

Transitioning to Splunk Enterprise 10.0: What You Need to Know

PLA2002



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Transitioning to Splunk Enterprise 10.0: What You Need to Know

**Hywel
Matthews**

Chief Technical Advisor, TS&I Platform, CSX
Splunk — a CISCO company



Powered By



**Casey
Pike**

Splunk Ninja



**Shane
Newman**

Splunk Sommelier

Agenda

Preparations and Health Checks

Splunk Enterprise 10 Intro

General Process to Upgrade Splunk Enterprise

Splunk 10 Breaking Changes

App Compatibility

KVStore and Infrastructure

Splunk IT Service Intelligence (ITSI) Upgrade Info

Splunk Enterprise Security (ES) Upgrade Info

FIPS 140-3

Splunk 10 Intro

What's new & breaking changes



Splunk Platform 10 New Features

Splunk Enterprise 10.0 and Splunk Cloud Platform 10.0

IPv6

**Edge Processor
for Splunk
Enterprise**

**Splunk
Observability
Related Content
in Splunk
Enterprise**

**Upgrade
Readiness App
replaced by
Splunk Health
Assistant
Add-On**

**Agent Manager 1.0:
Effective Configuration
—
Visibility & Insights into
Agents Status, Health,
Performance**

**Edge Processor
Validated
Architecture**

**Observability
Metrics & Charts in
Splunk Enterprise
Dashboard Studio**

**Publication of
Dashboards for
Splunk Enterprise**

Splunk Platform 10 Breaking Changes

Splunk Enterprise 10.0 and Splunk Cloud Platform 10.0

NodeJSv20

**OS & Hardware
Support Matrix**

FIPS-140-3

**Docker EULA
User
Acceptance**

**Hadoop Data-Roll
Disabled***

Depracated

Python 3.9

OpenSSL3.0

MongoDB v7.0*

**IF upgrading from
Splunk Ent 9.3
or lower**

Preparations and Health Checks

In preparation of the breaking changes

References

- [Splunk Health Assistant Add-On](#), enhancing the **Monitoring Console**
- Head to the [#office-hours](#) Community Slack channel to ask questions (request access [here](#))



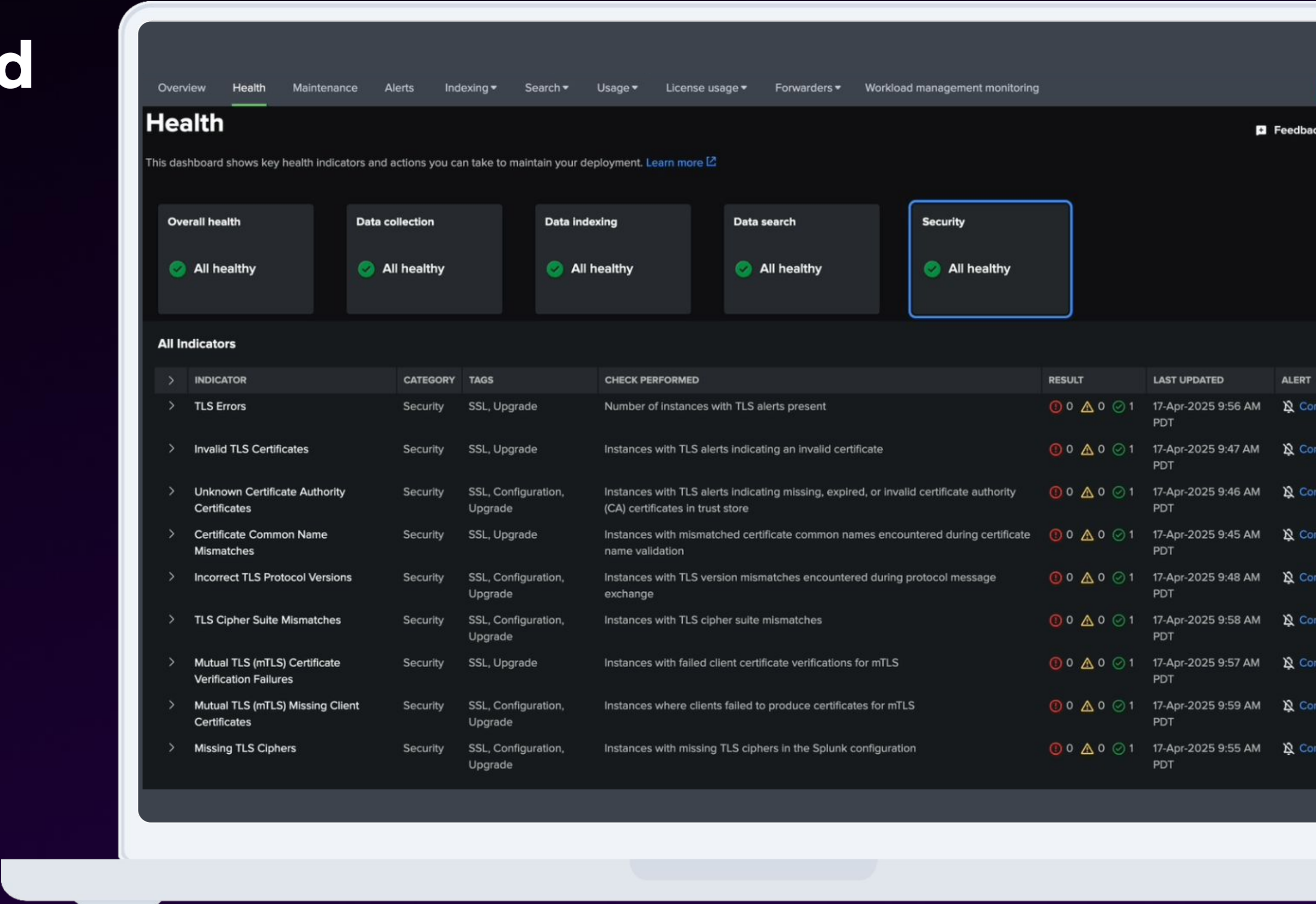
Preparations and Health Checks

Use when preparing to upgrade from 9.x to Splunk Enterprise and Cloud Platform 10.0.

This enables validation logic to be updated before a platform upgrade.

Each new validation offers remediation steps of any breaking changes, ensuring a smoother upgrade experience.

