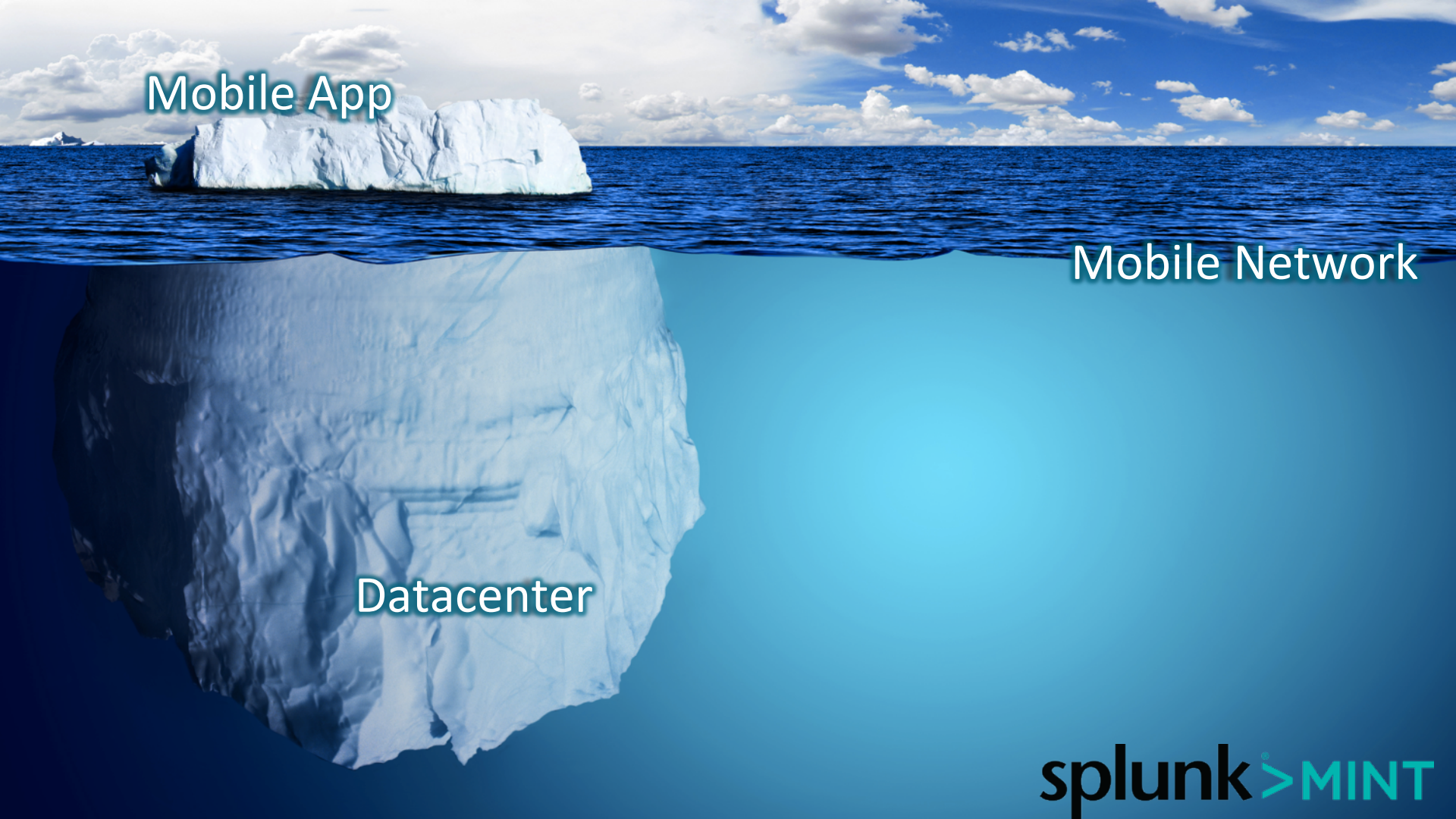


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Getting Started with Splunk MINT

Panos Papadopoulos
Director, Product Management, Splunk

splunk>

An iceberg floating in a blue ocean under a blue sky with white clouds. The visible tip of the iceberg is labeled 'Mobile App'. The much larger, submerged part of the iceberg is labeled 'Datacenter'. The water surface is labeled 'Mobile Network'.

