Worst Practices for Building Splunk Apps and Add-ons

…and how to avoid them

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splunk> .conf18

whoami

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http://www.linkedin.com/in/JasonConger
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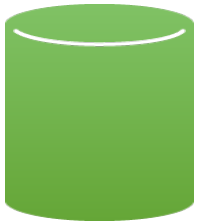
Staff Solutions Architect
Global Strategic Alliances

6+ years at Splunk

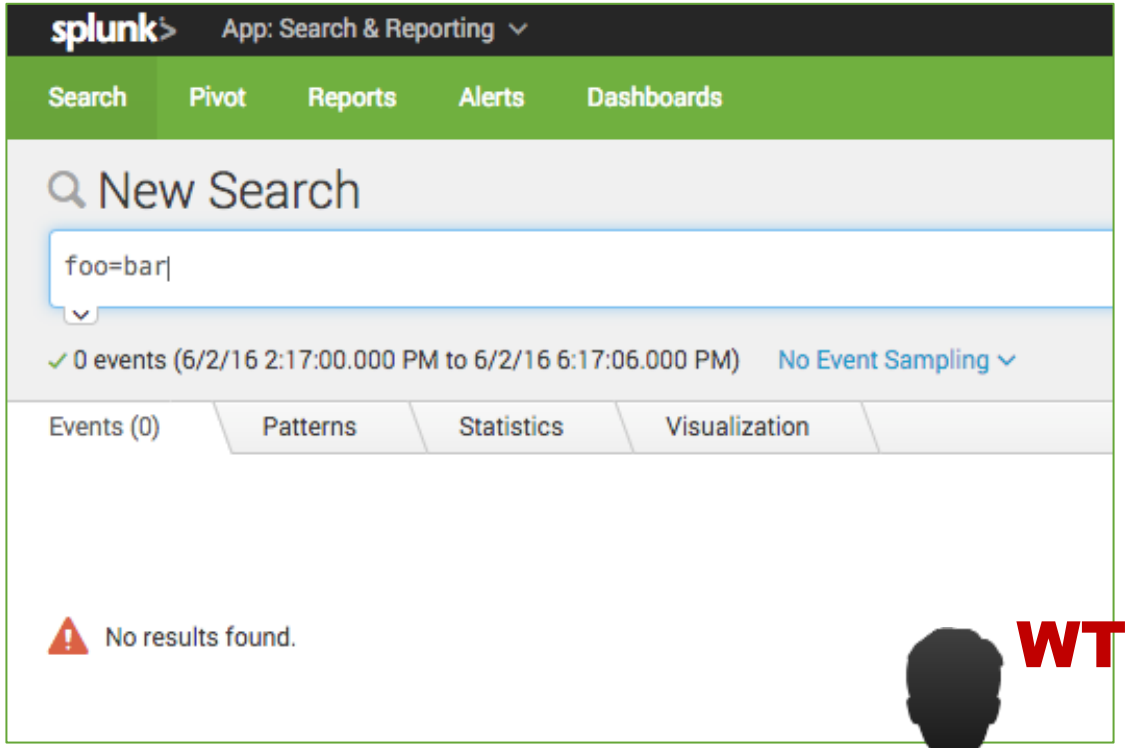
Created or consulted on 25+ Splunkbase applications

Worst Practice

Using Lots of Custom Indexes

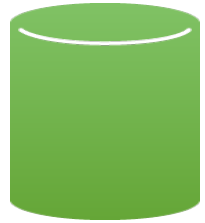


main



WTF?

