Censys Splunk

Censys, Inc.

Mar 13, 2024

INTRODUCTION

1	Featu	Ires	3
	1.1	Frequently Asked Questions	3
	1.2	Troubleshooting	4
	1.3	Support	6
	1.4	Quick Start	7
	1.5	Censys Add-on for Splunk	8
	1.6	Censys ASM App for Splunk	12
	1.7	Censys Search App for Splunk	25
	1.8	Common Information Model Mapping	28
	1.9	censys:asm:logbook	28
	1.10	censys:asm:risks	29

The Censys for Splunk apps and add-ons allow Censys users to import ASM and Search data into Splunk.

CHAPTER

ONE

FEATURES

Censys Add-on for Splunk

- Import data from the Censys ASM Logbook API into Splunk
- Import data from the Censys ASM Risk Events API into Splunk

Censys ASM App for Splunk

- Dashboards for Censys ASM Logbook and Risk Events APIs
- · Custom query-based alerts and reports

Censys Search App for Splunk

• Enrich logs with the most up-to-date information on public hosts and certificates

1.1 Frequently Asked Questions

1.1.1 Why do we have a Censys ASM for Splunk App and Censys Add-on for Splunk?

The Censys ASM for Splunk App is intended to be installed on the customer's search head. This is the visual layer for the data ingested. The app includes functionality such as dashboards, one-click pivot to Censys ASM, and preconfigured alerts. The Censys Add-on for Splunk is traditionally installed at the forwarder layer. The Add-on is what pulls the logs from Censys. We separated the functionality to align to Splunk best practices. Forwarders are the Splunk recommended way to ingest logs. To simplify deployment and support Splunk Cloud customers, we are required to provide 2 modes of deployment.

1.1.2 Does the app and add-on support Splunk Cloud deployments?

Splunk Cloud is the managed service offering of Splunk. Our application and add-on are both certified to be deployed in Splunk Cloud.

1.1.3 Does the add-on conform to the Common Information Model?

Yes. The add-on is compliant with the Common Information Model (CIM).

1.1.4 Does the add-on work with the Splunk Enterprise Security app?

Yes. If installed on a search head with Splunk Enterprise Security, the alerts and reports can be configured to generate notable events to enable a seamless workflow.

1.1.5 My question wasn't answered here

Ask a question on GitHub Discussions for direct communication with the developers and contributors.

1.2 Troubleshooting

1.2.1 Troubleshooting Add-on

Enable Debug Logging

1. Navigate to the Censys Add-on for Splunk.

splunk	>enterprise	
Apps	\$	Explore Splunk Enterprise
>	Search & Reporting	۲ <u>۴</u> ۹
	Censys Add-on for Splunk	Product Tours
>	Splunk Essentials for Cloud and Enterprise 8.2	New to Splunk? Take a tour to help you on your way.
ssg	Splunk Secure Gateway	
4	Splunk Security Essentials	
ΞQ	Upgrade Readiness App	
	+ Find More Apps	

2. Navigate to the **Configuration** tab.

splunk	splunk>enterprise Apps -							
Inputs	Configura	tion Search	1					
Inputs Manage your data inputs								
1 Input	1 Input 10 Per Page 🕶							
i N	Name 🔺		Interval ¢	Index ¢				
>			3600	default				

3. Navigate to the **Logging** section.

splunk>	enterprise	Apps 🔻			•
Inputs	Configuration	Search			
	guration				
Set up yo Proxy	ur add-on				
Proxy	Logging				
		Log level	INFO	• ×	
			Save		

4. Select the DEBUG option from the Log level dropdown menu.

splunk>	enterprise	Apps 🔻		•
Inputs	Configuration	Search		
Config Set up you Proxy	guration ^{ur add-on}			
		Log level	INFO DEBUG INFO WARNING ERROR CRITICAL	

1.3 Support

1.3.1 Install and configuration

- Add-on: See Add-on Installation for more information.
- ASM App: See ASM App Installation for more information.

1.3.2 Troubleshooting an issue?

See Troubleshooting for more information.

1.3.3 Need more help?

GitHub Discussions: Ask a question on GitHub Discussions for direct communication with the developers and contributors.

1.3.4 Found a bug?

GitHub Issues: Report a bug on GitHub Issues.

1.4 Quick Start

1.4.1 Installation

Splunkbase Links

- Censys Add-on for Splunk
- Censys ASM App for Splunk
- Censys Search App for Splunk

The Censys Splunk Apps and Add-on are designed to work together, and with Splunk Enterprise Security if available. Both Apps require the Add-on to be installed. The Add-on can be used with or without either of the Apps.

What to install

Splunk Node	What to install
Search Head	Add-on and App(s)
Heavy Forwarder	Add-on only
Universal Forwarder	None

Install the App(s) and Add-on

- Install the Censys Add-on for Splunk
- Install the Censys ASM App for Splunk

1.5 Censys Add-on for Splunk

The Censys Add-on for Splunk allows Censys ASM users to import Logbook and Risks data into Splunk®, where changes in their attack surface can be easily directed to downstream security and analytics applications.

This guide will help you:

- · Install the Censys Add-on in your Splunk environment
- Configure the Censys Add-on
- Use the Censys Add-on to monitor your attack surface

Splunkbase: Censys Add-on for Splunk

1.5.1 Add-on Prerequisites

1. Your Censys ASM API key

Find your key on the Censys ASM integrations page.

smoke_test_ @	3 ✔ Dashboard Inventory ✓ Risks 🛦 Reporting Tickets Logbook	C Gr v
Integrations		
API Key		API Documentation $ ightarrow$
Reveal API Key	Copy API Key to Clipboard Regenerate API Key	

2. A Splunk account and installation.

1.5.2 Install the Censys Add-on for Splunk

Install from Splunkbase (Recommended)

1. From the Splunk main page, click the + Find More Apps button in the sidebar.

splunk>enterprise			👍 Messages 👻 Settings 👻	Activity Help Find
Apps 🗘	Explore Splunk Enterprise			
Search & Reporting	۶.L			
Splunk Essentials for Cloud and Enterprise 8.2	Product Tours	Add Data	Explore Data	Splunk Apps [2]
Splunk Secure Gateway	New to Splunk? Take a tour to help you on your way.	Add or forward data to Splunk Enterprise. Afterwards, you may extract fields.	Explore data and define how Hunk parses that data.	Apps and add-ons extend the capabilities of Splunk Enterprise.
Splunk Security Essentials				Close
Ξ⊘ Upgrade Readiness App				
+ Find More Apps				

- 2. Type "Censys" in the search bar.
- 3. On the results page, find the "Censys Add-on for Splunk" app card and click the green Install button.

