Adding Depth to Dashboards

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Splunk

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Agenda

- Introduction
- Static vs Dynamic Dashboards
- Demo
- Step-by-Step Implementation
- Q&A

Introduction

- Splunker since 2014

- Previously worked in operations for large SaaS company
  - 5 years in escalation support before Splunk
  - 2 years using Splunk

I liked the product so much I joined the company!

A Quick Poll

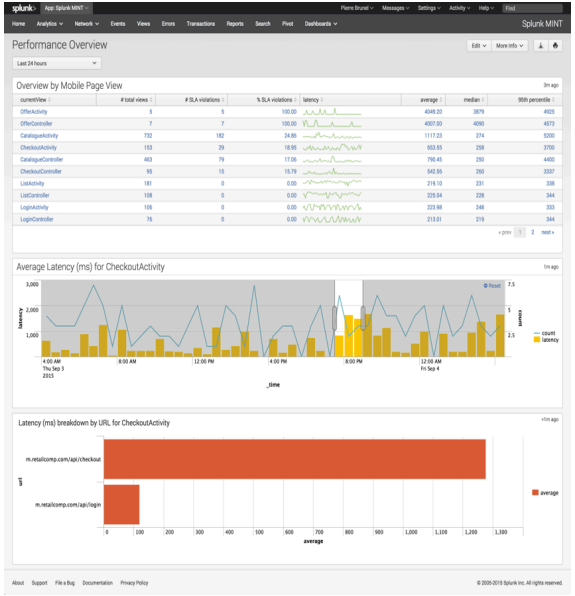
- New to Splunk?
- Experience w/ Simple XML?
- Experience w/ Advanced XML?

Perspective is Key

Perspective is Key

Static vs Dynamic Dashboards

- Static Dashboards
  - Provides executive summaries
  - Answers specific questions
    - “What are my top … ?”
    - “What’s the timeline of activity for … ?”
- Dynamic Dashboards
  - Same as above…and more
  - Pivot and answer subsequent questions
    - “Given my selection here, tell me more about …”
  - View the same dataset from multiple angles



Use Case – Mobile Applications

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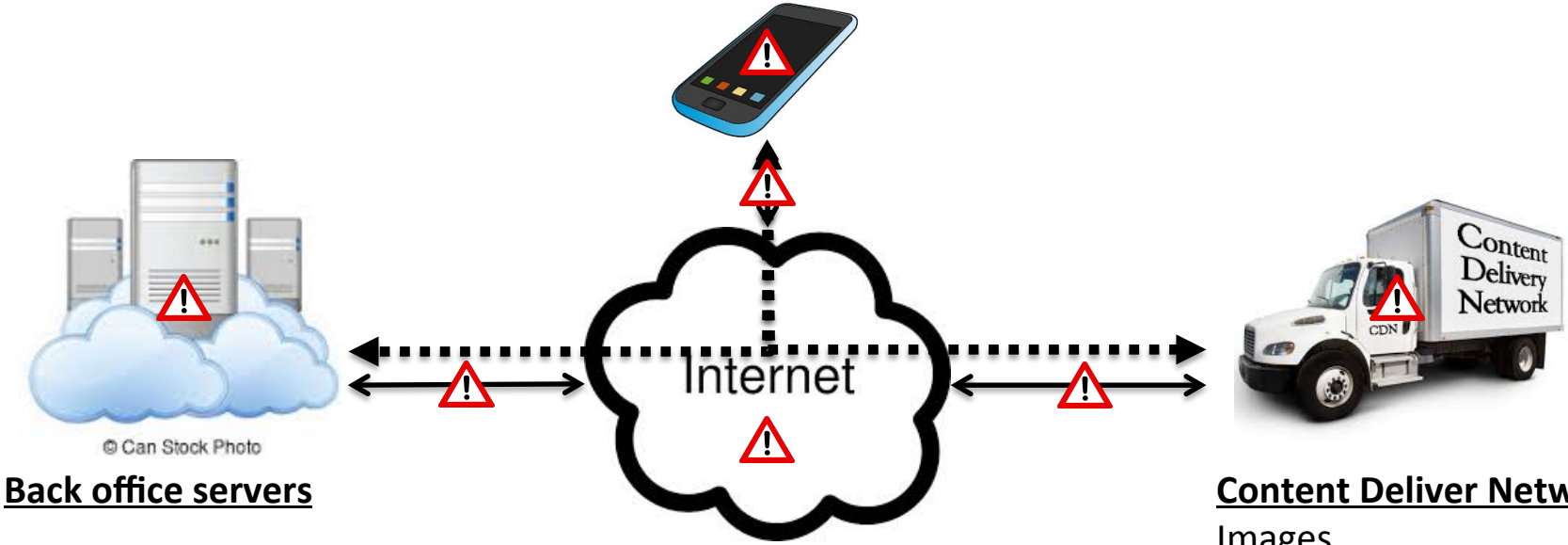
One Page Load = Many Network Calls