Mobile App

Mobile Network

Datacenter

The Challenges of Delivering Mobile Apps

Form Factor, Platform, Interaction Style Variety



Rapid App Dev Cycles, Break-Fix Needs

- New OS versions break apps
- Network issues are difficult to find and simulate
- Limited time to make changes and fixes



Infrastructure

- Plan for growth
- Solve infrastructure, API and app issues



Analytics

- Feature usage
- Monitor/analyze user behavior
- Deliver omni-channel analytics
- Mobile+Web+Desktop



Mobile App Delivery: Different Challenges for Different Roles



MOBILE APP DEVELOPERS

- How do I find the root cause of app crashes and/or poor performance?
- What were users doing when the issue happened?
- How do I get more insight into transaction paths?



APP MANAGERS / OPERATIONS

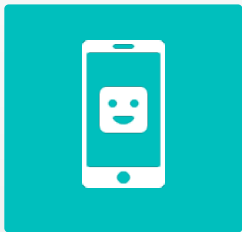
- Is the problem with the app, the network or the back end system?
- Do I have the right capacity in place to handle transaction volume?
- How does performance compare mobile vs. web vs. desktop?



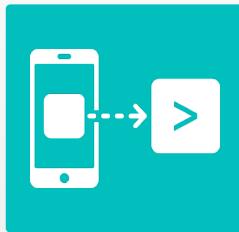
PRODUCT MANAGERS / BUSINESS OWNERS

- How are customers using my app?
- Which features should I prioritize for future versions?
- How does customer behavior compare across channels?

Extending Operational Intelligence to Mobile Apps



**Mobile End User
Monitoring**



**End-to-End
Performance**



**Deliver Real-Time
Omni-Channel
Analytics**

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Getting Started

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Getting Started with Splunk MINT

Mobile Developers



Sign up on
mint.splunk.com



Download SDKs
and create mobile projects



Re-deploy Splunk MINT
enabled apps



Check Splunk MINT
Management console

Splunk Admin



Download Splunk
Enterprise



Download the Splunk
MINT App



Run Wizard to connect
to the Splunk MINT
Data Collector



Get dashboards and
search, correlate

Create a New Project at mint.splunk.com

Add new project

Project name

AndroidTest

Billing account

BugSense

Platform

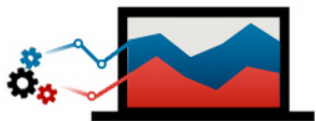
Android

Stage

Release

(Monitor an app in Release or Testing stage)

SUBMIT



Better apps happier users

You are a few minutes away from monitoring the quality of your apps.

Implementing Splunk MINT

Welcome to Splunk MINT! You are about to start tracking an **Android** app. Read the [docs](#) to find out how to integrate the SDK with your app.

```
Mint.initAndStartSession(MyActivity.this, "1378e5e5");
```

Press **Cmd+C** to copy

If you have more questions read the [FAQ](#). If you have any problems installing or using the SDK please [submit a ticket](#), we are more than happy to help you.

Once the SDK is installed, then crash your app and you will receive a crash report via email. You just made the first step to developing a better app!

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SDK Configuration

SKD Initialization

Android

```
Mint.initAndStartSession(Context, "APIKEY");
```

iOS

```
[[Mint sharedInstance] initAndStartSession@"API_KEY"];
```

This single line of code will offer you the following:

- Usage analytics
- Crash reporting
- Network monitoring

Further SKD Instrumentation

Transactions

Android

```
Mint.transactionStart("userLogin"); //start transaction  
Mint.transactionStop("userLogin"); //successfully end transaction  
Mint.transactionCancel("userLogin", "user pressed back"); //cancel transaction with a reason
```

iOS

```
[[Mint sharedInstance] transactionStart:@"userLogin" andResultBlock:nil];  
[[Mint sharedInstance] transactionStop:@"userLogin" andResultBlock:nil];  
[[Mint sharedInstance] transactionCancel:@"userLogin" reason:@"user pressed back"  
andResultBlock:nil];
```

