Solution 7
Training Guide

Automation and Report Distribution

Solution 7 Software Documentation Disclaimer and Copyright

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Contents

Introduction

Automation is a way to generate and distribute multiple reports across your NetSuite segments (e.g. Subsidiaries, Classes, Departments, Locations, etc.) from a single template, without manually copying or creating individual reports for each. These generated reports are built using Solution 7's Automation feature and can be distributed in a format that is available to non-Solution 7 users.

In *Solution 7 Training Guide - Basic Concepts & Building Your First Report*, we learned how to create an interactive, dynamic and refreshable report template from your live, real-time NetSuite data. In this lesson, we will use that same P&L (Income) Statement template and Solution 7's Automation feature to generate and distribute your automated reports.

You may also follow the exercises in this guide to use Automation on your own pre-existing reports.

Before We Begin

Before we begin, there are some items that we will refer to during the lesson.

NetSuite OneWorld

The information in this training guide is positioned from a NetSuite OneWorld user of Solution 7. If you are not running NetSuite OneWorld, you will be able to follow the exercises, but some dialogs may appear slightly differently to the screenshots (i.e. missing Subsidiary). In that case, where this document refers to Subsidiary, please substitute as appropriate to your instance of NetSuite.

Activation

When you first start Excel, Solution 7 is not automatically activated. You may be opening and/or editing Excel workbooks that have no NetSuite content. Solution 7 only needs to be activated if you are building new NetSuite report templates or need to refresh data in existing templates. Once activated, one of your Solution 7 licenses will be considered "in use". To release the license for another user, simply close Excel.

To activate Solution 7 within Excel, click **Solution 7** > **Activate**.
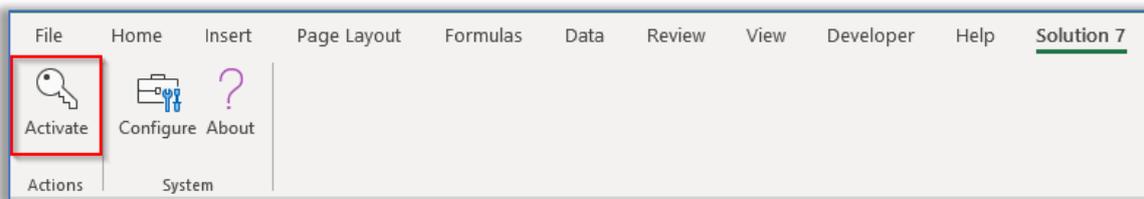
Solution 7 will now attempt to establish a connection to NetSuite and, if successful, will expand the full Solution 7 ribbon.

If you don't see the Solution 7 menu or Solution 7 fails to activate, please refer to the **Troubleshooting Guide** or contact support@solution7.co.uk.

Solution 7 Ribbon

The Solution 7 Ribbon expands after activation and is the starting point when using any of Solution 7's features.
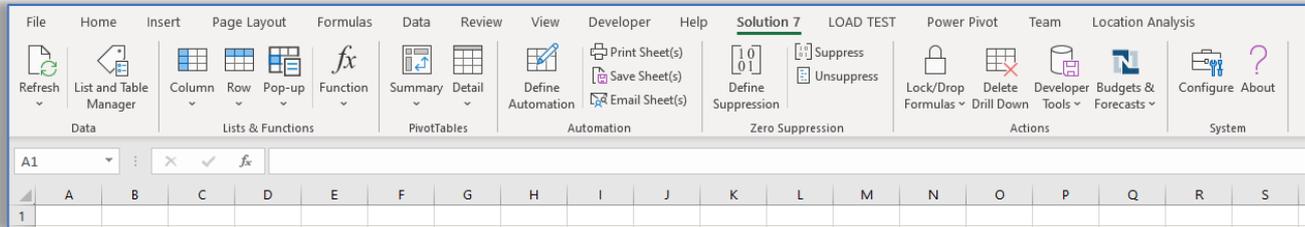
Automation Basic Concepts

At the most basic level, automation is a way of automatically pushing cell values into a workbook. We can do this through what we call an automation 'control' sheet.

Exercise 1 – Creating an automation control sheet

In this exercise, we will learn the basic concepts of Automation by building an automation 'control' sheet from a blank Excel workbook. In practice, you would typically use Automation to generate multiple finished reports from an existing Solution 7 report template.

Begin on a blank Excel workbook and with Solution 7 activated, follow these steps:-

Step 1:

Solution 7 requires you to save the workbook before you automate to ensure no loss of data.

Go to **File** > **Save As** and save this new workbook.

Step 2:

Click **Define Automation**. This will give access to the Automation dialog where you can select the cell you would like to automate.
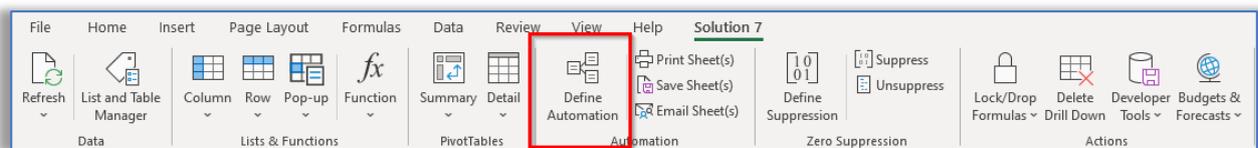
Step 3:

On the Automation dialog, click **Add**.

solution7
Excel Financial Reporting
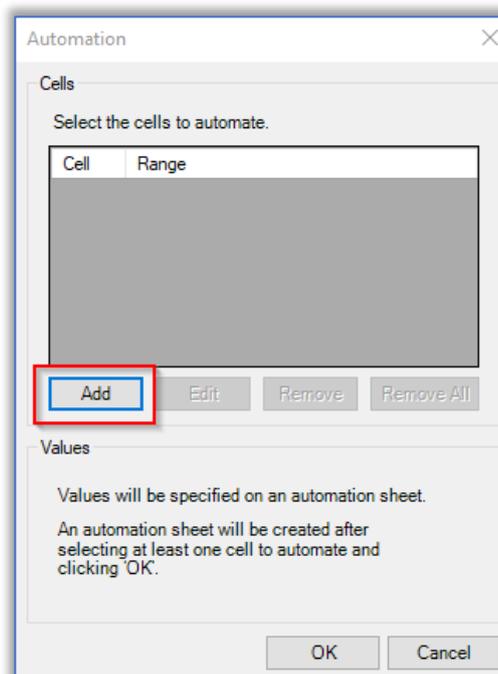
Step 4:

Select empty cell C3 and click OK.
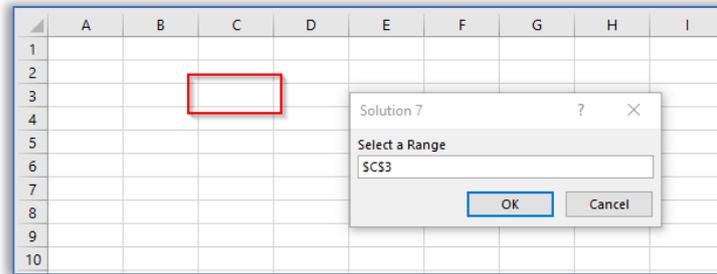
Step 5:

On the Automation dialog, click OK to create your first automation 'control' sheet. This will be generated on a new sheet called 'Automation'.
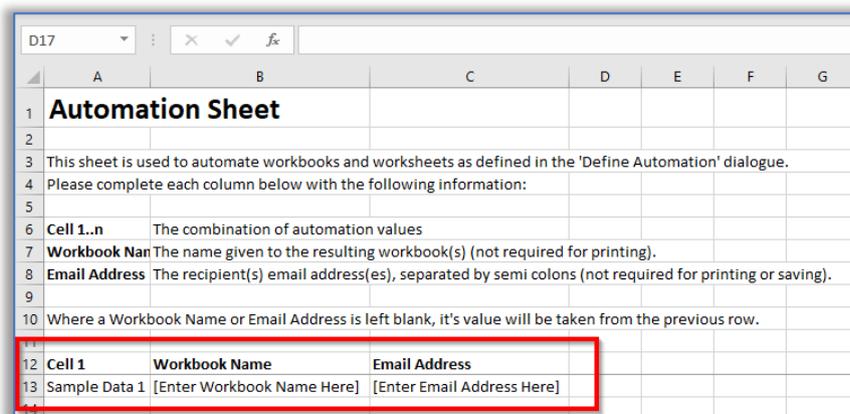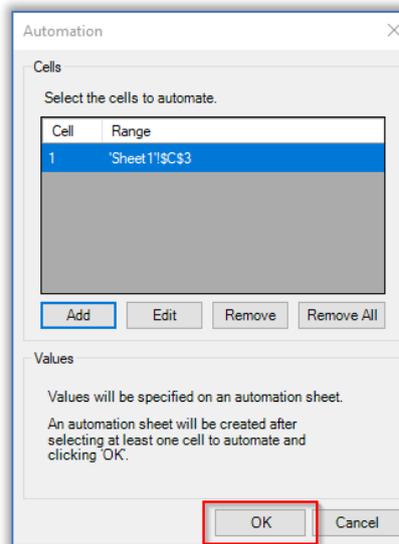
You can configure this 'control' sheet to define your required output by providing values for each of the automation cells, indicating how they will be grouped into separate workbooks and specifying an email recipient list.

Step 6:

To learn about the Automation process, we will first enter some very simple data.

In cells A13 – A16 enter the values "London", "Paris", "New York", "Munich".
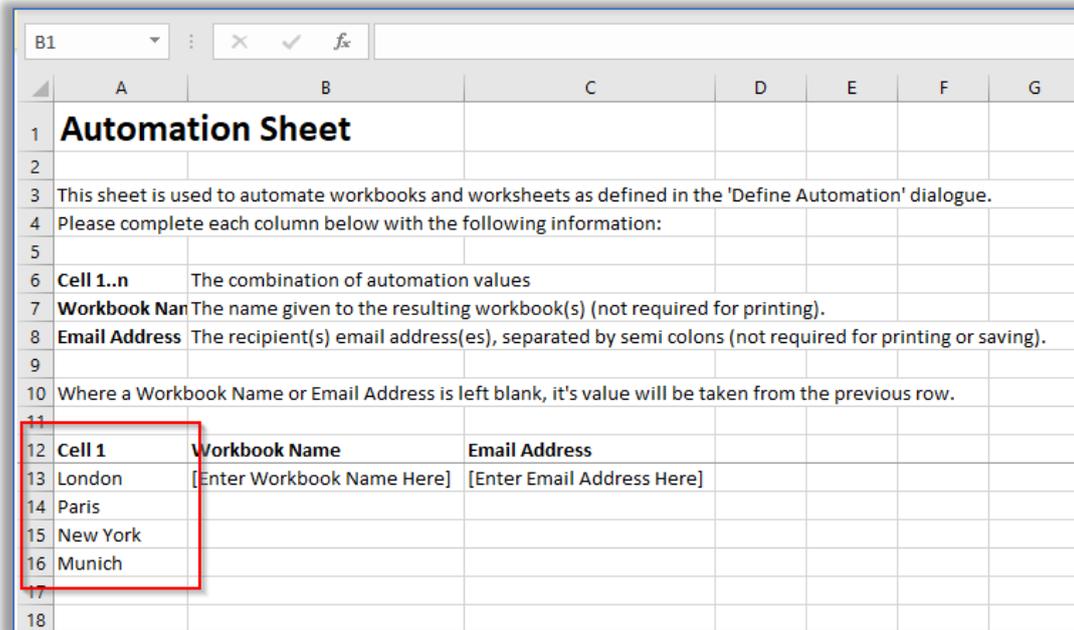
Step 7:

In cell B13 under **Workbook Name**, provide a name for the generated workbook by entering: 'Automation exercise 1'.

Step 8:

On the Solution 7 ribbon, click **Save Sheet(s)**.
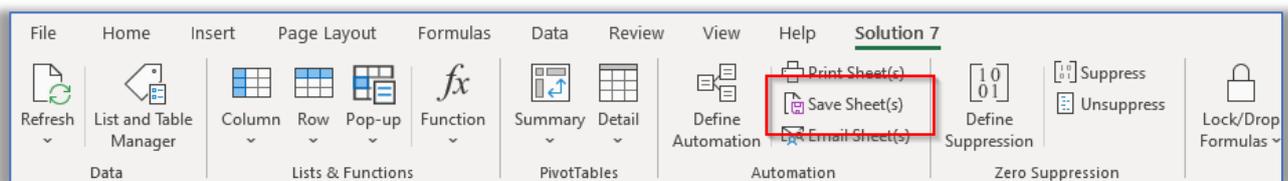
Step 9:

From the Save as Files(s) dialog, we can select which sheets to automate and specify how the reports are created.

With 'Sheet 1' highlighted, select *Copy Sheet Per Automation Row*.