Back office servers

Content Deliver Networks
Images
videos

Slow page loads = unhappy customer

Use Case - Introduction

- Page load times are critical
- One page load may involve retrieving information from multiple sources
- Problem could exist in mobile app, network, or back-office
- Operational SLAs

Disclaimers

- Not all visual capabilities will be discussed
- SimpleXML only
- Searches are out of scope
- Limited implementation

Demo

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How it Works

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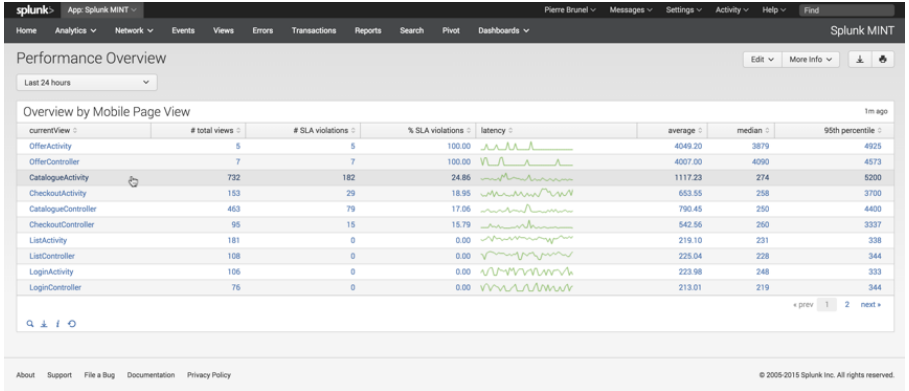
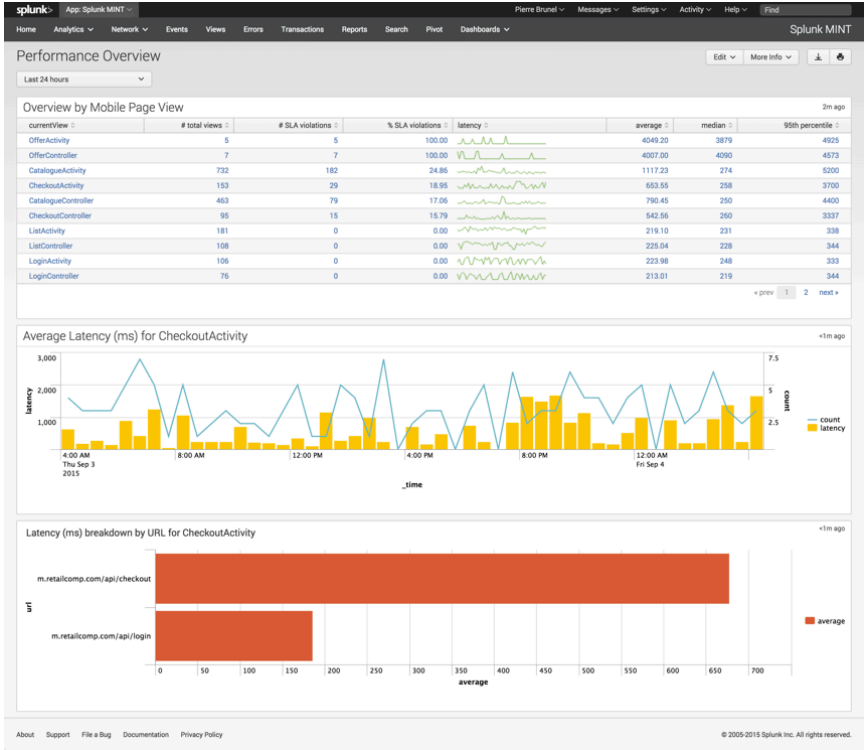
Select a Row