Events

Android

```
Mint.sendEvent("button1pressed");
```

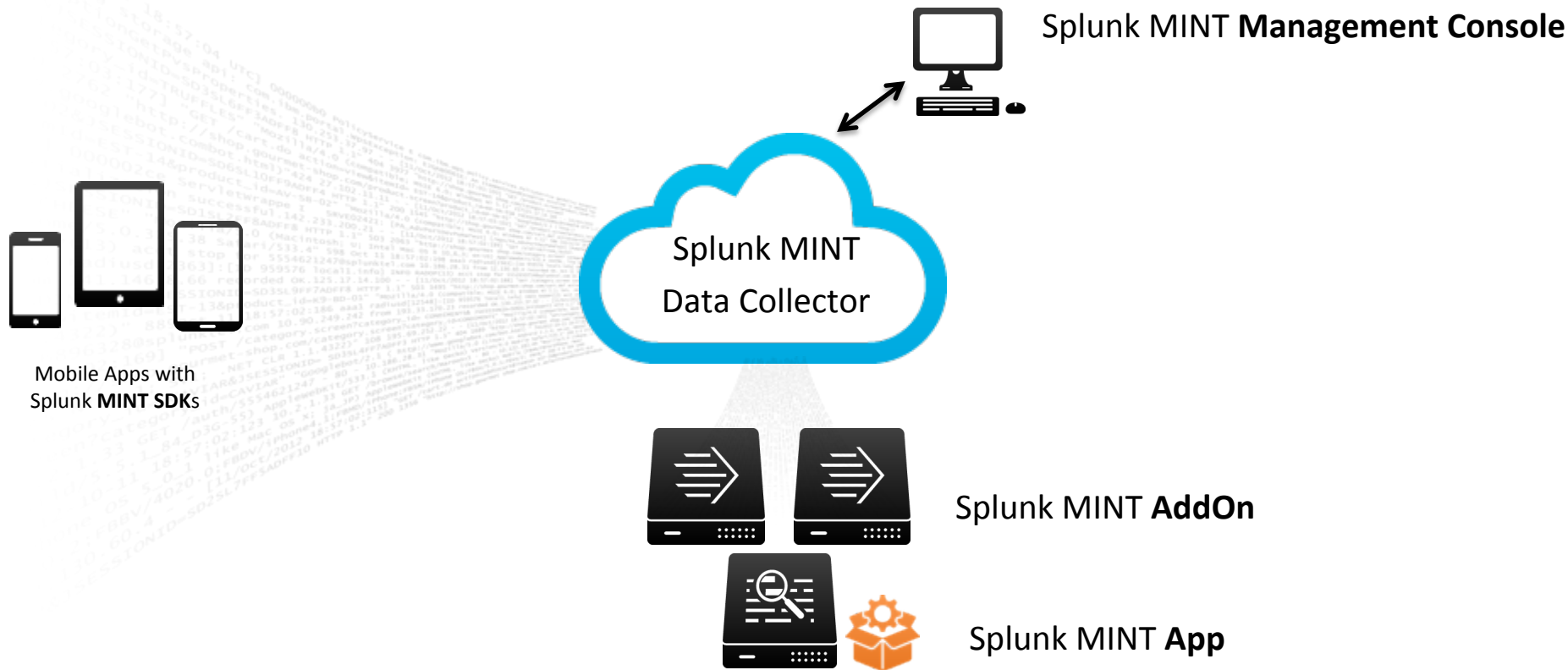
iOS

```
[[Mint sharedInstance] logEventAsyncWithTag:@"button1pressed" completionBlock:nil];
```

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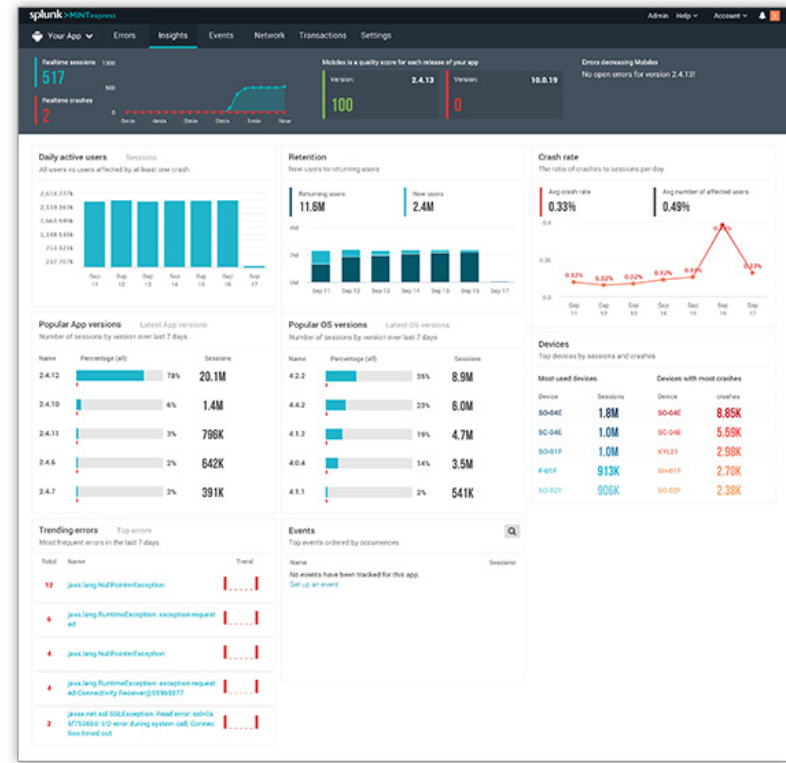
Architecture & Installation

