Integrate Splunk with Umbrella Log Management Using S3 and Local Sync

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Introduction

This document describes how to configure Splunk to analyze DNS traffic logs from a Cisco-managed S3 bucket.

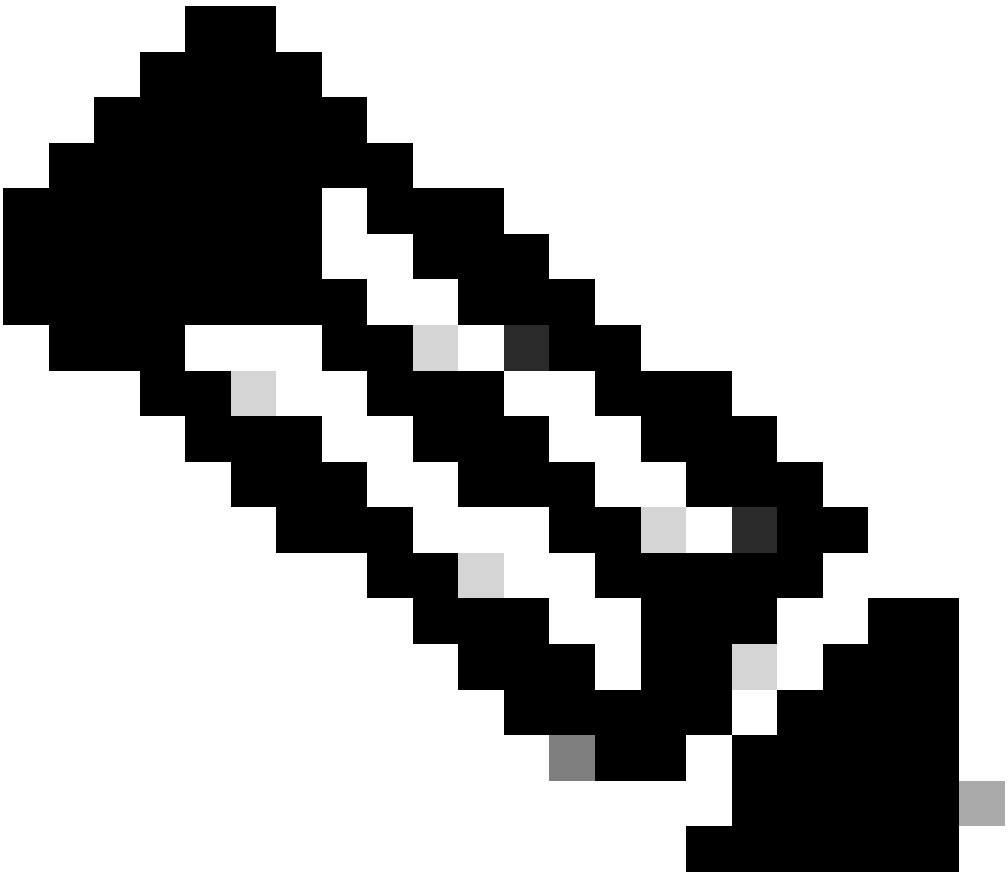
Overview

Splunk is a tool for log analysis. It provides a powerful interface for analyzing large chunks of data, such as the logs provided by Cisco Umbrella for your DNS traffic. This article describes how to:

- Set up your Cisco-managed S3 bucket in your dashboard.
- Ensure AWS Command Line Interface (AWS CLI) prerequisites are met.
- Create a cron job to retrieve files from the bucket and store them locally on your server.
- Configure Splunk to read from a local directory.

Prerequisites

- Download and install the AWS Command Line Interface (AWS CLI).
- Create your Cisco-managed S3 bucket.



Note: Existing Umbrella Insights and Umbrella Platform customers can access Log Management with Amazon S3 through the dashboard. Log Management is not available in all packages. Contact your account manager if you are interested in this feature.

Create a Cron Job on the Splunk Server

1. Create a shell script named **pull-umbrella-logs.sh** with the provided contents, which runs on a scheduled cron job:

```
#!/bin/sh
cd <local data dir>
AWS_ACCESS_KEY_ID=<accesskey> AWS_SECRET_ACCESS_KEY=<secretkey> aws s3 sync <data path> .
```

Replace the placeholders with your actual values:

- <local data dir> : Directory on disk to store the downloaded log files.
- <accesskey> : Access key from the Umbrella dashboard.
- **<secretkey>** : Secret key from the Umbrella dashboard.
- **<data path>**

: Data path from the log management UI (for example, s3://cisco-managed-<region>/1_2xxxxxxxxxxxxxxxxa120c73a7c51fa6c61a4b6/dnslogs/).