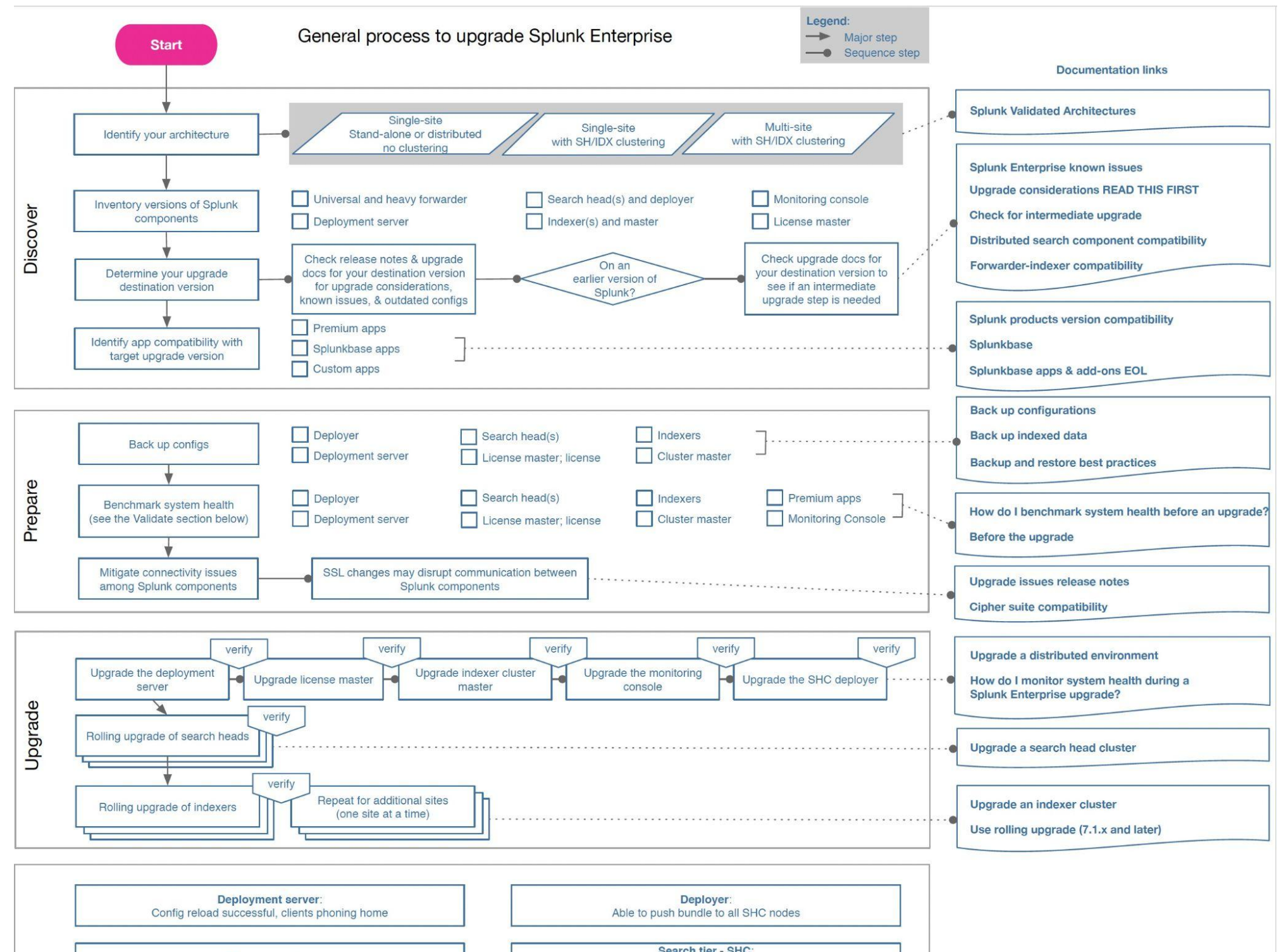
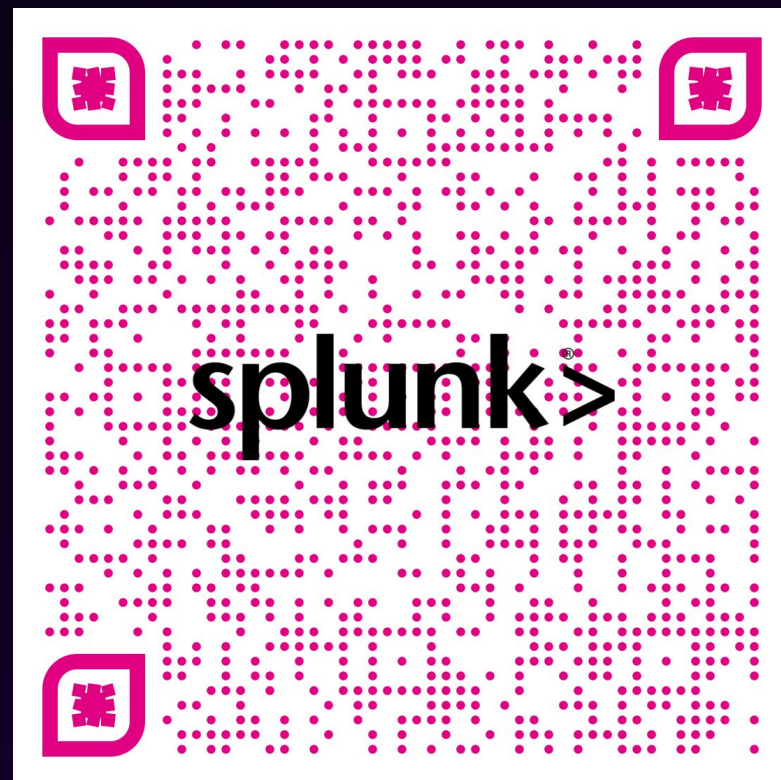
The Cloud Monitoring Console will have its own subset of validations relevant to Splunk Cloud Platform.



General Process to Upgrade Splunk Enterprise

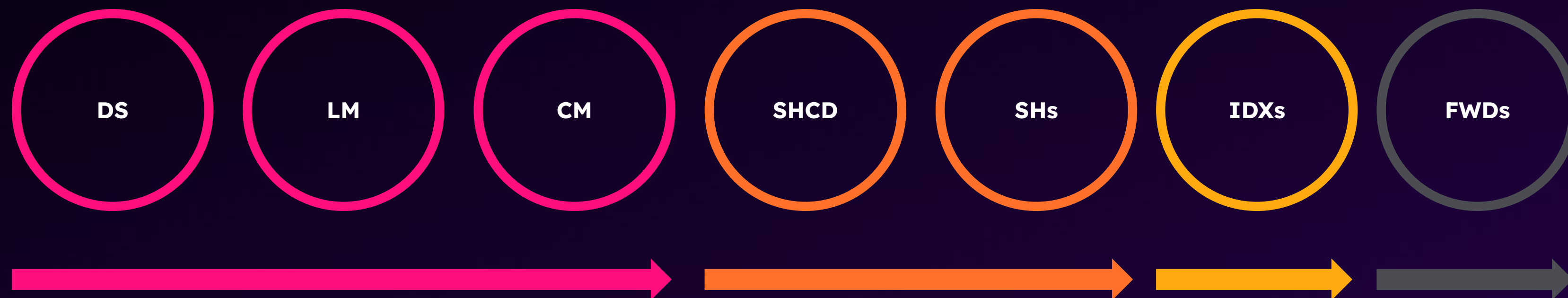
... order... order ...

Search for “splunk upgrade order of operations pdf”



Core Upgrade Order Recap

... For Splunk Enterprise



Verify instances functioning as expected

Move on to next layer

Breaking Changes

... The 7 Ps of planning ...

References

- [Preparing to upgrade from 9.x to the upcoming release of Splunk Enterprise and Cloud Platform](#)



Breaking Changes May Impact Splunk 10?

What and who...

Category	Breaking Change	Splunk Role Affected?
Dependency Updates	OpenSSL library version update	Admin
	Python runtime environment version update and removal of support of older versions	Admin & App Developers
	Upgrade to Node.js JavaScript runtime environment version update	Admin & App Developers
Security	Certificate Authority (CA) certificate is required due to OpenSSL3	Admin
	TLS network security protocol version 1.2 or higher is required	Admin & App Developers
	Extended Master Secret requirement for FIPS 140-3	Admin
Deprecation and Removals	Hadoop Data-Roll turned off by default	Admin
	Changes to Supported CPU Instruction Sets	Admin
	Unsafe v1 search APIs turned off by default	Admin & App Developers
	Incompatible Apps	Admin & App Developers
Compliance Changes	MongoDB upgrade for OpenSSL support	Admin
	FIPS 140-3 enforces minimum OS version requirements	Admin & App Developers
Legal	Docker EULA User Acceptance	Admin

App Compatibility

... measure twice, cut once ...

References

- [Splunk 10.0 compatible Splunk Supported Apps](#)
- [3rd Party / Private Apps](#)
- [Preparing to upgrade from 9.x to the upcoming release of Splunk Enterprise and Cloud Platform](#)
- [Preparing your Splunk Environment for OpenSSL3](#)
- [Deprecated and removed in version 9.0](#)
- [Splunk Docs Locate the source of your deprecated REST calls](#)



App Compatibility

Do your homework...