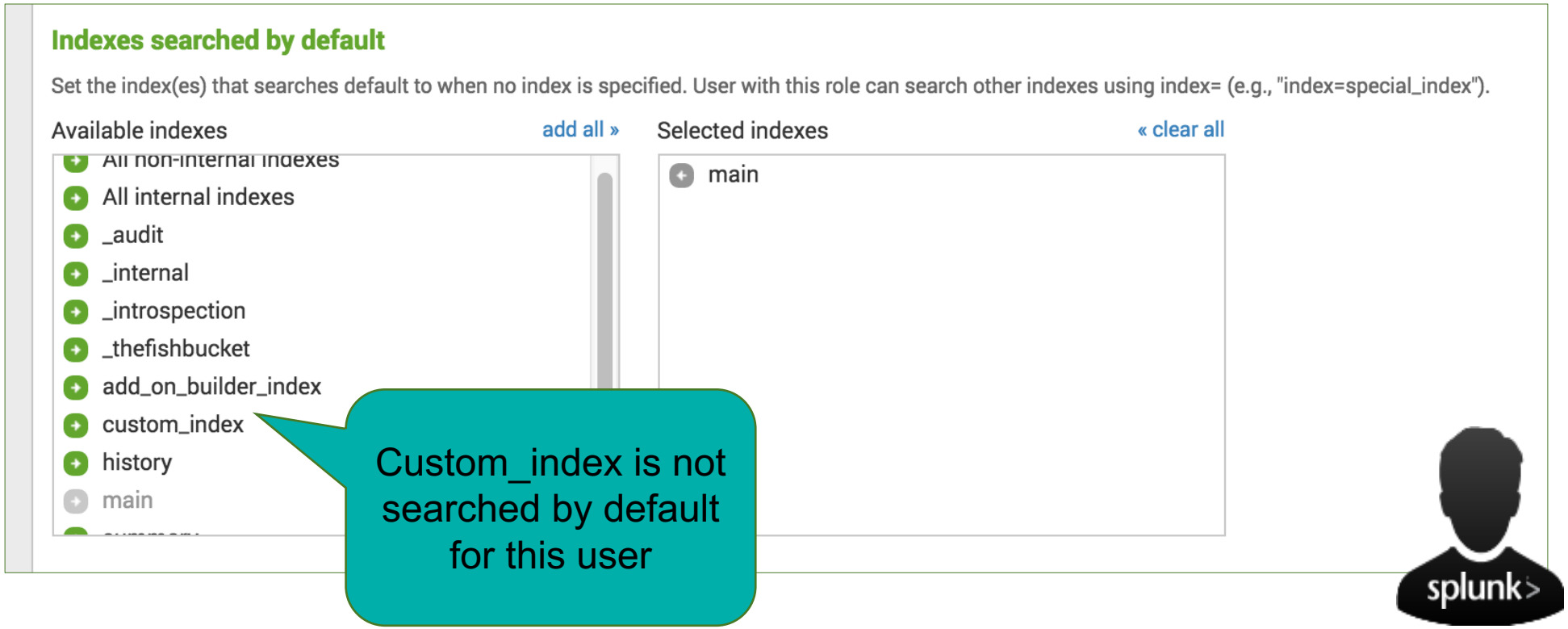
custom index



contains foo=bar data

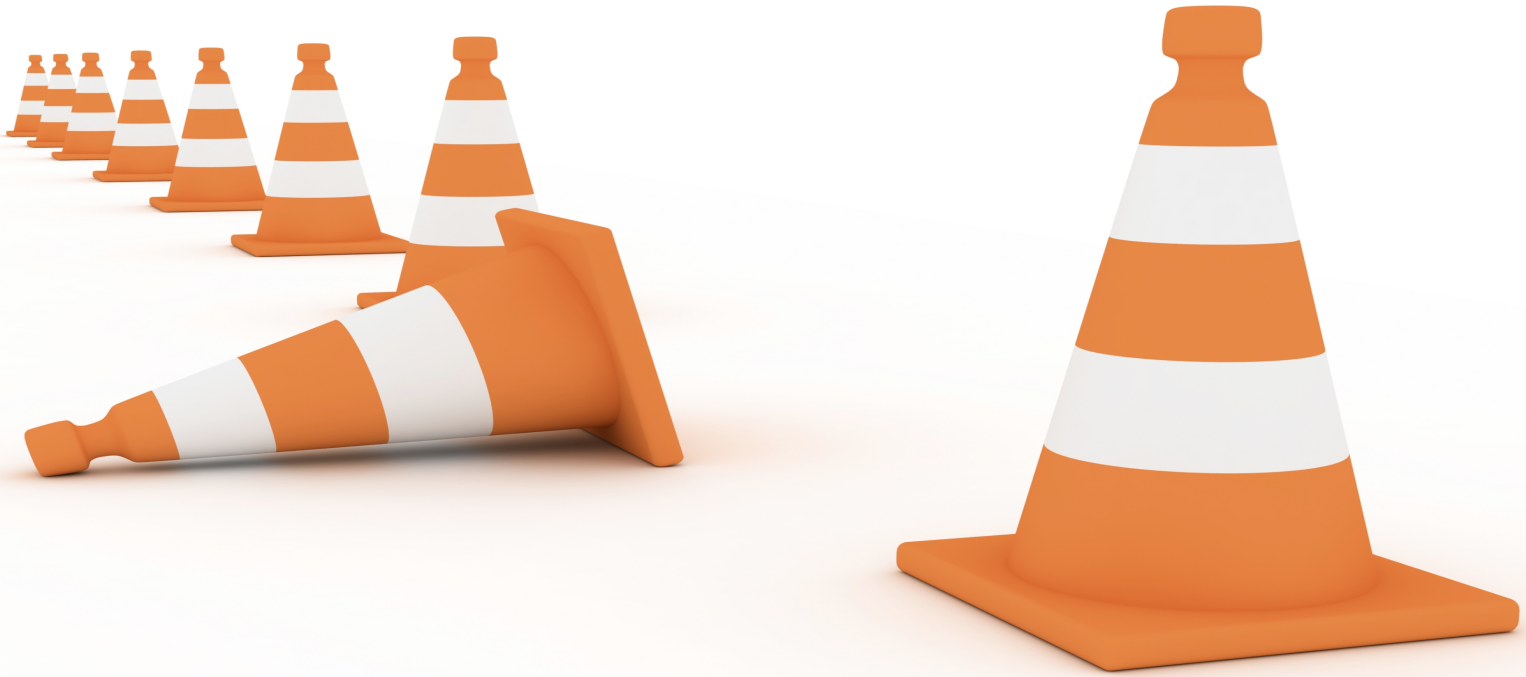
Worst Practice

Using Lots of Custom Indexes



Best Practice

Write Data To The “main” Index*



* there are exceptions to every rule

Exceptions To Using “main” Index

- Testing – writing data to a test index during development allows the developer to quickly and easily clear out all events in the index without impacting other events elsewhere

```
$SPLUNK_HOME/bin/splunk clean eventdata custom_index
```

- Retention – data retention/aging is controlled on the index level. Some administrators may want to have custom retention policies based on the type of data
- Security – using Splunk’s RBAC, the administrator can control who sees what data
- Performance – certain types and volumes of data may necessitate higher performing disk architectures

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The last 3 exception decisions should be made by the Splunk admin – not the developer.

Worst Practice

Relying on Automatic sourcetype Recognition

inputs.conf

```
[monitor://<path>]
# living dangerously with no sourcetype
```

- If sourcetype is unset in inputs.conf, Splunk picks a source type based on various aspects of the data.
- Requires RegEx matching = additional processing
- “too_small” sourcetypes

Worst Practice

Neglecting Timestamp Extraction, Event Breaking, and Typing in props.conf

Event Breaking	LINE_BREAKER	<where to break the stream>
	SHOULD_LINEMERGE	<enable/disable merging>
Timestamp Extraction	MAX_TIMESTAMP_LOOKAHEAD	<# chars in to look for ts>
	TIME_PREFIX	<pattern before ts>
	TIME_FORMAT	<strptime format string to extract ts>
Typing	ANNOTATE_PUNCT	<enable/disable punct:: extraction>