Censys Add-on for Splunk
The Censys Add-on for Splunk allows Censys ASM users to import Logbook data into Splunk, where changes in their attack surface can be easily directed to downstream security and analytics applications.
Category: IT Operations, Security, Fraud & Compliance Author: Censys Inc Downloads: 10 Released: a month ago Last Updated: a month ago View on Splunkbase

4. Reenter login credentials to confirm your choice.

Install from File

1. Go to the Add-on's page on Splunkbase and click the Download button.

Censys Add-on for Splunk ***** 1rating Splunk Cloud	
ADMINISTRATOR TOOLS: Manage App I View App I View Analytics	
Overview Details	12
The Censys Add-on for Splunk allows Censys ASM users to import Logbook data into Splunk ^a , where changes in their attack surface can be easily directed to downstream security and analytics applications.	Download Rate this App
Release Notes	
Version 1.0.8 May 4, 2022	VERSION

2. From the Splunk Web main page, click the gear icon next to Apps, then click Install app from file.

		Browse more apps Install app from file Create app
		25 per page ▼ « Prev 1 2 Next »
aring \$	Status 🕈	Actions
bal Permissions	Enabled Disable	Launch app Edit properties View objects 12 View details on Splunkbase
p Permissions	Disabled Enable	
p Permissions	Disabled Enable	
p Permissions	Enabled Disable	Launch app Edit properties View objects 12 View details on Splunkbase
obal Permissions	Enabled Disable	Launch app Edit properties View objects 🛛 View details on Splunkbase

1.5.3 Configure the Add-on

Global Settings

If you will be using the same Censys workspace for all Splunk work, you can enter your Censys ASM API key in one place, rather than for each input.

- 1. Click on the Configuration tab at the top of the page
- 2. Under the Accounts tab, you will see all of your configured accounts. Click "Add" to configure a new account.

splunk>enterprise Apps -			Administrator •	🚺 Messages 🔻	Settings 🕶	Activity -	Help • Find
Inputs Configuration Search						Ø	Censys Add-on for Splunk
Configuration							
Set up your add-on							\mathbf{i}
Accounts Proxy Logging							
0 Item	filter	Q					Add
Account name *			Actions				
	No records fou	ind					

3. Enter a name for this account (the name of your ASM workspace is a good choice) and enter your Censys ASM API key (check out *Add-on Prerequisites* for help finding this)

Add Accounts		×
		^
Account name	demo_account	
	Enter a unique name for this account.	
Censys ASM API Key	Enter the Censys ASM API Key for this account.	
		Cancel Add

Inputs

From the Inputs page, select Create New Input. Select the API you would like to pull from.

splunk>enterprise Apps -			Ø #	Administrator -	1 Messages 🕶	Settings -	Activity 🔻	Help 🔻	Find
Inputs Configuration Search								Censys Ad	d-on for Splunk
Inputs Manage your data inputs									te New Input -
0 Input 10 Per Page • All	•		filter	Q				Censy	s ASM Logbook
i Name *	Interval 0	Index ¢	Account o	St	atus ¢	1	Actions		
		No records	s found						

Fill out the following fields:

- Input Name (required): A name for the input
- Interval (in seconds): How often the input should run (default is 3600 seconds, or 1 hour)
- Index: The index where the data will be stored
- Account: The Censys account to use (if you have multiple accounts)

Add Censys ASM Risks		×
Name	risks_input_demo Enter a unique name for the data input]
Interval	3600 Time interval of input in seconds.]
Index	default The index to store the data in.]
Account	Select a value	×
	demo_account	Cancel Add

See also:

For more information on logbook events, visit our Logbook Event Catalog.

1.5.4 Use the Add-on

Download our Censys ASM App for Splunk!

Under the Search tab, you can enter queries on your data inputs. If you are not familiar with Splunk search syntax, Splunk has the following helpful resources:

- Splunk Search Documentation
- Splunk Search Tutorial

1.5.5 FAQs

What if I'm seeing no events in my index?

- 1. Confirm your Censys ASM API key is up to date
- 2. Confirm your index is accessible

1.6 Censys ASM App for Splunk

The Censys ASM App for Splunk allows ASM users to visualized Logbook API data with a pre-built dashboard that can be customized with additional views.

Note: This app is dependent on Censys Add-on for Splunk.

This guide will help you:

- Set up the Censys Add-on for Splunk (if you haven't already)
- · View our Attack Surface Management dashboard and create your own dashboards
- · Set up reports and alerting
- · Move seamlessly between Splunk and Censys ASM

Splunkbase: Censys ASM App for Splunk

1.6.1 ASM App Prerequisites

- 1. A Splunk account and installation.
- 2. Censys Add-on for Splunk installed and configured with your Censys API key.

1.6.2 Install the Censys ASM App for Splunk

Install from Splunkbase (Recommended)

1. From the Splunk Web main page, click the **+ Find More Apps** button in the sidebar.

splunk	>enterprise			4 Messages 👻 Settings 👻	Activity - Help - Find C	1
Apps	¢	Explore Splunk Enterprise				
>	Search & Reporting	戶門				
>	Splunk Essentials for Cloud and Enterprise 8.2	Product Tours	Add Data	Explore Data	Splunk Apps 🖉	
ssg	Splunk Secure Gateway	New to Splunk? Take a tour to help you on your way.	Add or forward data to Splunk Enterprise. Afterwards, you may extract fields.	Explore data and define how Hunk parses that data.	Apps and add-ons extend the capabilities of Splunk Enterprise.	
	Splunk Security Essentials				Close	_
EQ	Upgrade Readiness App					
	+ Find More Apps					

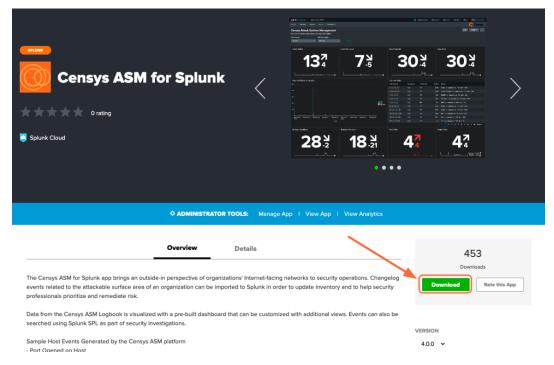
- 2. Type "Censys" in the search bar and press Enter.
- 3. On the results page, find the "Censys ASM App for Splunk" app card and click the green Install button.