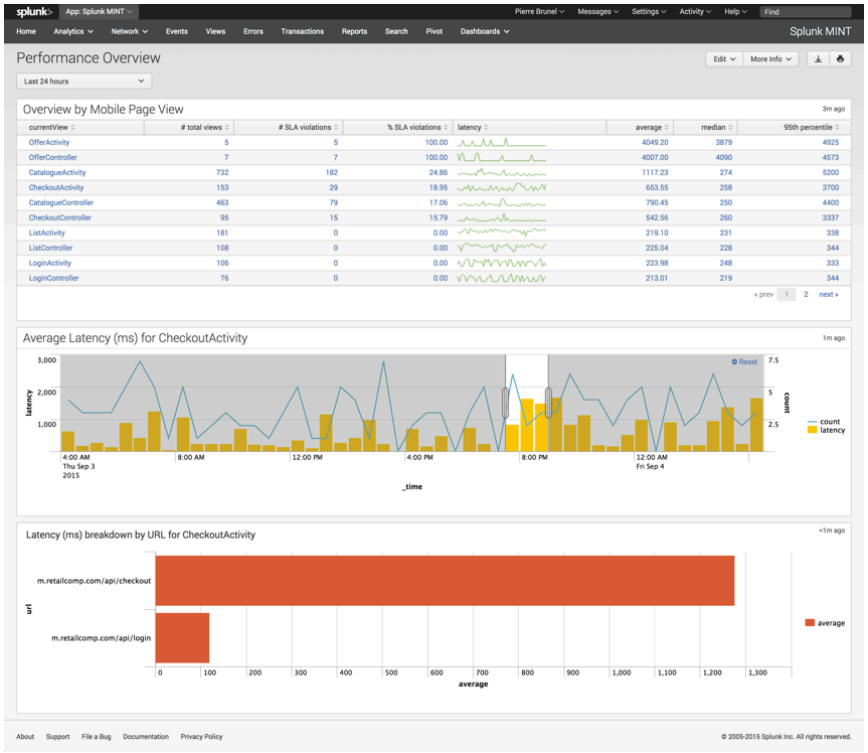


Other panels are hidden

Show Details for Selected View



Select a Subset of Timerange



Tokens – A Primer

- Variables that dynamically pass information within & between dashboards
  - Action on one panel can drive behavior in another panel
  - Tokens can be used to pass information into another URL
    - Another Splunk dashboard
    - Page outside Splunk altogether

Set the token:

```
<drilldown>
    <set token="my_new_token">$row.this_field$</set>
</drilldown>
```

Use the token:

```
<search>
    <query>sourcetype=mysourcetype this_field=$my_new_token$
</search>
```

