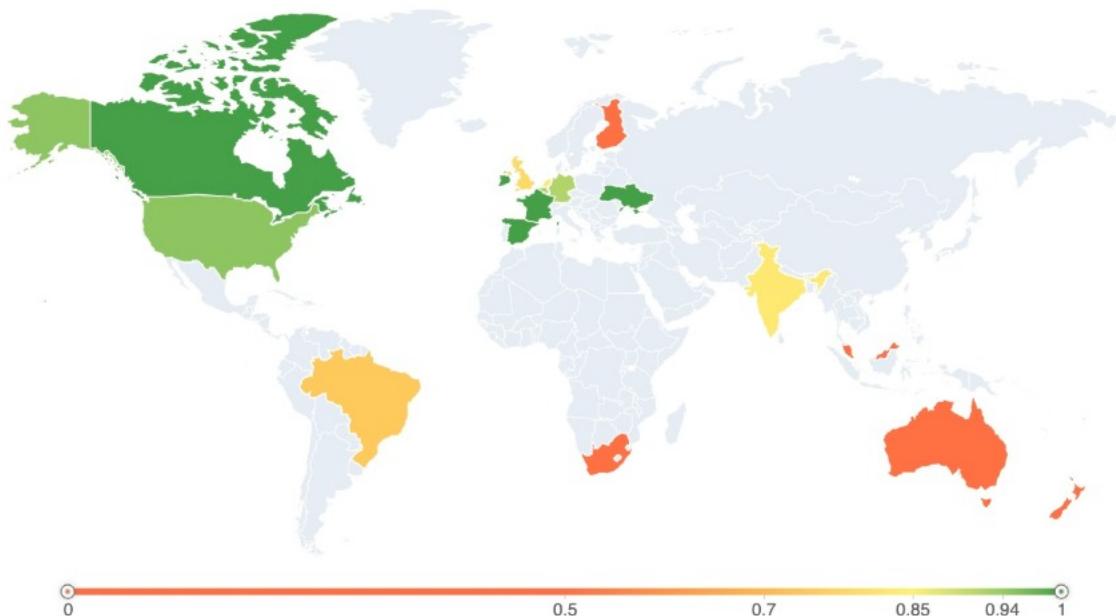
Adex Summary Report - World

World USA India Australia China Japan