Click OK to run automation and create your reports.
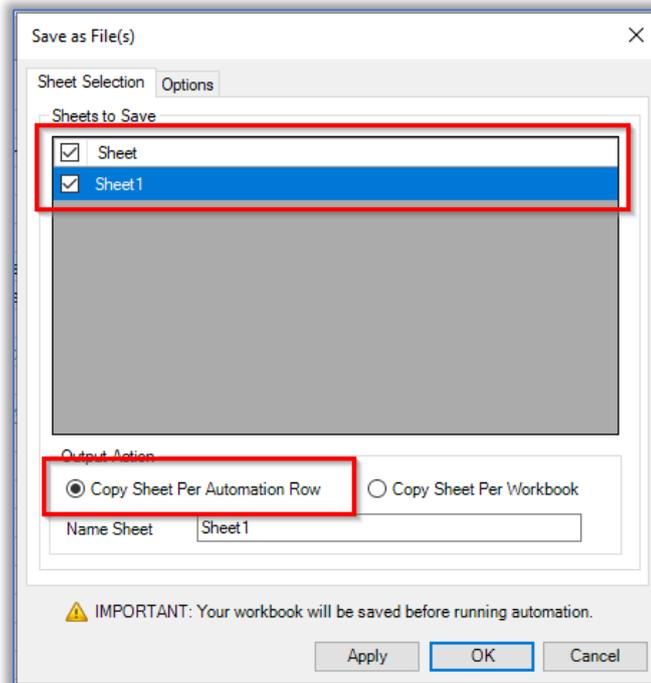
- 'Sheet 1' is the worksheet we are automating. Because our workbook only contains one worksheet, 'Sheet 1' is the only option. If we had multiple worksheets, each one would appear in the list.

- *Copy Sheet Per Automation Row* creates a new report sheet per cell entered in column A.

- *Copy Sheet Per Workbook* creates a new report sheet per workbook entered in column B.

> **For each cell value in column A, (Cell 1) of our automation 'control' sheet a new sheet will be created in the workbook named in column B (Workbook Name).**

Step 10:

Once automation is complete, you will receive the completion message below.
Go to **File** > **Open** and open your automated report. It will be saved as 'Automation exercise 1.xlsx'.
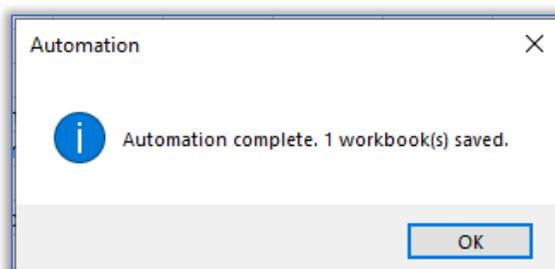
For each city name we entered in the automation 'control' sheet, a new sheet has been created. Within that sheet, cell C3 (the automation cell) has been populated with the city.
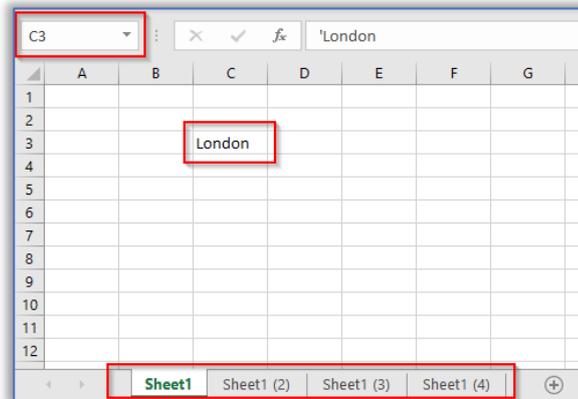
Exercise 2 – Automating multiple cells

In this exercise, we will take the basic concepts from Exercise 1 and learn how we can use Automation to push values into <u>multiple</u> cells across multiple worksheets.

Begin on a blank Excel workbook and with Solution 7 activated, follow these steps:-

Step 1:

Solution 7 requires you to save the workbook before you automate to ensure no loss of data.

Go to **File** > **Save As** and save this new workbook.

Step 2:

Click **Define Automation**.

Step 3:

On the Automation dialog, click **Add**.
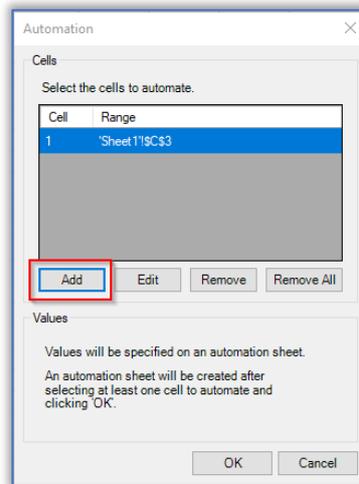
Step 4:

Select empty cell C3 and click OK.

Step 5:

On the Automation dialog, click **Add** a second time.

Step 6:

Select empty cell C5 and click OK.

Step 7:

On the Automation dialog, click OK.
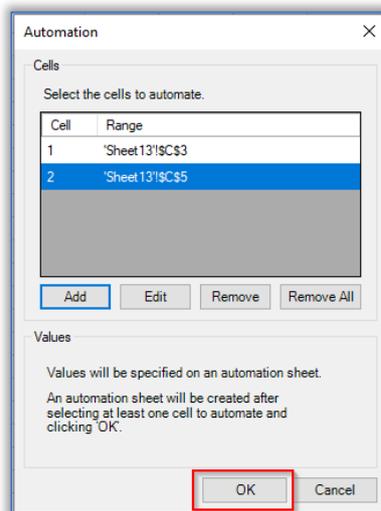
Step 8:

In column A (**Cell 1**) and column B (**Cell 2**), enter the values as they appear below. As in the previous exercise, **Cell 1** represents the first cell we selected to automate (C3) and this time **Cell 2** represents the second cell we selected (C5).
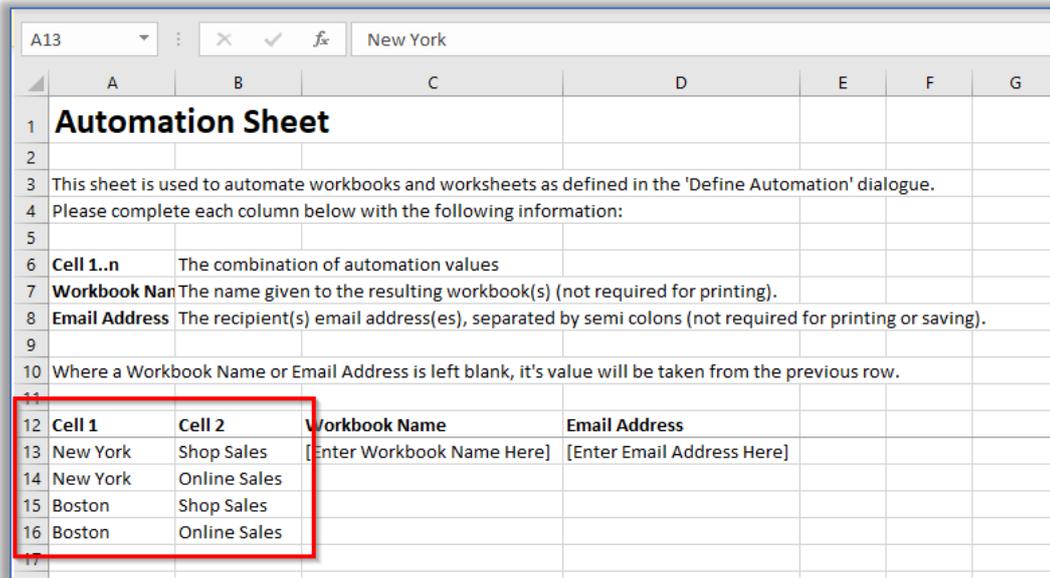
Step 9:

Under **Workbook Name** enter 'Automation exercise 2' and click **Save Sheet(s)**.
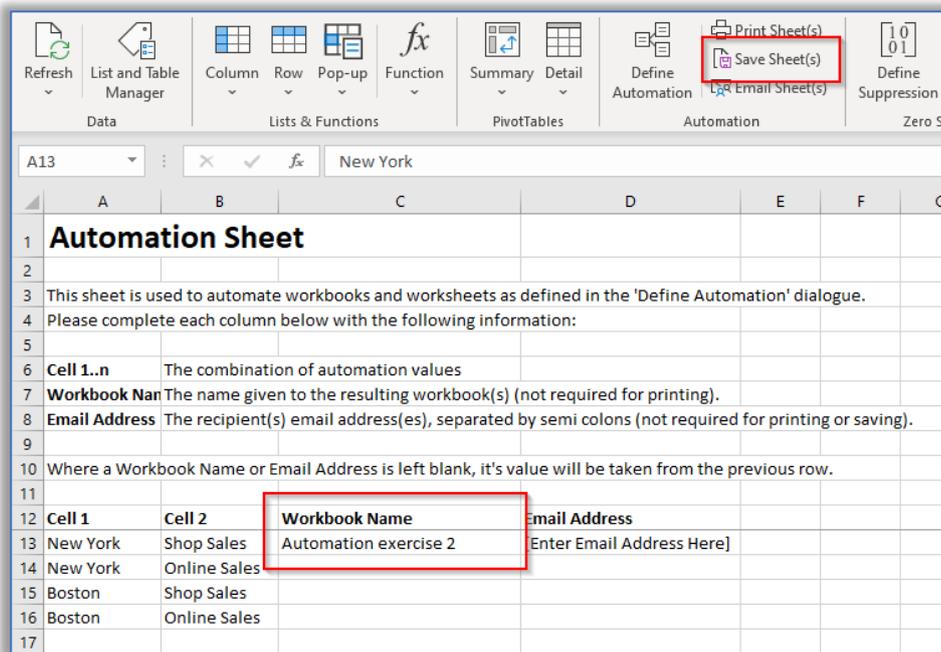
Step 10:

With 'Sheet 1' highlighted, select *Copy Sheet Per Automation Row*.

Click OK to run Automation and create your reports in a new workbook.

Step 11:

Go to **File** > **Open** and open your automated report. It will be saved as 'Automation exercise 2.xlsx'.
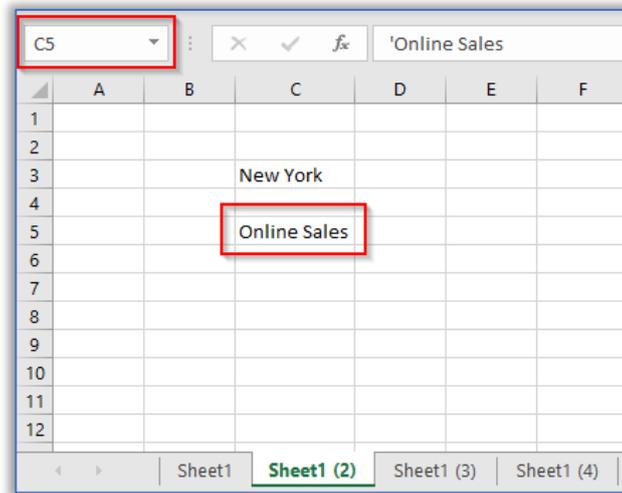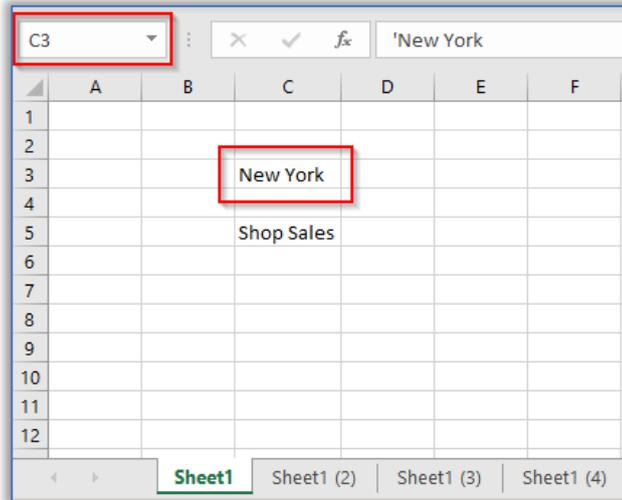
Like in the previous exercise, the values have been pushed into our chosen cells.
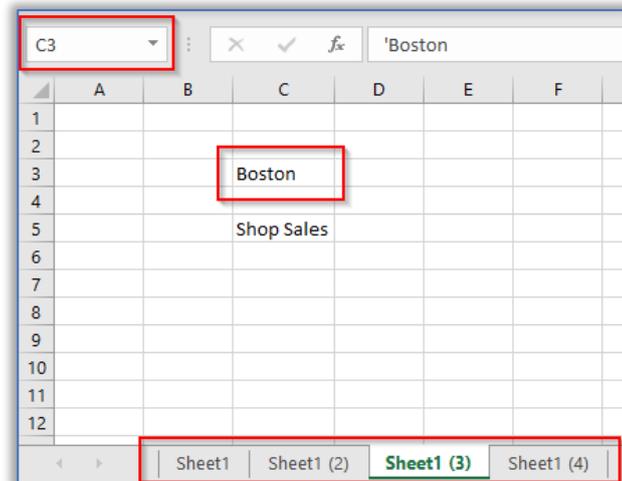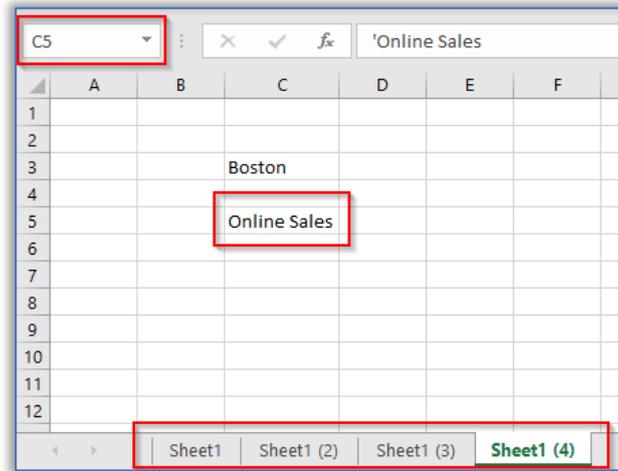
It can take up to several minutes for Solution 7 to create your reports depending on the number of cells you want to Automate, NetSuite servers and your internet connection.