Tokens

Tokens Set

currentView

selection.earliest
selection.latest

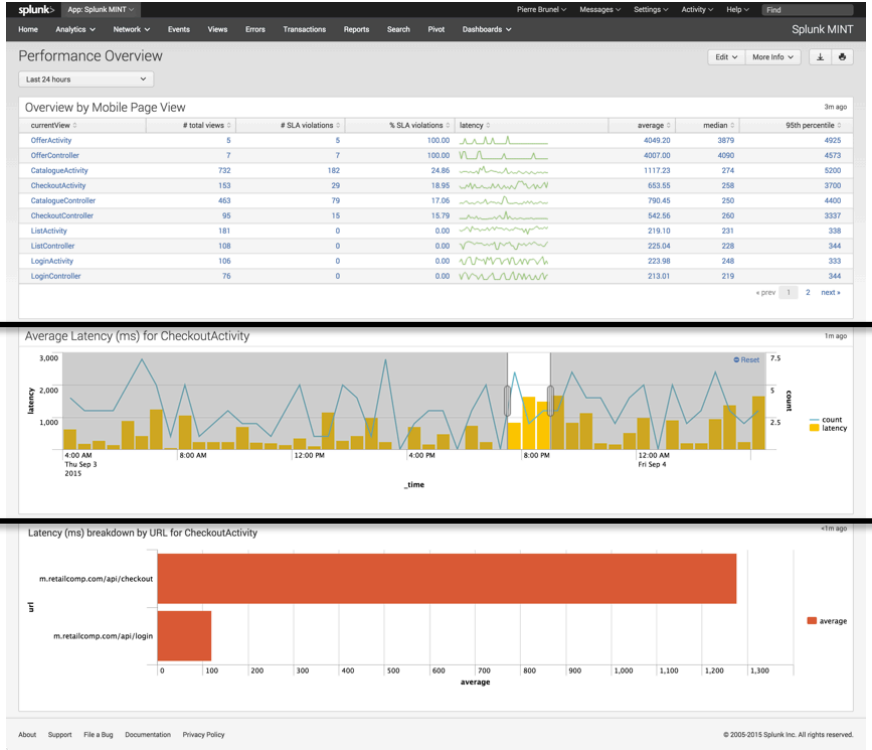
Tokens Utilized

currentView

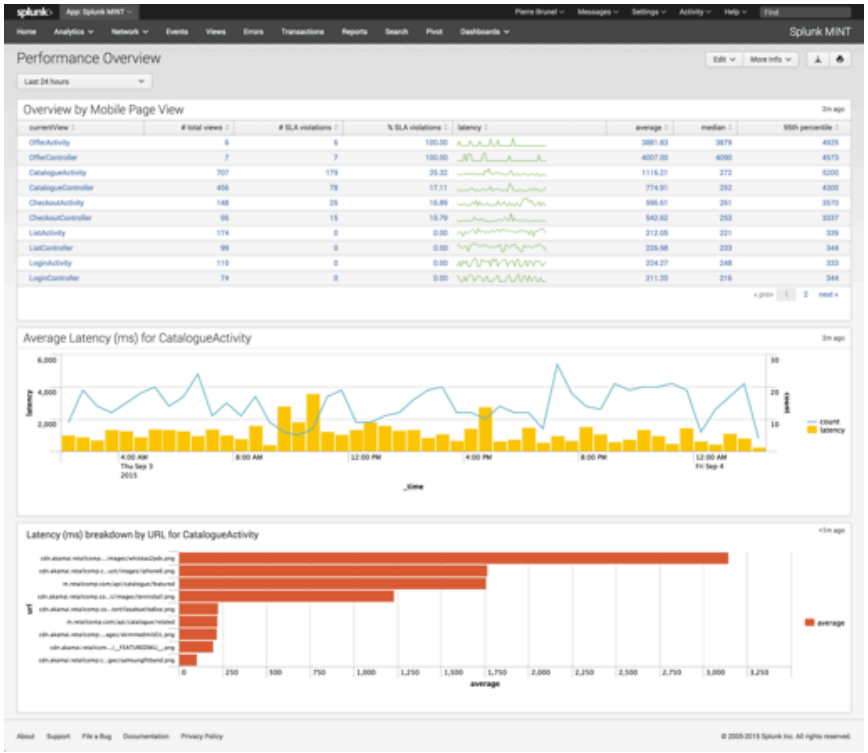
currentView

currentView

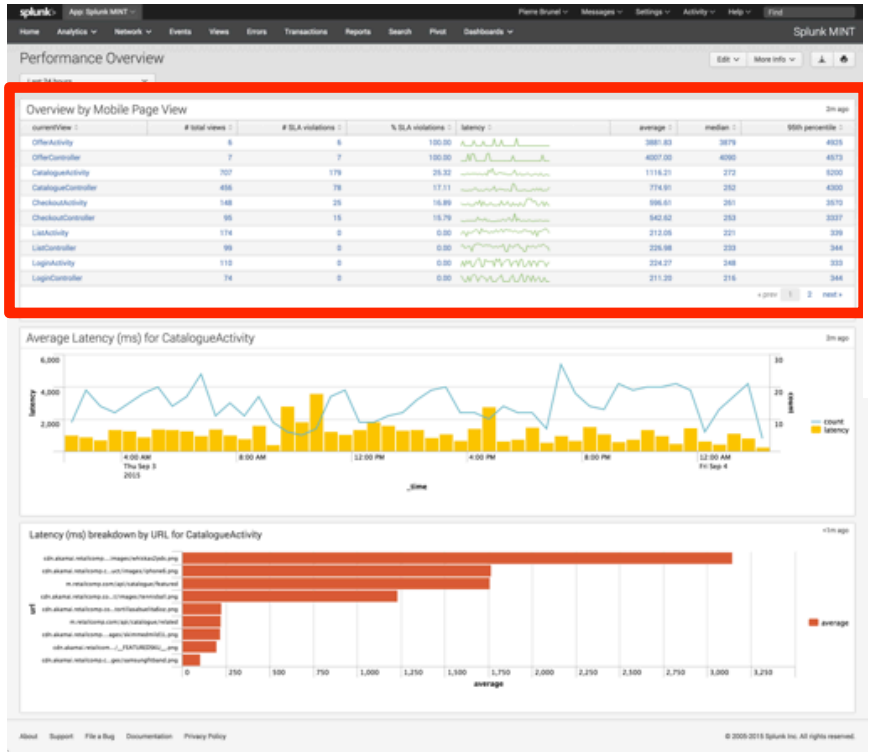
selection.earliest
selection.latest



Walkthrough



Select Row, Set Token




```
<row>
  <panel>
    <title>Overview by Mobile Page View</title>
    <table>
      <search>
        <query>sourcetype=mint:network
          | eval sla=1000
          | stats count count(eval(latency &gt; sla)) as sla_violations sparkline(avg(latency)) as latency
        avg(latency) as average median(latency) as median perc95(latency) as "95th percentile" by currentView
          | eval average=round(average,2)
          | eval "% SLA violations"=round((sla_violations/count)*100,2)
          | rename count as "# total views"
          | rename sla_violations as "# SLA violations"
          | fields currentView "# total views" "# SLA violations" "% SLA violations" latency average median
        "95th percentile"
          | sort -"% SLA violations"</query>
        <earliest>$global_time.earliest$</earliest>
        <latest>$global_time.latest$</latest>
      </search>
      <option name="drilldown">row</option>
      <drilldown>
        <set token="currentView">$row.currentView$</set>
      </drilldown>
      <option name="wrap">true</option>
      <option name="rowNumbers">false</option>