Splunk MINT Architecture



Splunk MINT Management Console

- The go to for your Mobile Developers
- Fast on boarding
- “Light weight” dashboards to get you started.
- Good-enough for some teams & mobile devs



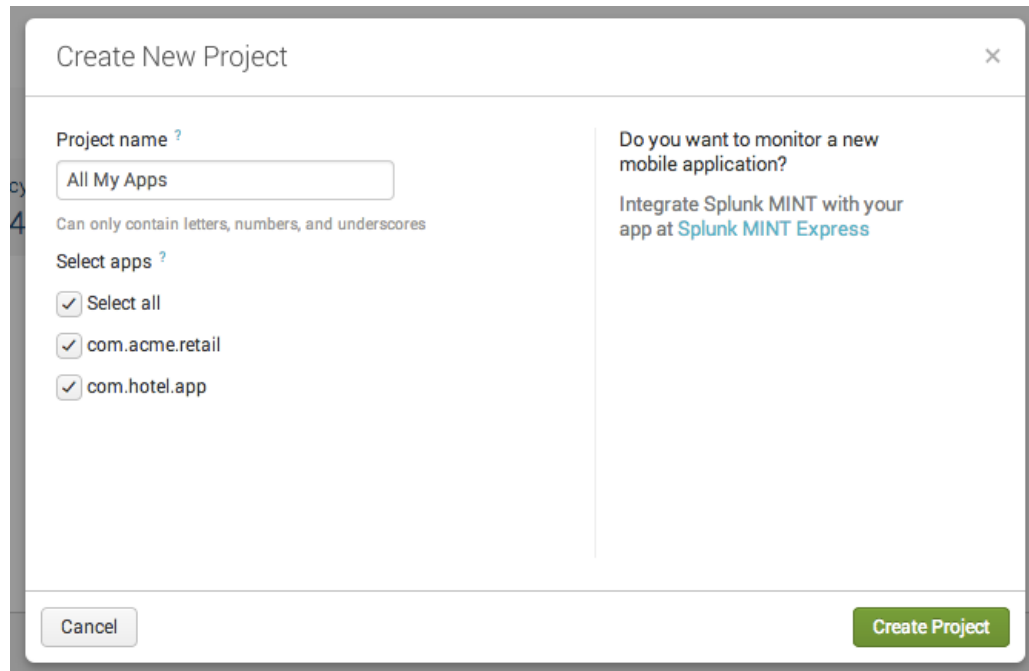
Install the MINT App

..in a distributed Splunk Environment

- You need to have a valid MINT license installed.
- After the license is installed the app will configure itself & fetch private SSL certificates for secure communication with the MINT Data Collector
- The First Time Run wizard will present two options:
 - Single instance, just click continue, wait for acceleration
 - Distributed environment:
 - Deploy the MINT TA in indexers
 - Copy local.conf & certs
 - Wait for the MINT data model to be accelerated everywhere

Create a MINT Project

Grouping or separating mobile apps



The screenshot shows a 'Create New Project' dialog box. At the top, it says 'Create New Project' with a close button (X). Below this, there's a section for 'Project name' with a text input field containing 'All My Apps'. A note below the field states 'Can only contain letters, numbers, and underscores'. To the right of the input field, there's a question 'Do you want to monitor a new mobile application?' followed by the text 'Integrate Splunk MINT with your app at [Splunk MINT Express](#)'. Below the project name section, there's a 'Select apps' section with a checkbox 'Select all' and two other checkboxes: 'com.acme.retail' and 'com.hotel.app', all of which are checked. At the bottom left is a 'Cancel' button, and at the bottom right is a green 'Create Project' button.

Customers may want to view data just for an app.

Example: How many users do our iOS banking app have?

Or they can group together all apps

Example: How many users do our mobile consumer banking apps have across iOS, Android and WP?

Project != App

Explain the MINT Data Model

i	13 Objects in MINT
>	All MINT
>	Usage
>	Sessions
>	Sessions Starts
>	Sessions Stops
>	Views
>	Events
>	Performance
>	Errors
>	Transactions
>	Transactions Stop
>	Transactions Start
>	Network Monitoring

- 13 data models
- 30 days acceleration
- Dashboards use data model
(therefore acceleration needs to be completed!)