Censys ASM for Splunk Install The Censys ASM for Splunk app brings an outside-in perspective of organizations' Internet-facing networks to security operations. Changelog events related to the attackable surface area of an organization can be imported to Splunk in order to update inventory and to help security professionals prioritize and remediate risk.)
Data from the Censys AS More	
Category: IT Operations, Security, Fraud & Compliance Author: Censys Inc Downloads: 448 Released: 5 days ago Last Updated: 4 days ago View on Splunkbase	

4. Reenter login credentials to confirm your choice.

Install from File

1. Go to the Add-on's page on Splunkbase and click the Download button.



2. From the Splunk Web main page, click the gear icon next to Apps, then click Install app from file.

		Browse more apps Install app from file Create app
		25 per page 🔹 « Prev 1 2 Next »
aring 🕈	Status 🕈	Actions
bal Permissions	Enabled Disable	Launch app Edit properties View objects 🛛 Z View details on Splunkbase
p Permissions	Disabled Enable	
p Permissions	Disabled Enable	
p Permissions	Enabled Disable	Launch app Edit properties View objects 🛛 Z View details on Splunkbase
obal Permissions	Enabled Disable	Launch app Edit properties View objects 12 View details on Splunkbase

1.6.3 Use the App

Censys has provided several reports based on ASM data for users to start with. These reports can be used for alerting and creating dashboards. Workflow actions provide a seamless transition between Splunk Search and Censys ASM.

Create Alerts from Reports

To view the pre-configured reports, click the **Reports** tab at the top of the page. To create an alert based on a report, click **Open in Search** next to the report you want to use.

Re	ports						
	rts are based on single searches and can include visualizations, statistics and/or events. Click the name to the report. Open the report in Pivot or Search to refine the parameters or further explore the data.						
19 Re	ports	All	Yours	This App's	filter		Q,
i	Title *					Actions	
>	CDNs Added by day					Open in Search	Edit 🔻
>	CDNs Removed by day					Open in Search	Edit 🔻
>	CVEs Added by day					Open in Search	Edit 🔻
>	CVEs Removed by day					Open in Search	Edit 🔻
>	Certificates Added by day					Open in Search	Edit 🔻
>	Certificates Removed by day					Open in Search	Edit -
>	Generate MITRE Environment Count					Open in Search	Edit 🔻
>	Hosts Added by day					Open in Search	Edit 🔻
>	Hosts Removed by day					Open in Search	Edit 🔻
>	New Host Risks by Severity					Open in Search	lidit 🕶
>	Ports Added by day					Open in Search	Edit 🔻
	Dente Deserved her den					One in Creat	T-IX-

Modify the query to your liking or leave as is, then click Save As Alert.

Search Dashboards Reports Alerts Other Censys Apps +			Censys ASM App for Splunk
New Host Risks by Severity			Save Save As View Create Table View Close
sourcetype="censys:asm:logbook" type="HOST_RISK" operation="ADD" timechart count by data.severity			All time - Q
✓ 4,208 events (before 6/6/22 4:22:08.000 PM) No Event Sampling ▼		/	Existing Dashboard A & * Smart Mode •
Events Patterns Statistics (21) Visualization			New Dashboard
20 Per Page • / Format Preview •			Event Type < Prev 1 2 Next >
_time \$	high 🌣 🖌	low 🌣 🖌	medium 🌣 🖌
3838-18		~*	4

Give your alert a title, set the alert to be scheduled or real-time, and configure the alert's trigger settings and trigger actions.

Interact with Dashboards

To view the pre-configured dashboards, click the **Dashboards** tab at the top of the page.

The **Censys ASM Logbook** dashboard gives you a broad overview of your attack surface. To view a query in Splunk Search, click on panel.

	agement Platform ata Input Name					
Year to date	All data inputs • Hosts Removed	14	Software Added	2	Software Removed	Subdomain Names Ac
Ports Added	i O «Im soo Protocols added	524	Certificates Added)	CVEs Added	CDN Hosts Added
Top Host Risks IP Address ¢	Severity =	Pretocel ‡	Port ÷	Risk ¢		

A few more steps are required to enable the pre-configured **Censys ASM Risks** dashboard. In order to keep the dashboard up to date, we recommend that you enable scheduled runs of the following five saved searches:

- Generate Risk Instances Lookup
- Generate Risk Types Lookup
- Hosts with most risks lookup
- · Hosts with most risks with severities
- Hosts with most risks with types

To enable scheduled runs, click the **Settings** tab at the top of the page, then click **Searches, reports, and alerts**.

