Splunk Fundamentals 1 Lab Exercises

Lab typographical conventions:

[sourcetype=db_audit] OR [cs_mime_type] indicates either a source type or the name of a field.

NOTE: Lab work will be done on your personal computer or virtual machine, no lab environment is provided. We suggest you **DO NOT** do the lab work on your production environment.

The lab instructions refer to these source types by the types of data they represent:

Type	Sourcetype	Fields of interest
Web Application	access_combined_wcookie	action, bytes, categoryId, clientip, itemId, JSESSIONID, productId, referer, referer_domain, status, useragent, file
Database	db_audit	Command, Duration, Type
Web server	linux_secure	COMMAND, PWD, pid, process

Lab Module 12 – Creating Lookups

NOTE: This lab document has two sections. The first section includes the instructions without answers. The second section includes instructions with the expected search string (answer) in red.

Description
In this lab exercise, you will create a new automatic lookup that provides additional information for Buttercup Games products.

Scenario: The web application data does not contain name and price information for the products being sold. Users of your reports would like to see product names used in your reports, not just product Ids.

Task 1: Download and examine the lookup file.

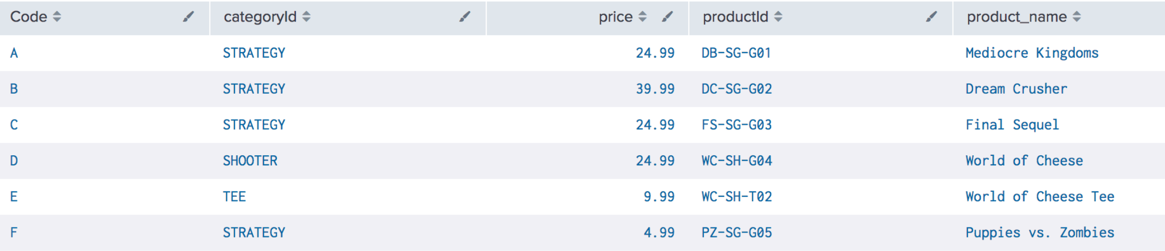
1. Open a new browser window and direct it to http://splk.it/productdata
2. The file **products.zip** will be downloaded to your system.
3. Use an archive tool to unarchive the file.
4. Once unarchived, you will see a file named products.csv.
5. Return to the browser window for your instance of Splunk Web or open a new one.
6. Navigate to the Search view. (If you are in the **Home** app, click **Search & Reporting** from the column on the left side of the screen. You can also access the Search view by clicking the **Search** menu option on the bar at the top of the screen.)

Task 2: Add a lookup file and create a lookup definition.

7. Navigate to: **Settings > Lookups > Lookup table files.**
8. Click **New Lookup Table File**.

9. Save the lookup table file with these values:
   - Destination app: *search*
   - File: products.csv file
   - Destination filename: *products.csv*
10. Navigate to **Settings > Lookups > Lookup definitions**.
11. Make sure **Search & Reporting** is selected for **App context** and Click **New Lookup Definition**.
12. Save the lookup table file with these values:
   - Destination app: *search*
   - Name: products_lookup
   - Type**:** File-based
   - Lookup file: *products.csv*
13. Return to the Search view.
14. Use `inputlookup` command to verify the lookup definition was created correctly.

Example Results:



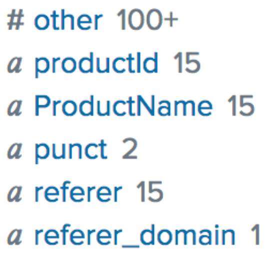
Code	categoryId	price	productId	product_name
A	STRATEGY	24.99	DB-SG-G01	Mediocre Kingdoms
B	STRATEGY	39.99	DC-SG-G02	Dream Crusher
C	STRATEGY	24.99	FS-SG-G03	Final Sequel
D	SHOOTER	24.99	WC-SH-G04	World of Cheese
E	TEE	9.99	WC-SH-T02	World of Cheese Tee
F	STRATEGY	4.99	PZ-SG-G05	Puppies vs. Zombies

Task 3: Use the lookup in a search.

> **NOTE:** For this course, you will be searching across all time using the main index. This is NOT a best practice in a production environment, but needed for these labs due to the nature of the limited dataset.

15. Search the web application data for all events where a user purchased a product successfully.
16. Use the `lookup` command and reference the lookup table you just created. Match the `productId` in lookup table to the `productId` field in the event data. Use the OUTPUT function to output the `product_name` lookup table data to a `ProductName` field.
17. Notice that there is now a `ProductName` field in the fields list.