Beware

MINT Sourcetypes

- MINT source types:

- `mint:ping`
- `mint:gnip`
- `mint:trstart`
- `mint:trstop`
- `mint:event`
- `mint:error`
- `mint:network`
- `mint:log`
- `mint:view`

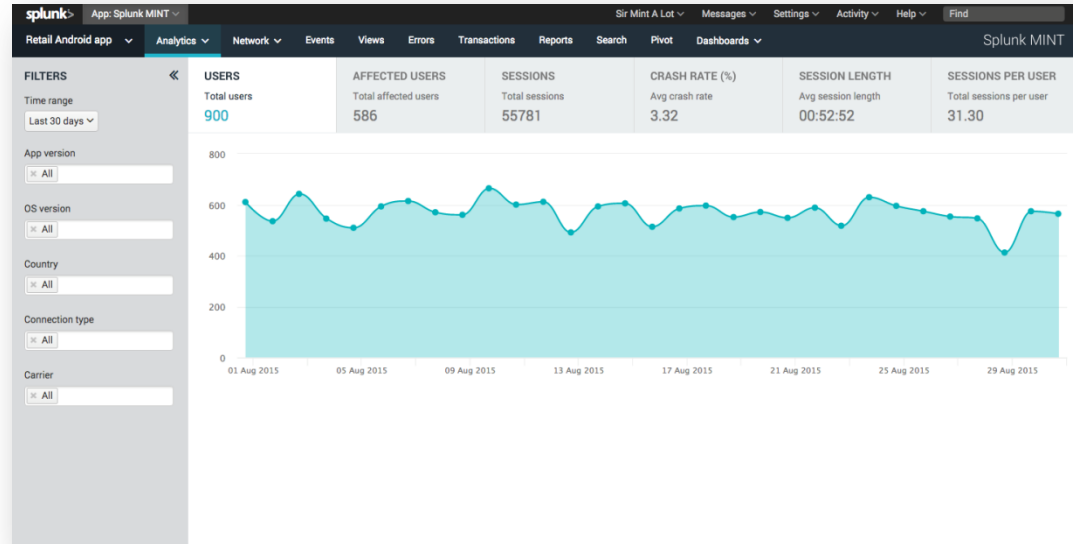
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Dashboards

User Analytics

Understand How Your Users Use Your Mobile App

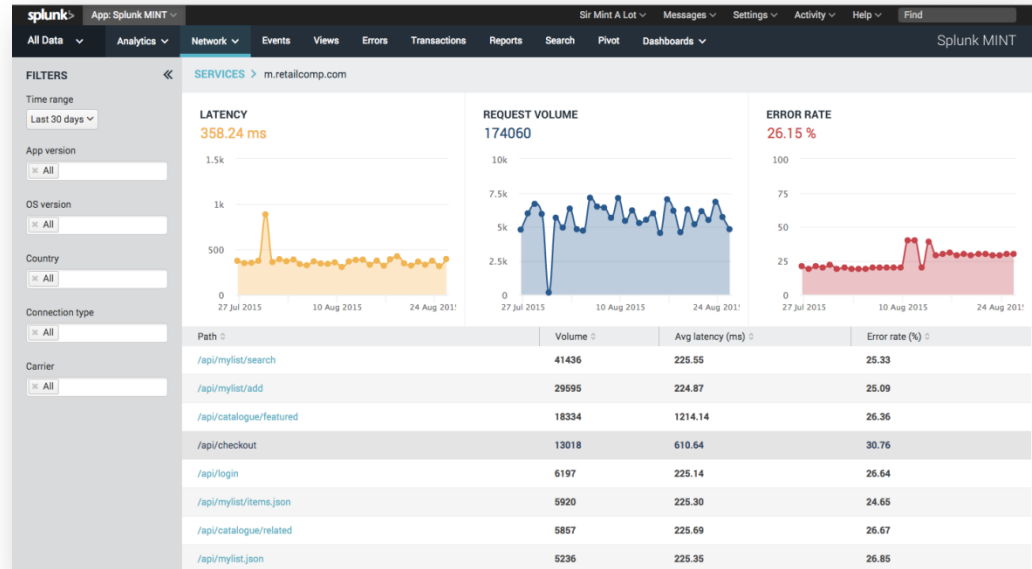
- How many users do I have?
- How many sessions do they do?
- How many have crashes?
- How often does my app crash?
- How much time is spent in my app?