      <option name="dataOverlayMode">none</option>
      <option name="count">10</option>
    </table>
  </panel>
</row>
```

Select Row, Set Token

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<row>
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Select Row, Set Token

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<option name="drilldown">row</option>
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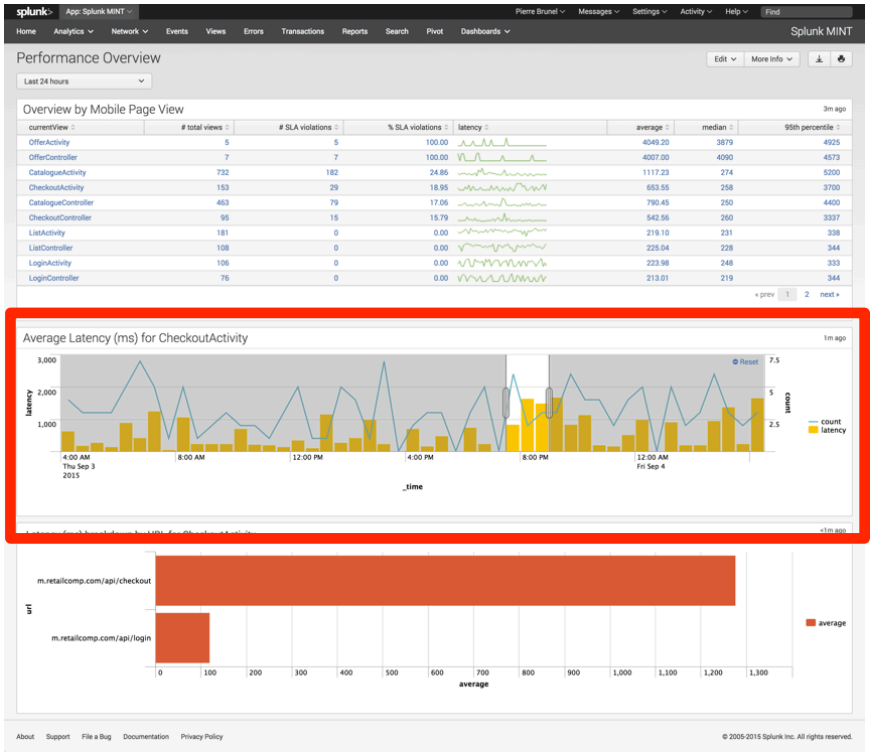
Select Subset of Timerange




```
<row>
  <panel depends="$currentView$">
    <title>Average Latency (ms) for $currentView$</title>
    <chart>
      <search>
        <query>sourcetype=mint:network currentView=$currentView$
          | timechart count avg(latency) as latency</query>
        <earliest>$global_time.earliest$</earliest>
        <latest>$global_time.latest$</latest>
      </search>
      <option name="charting.axisY2.enabled">1</option>
      <option name="charting.axisY2.scale">inherit</option>
      <option name="charting.chart.overlayFields">count</option>
      <option name="charting.chart">column</option>
      <option name="charting.drilldown">all</option>
      <option name="charting.layout.splitSeries">0</option>
      <option name="charting.legend.placement">right</option>
      <selection>
        <set token="selection.earliest">$start$</set>
        <set token="selection.latest">$end$</set>
      </selection>
    </chart>
  </panel>
</row>
```