splunk> .conf18

Best Practice

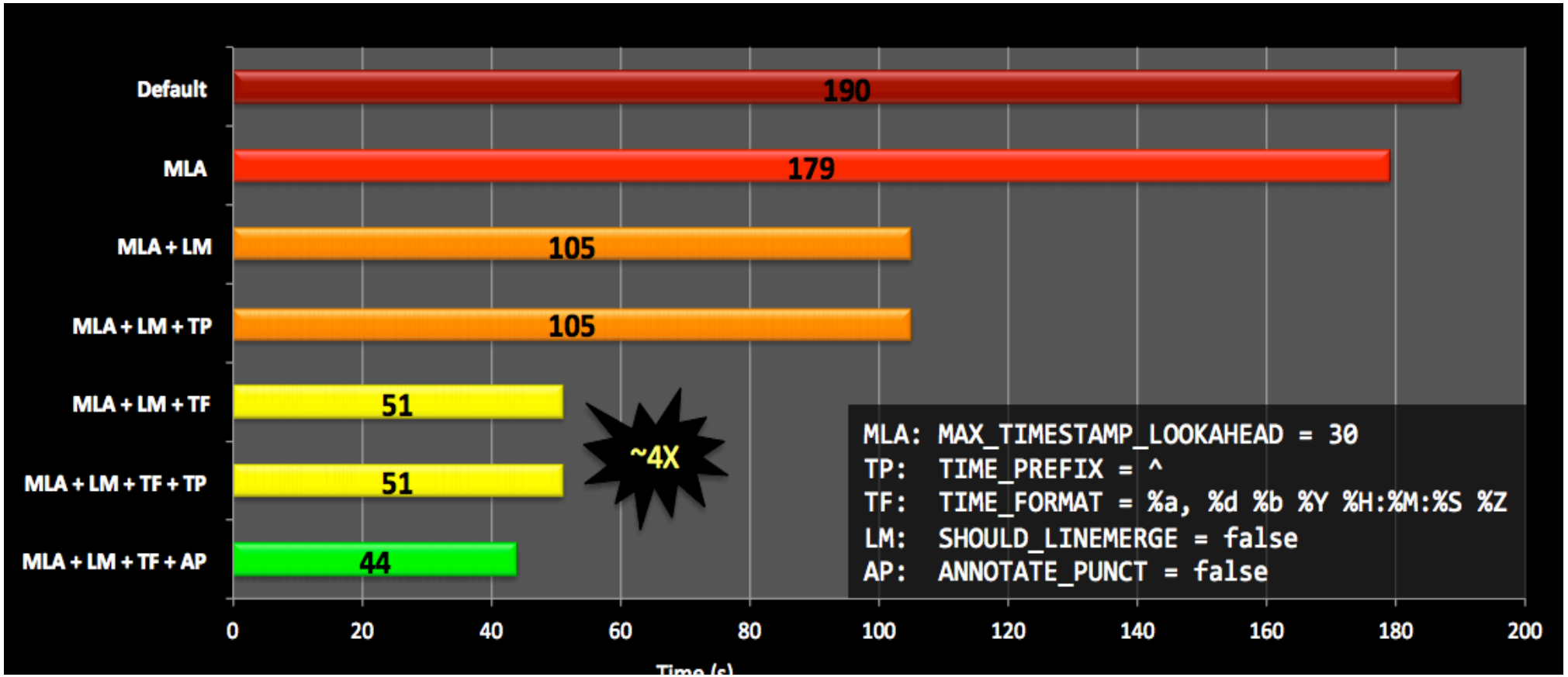
Explicitly Define sourcetype Settings

```
[mysourcetype]
TIME_PREFIX = ^
MAX_TIMESTAMP_LOOKAHEAD = 25
TIME_FORMAT = %Y-%m-%d %H:%M:%S.%3N %z
LINE_BREAKER = ([\r\n]+)\d{4}-\d{2}-
\d{2}\s\d{2}:\d{2}:\d{2}.\d{3}
SHOULD_LINEMERGE = False
ANNOTATE_PUNCT = false
```