Network Monitoring

Understand How Your Network Affects Your Mobile App

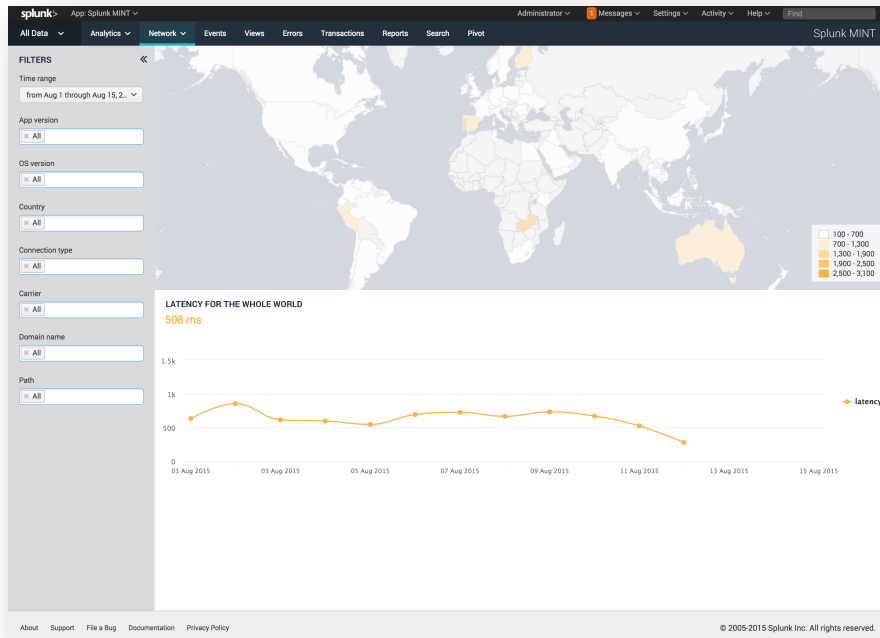
- What services does my app use?
- What is the availability of different APIs?
- What is the latency?
- What is the error rate?
- Analyze by location, connection, network



Location & Network performance

Understand the User Experience by Location

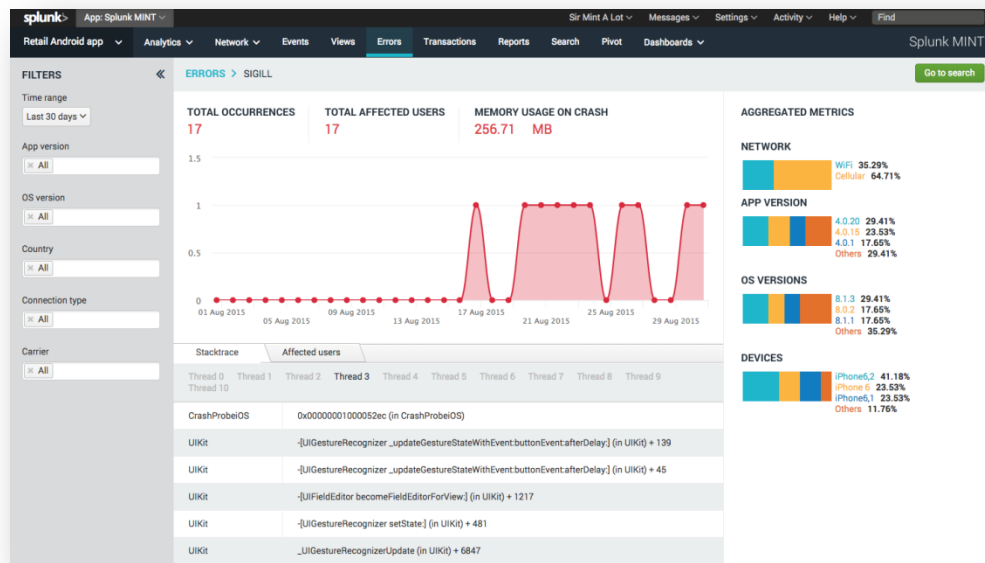
- What is the user latency by service & time of network in different countries?
- Should I invest in new datacenters?
- Should I invest in local CDN?