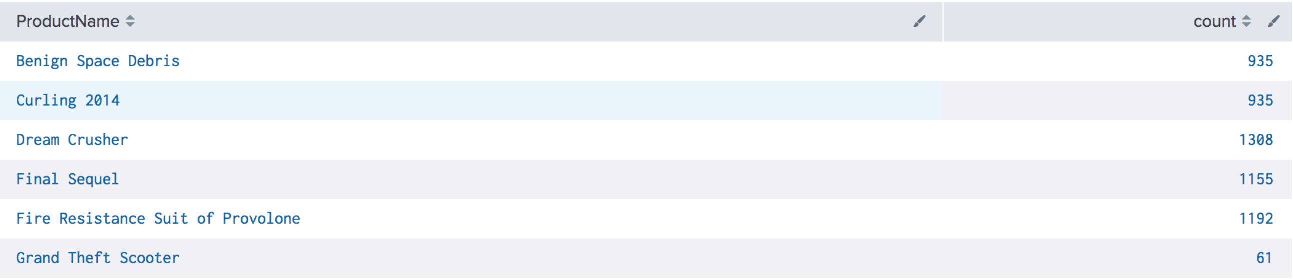
Example:



other 100+
a productId 15
a ProductName 15
a punct 2
a referer 15
a referer_domain 1

18. Change the search to use a `stats count` function to count events by `ProductName`.

Example Results:

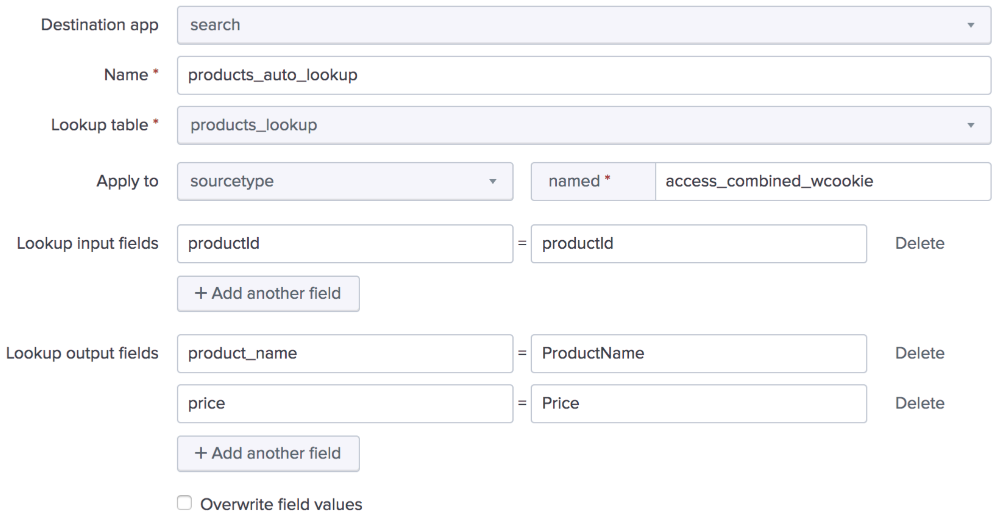


ProductName	count
Benign Space Debris	935
Curling 2014	935
Dream Crusher	1308
Final Sequel	1155
Fire Resistance Suit of Provolone	1192
Grand Theft Scooter	61

Task 4: Create an automatic lookup definition.

19. Navigate to **Settings > Lookups > Automatic lookups**
20. Save the automatic lookup with these values:
    - Destination app: *search*
    - Name: *products_auto_lookup*
    - Lookup table: *products_lookup*
    - Apply to: *sourcetype*
    - named: *access_combined_wcookie*
    - Lookup input fields: *productId = productId*
    - Lookup output fields: *product_name = ProductName*
      price = Price

Example:



Destination app: search

Name *: products_auto_lookup

Lookup table *: products_lookup

Apply to: sourcetype named *: access_combined_wcookie

Lookup input fields: productId = productId Delete

Lookup output fields: product_name = ProductName Delete

price = Price Delete

☐ Overwrite field values

Task 5: Verify your automatic lookup is working.

21. Return to the Search view.
22. Search the web application data for all events where a user purchased a product successfully. Use the `stats sum` function to sum the `Price` field by `ProductName`. Name the resulting field `Revenue`.
23. Use the `sort` command to find the product that has generated the largest revenue. Take note of the `ProductName` as you might be asked to recall it in the module quiz.
24. Save the report as a dashboard panel on your `Sales Dashboard`.

Splunk Fundamentals 1 Lab Exercises

Lab typographical conventions:

[sourcetype=db_audit] OR [cs_mime_type] indicates either a source type or the name of a field.

NOTE: Lab work will be done on your personal computer or virtual machine, no lab environment is provided. We suggest you **DO NOT** do the lab work on your production environment.