0	Administrator 🔻	Messages 🗸 Settings 🔻	Activity -	Help 🔻	Q Find	
	Administrator - Add Data Monitoring Console	Messages Settings Server controls Health report manager Instrumentation Licensing	DATA Data in Forwar Indexes Report Source Ingest DISTRIB Indexes Forwar Federa Distribu	puts ding and rec s acceleration types actions UTED ENVIRC r clustering der manager ted search uted search	eiving summaries DNMENT ment	Jink
		Licensing Workload management	Passwo	ord Managen tication Meth		

Make sure that the **Owner** filter at the top of the page is set to **All**. For the five saved searches listed above, click **Edit** -> **Edit Schedule**.

earches, Reports, and Ale		earn more 17						Ne	w Report New A
Searches, Reports, and Alerts Type: All			ter Q						10 per pag
searches, reports, and Alerts Type. All	 App. Censys App for spinink (censys 		uur 4					< Prev	1 2 3 Nex
lame ‡	Actions 5	Type No.	xt Scheduled Time \$	Display View \$	Owner ¢	App ≎	Alerts 0	Sharing ¢	Status ¢
DNs Added by day	Edit 🔻 Run 🗠	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
DNs Removed by day	Edit 👻 Run 🖾	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
/Es Added by day	Edit 👻 Run 🖾	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
/Es Removed by day	Edit 💌 Run 🖾	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
ertificates Added by day	Edit 👻 Run 🗹	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
ertificates Removed by day	Edit 🔹 Run 🖄	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
enerate Risk Instances Lookup	Edit 🔹 Run 🖄	Report nor	ne	none	nobody	censys	0	Global	✓ Enabled
enerate Risk Types Lookup	Edit • Run 🗹	Report nor	ne	none	nobody	censys	0	Global	✓ Enabled
osts Added by day	Edit 👻 Run 🖾	Report nor	ne	search	nobody	censys	0	Global	✓ Enabled
		Report nor			nobody	censys	0	Global	✓ Enabled
	Edit + Run (2	Report nor	16	search					
	Edit • Run I2	report nor	le	search	 Administrator 			Activity + He	
unk-enterprise Apps • earches, Reports, and Ale	erts		ie	search				Activity + He	lp ≠ Q. Find
unk-enterprise Apps - earches, Reports, and Ale ches, reports, and alerts are saved search	erts les created from pivot or the search page. I	Learn more 12	iter Q	search				Activity + He	ip ▼ Q. Find w Report New
unk-enterprise Apps • earches, Reports, and Ale cross, reports, and alerts are saved search	erts les created from pivot or the search page. I	Learn more 12		search				Activity + He	lp ♥ Q. Find w Report New 10 per pa
unk-enterprise Apps • earches, Reports, and Alec ches, Reports, and alerts are saved search searches, Reports, and Alerts Type: All	erts les created from pivot or the search page. I	Learn more 12		search Display View ©				Activity + He	Ip • Q Find w Report New 1 10 per pa
Ink-onterprise Area • earches, Reports, and Ale trobes, Reports, and Alers Type: All earches, Reports, and Alers Type: All and 0	erts les created from pixot or the search page. • App: Censys App for Splunk (censy	Learn more 12 s) ▼ Owner: All ▼ ff	tter Q		Administrator	 Message: 	s • Settings •	Activity + He No	lp ≠ Q. Find w Report New / 10 per pa 1 2 3 Ne
ankamtarprise Apps + Harches, Reports, and Ale tches, Reports, and Alers Type: All exches, Reports, and Alers Type: All anne 2 osts with Most Risk Instances	PTS es created from pivot or the search page. • App: Censys App for Splunk (censy Actions	Learn more 12 () * Owner: All * 10 5 Type Report	tter Q Next Scheduled Time =	Display View °	Administrator Owner 0	 Message: App ÷ 	a • Settings • Alerts \$	Activity * He No K Prev Sharing \$	lp ▼ Q. Find w Report New 10 per pa 1 2 3 Ni Status ≎
unk-enterprise Ages • earches, Reports, and Ale earches, Reports, and Alers Type: Al earches, Reports, and Alers Type: Al ame ° ots with Most Risk Instances osts with most risks lookup	erts es created from pivot or the search page. • App: Censys App for Splunk (censy Actions Edit • Run 12	Learn more 15 y) * Owner, All * (1) f Type Report Report Report	Iter Q Next Scheduled Time 2 none	Display View 2 none	Administrator Owner © nobody	 Messager App ¢ censys 	s • Settings • Alerts ≎ 0	Activity + He No C Prev Sharing 0 Global	lp ♥ Q. Find w Report New 10 per pe 1 2 3 Ni Status ≎ ✓ Enabled
unk-enterprise Ages • earches, Reports, and Ale earches, Reports, and Alers = sevel search searches, Reports, and Alers Type: All ame = orts with Most Risk Instances osts with most risks lookup osts with most risks lookup	erts + App: Censys App for Splunk (censy App: Censys App for Splunk (censy Actions Edit + Run L2 Edit + Run L2 View Reco	Learn more (2 a) * Owner: All * (1) f Type Report Report Report Report Report Report	tter Q Next Scheduled Time = none 2022-11-11 11000 EST	Display View 0 none none	Administrator Owner 0 nobody nobody	 Messager App ÷ censys censys 	s • Settings • Alerts ≎ 0 0	Activity • He No C Prev Sharing ¢ Global	lp ▼ Q. Find w Report New 10 per pa 1 2 3 Ni Status ≎ ✓ Enabled ✓ Enabled
unk-entorprise Aces + earches, Reports, and Aler chrches, reports, and alers are saved search esearches, Reports, and Alerts Type: All ame = osts with Most Risk Instances osts with most risks lookup osts with most risks lookup osts with most risks with syses	erts es created from pivot or the search page. In App: Censys App for Splank (censy App: Censys App for Splank (censy Edit * Run 12	Learn more (2 a) * Owner: All * (1) f Type Report Report Report Report Report Report	Next Scheduled Time : None 2022-11-11 115:00 EST 2022-11-11 115:00 EST	Display View 5 none none none	Administrator Owner nobody nobody	 Messager App * censys censys 	 Settings + Alerts 0 0 0 	Activity * He Ne C Prev Sharing \$ Giobal Giobal	p ♥ Q. Find w Report New 10 per pa 1 2 3 No Status ≠ ✓ Enabled ✓ Enabled ✓ Enabled
unksentorprise Aces + earches, Reports, and Aler chrches, reports, and alers are saved search learches, Reports, and Alerts Type: All ame = osts with Most Risk Instances osts with most risks lookup osts with most risks lookup osts with most risks with syses osts with most risks by Severity	erts es created from pivot or the search page. In App: Censys App for Splank (censy App: Censys App for Splank (censy Edit • Run 12 Edit • Run	Learn more (2 y) * Owner: All * (1) f Type Report ent(2) Report ent(2) Report ent(2) Report	Next Scheduled Time 1 Next Scheduled Time 2 None 2022-11-11 10:000 EST 2022-11-11 10:000 EST 2022-11-11 10:000 EST	Display View 1 none none none none	Administrator Owner 5 nobody nobody nobody	 Messaper App e censys censys censys censys 	s • Settings • Alerts 0 0 0 0 0	Activity • He No C Prev Sharing = Giobal Giobal Giobal	p • Q. Find w Report New 1 2 3 No Status : ✓ Enabled ✓ Enabled ✓ Enabled
unks enterprise Ages + earches, Reports, and Alers bearches, Reports, and alers are saved search bearches, Reports, and Alers Type Al anne = ots with most risks tookup ots with most risks tookup ots with most risks tookup ots with most risks tookup ots with most risks tookup eve Hoat Risks by Severity trisk Added by dey	erts es created from pivot or the search page. I App: Censys App for Splank (censy App: Censys App for Splank (censy Edit • Run 12 Edit • Run 12	Learn more (2 y) * Owner: All * (1) 5 Type Report Report ent(2 Report Report Report Report Report Report	Next Scheduled Time 1 Next Scheduled Time 2 None 2022-11-11 10:000 EST 2022-11-11 10:000 EST 2022-11-11 10:000 EST 2022-11-11 10:000 EST 7002-11-11 10:000 EST	Display View 1 none none none none search	Administrator Administrator Owner 5 nobody nobody nobody nobody	 Message: App * censys censys censys censys censys 	 Settings * Alerts * 0 0 0 0 0 0 	Activity + Ho No C Prev Sharing S Global Global Global Global	p • Q. Find W Report New 1 2 3 No Status • ✓ Enabled ✓ Enabled ✓ Enabled ✓ Enabled
unks enterpreter Ages + earches, Reports, and Alerts are saved search Searches, Reports, and Alerts are saved search Searches, Reports, and Alerts Type: All ame 0 osts with Most Risk Instances osts with most risks lookup osts with most risks tokup osts with most risks with syser searches by Severity ots Added by day	erts ereated from pivot or the search page. I App: Censys App for Splumi (censy Edit * Run 0 Edit * Run 12 Edit * Run 12 Edit * Run 12 Edit * Run 12 Edit * Run 12	Learn more L2 y) * Owner: All * 1 5 Type Report Report Report Report Report Report Report Report	Iter Q Next Scheduled Time = none 2022-11-11 10:00 EST 2022-11-11 10:00 EST 2022-11-11 10:00 EST none none none	Display View 9 none none none search search	Administrator Administrator Owner 5 nobody nobody nobody nobody nobody	Messager App * censys censys censys censys censys censys censys	 Settings * Settings * Alerts * 0 <l< td=""><td>Activity • Ha No C Prev Sharing * Global Global Global Global Global</td><td>9 Q. Find Wr Report New / 1 2 3 Not Status \$ 2 Enabled 2 Enabled 2 Enabled 2 Enabled 2 Enabled 2 Enabled</td></l<>	Activity • Ha No C Prev Sharing * Global Global Global Global Global	9 Q. Find Wr Report New / 1 2 3 Not Status \$ 2 Enabled 2 Enabled 2 Enabled 2 Enabled 2 Enabled 2 Enabled
earches, Reports, and Ale	erts erts created from pivot or the search page. I App: Censys App for Splumi (censy Edit • Run 0 Edit • Run 0	Learn more L2 y) * Owner: All * 1 y Owner: All * 1 Report reft 2 Report reft 2 Report Report Report Report Report Report	Next Scheduled Time = Q Next Scheduled Time = none 2022 11-11 11:000 EST 2022 11-11 11:000 EST 2022 11-11 11:000 EST 2022 11-11 11:000 EST 2022 11-11 11:000 EST none none none none none none none	Display View * none none none search search search	Administrator Administrator Owner 5 nobody nobody nobody nobody nobody nobody nobody	 Messager App * censys 	 Settings * Settings * Alerts * 0 <l< td=""><td>Activity • Ha Ne C Prev Sharing * Global Global Global Global Global</td><td> Q. Find New // Report New // New // Vo per particular Vo per particular Status * Catabled </td></l<>	Activity • Ha Ne C Prev Sharing * Global Global Global Global Global	 Q. Find New // Report New // New // Vo per particular Vo per particular Status * Catabled