splunk> .conf18

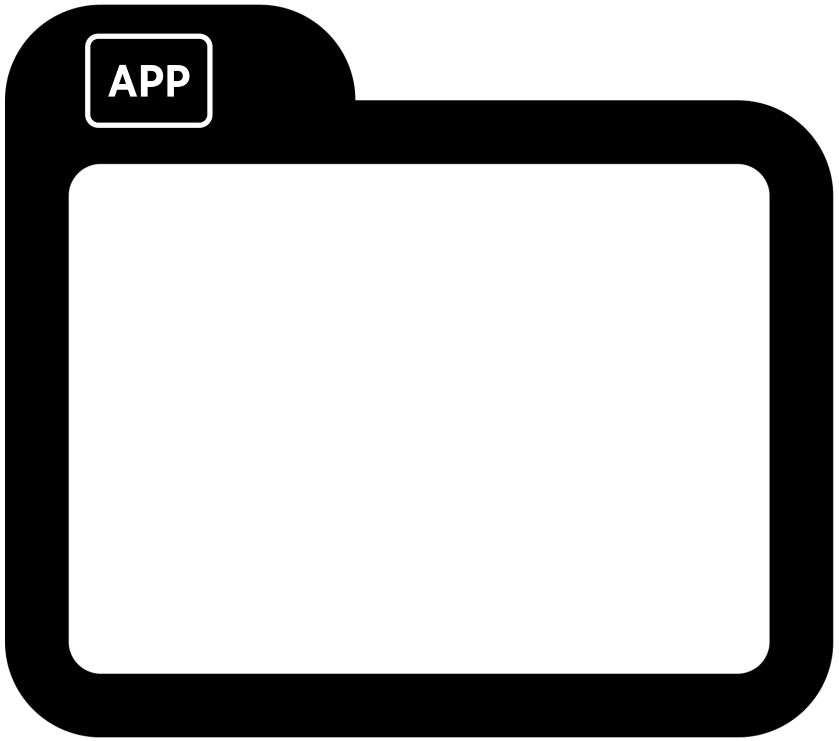
Best Practice

Explicitly Define sourcetype Settings



Worst Practice

Not Including Dependencies In Your App's bin Folder



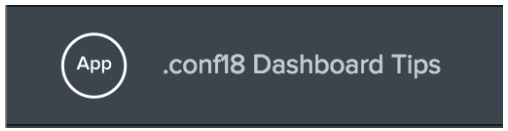
Best Practice

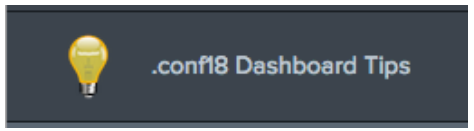
Include Everything Your App Needs

- Test on a clean Splunk install – Docker can be your friend.