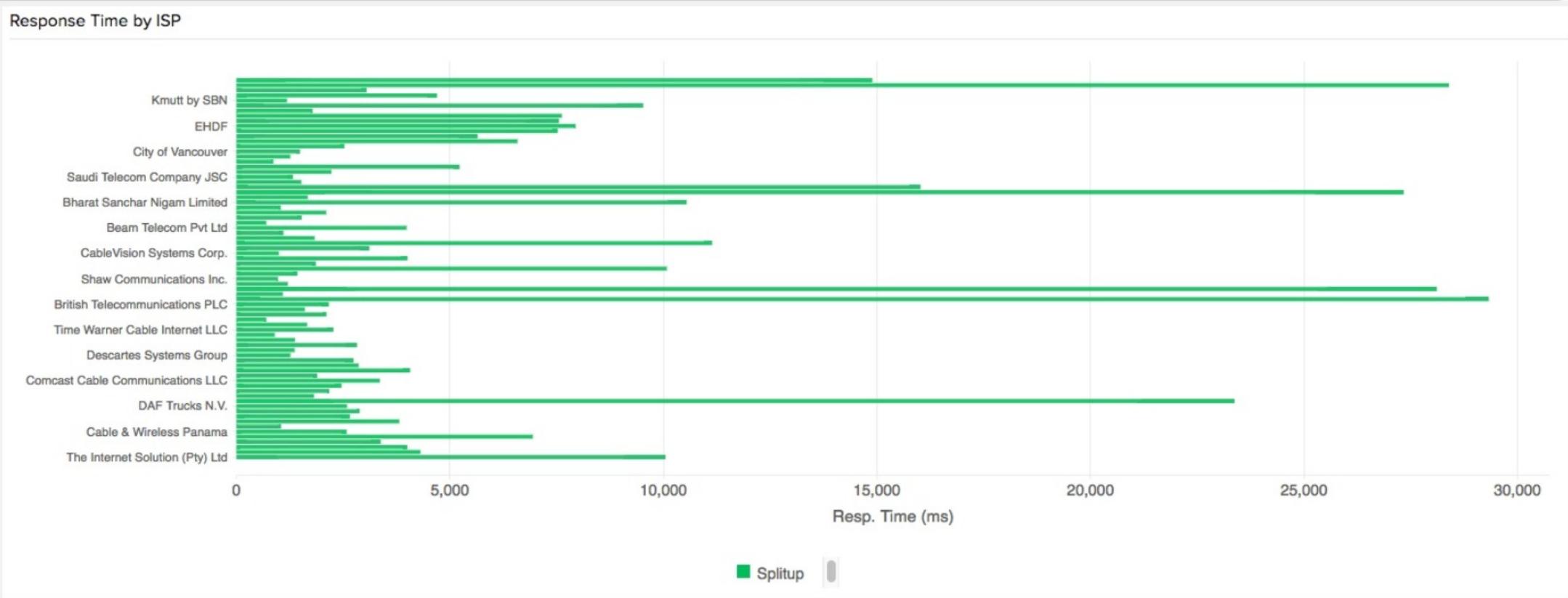
India 0.79



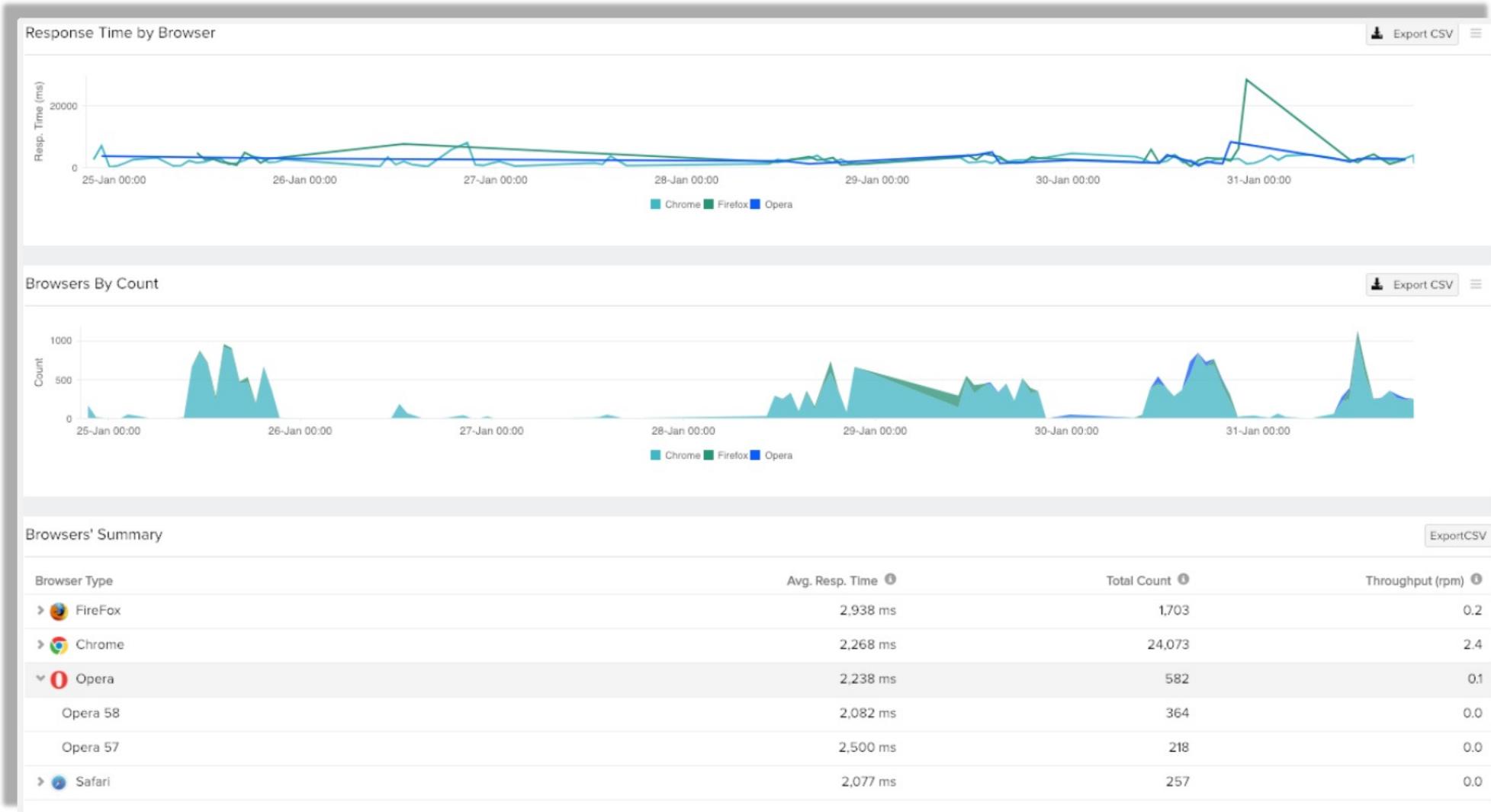
# Real User Monitoring Reports Geography