Click the checkbox next to **Schedule Report**. By default, the report will run every hour. You can change this frequency in this window.

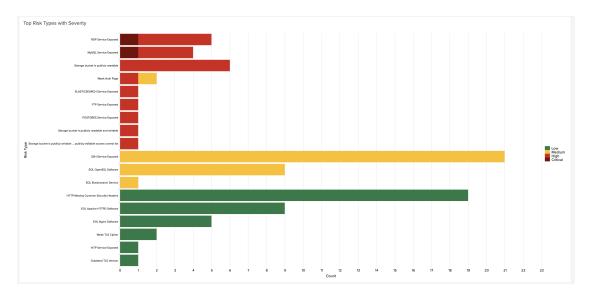
			U Me
ie sea	Edit Schedule	×	
or Spl	A Scheduling this repo	rt results in removal of the time picker from the report display.	
	Report	Hosts with most risks with severities	
in 12	Schedule Report	Learn More 12	Ap
n 12	Schedule	Run every hour 🔻	cer
n 12		At 15 • minutes past the hour	cer
n 🛽	Time Range	All time >	cer
n 12	Schedule Priority ?	Default 🕶	cer
n 🖪	Schedule Window?	No window 👻	cer
n 12	Trigger Actions		cer
n 12		+ Add Actions -	cer
n 🖄			cer
in 12		Cancel Save	cer

If you'd like to check out the **Censys ASM Risks** dashboard right away, you'll need to manually run each of these five searches by clicking the **Run** button. Otherwise, the lookup tables will populate according to the schedule you have set.

If you do not wish to enable scheduled runs, you can still use the **Censys ASM Risks** dashboard, but you will need to manually run each of the five saved searches to pull in current data.