Upgrade to Splunk 10 Compatible Versions From Splunkbase

- [Splunk 10.0 compatible Splunk Supported Apps](#) — Splunkbase Filter link
- [3rd Party / Private Apps](#) — Splunkbase Filter link
 - Developers have been sent emails, lantern article and news community post
 - Splunk Lantern: [Preparing to upgrade from 9.x to the upcoming release of Splunk Enterprise and Cloud Platform](#)
 - Splunk Community: [Preparing your Splunk Environment for OpenSSL3](#)

Incompatible Apps and Customizations

- Compatibility with Python 3.9 + OpenSSL3 (can fallback to OpenSSL1 for non FIPS)
- Convert all v1 Search APIs to v2
- Compatibility with Node.js 20.18.2+

Python Consideration

- Splunk Enterprise 10.0 only ships with Python 3.9
- Python 2.7 and 3.7 **DO NOT** exist in Splunk Enterprise 10.0
- When you upgrade to Splunk Enterprise 10.0, if there are python issues, **THERE IS NO FALLBACK**

Test Your Apps!

Version 1 APIs

Version 1 APIs Deprecated

- V1 APIs were deprecated in Splunk Enterprise 9.0 — [Deprecated Features Doc](#)
- Splunk Enterprise 9.0 was initially released on June 14, **2022**
- Splunk Enterprise 9.0.1 reached its End-of-Life (EOL) on June 14, **2024**

Discover Deprecated REST Calls

- Check apps and users still using the V1 API, reference the Splunk doc for searches
 - [Splunk Docs Locate the source of your deprecated REST calls](#)
- There are 2 searches that can be used to validate V1 APIs are no longer used

Enable V1 API?

- Want to enable V1 API?
 - Use `restmap.conf`
 - `[global]`
`v1APIBlockGETSearchLaunch=false`
- Is set to true by default in Splunk Enterprise 10.0
 - Set to false if there is a dependency on V1 APIs missed during validation

Test Your Apps! Part 2

Python 3.9

Splunk's Recommendation (Email / Blog Articles)

- Create Splunk Enterprise 10 Beta test instance
- Install applications referencing python (.py files in etc/apps/*)
- Configure apps to work on the Splunk Enterprise 10 Beta instance
- Test to confirm apps work
 - Check logs for error messages, assuming they are logged, and not silent
 - Include log level “INFO” and “WARN”

Using Splunk Enterprise 9.3 / 9.4

- Splunk Enterprise 9.3 & 9.4 have a feature flag to force python 3.9
 - Can be turned on and off for testing, switching between 3.7 and 3.9
 - Use `Server.conf`

```
[general]  
python.version = force_python3
```
 - <https://docs.splunk.com/Documentation/Splunk/9.4.2/Python3Migration/ChangesEnterprise>
 - Test apps in production during a maintenance window in python 3.9. if issues switch back and resolve

Reminder

- Splunk Enterprise 10.0 only ships with Python 3.9
- Python 2.7 and 3.7 **DO NOT** exist in Splunk Enterprise 10.0
- When upgrading to Splunk Enterprise 10.0, if there are python issues, **THERE IS NO FALLBACK**

Test Your Apps! Part 3

OpenSSLv3

Splunk Enterprise 10.0

- Only option is to test on Splunk Enterprise 10.0 - is the first version of Splunk including OpenSSLv3
- There are only a few apps OpenSSLv3 has impacted, across all Splunk apps

Fallback to OpenSSLv1 ... as a failsafe ...

- The “fallback” mode runs python 3.9 + OpenSSLv1
 - Use for apps that depend on OpenSSLv1, but conflict if OpenSSLv3 is in use
- The “fallback” Mode is global
- Whenever splunkd launches python, OpenSSL 1.0 is used
- To enable use `server.conf`

```
[general]
python.not_compatible =
openssl3.0
```

Reminder

- Any python module that uses deprecated APIs needs to be updated to versions that work with OpenSSLv3 or later for FIPS 140-3 compliance
- Refer to the [OpenSSL Migration Guide \(docs.openssl.org\)](https://docs.openssl.org) for detailed information

Test Your Apps! Part 4

NodeJSv20

NodeJSv20

- NodeJS was upgraded from v8 to v20
- NodeJS is deprecated as of Splunk Enterprise and Splunk Cloud 10.0
- **NodeJS will be removed in the next release after Splunk Enterprise 10.0 - apps that call NodeJS will break**
- App developers have received [multiple](#) emails and [blog posts](#) informing them of these changes in 2025

Developer Responsibility

- Review [NodeJS's deprecation](#) notes
 - Identify APIs that may have been removed between v8 and v20
- Check for script invocation errors relating to extension points in apps implemented in NodeJS
 - Custom Search Commands, Modular Alerts, and Modular Inputs support NodeJS natively (i.e. Splunk will look for .js files matching the files specified in .conf files even if the file extension isn't specified) making it tricky to identify NodeJS usage using SPL alone
 - Some extension points might also be implemented using a shell script as a shim for NodeJS code
- Consider converting extension points to python or another supported language

Customer / User Responsibility

- Use the Splunk Enterprise 10 Beta to determine if any key apps or workflows are impacted
- Always ensure that Splunk-built and 3rd party apps are updated to the latest version!

KVStore and Infrastructure

Important changes

- MongoDB (KV Store) Upgrade to v7.0
- Intel and AMD Processors



KVStore and Infrastructure

Important changes

MongoDB (KV Store): Upgrade to v7.0

- Upgrade to v7.0 (Requires AVX enabled, Required for FIPS 140-2 after March & FIPS 140-3)
- On upgrading to Splunk Enterprise 9.4.x or 10.0, upgrade will automatically be attempted twice, after splunkd is started
- **Warning: FIPS mode will result in a startup failure**

MongoDB v4.2 Unsupported in Splunk 10

- If the upgrade fails twice, MongoDB will revert to v4.2
 - Manual upgrade required
 - Contact Splunk Support for assistance
- KVstore will continue to operate with Splunk Enterprise 9.4 and 10.0
- MongoDB v4.2 is **NOT supported with Splunk Enterprise 10.0**
 - Splunk Enterprise 10.0 and premium apps will still function

Infrastructure Changes CPU Requirements:

- For Intel x86_64, a Sandy Bridge or higher Core processor is required, with the SSE4.2, AVX, and AES-NI instructions enabled
- For AMD x86_64, a Bulldozer or higher processor is required, with the AVX instructions enabled

IT Service Intelligence (ITSI & ITEW)



Recommendations

References

- [Splunk Docs - Splunk products version compatibility matrix](#)
- [Splunk Docs - ITSI compatibility with related apps and add-ons](#)

IT Service Intelligence (ITSI & ITEW)

Recommendations

- ITSI 4.21 - **Recommended** - Splunk 10 compatible

 - **Availability** September 2nd, 2025
- ITSI 4.20.1 - **Not Recommended** - Requires v1 API flag 
 - **Availability** June 30th, 2025
- Dependencies:
 - MLTK 5.5.x (min for ITSI 4.20.x)
 - MLTK 5.6.0 (Required for FIPS 140-3)
- Check ITSI Compatibility Matrix!
 - [Splunk Docs - Splunk products version compatibility matrix](#)
 - [Splunk Docs - ITSI compatibility with related apps and add-ons](#)

Enterprise Security (ES)

Recommendations & advice







References

- [Splunk Lantern - Upgrading to Enterprise Security 8.0.x - Walkthrough and validation](#)
- [Splunk Docs - Splunk products version compatibility matrix](#)
- [Splunk Docs - Upgrade Splunk Enterprise Security 8](#)
- [Splunk Lantern: Upgrading to Enterprise Security 8.0.x - Compatibility checks](#)



Enterprise Security (ES)

Recommendations

- ES 8.1.1 - **Recommended** - API v2, MLTK 5.5+ - Splunk 10 compatible 
 - **Availability** July 17th, 2025
- ES 7.3.4 - **Recommended** - Patch expected for Splunk 10 compatible 
 - **Availability** July 30th, 2025
 - Customers with a Centralized SOC / RBAC / Multi-tenancy should remain on this version while reviewing security requirements
- ES 8.1.0 - **Not Recommended** - MLTK 5.4 - NOT Splunk 10 compatible 
 - **Availability** June 10th, 2025
- ES 8.0.40 - **Not Recommended** - MLTK 5.4 - NOT Splunk 10 compatible 
 - **Availability** April 30th, 2025
- ES 8.0.1 - **Not Recommended** - MLTK and v1 API only - NOT Splunk 10 compatible without feature flag 
 - **Availability** December 5th, 2024
- ES < 7.3.4 - **Not Recommended** - NOT Splunk 10 compatible 