# Real User Monitoring Reports ISP

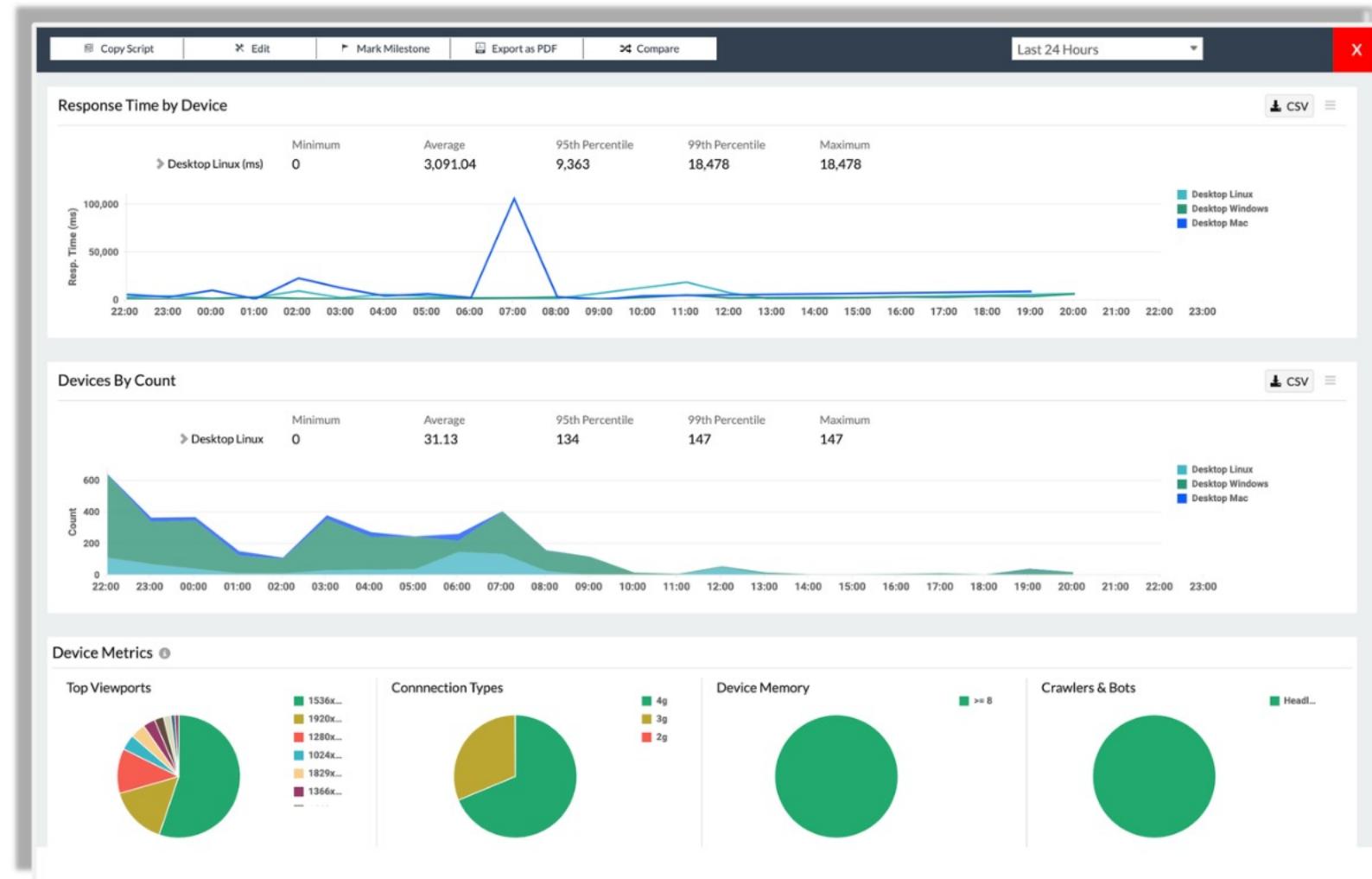


# Real User Monitoring Reports Browser

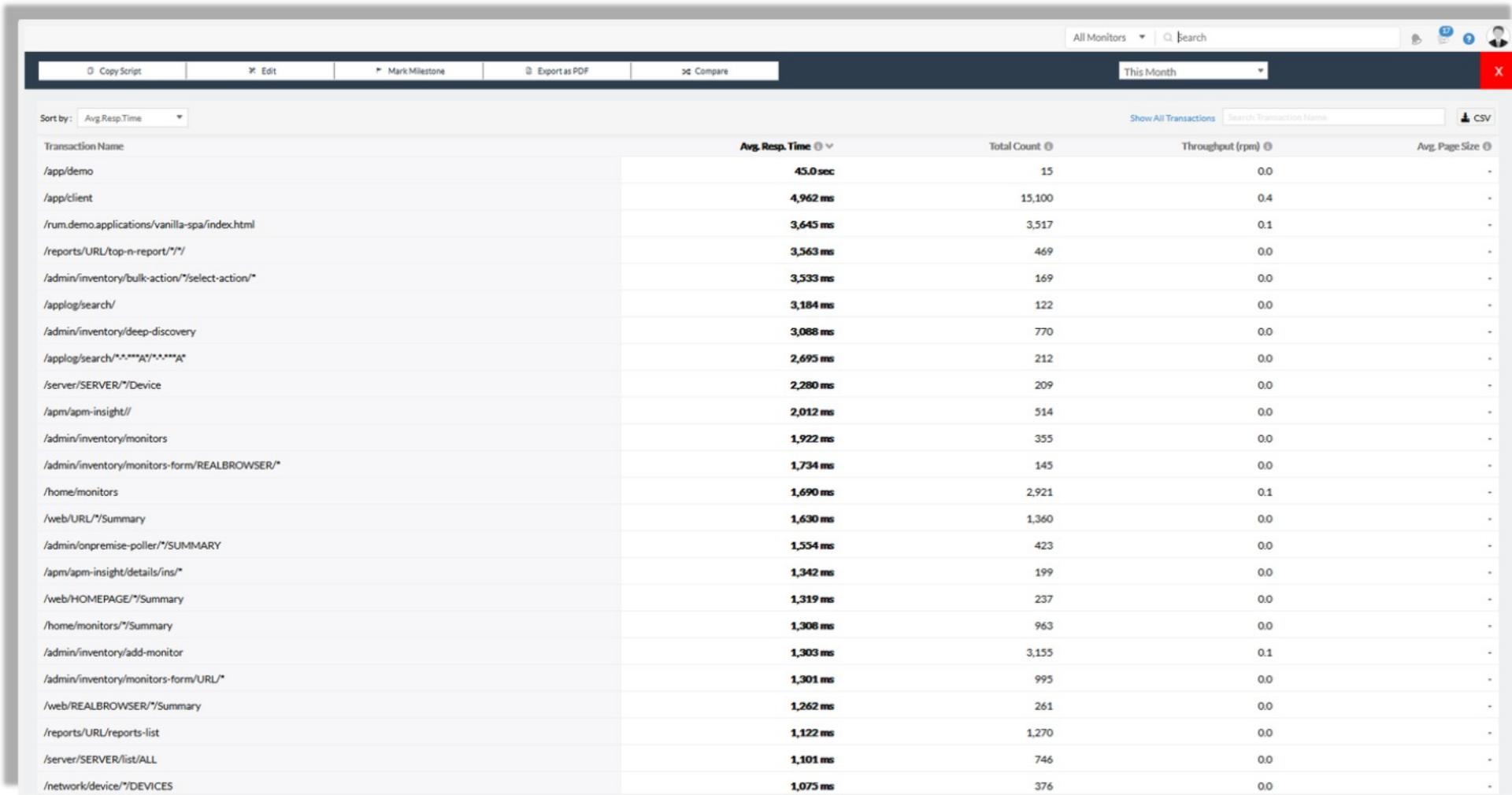


# Real User Monitoring Reports

Device type



# Real User Monitoring Reports Web pages



The screenshot shows a web-based RUM reporting interface. At the top, there's a navigation bar with buttons for 'Copy Script', 'Edit', 'Mark Milestone', 'Export as PDF', 'Compare', 'All Monitors' (dropdown), 'Search' (input field), and a date selector set to 'This Month'. Below the navigation is a search bar with 'Show All Transactions' and 'Search Transaction Name' fields, and a 'CSV' export button.

The main area is a table listing transactions with their average response time, total count, throughput, and average page size. The table is sorted by 'Avg. Resp. Time' in descending order. The data includes:

| Transaction Name                               | Avg. Resp. Time | Total Count | Throughput (rpm) | Avg. Page Size |
|--|-----------------|-------------|------------------|----------------|
| /app/demo                                      | 45.0 sec        | 15          | 0.0              | -              |
| /app/client                                    | 4,962 ms        | 15,100      | 0.4              | -              |
| /rum.demo.applications/vanilla-spa/index.html  | 3,645 ms        | 3,517       | 0.1              | -              |
| /reports/URL/top-n-report/*/*                  | 3,563 ms        | 469         | 0.0              | -              |
| /admin/inventory/bulk-action/*/select-action/* | 3,533 ms        | 169         | 0.0              | -              |
| /applog/search/                                | 3,184 ms        | 122         | 0.0              | -              |
| /admin/inventory/deep-discovery                | 3,068 ms        | 770         | 0.0              | -              |
| /applog/search/*/*/*A/*/*/*A*                  | 2,695 ms        | 212         | 0.0              | -              |