Below are just a few insights you can gain about your attack	surface with the \ensuremath{Censys} ASM \ensuremath{Risks} dashboard:
--	--

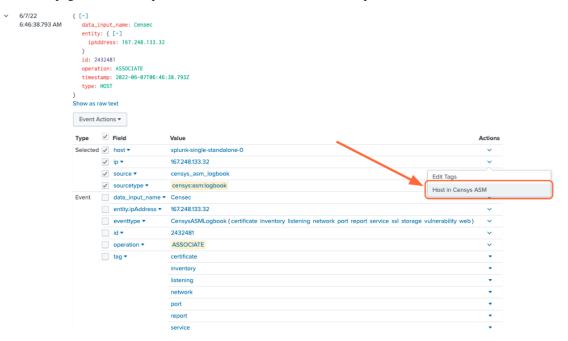
Start Setup Search Das	hboards Reports	Alerts	c	ensys App for Splunk
Censys ASM Risks				Edit Export •
Risks by Severity			Risks by Category	
	Medium, 35.556%	Orical 2222% High 210% Low, 410%	delle 40 Web Microsoftwarten Volnestility Schurer Vulnestility Service or Interfree Exposure Survice Microsoftwarten Service Microsoftwarten	sure
Top Critical and High Risk Type	s			
Risk Type \$	Assets Affected	Remediations		\$
RDP Service Exposed	5	Restrict access to this service using firewall rules, VPN segmentation, or VPC If you must keep RDP available outside of your firewall, make sure it is patche only through a VPN.	segmentation to make it inaccessible from the Internet. d for CVE-2019-0708 (BlueKeep), Enable Network Lavel Authentication. Enforce long passphrases. Enforce 2F	A on all accounts. Allow
MySQL Service Exposed	4	Restrict access to this service using firewall rules, VPN segmentation, or VPC Drop the default test database. Remove default anonymous accounts. Modify .mysql_history file.	segmentation to make it inaccessible from the Internet, hosts.deny and hosts.allow to restrict access to only the hosts required. Ensure MySQL is not running as root.	Remove and disable the
ELASTICSEARCH Service Exposed	1	Enable authentication for the HTTP API. Set up auditing and alerting. Check to make sure this server/service is necessary and turn it off if it isn't or a	adjust firewall rules to make this an internal service.	
FTP Service Exposed	1	Cease using this service type. If that is not possible, restrict access to this ser- If this service is needed externally, consider moving to sFTP and engaging an	vice using firewall rules, VPN segmentation, or VPC segmentation to make it inaccessible from the Internet. MFA provider to protect this service.	
POSTGRES Service Exposed	1	Restrict access to this service using firewall rules, VPN segmentation, or VPC Use one-way hashing encryption methods for columns that don't need to be up		
Weak Auth Page	1	Protect this page with a more secure authentication method such as OAuth.		



You can click on any piece of data to view more details in Censys ASM.

Workflow Actions

From the events page, click the dropdown to the left of the event's timestamp. This will show all the fields for the event.



To view more information about an event, click the **Actions** dropdown next to the asset you'd like to view, then [**Do-main|Host|Storage Asset|Certificate] in Censys ASM/Search**.

167.248.133.32 NEW	scanner-08.ct	11.censys-scanner.com [2] More Actions V
⊘ Add Tags □ Add Comment	0	This asset was last scanned on: Jun 6, 2022 07:31 AM UTC
Summary Risks ✓		
Recent Host Activity	Trail	Overview
 Jun 7, 2022 07:21 AM UTC 167.248.133.32 on port 80 added nginx 1.18.0 × Jun 7, 2022 07:21 AM UTC Port 80 added to 167.248.133.32 × Jun 7, 2022 07:21 AM UTC http added to 167.248.133.32 × Jun 7, 2022 06:46 AM UTC 167.248.133.32 associated × Jun 3, 2022 01:07 PM UTC 167.248.133.32 disassociated × Jun 3, 2022 01:07 PM UTC 167.248.133.32 on port 80 removed nginx 1.18.0 × Jun 3, 2022 01:07 PM UTC 167.248.133.32 on port 80 removed nginx 1.18.0 × Jun 3, 2022 01:07 PM UTC 167.248.133.32 on port 80 removed nginx 1.18.0 × 	 ⊘ 167.248.133.32 ∨ia network o 167.248.133.0/24 via asn ⊙ 9897222 (seed you provided) View all Seeds → 	- +
Host Information		Location
Protocols (1) Ports (1)		United States Fully Qualified Domain Names
нттр		scanner-08.ch1.censys-scanner.com
Show All Protocols	Jump to Certificates 🕹	CIDR Block 167.248.133.0/24

Turn Queries into Reports, Alerts, and Dashboards

From Splunk Search, any query can be used to create custom reports, alerts, and dashboards by clicking the **Save As** button in the top right corner. A query can be added as a new panel to an existing dashboard or a new dashboard can be created.

Create Reports and Alerts from Scratch

One more way to create reports and alerts is by going to **Settings -> Searches, reports, and alerts**.

4	@censys.io 🔻	Messages 🔹 Settings 🔻	Activity Help Find	Q,
Analyze Your Data with Table Views	Console	Messages Vettings Vet	DATA	d Junk
		Horkiede management	Authentication Methods	

From there, you can manage current reports and alerts, create new reports and alerts from custom queries.

Set a Home Dashboard

	📒 @censys.io 🔻	Messages 🔻	Settings 🔻	Activity ▼ Help ▼ Find	٩
				Censys ASM Ap	p for Splunk
				Edit Expor	t -
				Clone Clone in Dashboard Studio Edit Permissions	NEW
	Software Removed	:		Set as Home Dashboard Iames Added	
,248	3,227	7		11	
d	CVEs Added		CDN Hosts A	dded	
674	1,476	5		40	
k \$					
Bucket Sub-Domain Takeover on TCP					
Bucket Sub-Domain Takeover on TCP	port 444				

Easily check out the Censys ASM dashboard or your own custom dashboard by setting it as your home dashboard.

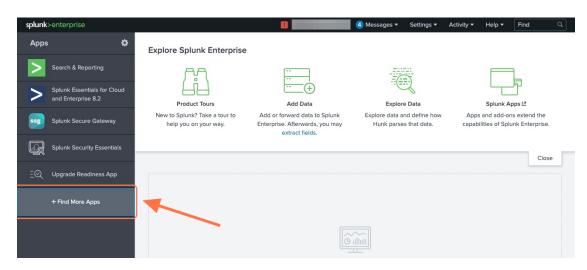
Now, when you open your Splunk Web main page, you'll easily see changes in your attack surface.