Worst Practice

Not Including High-res 2x App Icons

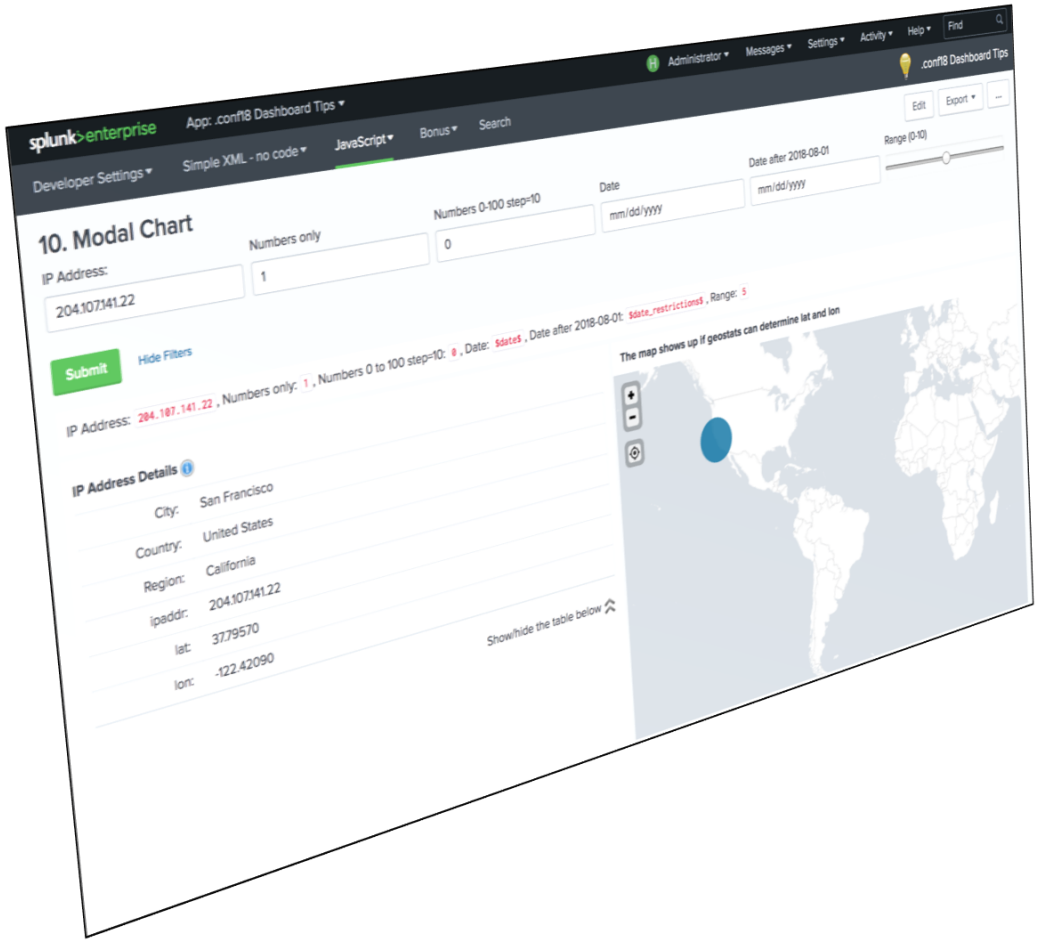




- But, the default icon is better than it used to be…

Worst Practice

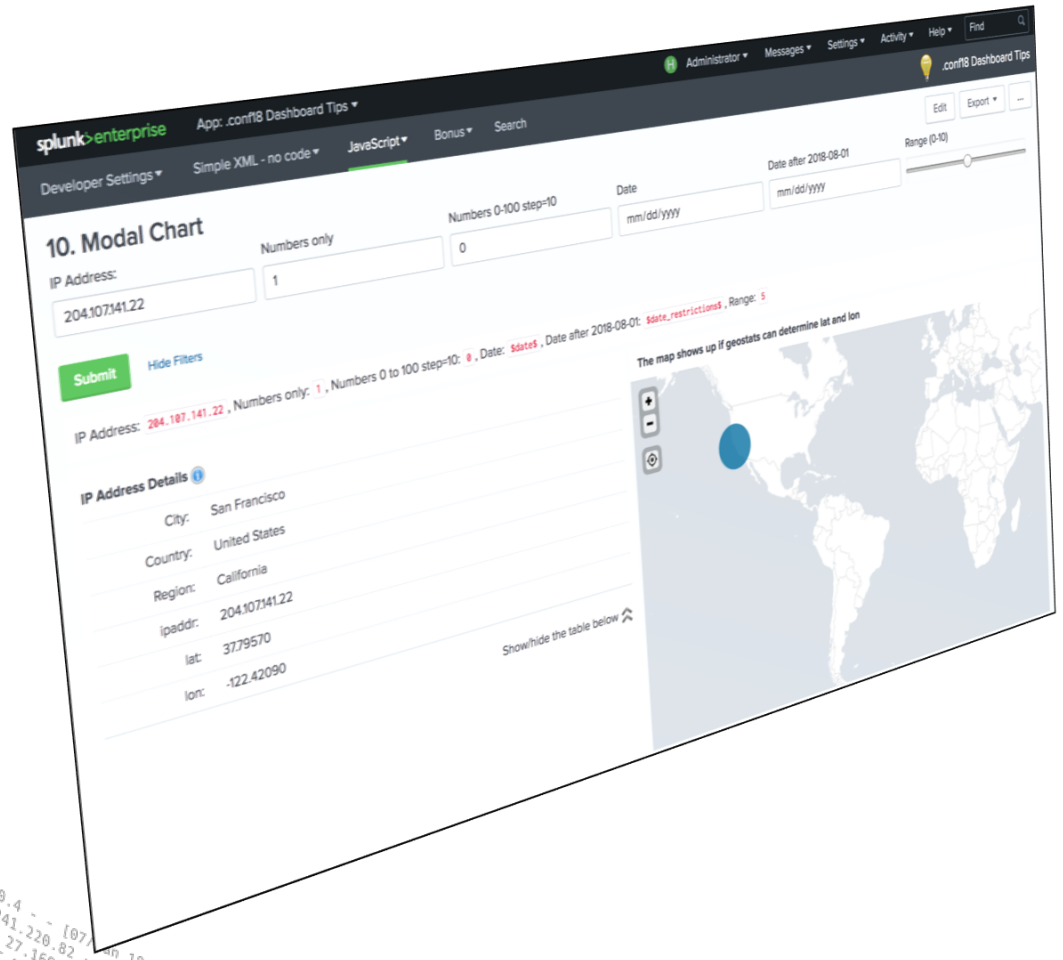
Not Parameterizing Base Searches




```
<search>
  <query>
    index = my_index sourcetype
= mysourcetype | stats count
  </query>
</search>
```