Automating an Existing Report Template

So far we have learned how to use Solution 7's Automation feature to create an automation 'control' sheet and push values into selected cells. In the next exercises, we will learn how to apply these concepts to an existing report template built using Solution 7 and see how reports can easily be generated and distributed across your important reporting segments.

Exercise 3 – Define automation

In this exercise, we will learn how to automate the distribution of an existing P&L (Income) Statement template.

Begin with   P&L (Income) Statement made in '*Solution 7 Training Guide - Basic Concepts and Building Your First Report*' and with Solution 7 activated, follow these steps:-

Step 1:

Go to **File** > **Save** and save a separate copy of the report.
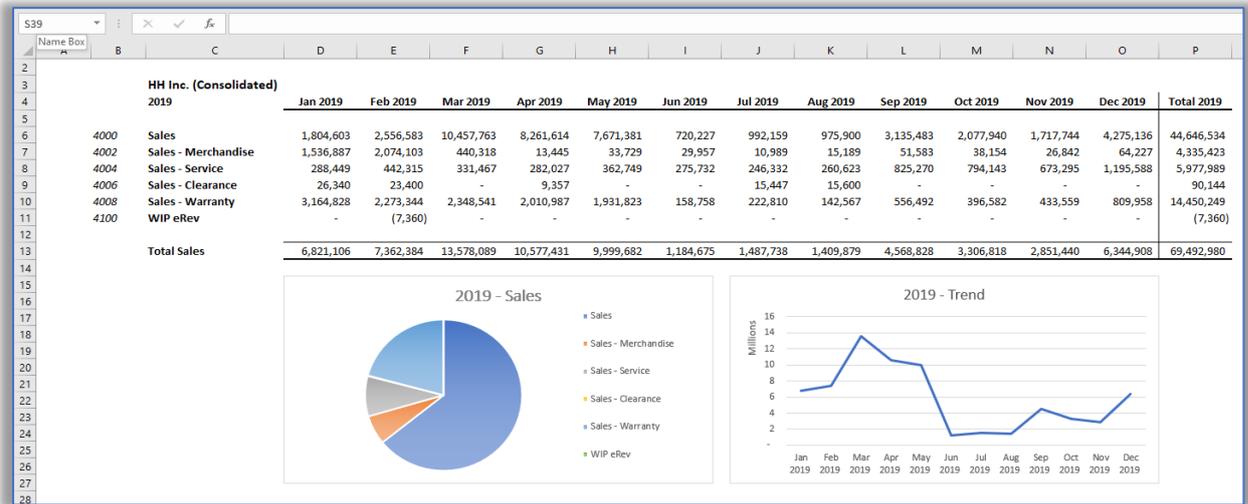
Step 2:

Go to **Define Automation** and remove any previously automated cells.

Click **Add**.

Step 3:

Select cell C3 (the Subsidiary cell) as your automation cell and click OK.
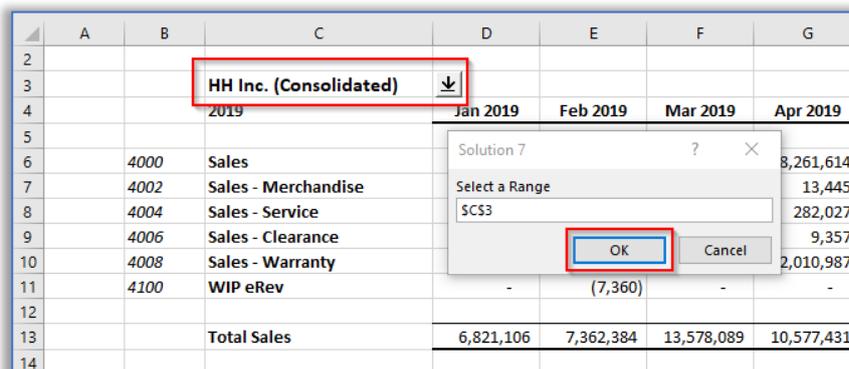
Step 4:

On the Automation dialog, click OK.
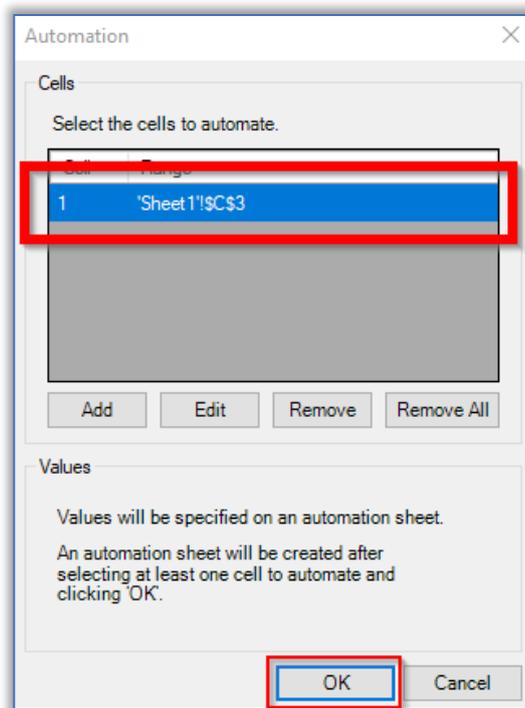
Step 5:

When you click OK, Solution 7 will recognise that the automation cell is a pop-up list and display the below message asking if you would like to populate the automation sheet with values from this list.

Click **Yes**.
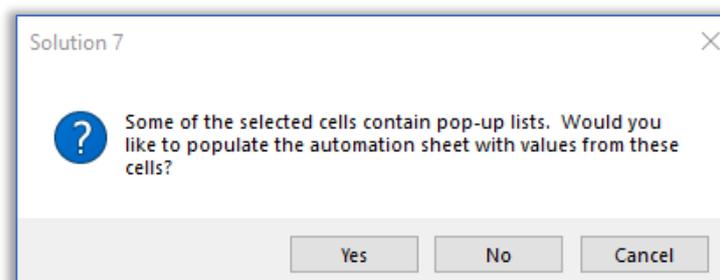
The pop-up list contains all the Subsidiaries we wish to automate. By including the values in the pop-up, we are going to create a new P&L (Income) Statement for each of your NetSuite Subsidiaries.

The automation 'control' sheet will be created, allowing us to configure the output we require. This time, column A (**Cell1**) has been pre-populated with the values from the pop-up list.

If you do not wish to automate on a value in column A, simply hide or delete the row.

Step 7:

In cell B13 under **Workbook Name**, enter 'Automation exercise 3'.

Step 8:

On the Solution 7 ribbon, click **Save Sheet(s)**.