Enterprise Security (ES)

Incompatible apps/configs — DO NOT upgrade to ES 8.0.x if using PCI, Mothership, SOAR

Splunk SOAR - configurations not supported in ES 8.0.x:

- Hybrid architecture (CMP & Cloud)
- Container labels to segregate roles/access to incidents and investigations
- SOAR clusters (CMP)

Splunk PCI

- No current version compatible with Splunk Enterprise Security 8.0.x
- Support for the PCI app is tentatively slated for Enterprise Security 8.1.x

Mothership

- Core functionality (sending SPL to remote environments) remains compatible with ES 8.0.x
- ES 8.0.x taxonomy changes:
 - Notable references (for example, `multi_es_security_posture_view`) require updates to align with the ES 8.0.x taxonomy
- Finding groups & roll-up findings:
 - In ES 8.0.x, AQ FBD findings can be grouped and expanded.
 - However, in Mothership, child findings do not appear when pulling in parent findings, which breaks the grouping relationship

FIPS

... Not pips ...

References

- [Secure Splunk Enterprise with FIPS](#)



FIPS

Splunk Enterprise 10 supports FIPS 140-3

- Splunk Enterprise 10.0 defaults to FIPS 140-2
- When ready, change to 140-3

Many Requirements

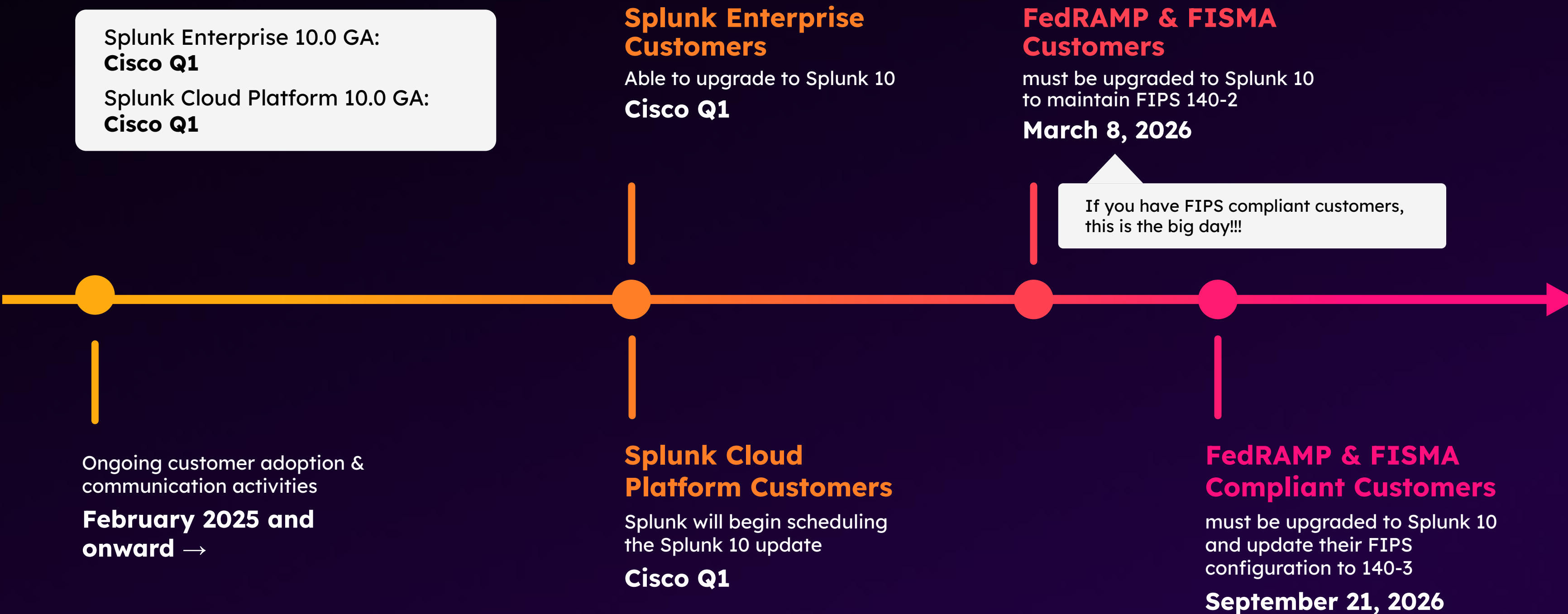
- Requires FIPS 140-3 Hardware
- Requires ITSI 4.21
- Requires MLTK 5.6.0
- SSL Certificates must be OpenSSL 3.0 / FIPS compliant (Use SHAA MC Checks)
- Mongo 7.0
- OpenSSLv3
- All instances on Ubuntu 22.04 or higher
- Python 3.9
- Splunk DB Connect 4.0 requires a fresh installation

Many Compatibility Requirements

- Between Splunk UF / Splunk Cloud / Splunk Enterprise
- Read and check the Splunk 10 Documentation
 - [Secure Splunk Enterprise with FIPS](#)

Splunk 10 and FIPS Compliance Timeline

When customers operating a FIPS compliance environment need to upgrade



FIPS Compatibility

Before switching Splunk 10.0 to FIPS 140-3, ensure all Splunk 9.x (and prior) instances have first been upgraded to Splunk 10.0.

FIPS 140-2 is the default for Splunk 10.0.

Universal Forwarder			
Splunk Enterprise / Cloud	Splunk UF 9.x FIPS 140-2	Splunk UF 10 FIPS 140-2	Splunk UF 10 FIPS 140-3
Splunk 9.x FIPS 140-2	✓	✓	✗
Splunk 10 FIPS 140-2	✓	✓	✓
Splunk 10 FIPS 140-3	✗	✓	✓

Splunk Enterprise / Cloud			
Splunk Enterprise / Cloud	Splunk 9.x FIPS 140-2	Splunk 10 FIPS 140-2	Splunk 10 FIPS 140-3
Splunk 9.x FIPS 140-2	✓	✓	✗
Splunk 10 FIPS 140-2	✓	✓	✓
Splunk 10 FIPS 140-3	✗	✓	✓

Call To Action!