Set Up Splunk Event Generator (Eventgen)

Splunk Event Generator is a useful tool for generating configurable events to simulate real-time data. We have provided a sample eventgen.conf file along with sample events to get you started.

1. Install and enable the Splunk Eventgen app

From the Splunk Web main page, click the **+ Find More Apps** button in the sidebar.



Type "Eventgen" in the search bar and press Enter.

On the results page, find the Eventgen app card and click the green Install button.

Eventgen
The Splunk Event Generator (Eventgen) is a utility which allows its users to easily build real-time event generators.
Eventgen allows an app developer to get events into Splunk to test their applications. It provides a somewhat ridiculous amount of configurability to allow users to simulate real data.
To join the development community, please go More
Category: Utilities Author: Splunk Inc. Downloads: 215142 Released: a year ago Last Updated: 7 days ago View on Splunkbase

Go to **Settings > Data inputs** and click **Eventgen**.

Assigns a random identifier to each Beam node		
Logd Input for the Splunk platform This input collects data from logd on macOS and sends it to the Splunk platform.	0	+ Add new
Eventgen Modular Input that generates data for Splunk	1	+ Add new

Click Enable in the modinput_eventgen row.

splunk>enterprise Apps •				Administrator •	1 Messages 🕶	Settings 👻 Activ	ity 👻 Help 👻	Find	Q,
SA-Eventgen Data inputs > SA-Eventgen								New	
Showing 1-1 of 1 item									
filter Q								25 per page	×
name •	Verbosity •	Source type	Index *	Status •			Actions		
default	40	modinput_eventgen	default	Disabled Enable			Clone		

2. Create an Index

A new index for your sample events can be created through the Splunk Web UI or the Splunk Enterprise CLI. Instructions for each option are detailed below.

Option #1: Splunk Web UI

Image: Server settings Distributed search Monitoring Console Server controls Health report manager USERS AND AUTHENTICATION RapidDiag Roles Instrumentation Users Licensing Tokens Workload management Password Management Authentication Methods Authentication Methods

Go to **Settings > Indexes**.

On the Indexes page, click New Index.

Enter "demo" in the Index Name field and select SA-Eventgen in the App field.

New Index						×
General Settings						
Index Name	demo					
	Set index name (e.g., INDEX_NAME). Sear	ch using inde	ex=INDEX_NA	ME.		
Index Data Type	E Events	♦ Metrics				
	The type of data to store (event-based or	f data to store (event-based or metrics).				
Home Path	optional					
	Hot/warm db path. Leave blank for default (\$SPLUNK_DB/INDEX_NAME/db).					
Cold Path	optional					
	Cold db path. Leave blank for default (\$SPLUNK_DB/INDEX_NAME/colddb).					
Thawed Path	optional	censys Addron				
	Thawed/resurrected db path. Leave blar					
Data Integrity Check	Enable	Instrumentation Disable				
	Enable this if you want Splunk to compu	Monitori Console	2	r data for the purpose of data integrity.		
Max Size of Entire Index	500	Python L			GB ▼	
	Maximum target size of entire index.	Readine	10			
Max Size of Hot/Warm/Cold Bucket	auto	SA-Even	itgen		GB ▼	
	Maximum target size of buckets. Enter	Splunk A	2	ume indexes	h.	
Frozen Path	optional	Workspa	ace			
	Frozen bucket archive path. Set this if y	Splunk	· · · · · ·		zen buckets.	
Арр	Ce	nsys ASM A	App for Splu	nk 🔻		
Storage Optimization						
Tsidx Retention Policy	Enable Reduction			Disable R	Reduction	
	Warning: Do. not enable reduction without	understandi	na the full imm	lications. It is e	stremely difficult to	rebuild
					Save	ncel

Click Save.

Option #2: Splunk Enterprise CLI

From the terminal (Mac or Linux), navigate to \$SPLUNK_HOME/bin and enter the following command:

./splunk add index demo

You will likely need to enter your Splunk username and password.

Note: If you would like to name your index something other than **demo**, you will need to edit the eventgen.conf file.

3. View your Sample Events

In the Censys ASM App, click the **Search** tab at the top of the page.

Enter the search query index=demo to see all sample events.

Additional Resources

- Splunk Eventgen Documentation
- Splunk Dev Eventgen Setup Tutorial

Additional information can be found in Splunk documentation:

- Splunk Alerting Manual
- Splunk Reporting Manual
- Splunk Search Manual

1.7 Censys Search App for Splunk

The Censys Search App for Splunk enables rapid enrichment of logs with the most up-to-date information on public hosts and certificates.

This guide will help you:

- Install the Censys Search App in your Splunk environment
- Configure the Censys Search app
- Use the Censys Search command to enrich Splunk logs by IP address

Splunkbase: Censys Search App for Splunk

1.7.1 Search App Prerequisites

1. Your Censys Search API key and secret.

My Account

Details API Team Tags	
API Credentials	
Below are the credentials that can	be used for accessing authenticated APIs:
API ID	
Secret	
RESET MY API SECRET	

2. A Splunk account and installation.

1.7.2 Install the Censys Search App for Splunk

Install from Splunkbase

1. From the Splunk main page, click the + Find More Apps button in the sidebar.

splunk >e	enterprise			④ Messages ▼ Settings ▼	Activity - Help - F	Find Q
Apps	۵	Explore Splunk Enterprise				
> s	Search & Reporting	۶.L				
	Splunk Essentials for Cloud and Enterprise 8.2	Product Tours	Add Data	Explore Data	Splunk Apps]
ssg s	Splunk Secure Gateway	New to Splunk? Take a tour to help you on your way.	Add or forward data to Splunk Enterprise. Afterwards, you may extract fields.	Explore data and define how Hunk parses that data.	Apps and add-ons e capabilities of Splunk	extend the
l⊆∂ s	Splunk Security Essentials					Close
ΞQ u	Jpgrade Readiness App					
+	Find More Apps					