2. Save the shell script and set the run permission. The script must be owned by root.

```
$ chmod u+x pull-umbrella-logs.sh
```

3. Run the **pull-umbrella-logs.sh** script manually to confirm that the sync process is functional. Full completion is not required; this step confirms that credentials and script logic are correct.

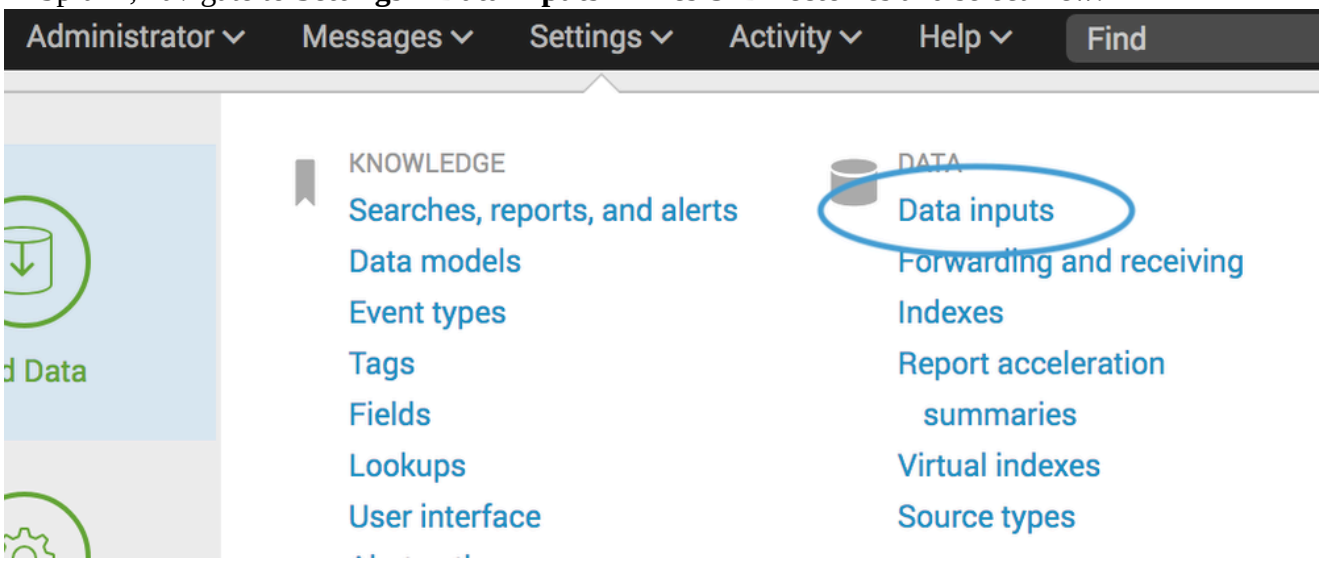
4. Add this line to your Splunk server **crontab**:

```
*/5 * * * * root root /path/to/pull-umbrella-logs.sh &2>1 >/var/log/pull-umbrella-logs.txt
```

Make sure to edit the line to use the correct path to the script. This runs a sync every five minutes. The S3 storage directory updates every 10 minutes and the data remains on the S3 storage for 30 days. This keeps the two in sync.