Step 9:

With 'Sheet 1' highlighted, select *Copy Sheet Per Automation Row*.

Click OK to run Automation and create your reports.

Step 10:

Go to **File** > **Open** to open your newly created report. It will be saved as 'Automation exercise 3.xlsx' in the same folder as your report template. Notice how like in Exercise 1, Solution 7 has created a new worksheet per cell value in column A.

> **You have now created your first report template for a P&L (Income) Statement. Follow these steps to automate reports for your other NetSuite segments. (I.e. Class, Department, Location).**

Automation Options

After choosing one of the Automation Distribution options (**Print Sheet(s)**, **Save Sheet(s)** or **Email Sheet(s)**), the Automation options allow you to further refine the output of your report.
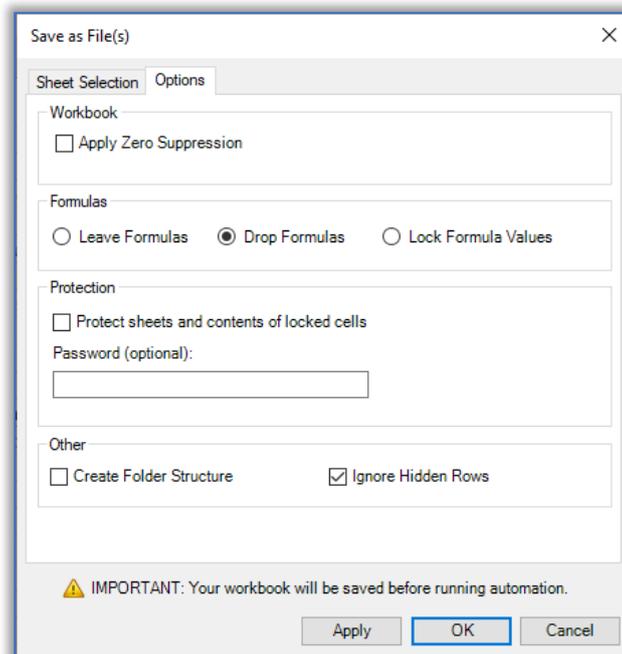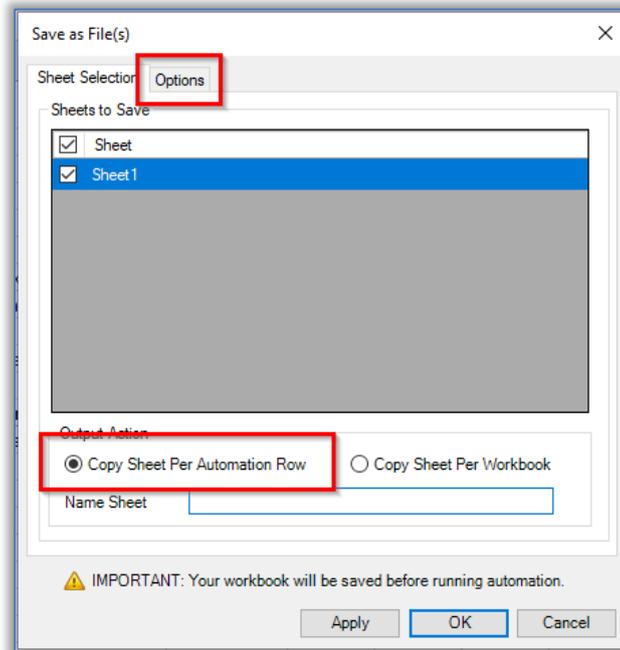
- Zero Suppression – Applies suppression defined in the sheet to hide all zero value rows.

- Leave Formulas – Retains the formulas in the worksheet.

- Drop Formulas – Removes the formulas to leave static values.

- Lock Formula Values – Similar to Drop Formulas but is reversible. I.e. Formulas can be "unlocked" later.

- Protect sheets – Protects the worksheets with a password.

- Create Folder Structure – If checked, this will create the folders specified when using a file path. If unchecked and the folder does not exist, an error will be reported.

- Ignore Hidden Rows – Hidden rows on the automation sheet will be ignored.

- Apply – Save the settings without running automation.

- OK – Save the settings and run automation.

Exercise 4 – Dropping and locking formulas

Dropping or Locking Formulas provides a way of distributing reports in a static format that can be viewed by users who do not have Solution 7 installed.

Continue with the automation 'control' sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

In column B, under **Workbook Name**, enter 'Automation exercise 4'.

Step 2:

With the cursor in an empty cell, click **Save Sheet(s)**.

Step 3:

With 'Sheet 1' highlighted, select *Copy Sheet Per Automation Row* and click the **Options** tab.

Step 4:

Select *Drop Formulas*.

Click OK to run automation and create your report.
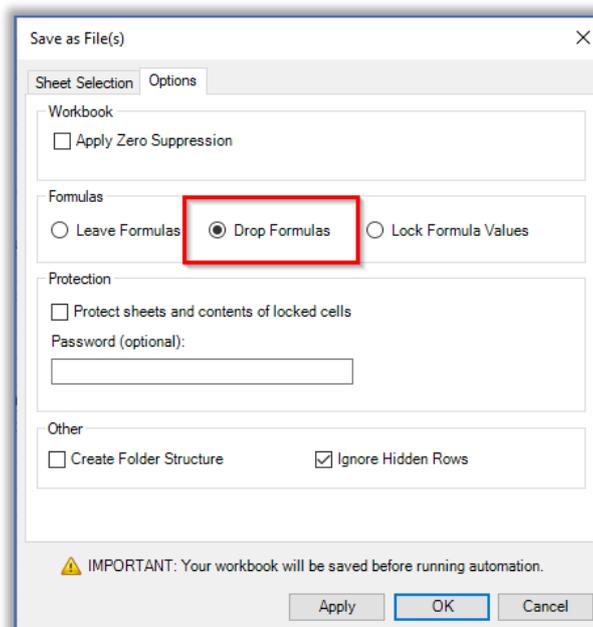
Step 5:

Go to **File** > **Open** to open your report. It will have been saved as 'Automation exercise 4.xlsx'

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Excel Financial Reporting

Step 6:

Click on cell D6 and look to the formula bar. Notice how the Solution 7 formula has been dropped to leave a static value.