2. Type "Censys" in the search bar.

splunk>enterprise Apps -		④ Messages ▼	Settings 🔻	Activity -	Help 🔻	Find	Q
Browse More Apps							
Censys X	Newest Popular 1836 Apps	< Prev 1	2 3 4	56	7 8	9	Next >
CATEGORY	1836 Apps	< Prev 1	2 3 4	5 6	/ 8	9	

3. On the results page, find the "Censys Search for Splunk" app card and click the green Install button.

Censys Search for Splunk	Install
Censys Search for Splunk enables users to rapidly query Censys by IP, port, domain, or certificate hash, and enrich events with th API.	e Censys Search
Category: IT Operations, Security, Fraud & Compliance Author: Censys Inc Downloads: 129 Released: a year ago Last Updated: 8 months ago V	ew on Splunkbase

4. Enter your Splunkbase credentials and click the Login and Install button.

1.7.3 Configure the Censys Search App

1. From the Splunk main page, click the Manage Apps gear in the top left corner of the page.

splunk>enter	prise			🕘 Messages 🔻	Settings 🔻	Activity 🔻	Help 🔻	Find	٩
Apps	۵	Explore Splunk Enterprise							
> Search	n & Reporting	<u>الم</u>		-(~			1	
	< Essentials for Cloud nterprise 8.2		Add Data	Explore	3		Splunk A	Apps 12	
Splunk	< Secure Gateway	New to Splunk? Take a tour to help you on your way.	Add or forward data to Splunk Enterprise. Afterwards, you may extract fields.	Explore data an Hunk parses				ns extend the unk Enterprise	
Splunk	< Security Essentials		exact news.					Clo	SP
三〇 Upgrad	de Readiness App								
+ Find	More Apps								

- 2. Find "Censys Search" in the list of installed apps.
- 3. Click the **Set up** button to open the Censys Search app.

plunk>enterprise Apps •					4 Messages ·	🕶 Settings 👻 A	ctivity ▼ Help ▼ Find Q
Apps						Browse more apps	Install app from file Create app
howing 1-25 of 28 items							
filter Q							25 per page 🔹
							« Prev 1 2 Next »
Name 🕈	Folder name 🕈	Version \$	Update checking \$	Visible \$	Sharing 🕈	Status 🕈	Actions
SplunkForwarder	SplunkForwarder		Yes	No	App Permissions	Disabled Enable	
SplunkLightForwarder	SplunkLightForwarder		Yes	No	App Permissions	Disabled Enable	
Splunk Security Essentials	Splunk_Security_Essentials	3.5.1	Yes	Yes	App Permissions	Enabled Disable	Launch app Edit properties View of
Censys Add-on for Splunk	Splunk_TA_censys	1.0.8	Yes	Yes	Global Permissions	Enabled Disable	Launch app Edit properties View of
Log Event Alert Action	alert_logevent	8.2.6	Yes	No	App Permissions	Enabled Disable	Edit properties View objects
Webhook Alert Action	alert_webhook	8.2.6	Yes	No	App Permissions	Enabled Disable	Edit properties View objects
Apps Browser	appsbrowser	8.2.6	Yes	No	App Permissions	Enabled	Edit properties View objects
Censys Search	censys_search	1.0.0	Yes	No	App Permissions	Enabled Disable	Set up Edit properties View objects
introspection_generator_addon	introspection_generator_addon	8.2.6	Yes	No	App Permissions	Enabled Disable	Edit properties View objects
journald_input	journald_input		Yes	No	App Permissions	Enabled Disable	Edit properties View objects
Home	launcher		Yes	Yes	App Permissions	Enabled	Launch app Edit properties View o

4. Enter your Censys Search API key and secret in the fields provided.

Censys Search A	.PI Setup	
Submit		

1.7.4 Use the Censys Search command

censyssearch

The censyssearch command enables the enrichment of events by IP address. This command takes the events from a search as input and adds context to the events by querying the Censys API.

Syntax

censyssearch <ip_address_field> <summary|verbose>

Parameter	Usage
ip_address_field	The name of the field containing the IP address to search.
verbosity	The level of detail to return. Either summary or verbose.

Note: For each enrichment command executed, responses will be cached for previously seen IPs, so the number of API credits consumed will equal the number of unique IPs enriched.

Examples

sourcetype="access_combined" | dedupe clientIP | censyssearch clientIP verbose

sourcetype="censys:asm:logbook" | dedupe ip | censyssearch ip summary

See also:

For more information on how Censys collects and models host data, visit our help center.

1.8 Common Information Model Mapping

1.9 censys:asm:logbook

Logbook API docs

Tag	CIM Model
certificate	Certificates
inventory	ComputeInventory
listening	Endpoint
network	NetworkResolutionDNS
port	NetworkTraffic
report	Endpoint
service	Endpoint
ssl	Certificates
storage	ComputeInventory
vulnerability	Vulnerabilities
web	Web

Table 1: CIM Models

Field	CIM Alias
data.cve	cve
data.cvss	cvss
data.mailExchange	dest_name
data.port	 dest_port
data.port	src_port
data.severity	severity
data.sha256	ssl_hash
data.softwareName	арр
data.softwareName	service_name
data.softwareProduct	service
data.softwareSource	src
data.softwareUri	service_id
data.softwareVendor	vendor_product
data.subdomain	dest_name
data.title	signature
data.transportProtocol	transport
entity.domain	dns
entity.domain	<pre>src_name</pre>
entity.hostname	dns
entity.hostname	site
entity.hostname	<pre>src_host</pre>
entity.hostname	<pre>ssl_subject_common_name</pre>
entity.ipAddress	ip
entity.ipAddress	src_ip
<pre>entity.objectStorageName</pre>	storage_name
<pre>entity.objectStorageName</pre>	url
entity.sha256	ssl_hash
timestamp	creation_time

Table 2: Field Aliases

1.10 censys:asm:risks

Risks API docs

Table 3: CIM Models

Tag	CIM Model
report	Endpoint
vulnerability	Vulnerabilities

Table 4: Field Aliases

Field	CIM Alias
riskName	signature
riskType	signature_id
ts	creation_time