| /server/SERVER/*/Device                        | 2,280 ms        | 209         | 0.0              | -              |
| /apm/apm-insight//                             | 2,012 ms        | 514         | 0.0              | -              |
| /admin/inventory/monitors                      | 1,922 ms        | 355         | 0.0              | -              |
| /admin/inventory/monitors-form/REALBROWSER/*   | 1,734 ms        | 145         | 0.0              | -              |
| /home/monitors                                 | 1,690 ms        | 2,921       | 0.1              | -              |
| /web/URL/*/Summary                             | 1,630 ms        | 1,360       | 0.0              | -              |
| /admin/onpremise-poller/*/SUMMARY              | 1,554 ms        | 423         | 0.0              | -              |
| /apm/apm-insight/details/ins/*                 | 1,342 ms        | 199         | 0.0              | -              |
| /web/HOMEPAGE/*/Summary                        | 1,319 ms        | 237         | 0.0              | -              |
| /home/monitors/*/Summary                       | 1,308 ms        | 963         | 0.0              | -              |
| /admin/inventory/add-monitor                   | 1,303 ms        | 3,155       | 0.1              | -              |
| /admin/inventory/monitors-form/URL/*           | 1,301 ms        | 995         | 0.0              | -              |
| /web/REALBROWSER/*/Summary                     | 1,262 ms        | 261         | 0.0              | -              |
| /reports/URL/reports-list                      | 1,122 ms        | 1,270       | 0.0              | -              |
| /server/SERVER/list/ALL                        | 1,101 ms        | 746         | 0.0              | -              |
| /network/device/*/DEVICES                      | 1,075 ms        | 376         | 0.0              | -              |