Best Practice

Use macros (preferred) or eventtypes to parametrize searches



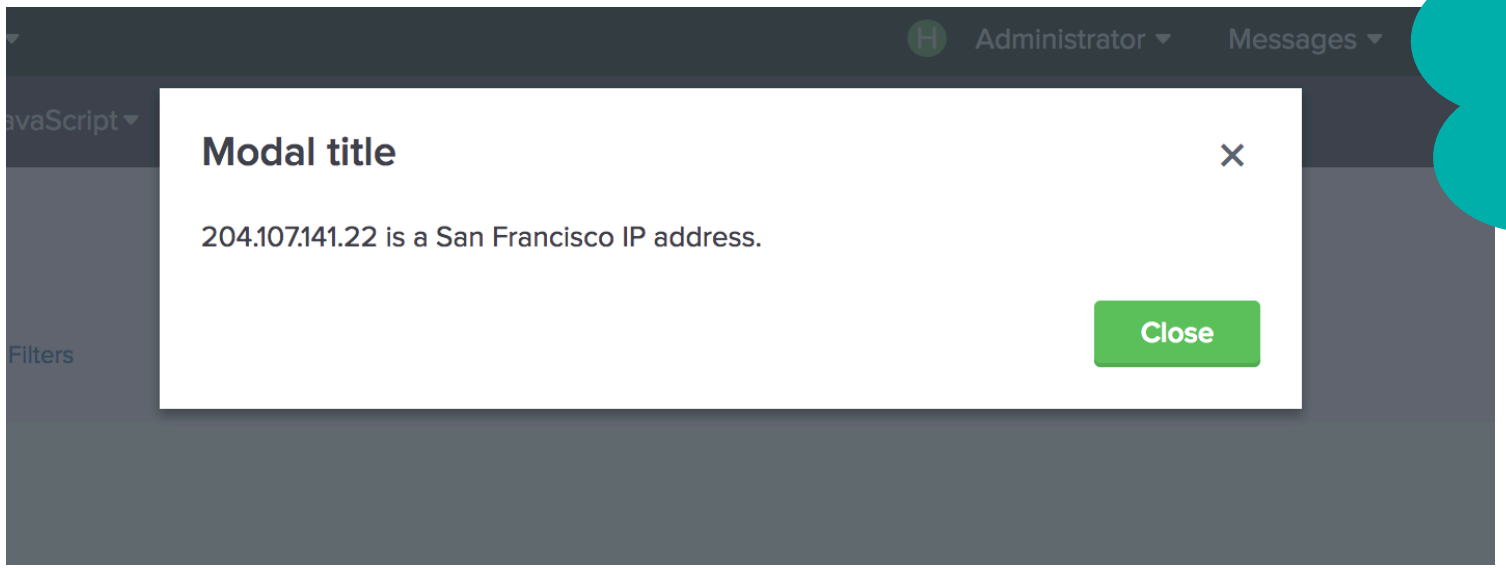

```
macros.conf
[my_index]
definition = index=my_index

[my_sourcetype]
definition = `my_index` sourcetype =
my_sourcetype
```

```
<search>
  <query>
    `my_sourcetype` | stats count
  </query>
</search>
```