	A	B	C	D	E	F
D6			f_x	1804603.42		
2						
3			HH Inc. (Consolidated)			
4			2019	Jan 2019	Feb 2019	Mar 2019
5						
6		4000	Sales	1,804,603	2,556,583	10,457,763
7		4002	Sales - Merchandise	1,536,887	2,074,103	440,318
8		4004	Sales - Service	288,449	442,315	331,467
9		4006	Sales - Clearance	26,340	23,400	-
10		4008	Sales - Warranty	3,164,828	2,273,344	2,348,541
11		4100	WIP eRev	-	(7,360)	-
12						
13			Total Sales	6,821,106	7,362,384	13,578,089

	A	B	C	D	E	F
D6			f_x	=-NSGLABAL(C3,$B6,D$4)		
2						
3			HH Inc. (Consolidated)			
4			2019	Jan 2019	Feb 2019	Mar 2019
5						
6		4000	Sales	1,804,603	2,556,583	10,457,763
7		4002	Sales - Merchandise	1,536,887	2,074,103	440,318
8		4004	Sales - Service	288,449	442,315	331,467
9		4006	Sales - Clearance	26,340	23,400	-
10		4008	Sales - Warranty	3,164,828	2,273,344	2,348,541
11		4100	WIP eRev	-	(7,360)	-
12						
13			Total Sales	6,821,106	7,362,384	13,578,089

As you can see, the Solution 7 functionality has been removed to leave static values. Repeat the steps in this exercise for all the Automation options to see what each achieves.

Multi-Sheet Reports

Now we have learned how to generate multiple reports through Automation, in this section we will use Excel's native functionality and learn how to create a summary report for multi-sheet reporting. A report's summary sheet displays the combined values of your multi-sheet workbook.

Exercise 5 – Creating a summary sheet

In this exercise, we will create a summary sheet using native Excel functionality.

Continue with the P&L (Income) Statement and automation 'control' sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

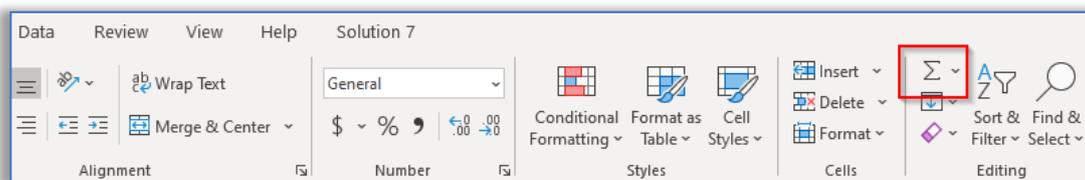Add a new worksheet to your existing workbook and rename from 'Sheet2' to 'Summary'.

Step 2:

On the Summary sheet, click into empty cell D6.

Step 3:

Go to the Home ribbon and select Excel's AutoSum feature.

Step 4:

Go to the report in 'Sheet1' and select the first consolidated value in cell D6. This will insert the =SUM function, sheet number and cell reference into the formula bar.
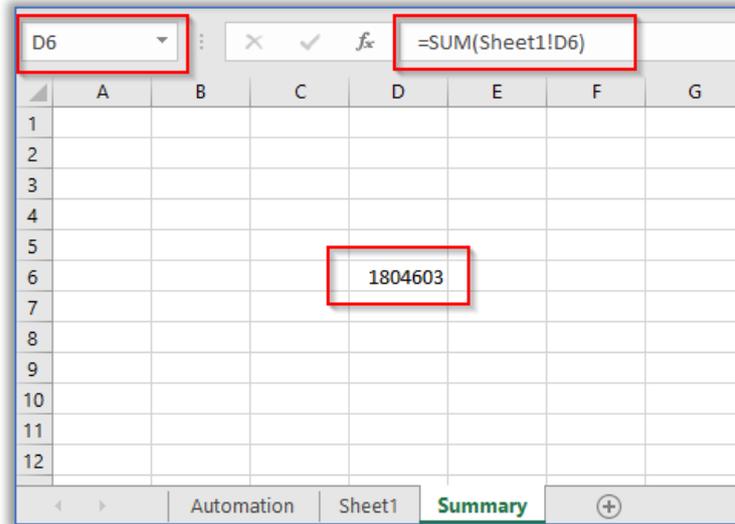
Step 5:

Press Enter on your keyboard to complete the function. You will see that the same formula has been entered into our summary sheet formula bar. This tells Solution 7 to summarise the values from cell D6 in the report template (Sheet1) into cell D6 of our summary report sheet.

Step 6:

Copy the formula across to column O and then all the way down to row 11.

Change between 'Sheet1' and 'Summary' to see how the values have been inserted into the worksheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2																
3																
4																
5																
6				1804603.4	2556582.86	10457763	8261614.5	7671381	720227.1	992159.5	975899.57	3135483.4	2077939.9	1717744.1	4275135.81	
7				1536886.9	2074102.52	440317.63	13445.08	33728.72	29957.37	10988.82	15189.47	51583.45	38154.02	26841.87	64226.78	
8				288448.69	442314.92	331467.33	282026.73	362748.8	275732.5	246332	260622.87	825269.9	794142.51	673295.46	1195587.5	
9				26339.73	23400	0	9357.2	0	0	15447.35	15600	0	0	0	0	
10				3164827.7	2273344.16	2348541.4	2010987.3	1931823	158757.8	222809.9	142567.06	556491.74	396581.65	433559.04	809958.26	
11				0	-7360	0	0	0	0	0	0	0	0	0	0	
12																
13																
14																

Step 7:

You can now copy the Year, Account Titles, Period Titles, Totals and apply appropriate formatting and charts (optional) to make the Summary sheet resemble the image below.
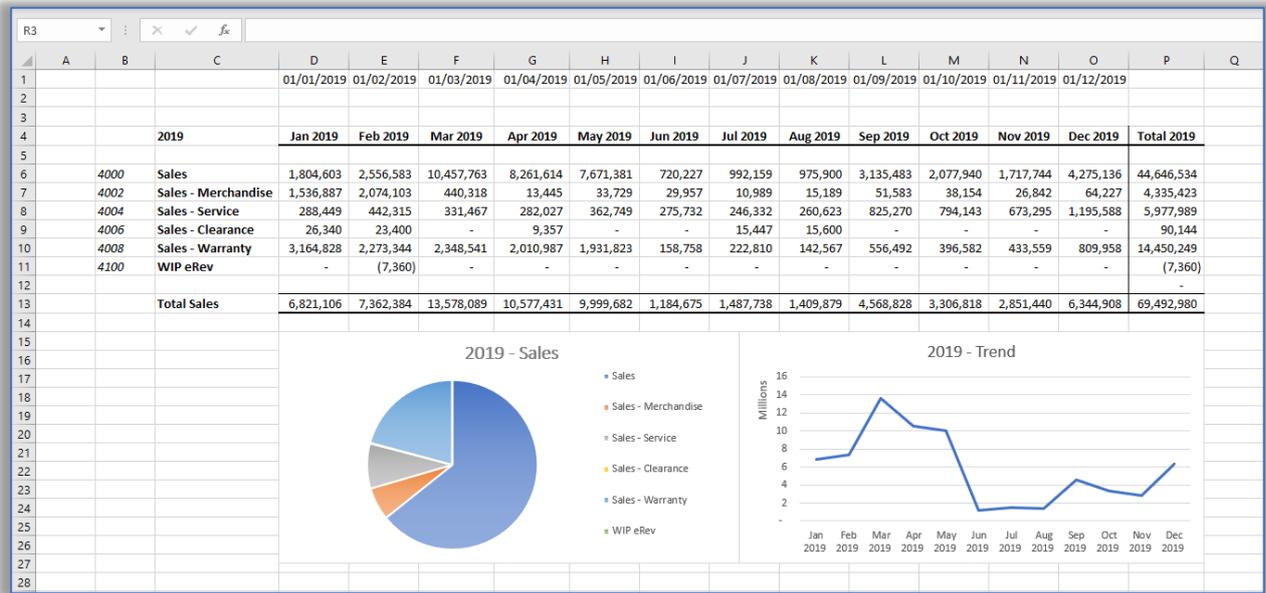
Step 8:

From the Solution 7 ribbon, click **Save Sheet(s)**.