# Real User Monitoring Reports

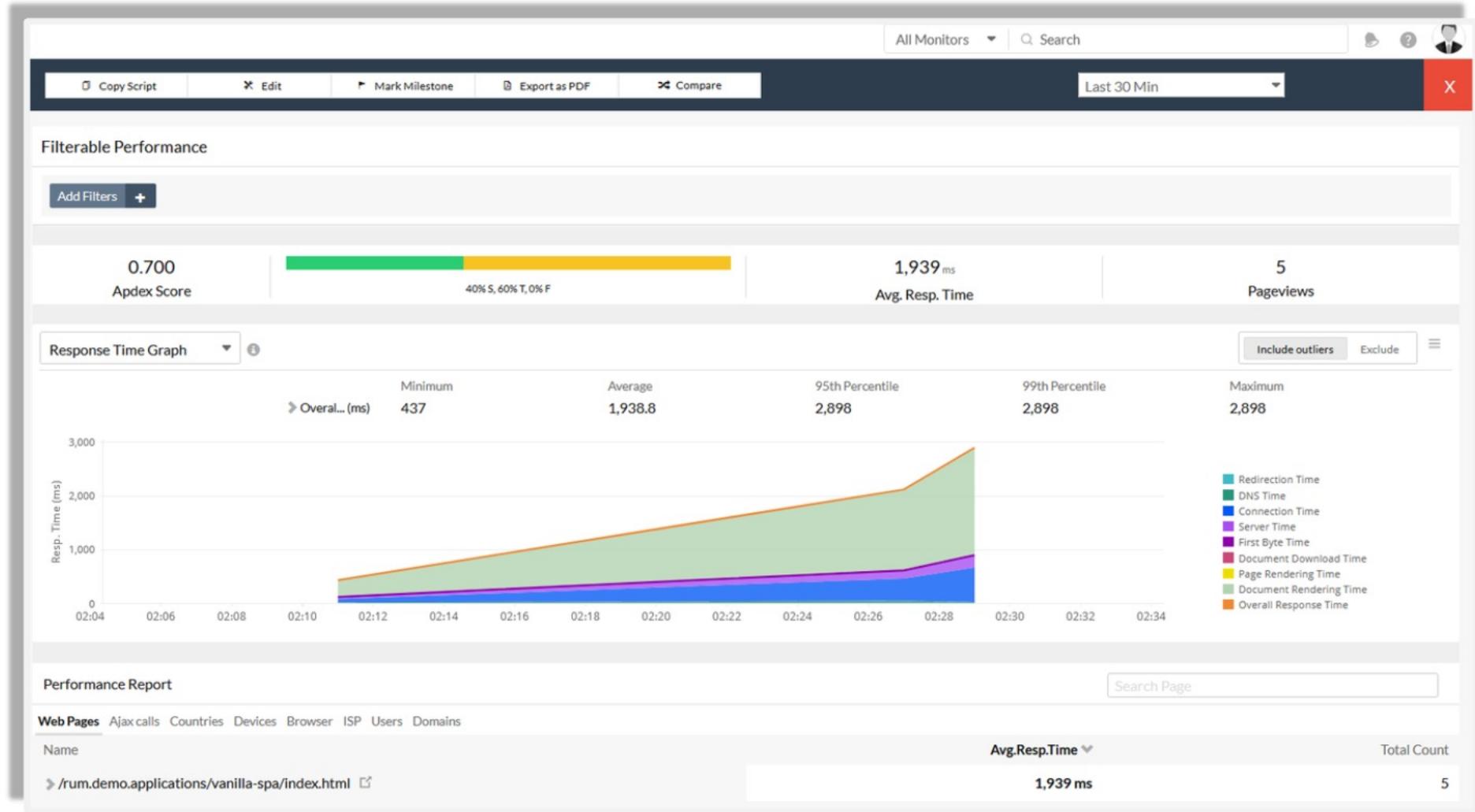
## User sessions

The screenshot displays a RUM report interface with the following key elements:

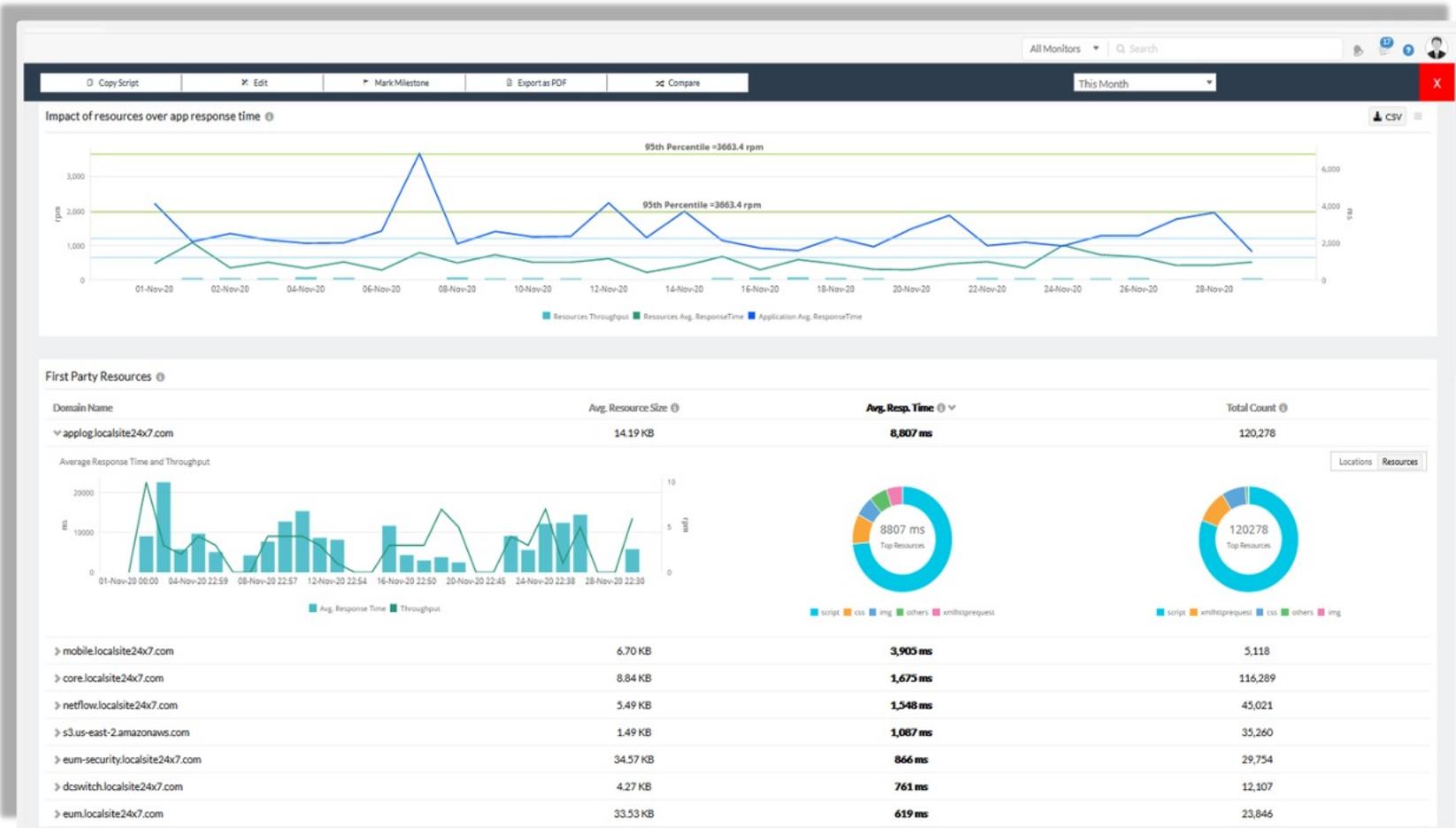
- Header:** Includes "All Monitors" dropdown, search bar, and user profile icon.
- Toolbar:** Buttons for "Copy Script", "Edit", "Mark Milestone", "Export as PDF", "Compare", and a date range selector set to "Last 30 Min".
- Summary Metrics:** Three cards showing "Total Sessions" (5), "Total Users" (5), and "Avg. Pages Navigated" (1.00).
- User Sessions Table:** A table titled "User Sessions" with columns: Start Time, User Name, Browser, Device, Country / Region, User Experience, Pages Navigated, and Viewing Time. The data is sorted by Start Time (descending).