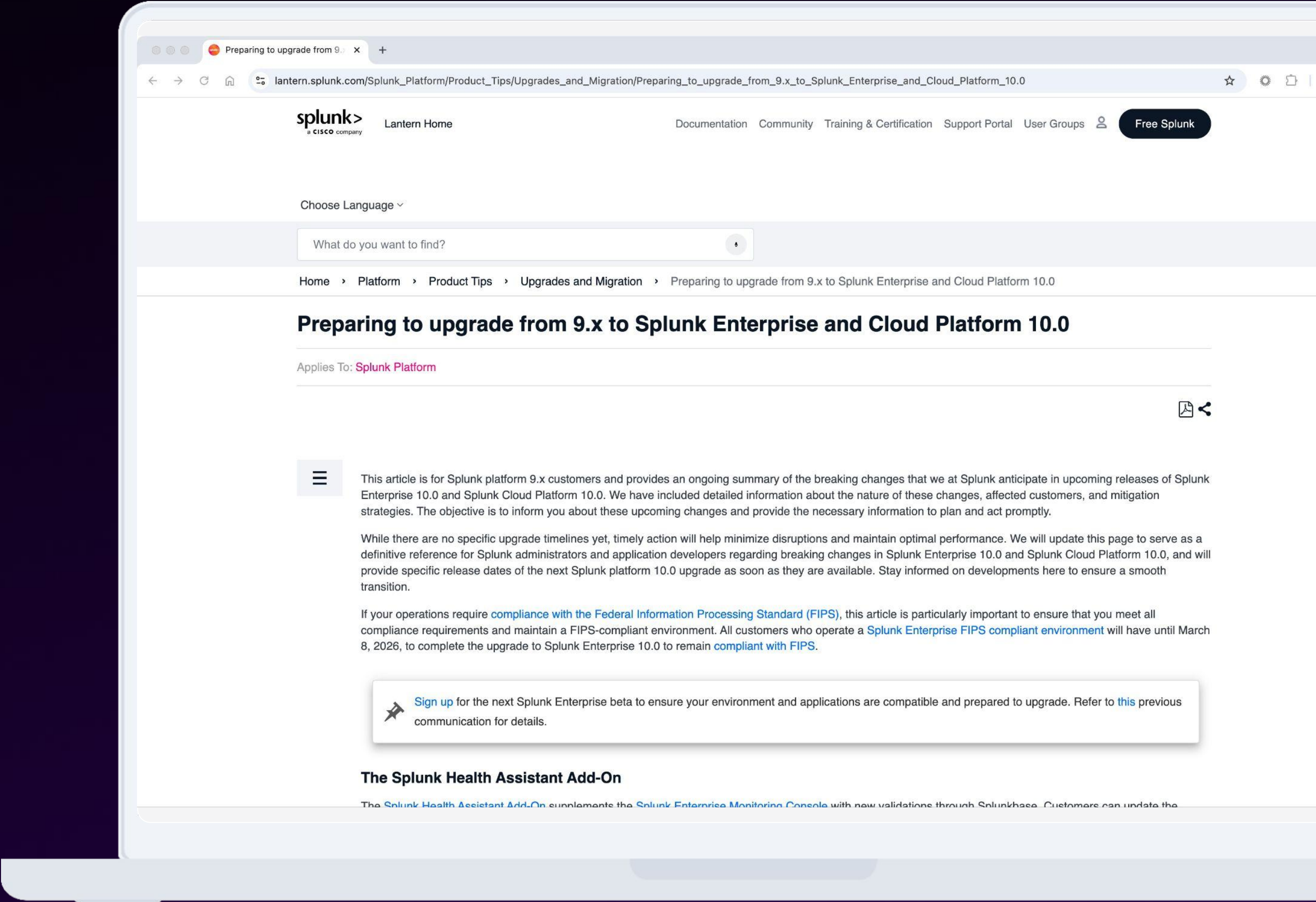
To do list when you get home



Lantern

Preparing to upgrade from 9.x to Splunk Enterprise and Cloud Platform 10.0

https://lantern.splunk.com/Splunk_Platform/Product_Tips/Upgrades_and_Migration/Preparing_to_upgrade_from_9.x_to_Splunk_Enterprise_and_Cloud_Platform_10.0

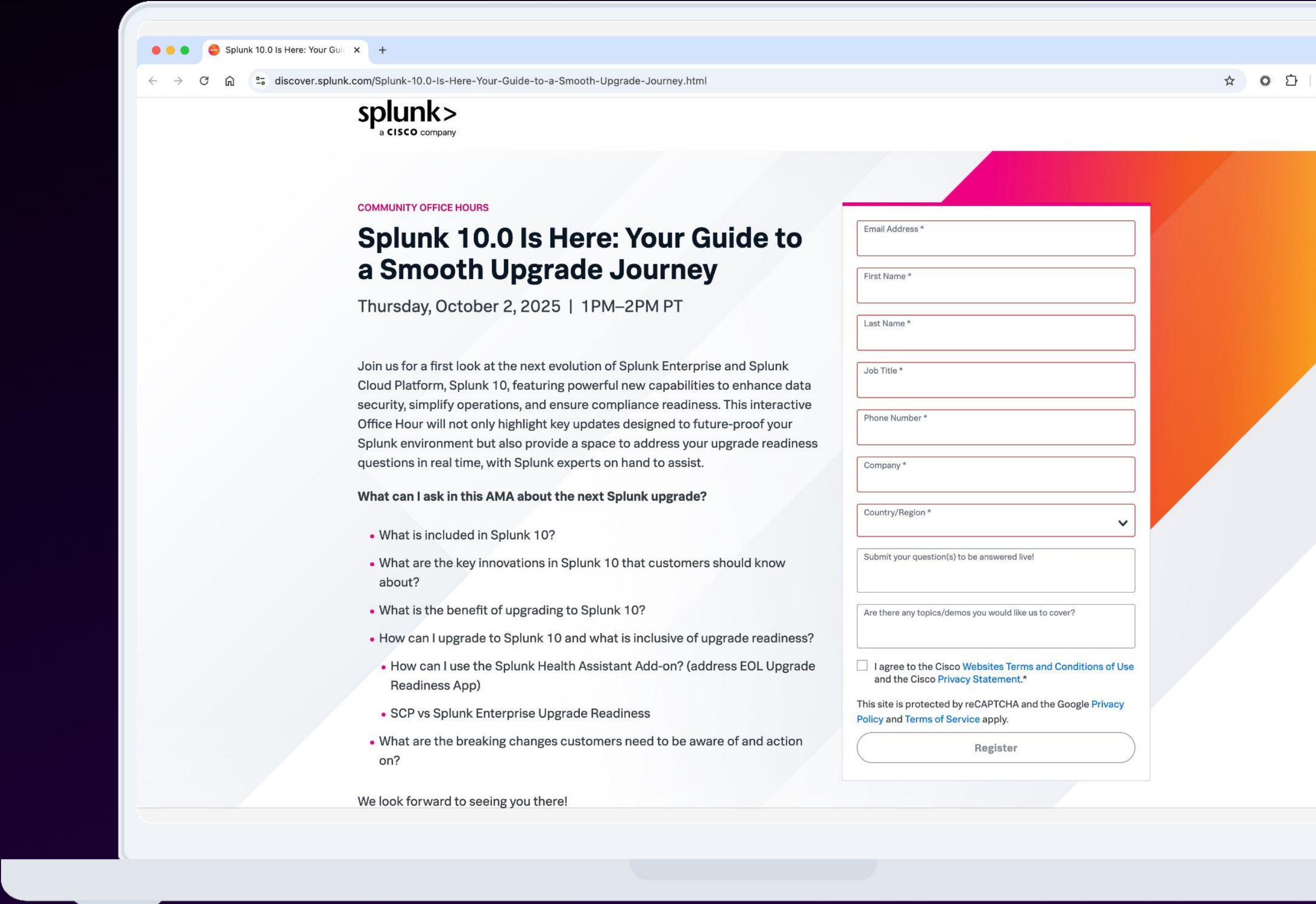


Splunk 10.0 Is Here:

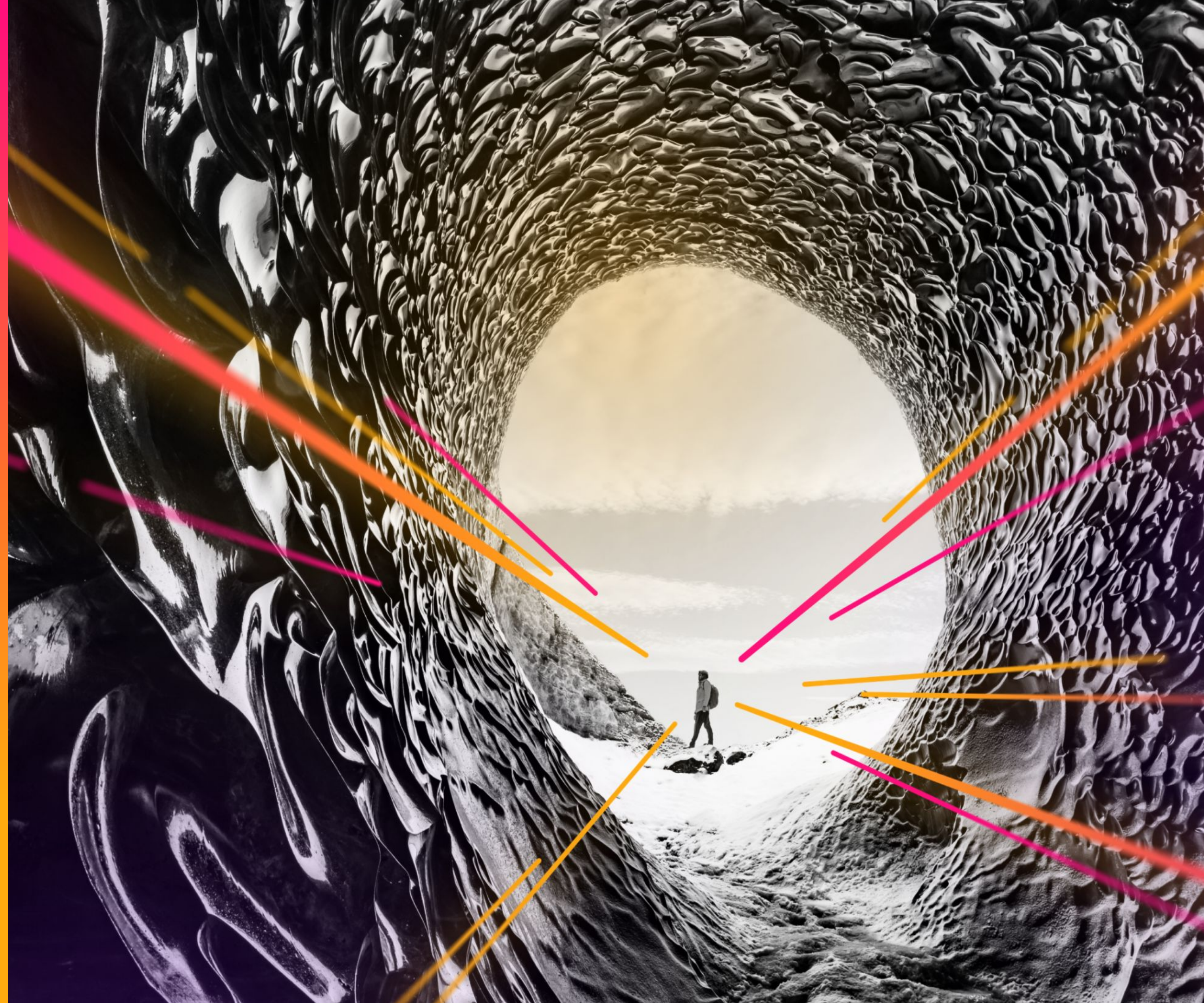
Your Guide to a Smooth Upgrade Journey

Thursday, October 2, 2025 | 1PM–2PM PT. Register here <https://discover.splunk.com/Splunk-10.0-Is-Here-Your-Guide-to-a-Smooth-Upgrade-Journey.html>

Head to the [#office-hours](#) Community Slack channel to ask questions (request access [here](#))