Crash Reporting

What Crashes are Effecting My User Base

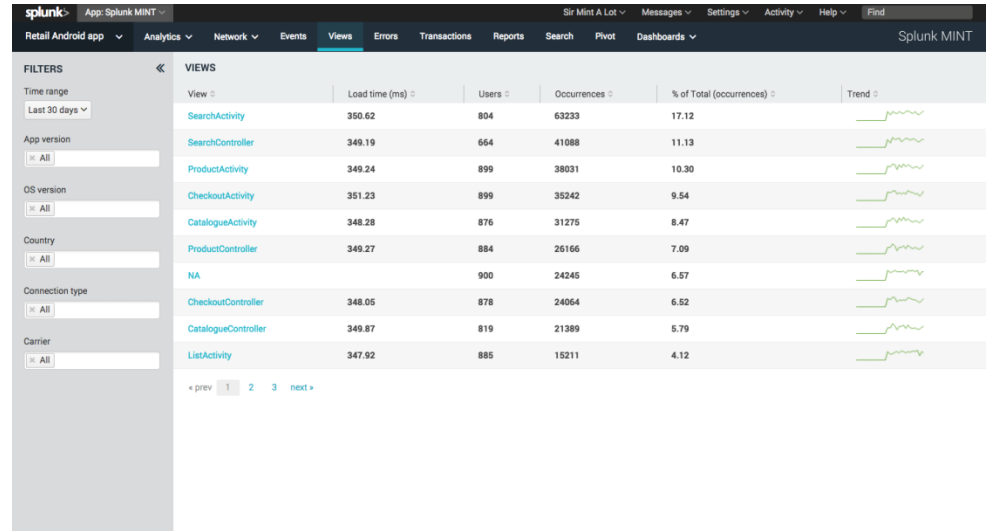
- See the complete stack trace of the errors that affect your app
- Get per error metrics on impact on user base & trends.
- Jump from aggregated to raw search
- Symbolication



View Tracking

What are My Most Used Features

- What are the views (screens/pages) that are used the most?
- What is the rendering time?
- What other events happen within a view?



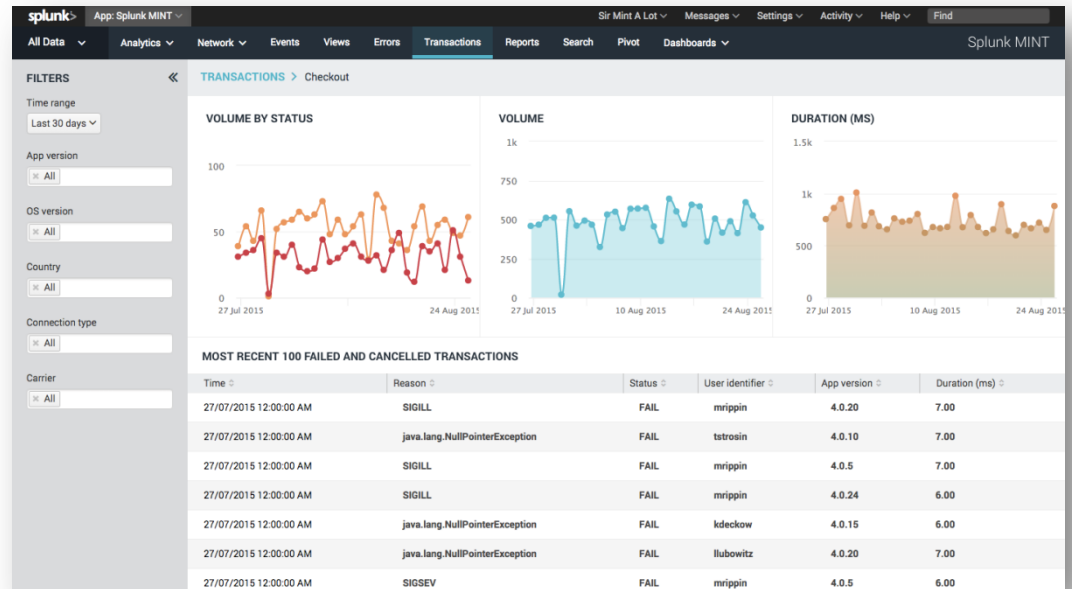
The screenshot shows the Splunk MINT interface for the 'Retail Android app'. The 'Views' tab is selected, displaying a table of app views. The table includes columns for View, Load time (ms), Users, Occurrences, % of Total (occurrences), and Trend. The data is sorted by Occurrences in descending order.