| Start Time           | User Name        | Browser | Device        | Country / Region | User Experience | Pages Navigated | Viewing Time  |
|----------------------|------------------|---------|---------------|------------------|-----------------|-----------------|---------------|
| Jul 15, 2021 2:29:00 | 456736951596238  | Chrome  | Desktop Linux | India            | Tolerating      | 1               | 0 Mins 0 Secs |
| Jul 15, 2021 2:27:20 | 483928633285727  | Chrome  | Desktop Linux | Brazil           | Tolerating      | 1               | 0 Mins 0 Secs |
| Jul 15, 2021 2:27:13 | 2345486184964100 | Chrome  | Desktop Linux | Australia        | Tolerating      | 1               | 0 Mins 0 Secs |
| Jul 15, 2021 2:27:00 | 6718727079783394 | Chrome  | Desktop Linux | United States    | Satisfied       | 1               | 0 Mins 0 Secs |
| Jul 15, 2021 2:11:51 | 8599733586151992 | Chrome  | Desktop Linux | United States    | Satisfied       | 1               | 0 Mins 0 Secs |
- Pagination:** Page 1 of 1, 10 rows per page, 1-5 of 5.

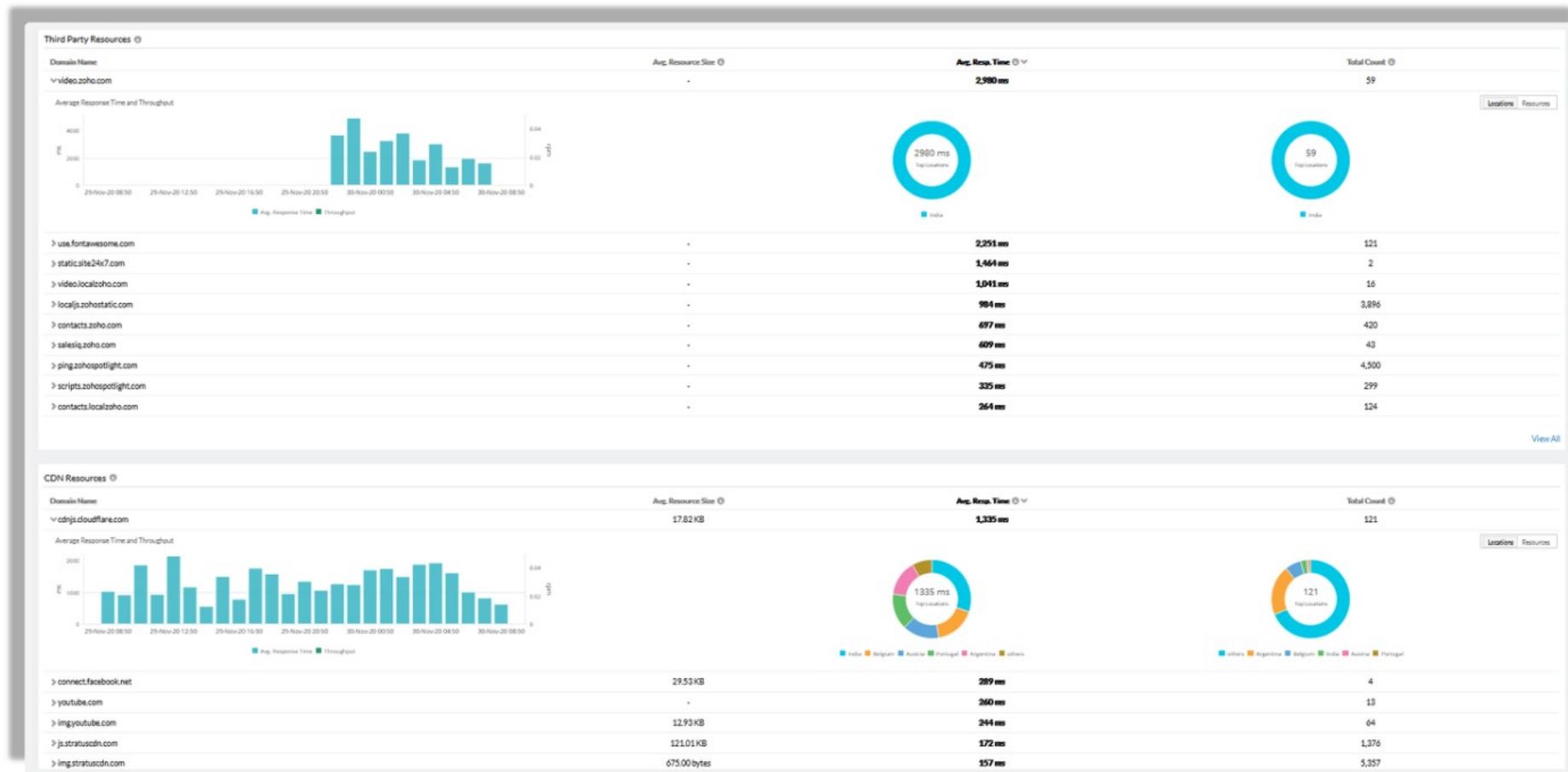
# Real User Monitoring Reports Filterable performances