The lab instructions refer to these source types by the types of data they represent:

Type	**Sourcetype**	**Fields of interest**
Web Application	access_combined_wcookie	action, bytes, categoryId, clientip, itemId, JSESSIONID, productId, referer, referer_domain, status, useragent, file
Database	db_audit	Command, Duration, Type
Web server	linux_secure	COMMAND, PWD, pid, process

Lab Module 12 – Creating Lookups with Solutions

NOTE: This lab document has two sections. The first section includes the instructions without answers. The second section includes instructions with the expected search string (answer) in red.

Description
In this lab exercise, you will create a new automatic lookup that provides additional information for Buttercup Games products.

Scenario: The web application data does not contain name and price information for the products being sold. Users of your reports would like to see product names used in your reports, not just product Ids.

Task 1: Download and examine the lookup file.

1. Open a new browser window and direct it to http://splk.it/productdata
2. The file **products.zip** will be downloaded to your system.
3. Use an archive tool to unarchive the file.
4. Once unarchived, you will see a file named products.csv.
5. Return to the browser window for your instance of Splunk Web or open a new one.
6. Navigate to the Search view. (If you are in the **Home** app, click **Search & Reporting** from the column on the left side of the screen. You can also access the Search view by clicking the **Search** menu option on the bar at the top of the screen.)

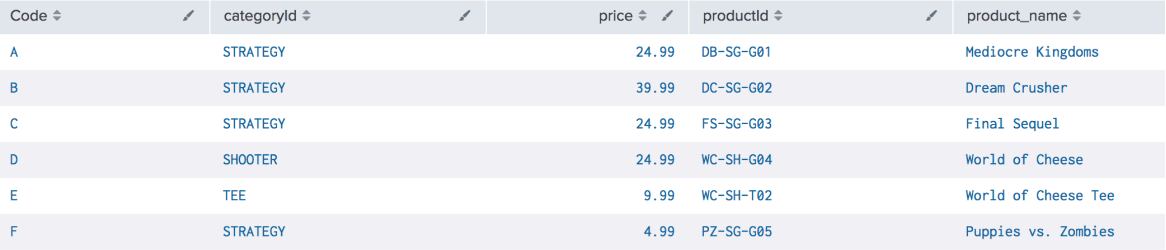
Task 2: Add a lookup file and create a lookup definition.

7. Navigate to: **Settings > Lookups > Lookup table files.**
8. Click **New Lookup Table File**.

9. Save the lookup table file with these values:
   - Destination app: *search*
   - File: products.csv file
   - Destination filename: *products.csv*
10. Navigate to **Settings > Lookups > Lookup definitions**.
11. Make sure **Search & Reporting** is selected for **App context** and Click **New Lookup Definition**.
12. Save the lookup table file with these values:
    - Destination app: *search*
    - Name: products_lookup
    - Type**:** File-based
    - Lookup file: *products.csv*
13. Return to the Search view.
14. Use `inputlookup` command to verify the lookup definition was created correctly.

    (| inputlookup products_lookup)

Example Results:



Code	categoryId	price	productId	product_name
A	STRATEGY	24.99	DB-SG-G01	Mediocre Kingdoms
B	STRATEGY	39.99	DC-SG-G02	Dream Crusher
C	STRATEGY	24.99	FS-SG-G03	Final Sequel
D	SHOOTER	24.99	WC-SH-G04	World of Cheese
E	TEE	9.99	WC-SH-T02	World of Cheese Tee
F	STRATEGY	4.99	PZ-SG-G05	Puppies vs. Zombies

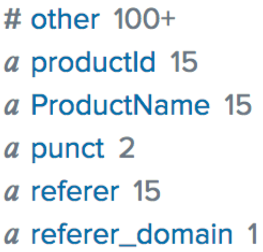
Task 3: Use the lookup in a search.

NOTE: For this course, you will be searching across all time using the main index. This is NOT a best practice in a production environment, but needed for these labs due to the nature of the limited dataset.

15. Search the web application data for all events where a user purchased a product successfully. (index=main sourcetype=access_combined_wcookie status=200 file=success.do)
16. Use the `lookup` command and reference the lookup table you just created. Match the `productId` in lookup table to the `productId` field in the event data. Use the OUTPUT function to output the `product_name` lookup table data to a `ProductName` field.

    (index=main sourcetype=access_combined_wcookie status=200 file=success.do | lookup products_lookup productId as productId OUTPUT product_name as ProductName)
17. Notice that there is now a `ProductName` field in the fields list.