Q&A



Thank you



Appendix

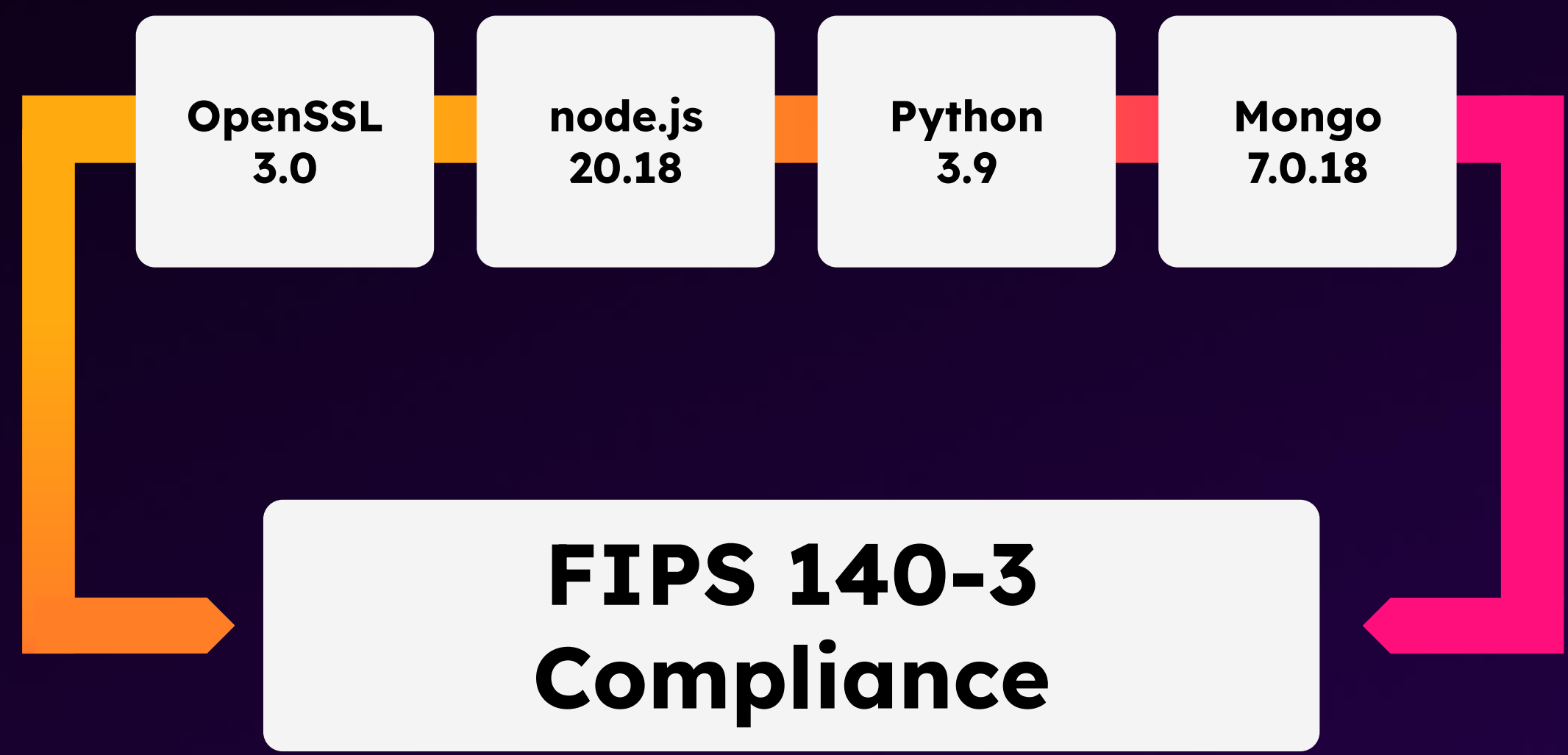
Value of Splunk 10



ANNOUNCING

Compliant-Ready Environment

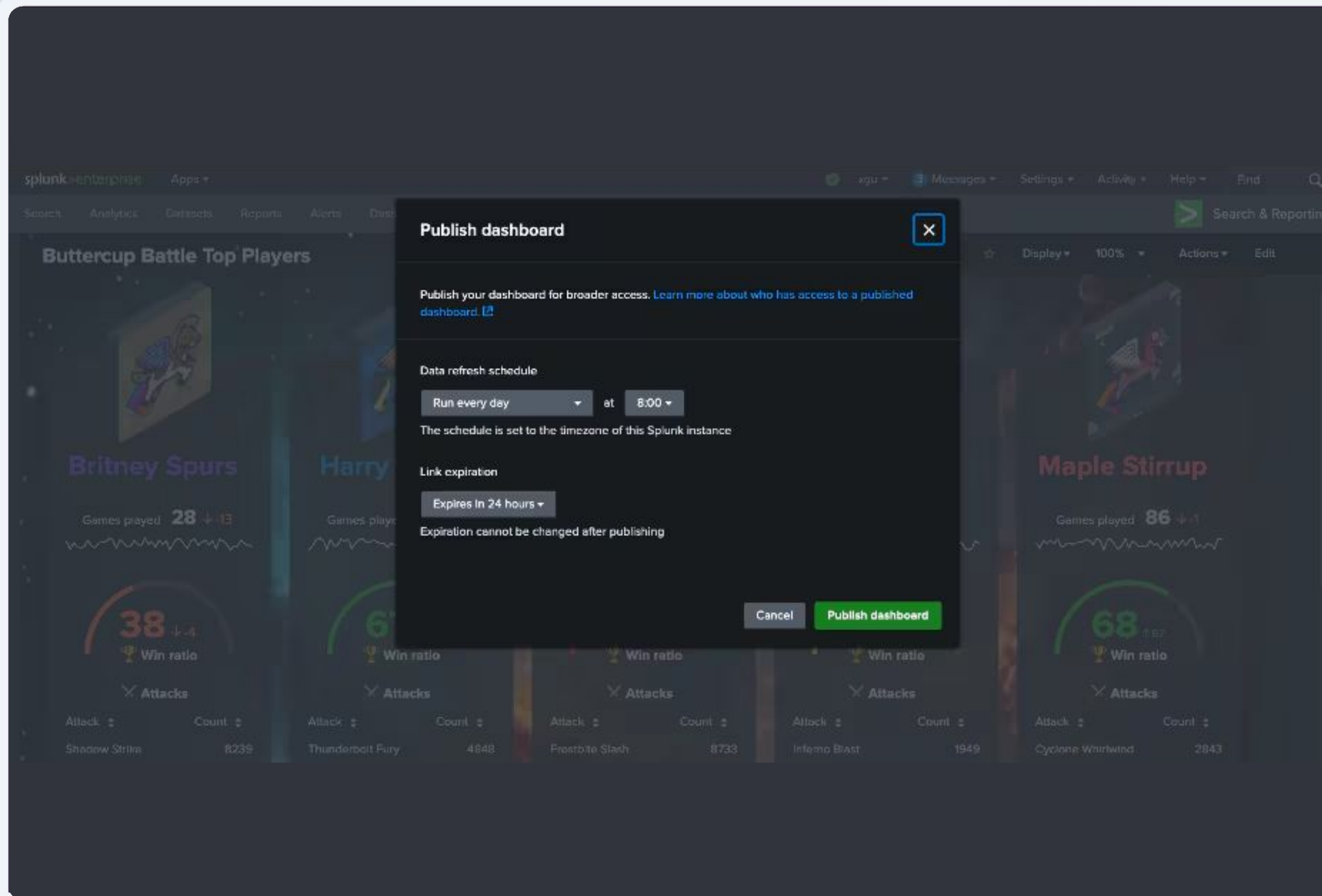
A more **secure and compliant environment**, reducing the compliance and administrative overhead for Splunk admins and allowing them to focus more on strategic business priorities.



ANNOUNCING

Dashboard Studio Updates

Sharing Splunk data without security risks: the publication of Dashboards!



ANNOUNCING

Observability Cloud Related Content

Accelerate **root cause analysis**
by bringing in application and
infrastructure data to your logs
for more context of your events.



ANNOUNCING

Observability Cloud metrics and Service Map in Dashboard Studio

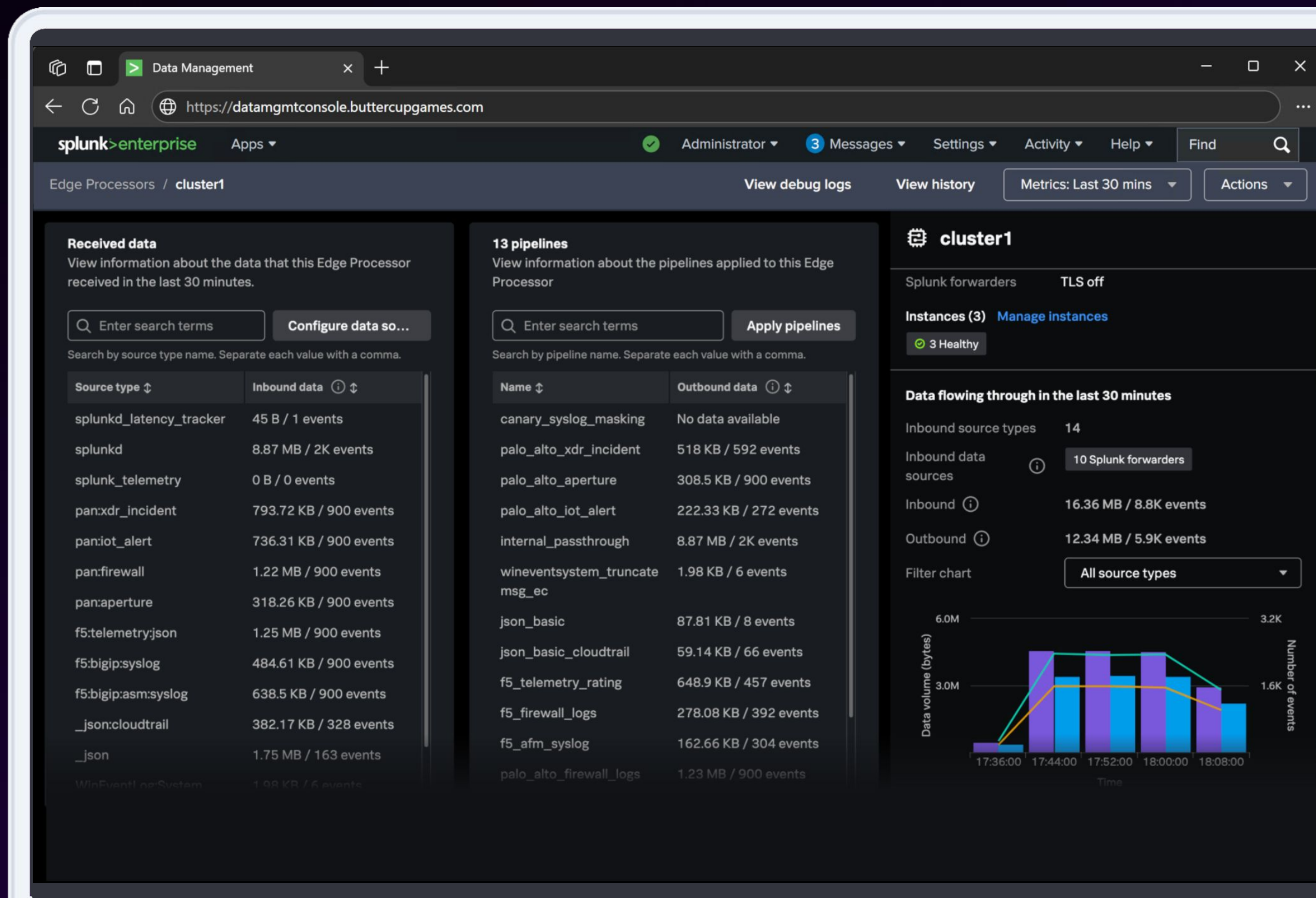
Leverage Splunk Observability Cloud's **powerful metric store** and Service Map views for your ITOps and security use cases by bringing real-time monitoring metrics into Splunk Dashboard Studio.