Worst Practice

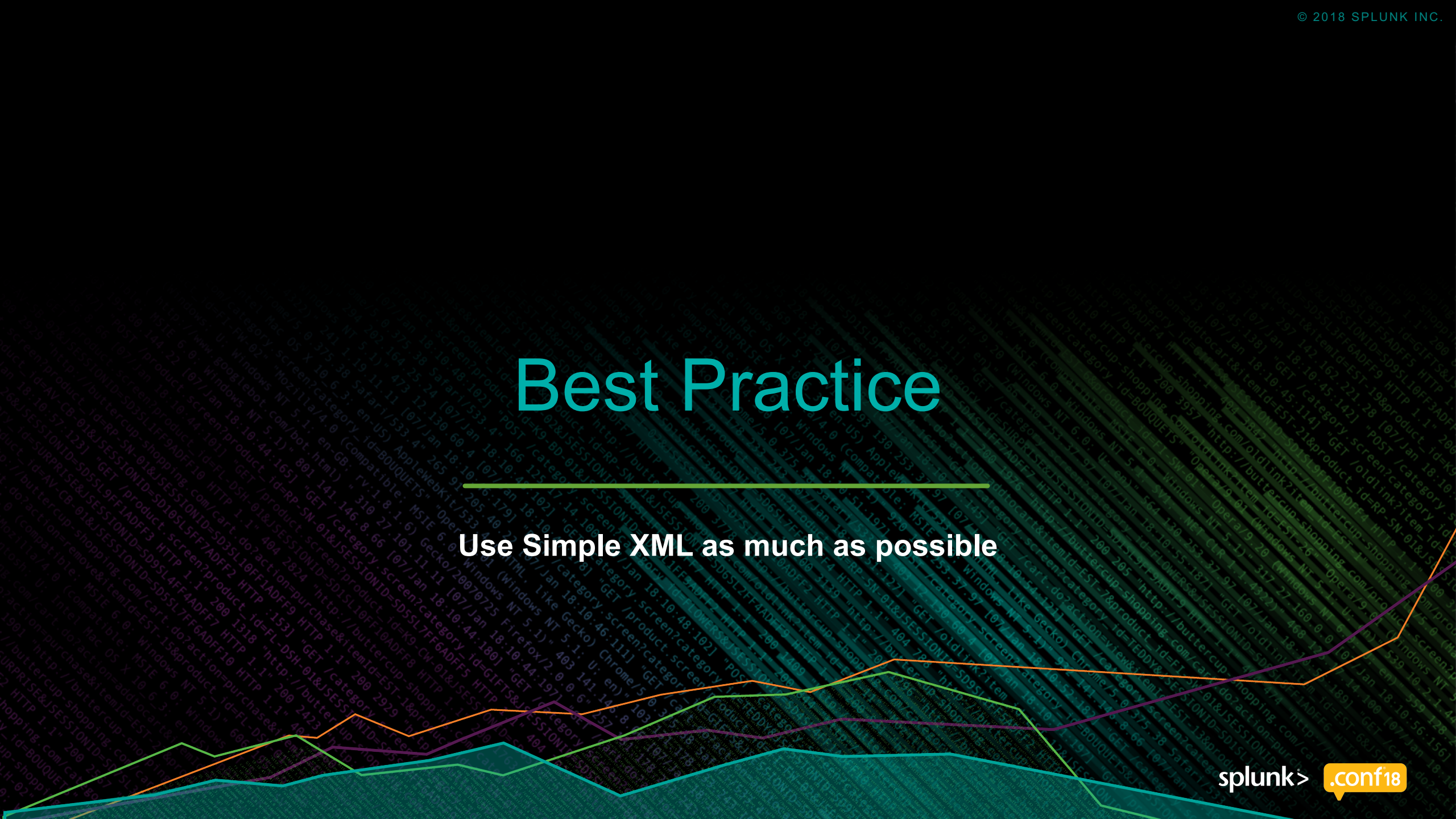
Converting to HTML for Basic Dashboard Extension



I need to add a modal popup, I guess I need to convert to HTML…

Best Practice

Use Simple XML as much as possible



More Splunkiness

- Meh practice – not using TERM() for IP Address searches
  - https://docs.splunk.com/Documentation/Splunk/latest/Search/UseCASEandTERMtomatchphrases
- Worst practice – no debug logging in add-ons
  - Use debug logging so the use of the _internal index can be used for troubleshooting
- Worst practice – not using AppInspect
  - Use AppInspect even if you are not uploading to Splunkbase – it doesn't hurt

Thank You

Don't forget to rate this session in the .conf18 mobile app