Example:

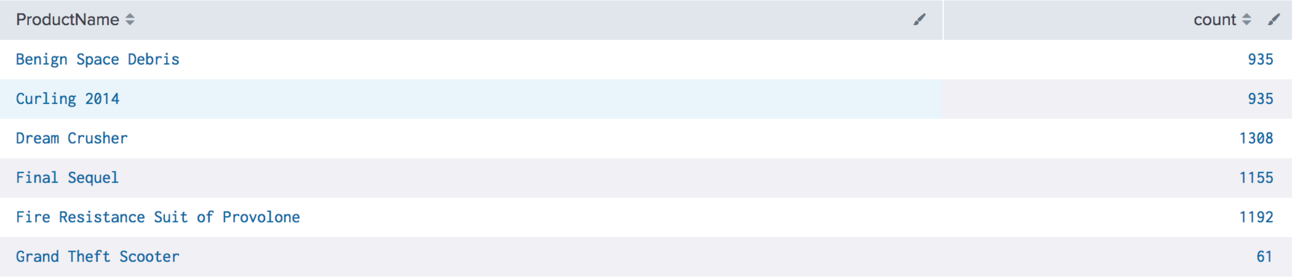


other 100+
a productId 15
a ProductName 15
a punct 2
a referer 15
a referer_domain 1

18. Change the search to use a `stats count` function to count events by `ProductName`.

(index=main sourcetype=access_combined_wcookie status=200 file=success.do | lookup products_lookup productId as productId OUTPUT product_name as ProductName | stats count by ProductName)

Example Results:



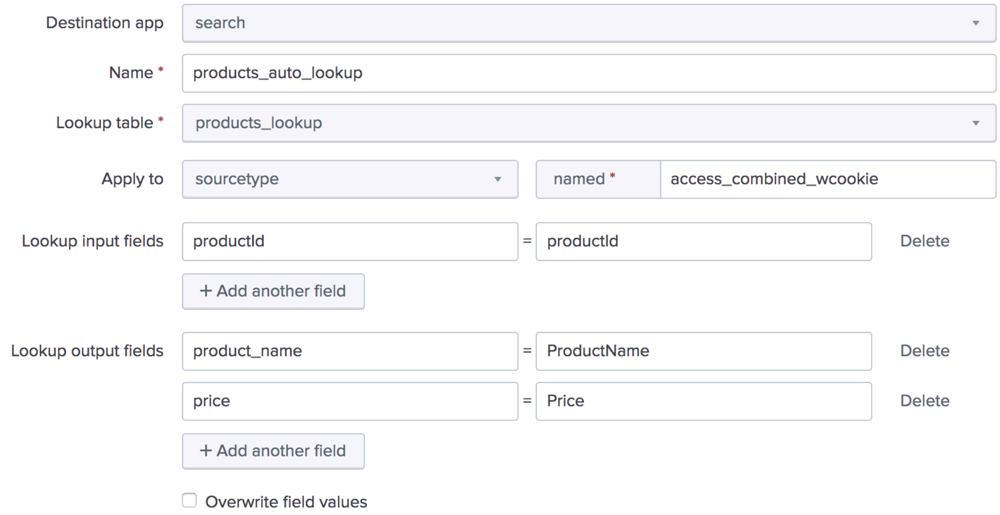
ProductName	count
Benign Space Debris	935
Curling 2014	935
Dream Crusher	1308
Final Sequel	1155
Fire Resistance Suit of Provolone	1192
Grand Theft Scooter	61

Task 4: Create an automatic lookup definition.

19. Navigate to **Settings > Lookups > Automatic lookups**
20. Save the automatic lookup with these values:

Destination app:	*search*
Name:	*products_auto_lookup*
Lookup table:	*products_lookup*
Apply to:	*sourcetype*
named:	*access_combined_wcookie*
Lookup input fields:	*productId = productId*
Lookup output fields:	*product_name = ProductName* *price = Price*

Example:



Destination app	search			
Name *	products_auto_lookup			
Lookup table *	products_lookup			
Apply to	sourcetype	named *	access_combined_wcookie	
Lookup input fields	productId	=	productId	Delete
	+ Add another field			
Lookup output fields	product_name	=	ProductName	Delete
	price	=	Price	Delete
	+ Add another field			
	□ Overwrite field values			

Task 5: Verify your automatic lookup is working.

21. Return to the Search view.
22. Search the web application data for all events where a user purchased a product successfully. Use the `stats sum` function to sum the `Price` field by `ProductName`. Name the resulting field `Revenue`.

(index=main sourcetype="access_combined_wcookie" file=success.do status=200 | stats sum(Price) as Revenue by ProductName)

23. Use the `sort` command to find the product that has generated the largest revenue. Take note of the `ProductName` as you might be asked to recall it in the module quiz.

    (index=main sourcetype="access_combined_wcookie" file=success.do status=200 | stats sum(Price) as Revenue by ProductName | sort -Revenue)

    (Dream Crusher)

24. Save the report as a dashboard panel on your `Sales Dashboard`.