ANNOUNCING

Edge Processor

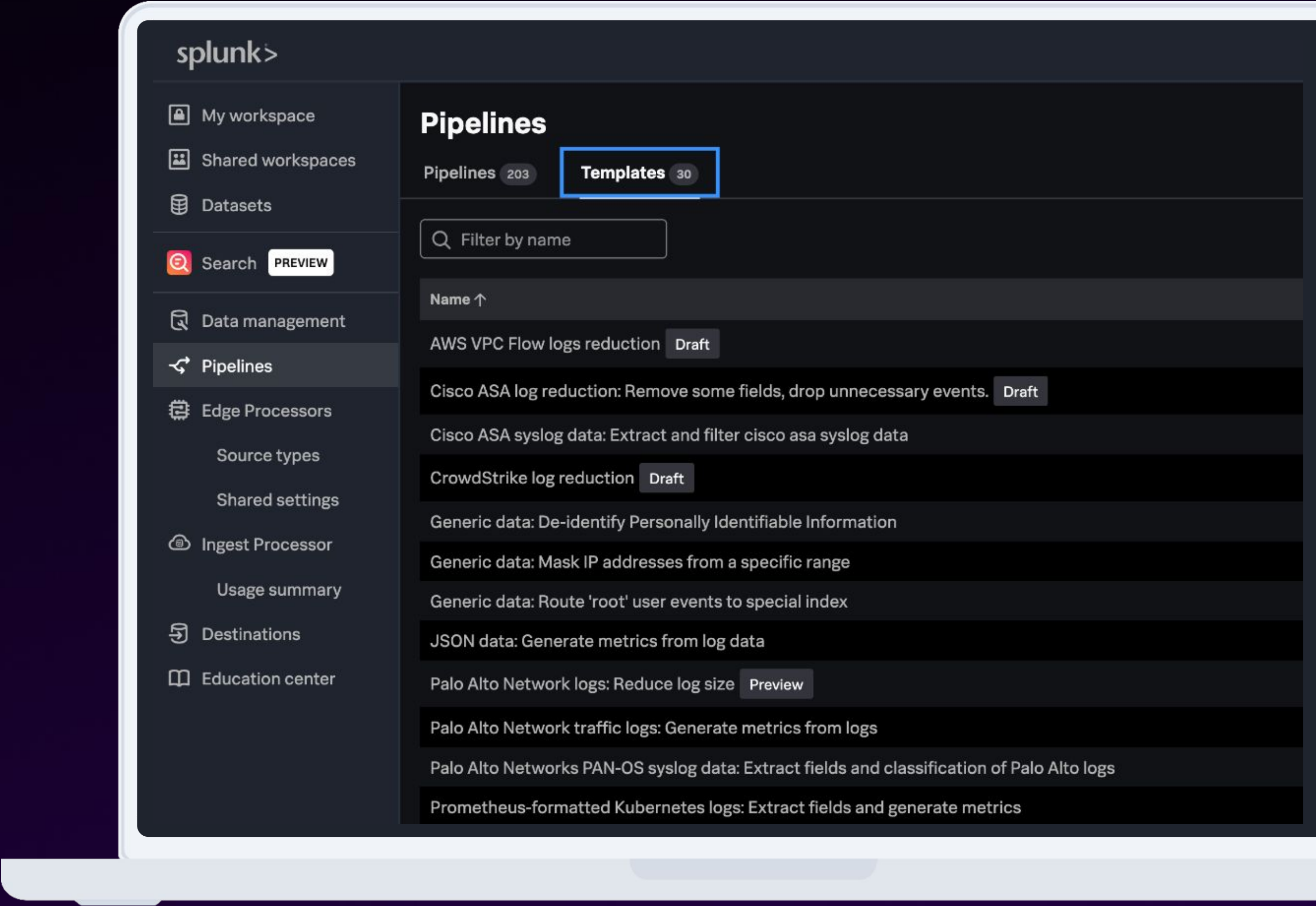
Gain more control over data pipelines with flexible filtering, transformation, masking, encrypting and routing capabilities - powered by SPL2.

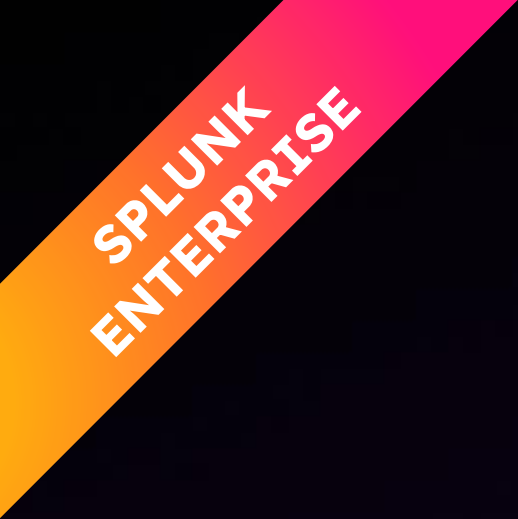


ANNOUNCING

Pipeline
templates

Production ready,
SPL2-based code for
Edge Processor and
Ingest Processor.

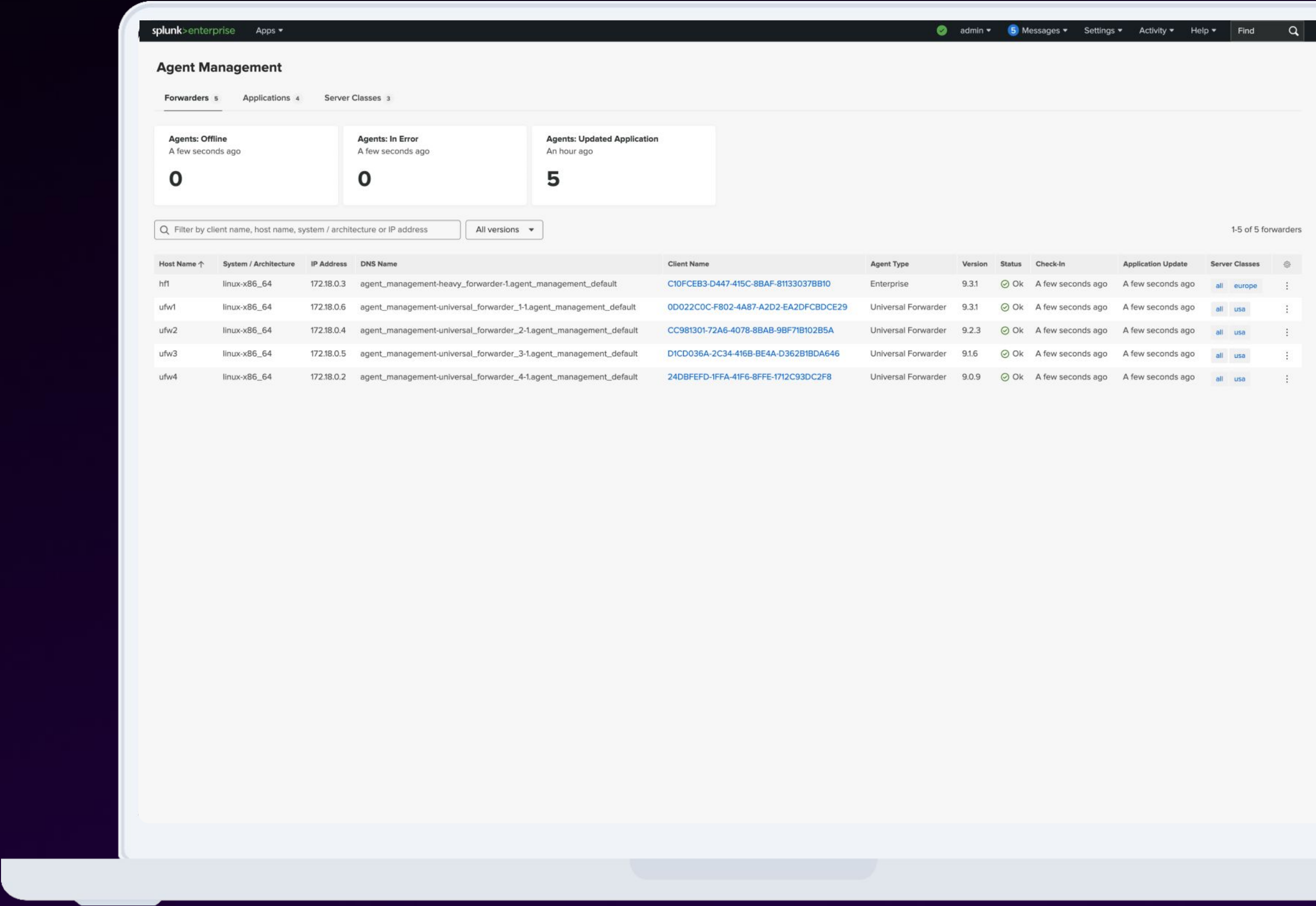




ANNOUNCING

Agent management

Accelerate data ingestion and reduce administrative overhead with centralized configuration, upgrades and troubleshooting of the agent fleet.



ANNOUNCING

Ingest
monitoring

Understand and monitor real-time data movement, including ingestion volumes and latency, to optimize and effectively manage data flows across diverse ingestion pathways.