Select Subset of Timerange

```
<row>
  <panel depends="$currentView$">
    <title>Average Latency (ms) for $currentView$</title>
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      <search>
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```
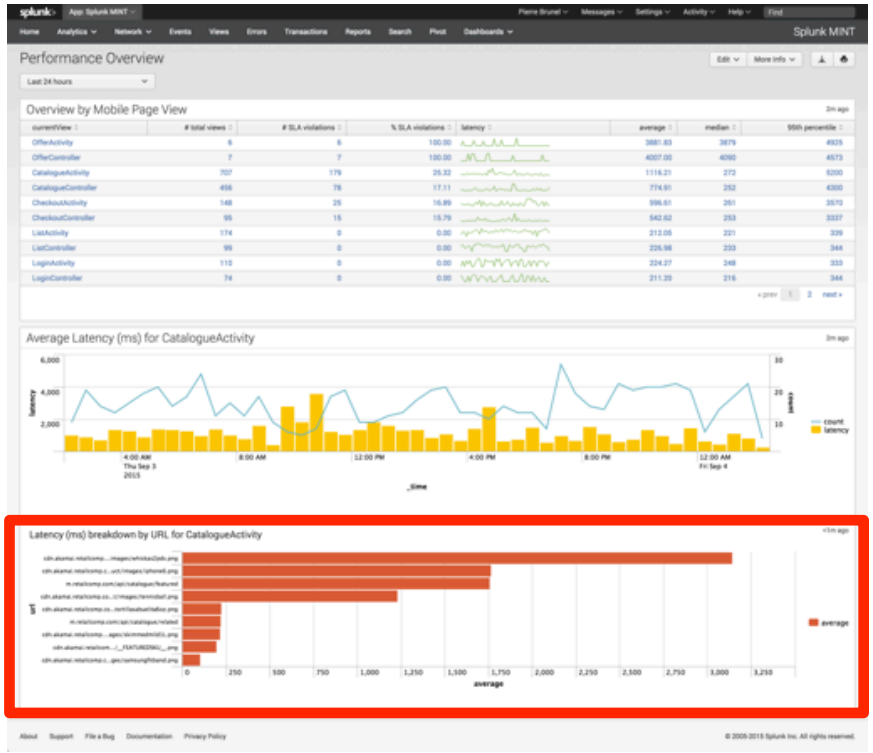

Use Selected Timerange




```
<row>
  <panel depends="$currentView$">
    <chart>
      <title>Latency (ms) breakdown by URL for $currentView$</title>
      <search>
        <query>sourcetype=mint:network currentView=$currentView$
          | chart eval(round(avg(latency),1)) as average by url
          | sort -average</query>
        <earliest>$selection.earliest$</earliest>
        <latest>$selection.latest$</latest>
      </search>
      <option name="charting.axisY2.enabled">1</option>
      <option name="charting.axisY2.scale">inherit</option>
      <option name="charting.chart">bar</option>
      <option name="charting.chart.overlayFields">count</option>
      <option name="charting.drilldown">all</option>
      <option name="charting.layout.splitSeries">0</option>
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        <latest>$selection.latest$</latest>
      </search>
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      <option name="charting.chart.overlayFields">count</option>
      <option name="charting.drilldown">all</option>
      <option name="charting.layout.splitSeries">0</option>
    </chart>
  </panel>
</row>
```

Conclusion

- Greater depth in dashboards -> greater insight
- SimpleXML: powerful capabilities for the non-UI expert
- Work with your users
  - Which questions would they ask next?

Additional Reading

- Get the code
  - https://github.com/sirmonkey/conf2015
- Splunk Docs
  - http://docs.splunk.com/Documentation/Splunk/6.2.5/Viz/Visualizationreference
- Dashboard examples app
  - https://splunkbase.splunk.com/app/1603/
- Level up: Satoshi's conf talk "Enhancing Dashboards with Javascript!"
  - Wed 12:15 -> 1pm (Breakout 9)

Questions?

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THANK YOU

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