# Real User Monitoring Reports Resources



# Real User Monitoring Reports Resources



# Real User Monitoring Reports

## AJAX calls

| Transaction Name  | Avg. Resp. Time | Total Count | Throughput (rpm) | Avg. Resource Size | 1xx | 2xx   | 3xx | 4xx | 5xx | 0 |
|---|-----------------|-------------|------------------|--------------------|-----|-------|-----|-----|-----|---|
| /app/api/reports/topn/URL                                       | 4,273 ms        | 233         | 0.0              | 1.67 KB            | 0   | 232   | 0   | 0   | 1   | - |
| /app/applog/modules/applog/html/applog-add-monitor-section.html | 987 ms          | 1,183       | 0.0              | 932.00 bytes       | 0   | 1,180 | 0   | 0   | 3   | - |
| /app/api/monitors   | 770 ms          | 760         | 0.0              | 1.21 KB            | 0   | 760   | 0   | 0   | 0   | - |
| /home/IncludeJSPWidgetAction.do                                 | 753 ms          | 1,339       | 0.0              | 2.73 KB            | 0   | 715   | 0   | 81  | 0   | - |
| /app/api/monitors/detailspage/topband/*                         | 584 ms          | 8,193       | 0.2              | 2.36 KB            | 0   | 8,157 | 0   | 2   | 19  | - |
| /app/api/charts/performance/*/ThroughputChart                   | 548 ms          | 1,056       | 0.0              | 3.45 KB            | 0   | 1,048 | 0   | 0   | 0   | - |
| /app/api/usergroups   | 496 ms          | 2,827       | 0.1              | 1.01 KB            | 0   | 2,819 | 0   | 6   | 0   | - |
| /app/api/short/ispolleravailable                                | 490 ms          | 3,211       | 0.1              | 850.00 bytes       | 0   | 3,127 | 0   | 15  | 3   | - |
| /app/api/short/actions  | 485 ms          | 1,777       | 0.0              | 918.00 bytes       | 0   | 1,771 | 0   | 5   | 1   | - |
| /app/api/charts/performance/*/LocationResponseTimeChart         | 474 ms          | 3,383       | 0.1              | 3.77 KB            | 0   | 3,358 | 0   | 1   | 18  | - |
| /app/api/currentstatus  | 465 ms          | 2,615       | 0.1              | 8.05 KB            | 0   | 2,327 | 0   | 4   | 1   | - |
| /app/api/short/thirdpartyservices                               | 462 ms          | 1,991       | 0.1              | 898.00 bytes       | 0   | 1,988 | 0   | 3   | 0   | - |
| /app/api/monitorgroups  | 449 ms          | 2,915       | 0.1              | 2.95 KB            | 0   | 2,892 | 0   | 15  | 0   | - |
| /benchmarks/app   | 442 ms          | 1,970       | 0.1              | 601.00 bytes       | 0   | 1,966 | 0   | 0   | 0   | - |
| /app/api/charts/performance/*/ResponseTimeReportChart           | 430 ms          | 2,702       | 0.1              | 4.03 KB            | 0   | 2,676 | 0   | 3   | 17  | - |
| /app/api/rum/web/view/short/pageViews                           | 413 ms          | 2,530       | 0.1              | 847.00 bytes       | 0   | 2,303 | 0   | 223 | 0   | - |
| /app/api/rum/web/view/*/D                                       | 410 ms          | 2,533       | 0.1              | 826.00 bytes       | 0   | 2,529 | 0   | 0   | 0   | - |
| /app/api/short/notificationprofiles                             | 405 ms          | 2,098       | 0.1              | 1.04 KB            | 0   | 2,096 | 0   | 1   | 1   | - |

# Real User Monitoring Reports JavaScript errors

JavaScript Errors

Add Filters +

|              |                |           |             |
|--------------|----------------|-----------|-------------|
| 98<br>Errors | 1<br>Web Pages | 1<br>File | 98<br>Users |
|--------------|----------------|-----------|-------------|

Errors vs Affected Users Graph

Minimum 1      Average 1.31      95th Percentile 2      99th Percentile 4      Maximum 4