View	Load time (ms)	Users	Occurrences	% of Total (occurrences)	Trend
SearchActivity	350.62	804	63233	17.12	
SearchController	349.19	664	41088	11.13	
ProductActivity	349.24	899	38031	10.30	
CheckoutActivity	351.23	899	35242	9.54	
CatalogueActivity	348.28	876	31275	8.47	
ProductController	349.27	884	25166	7.09	
NA		900	24245	6.57	
CheckoutController	348.05	878	24064	6.52	
CatalogueController	349.87	819	21389	5.79	
ListActivity	347.92	885	15211	4.12	

Transaction Monitoring

Monitor the Business Base Line of Your Apps

- Monitor and analyze critical business transactions
- Understand user activity by monitoring specific events and transactions
- Understand impact on business



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Use Cases

Achieve End-to-End Visibility

Use Correlations to Get Comprehensive Insights

Correlate Splunk MINT data with other Operational Intelligence for end-to-end transaction analysis

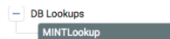
Use Splunk Enterprise search capabilities to correlate and drill down into your mobile and non-mobile data



Personalized Analytics

Augment MINT Data with SQL Data Thanks to DBConnect

- Augment machine data with PII information
- Create personalized reports
- Rich analytics
- Monitor usage/issues per named user
- All in your datacenter

The image shows a screenshot of the DBConnect configuration interface. At the top, it says 'Choose the Splunk Fields to Base the Lookup on' with a progress indicator '3 of 6'. Below this is a section 'Map Splunk Fields and Output to New Fields' with a progress indicator '4 of 6'. The first step is '1. Map your Splunk Fields to your database columns'. It shows a table with 'Fields' and 'Columns'. The 'Fields' column has 'userid' and the 'Columns' column has 'id'. The second step is '2. Output your database columns to New Splunk Fields'. It shows a table with 'Columns' and 'New Output Fields'. The 'Columns' column has 'first_name', 'last_name', 'email', 'phone', 'crm_id', and 'lty'. The 'New Output Fields' column has 'Rename Field (optional)' for each. There is a '+ Add Column' button at the bottom.

More than Application Metrics

Use the Splunk MINT SDKs to Collect Metrics

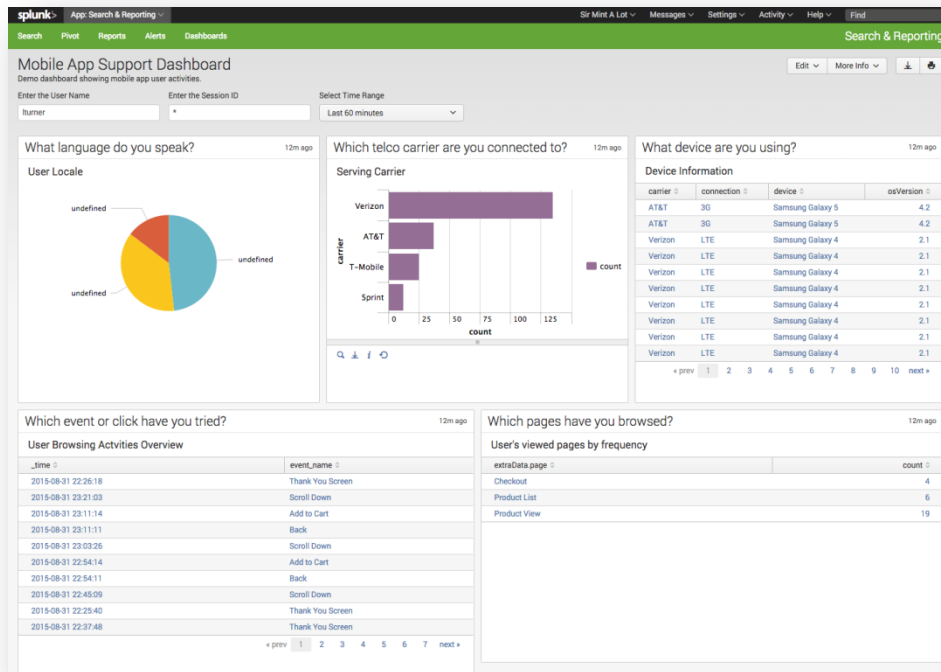
- Use the MINT SDKs to capture data from phone sensors & connected devices eg iBeacon, ODB2, wearables.
- Create customized dashboards



Support

Provide Full End-User Visibility to Support Agents

- Create customized dashboards for Support agents
- Last user actions
- User attributes (device, OS, app version, network, language)
- Achieve 360 overview



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Sum Up

MINT Benefits Developers and the Business



**MOBILE APP
DEVELOPERS**

- Immediate quality insights
- User, usage, transaction, network visibility
- Fast time-to-value with lightweight SDK



**APP MANAGERS/
OPERATIONS**

- Find bottlenecks across app, network, backend, APIs
- Right size capacity for transaction volumes
- Ensure performance across all channels



**PRODUCT MANAGERS/
BUSINESS OWNERS**

- User behavior, user experience insights
- Faster, more valuable improvements
- Omni-channel analytics



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THANK YOU

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