Configure Splunk to Read from a Local Directory

1. In Splunk, navigate to **Settings > Data Inputs > Files & Directories** and select **New**.



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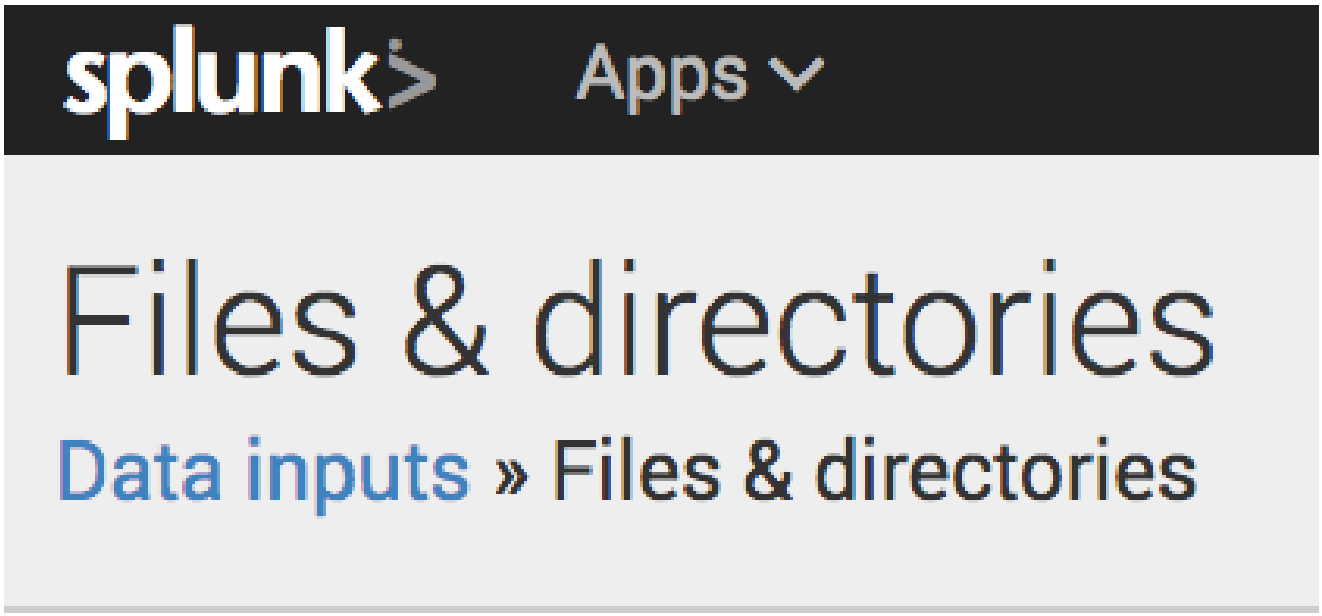

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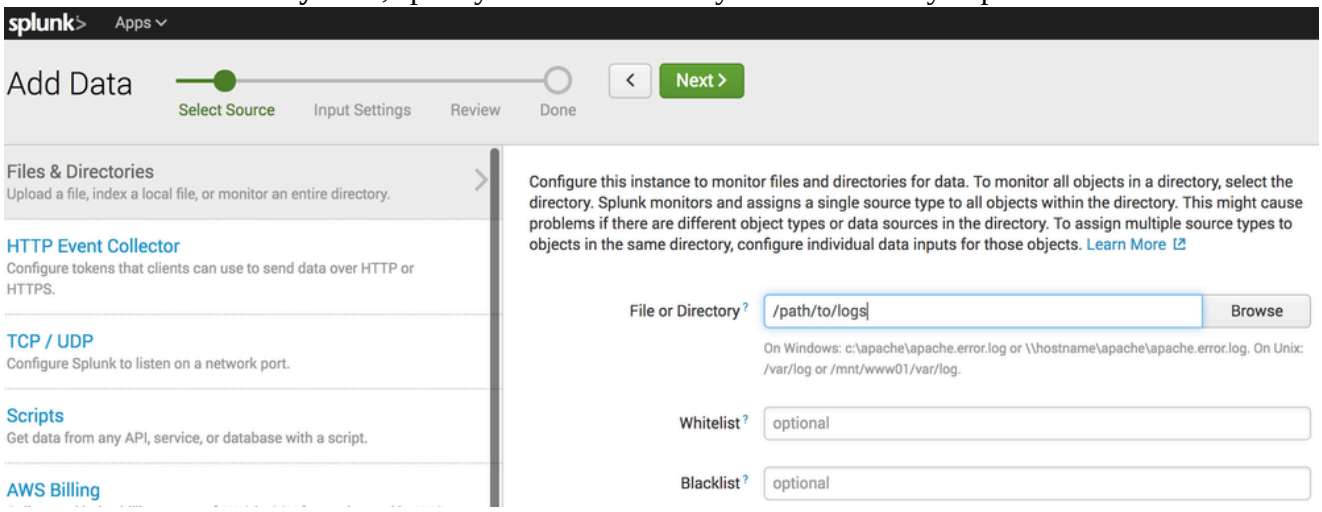
2. In the **File or Directory** field, specify the local directory where the S3 sync places files.



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3. Click **Next** and complete the wizard using the default settings.

Once there is data in the local directory and Splunk is configured, the data can be available to query and report on in Splunk.