3-No... 30-

■ Errors ■ Affected Users

JavaScript Errors

Search Error Message

Errors Type File Page Browser Affected Users Domains

Active Ignored

JavaScript Errors Ignore Errors

ReferenceError: a is not defined  
Url: index.html

Last Occurred - Nov 30, 2020 4:54:13

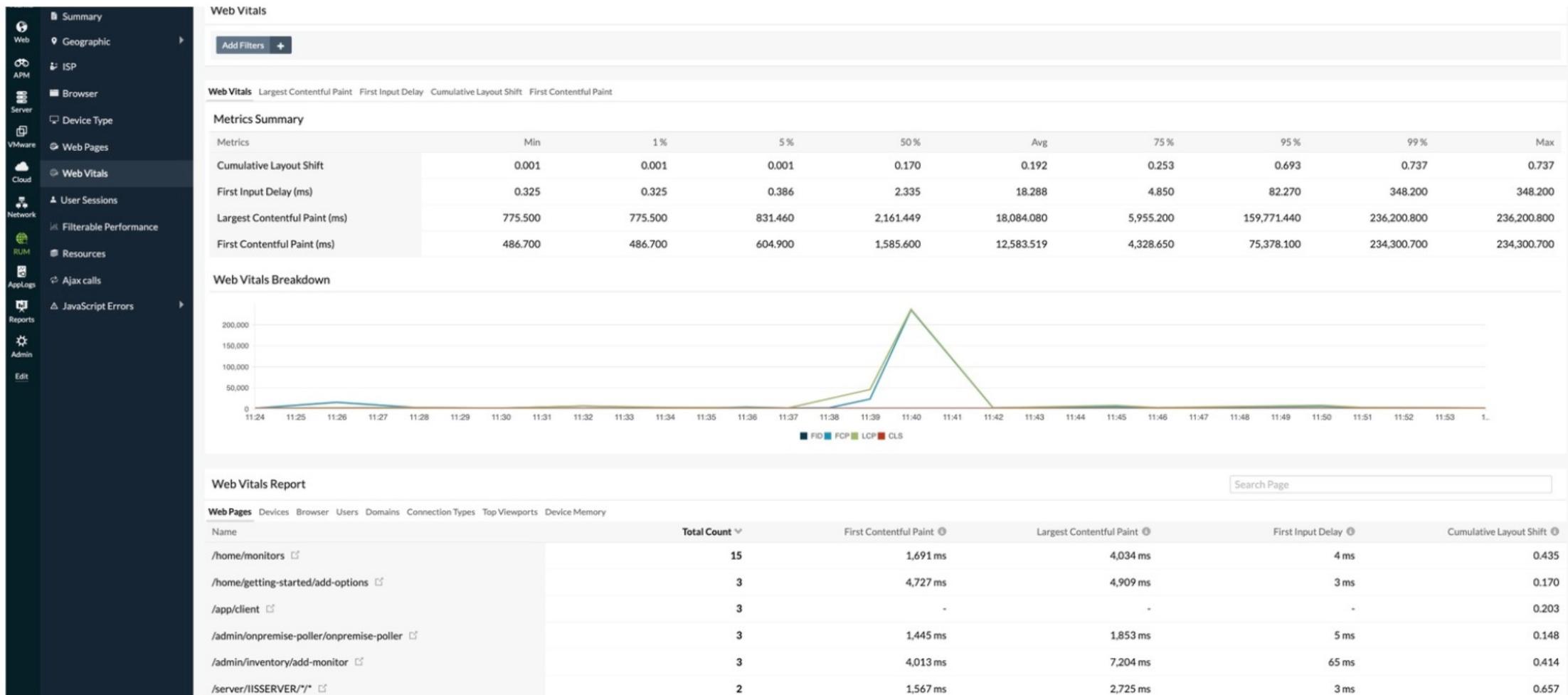
Total Count 98



# RUM - WordPress Plugin

- Monitor websites built on WordPress using Site24x7 RUM Plugin
- Helps you track the website and front-end performance
- You can also monitor the performance of websites built on Wix using Site24x7 RUM
- Learn more - <https://wordpress.org/plugins/site24x7-rum/>  
<https://www.site24x7.com/help/apm/rum/rum-wordpress-plugin.html>  
<https://www.site24x7.com/help/apm/rum/monitor-wix-websites.html>

# RUM- Web Vitals





# 2022 Q3 Updates

- **ARM architecture support in the PHP agent**
- **.NET agent version 5.8.0**

**The following are some of the new .NET agent features:**

The .NET agent now supports capturing Request wait time for transactions in IIS. The .NET Core agent now supports RabbitMQ.

The issue with creating a monitor with a new instance name after cloning the server with the APM agent has been resolved. [.NET and .NET Core]



# Learnings

- Installation and configuration of APM Insight Java, .Net, PHP, Python, Ruby on Rails and Node.js
- Report interpretation
- APM Insight integration with Real User Monitoring
- RUM monitor configuration and metrics collected



Crafted at ZOHO Corp.

## Seminar

# Beyond Monitoring: Leverage AIOps for observability

Tuesday, 15 Nov 2022  
Sydney, Australia

Thursday, 17 Nov 2022  
Melbourne, Australia





# Agenda

|          |  |
|----------|--|
| 09:00 AM |  <b>Registration</b><br> 30 minutes  |
| 09:30 AM |  <b>Site24x7 observability platform: A shift from reactive to proactive monitoring</b><br> 45 minutes  |
| 10:15 AM |  <b>Digital experience management strategies for the modern enterprise</b><br> 45 minutes              |
| 11:00 AM |  <b>Break</b><br> 15 minutes   |
| 11:15 AM |  <b>Leverage AIOps for remote infrastructure monitoring in multi-cloud environments</b><br> 30 minutes |
| 11:45 AM |  <b>Analyze, control, and track your spending on AWS and Azure cloud services</b><br> 15 minutes   |
| 12:00 PM |  <b>Certification</b><br> 30 minutes   |
| 12:30 PM |  <b>Lunch and Networking</b><br> 45 minutes  |



# Agenda / Registration Link

→ For Agenda and Registration : Click [this link](#)

# Thank you

Next session: Reports, Dashboards, Advanced Configurations, Alerting, and More  
**(Fri, Oct 14, 2022)**

Send your feedback to **training@site24x7.com**  
<https://www.site24x7.com/training.html>