Step 9:

With 'Sheet1' highlighted, select *Copy Sheet Per Automation Row.*

Step 10:

With 'Summary' highlighted, select '*Copy Sheet Per Workbook'.*

In the *Name Sheet* box, type 'Summary' and click OK.
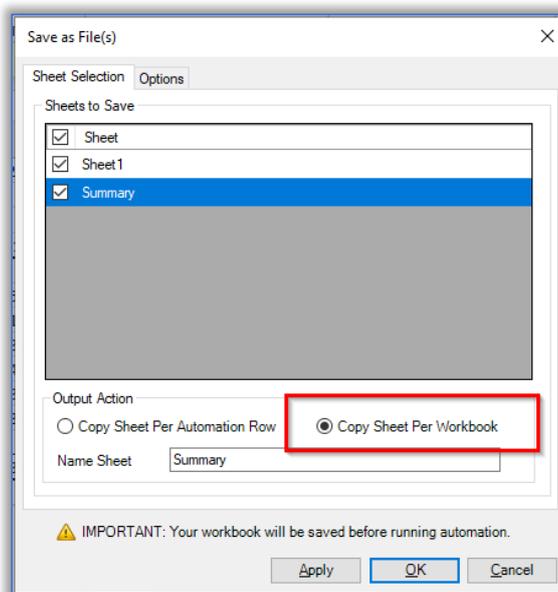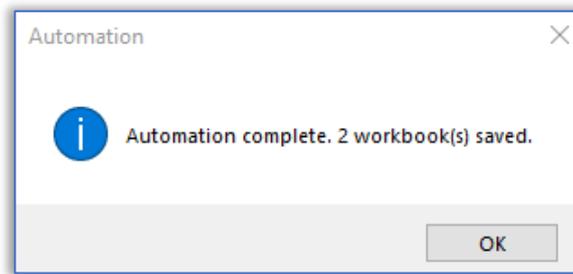
Step 11:

Go to **File** > **Open** and open your new reports. You will see that a summary sheet report has been saved in each workbook and shows the combined values of the automated P&L (Income) Statements.

> **A Parameter sheet can be created in a similar way. A Parameter sheet contains driver values for the report, which can easily be changed in one place. When you have built your parameter sheet, simply click Save Sheet(s), select *Copy Per Workbook* and click OK to create a parameter sheet in each of your workbooks.**

Controlling Outputs

In the previous section, we learned about the ways you can automate an existing report and create a Summary sheet using Solution 7. In this section, we will learn about the different ways you can control the output of your completed report(s).

Tokens

Tokens allow placeholders, in the format "{1}", to be inserted in various areas of your workbook and substituted for values provided on the automation 'control' sheet when automated reports are generated.

You can use tokens where functions aren't supported by Excel (eg Sheet Names, in document headers & footers and in automation email templates).

In the next exercise we will use a Token to improve the sheet names generated during automation.

Exercise 6 – Using tokens

In previous exercises, the generated sheet names have retained their normal Excel format - suffixed with a number to make them unique within the workbook. In this exercise, we will learn how to use tokens to improve the names of the resulting sheets.

Continue with the P&L (Income) Statement and automation 'control' sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

Within the automation 'control' sheet, click on cell D12.

You will see a small pop-up control appear, click on it to view a list of header values.

Set the value to '**Token 1**' (you can set up to 9 tokens in row 12).

Step 2:

In cells D13 – D16 under **Token 1** , enter some values which will be used for our sheet names.

E.g. below, we have entered 'Consolidated', 'HH Inc.', 'USA', 'Mexico' for each of our subsidiaries.
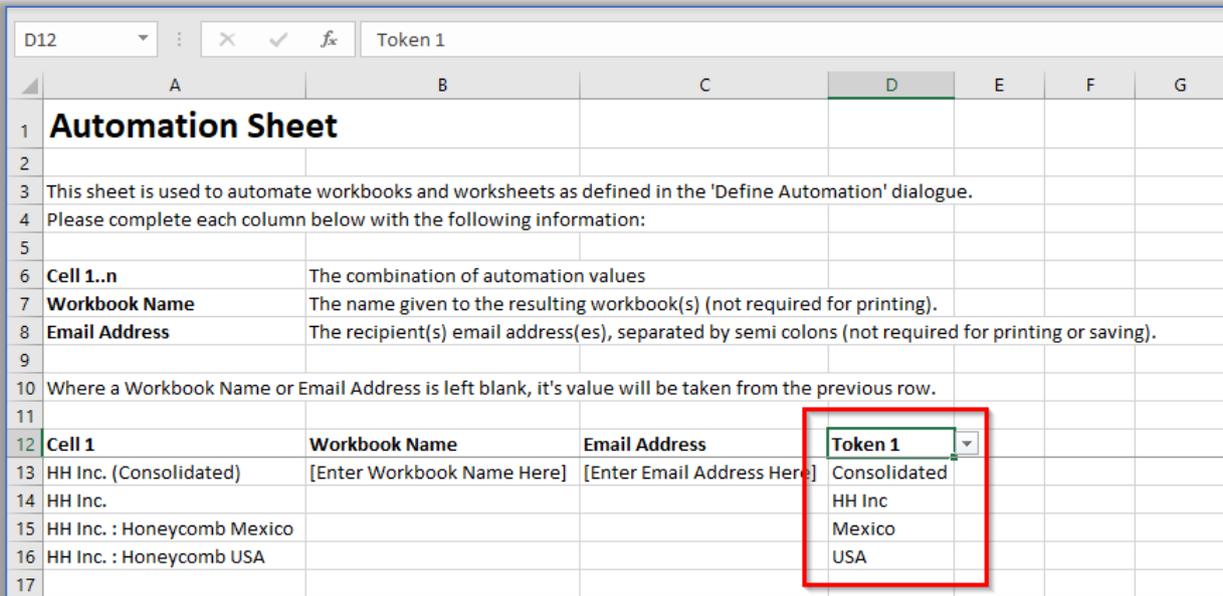
Step 3:

In cell B13, under **Workbook Name**, enter 'Automation exercise 6'
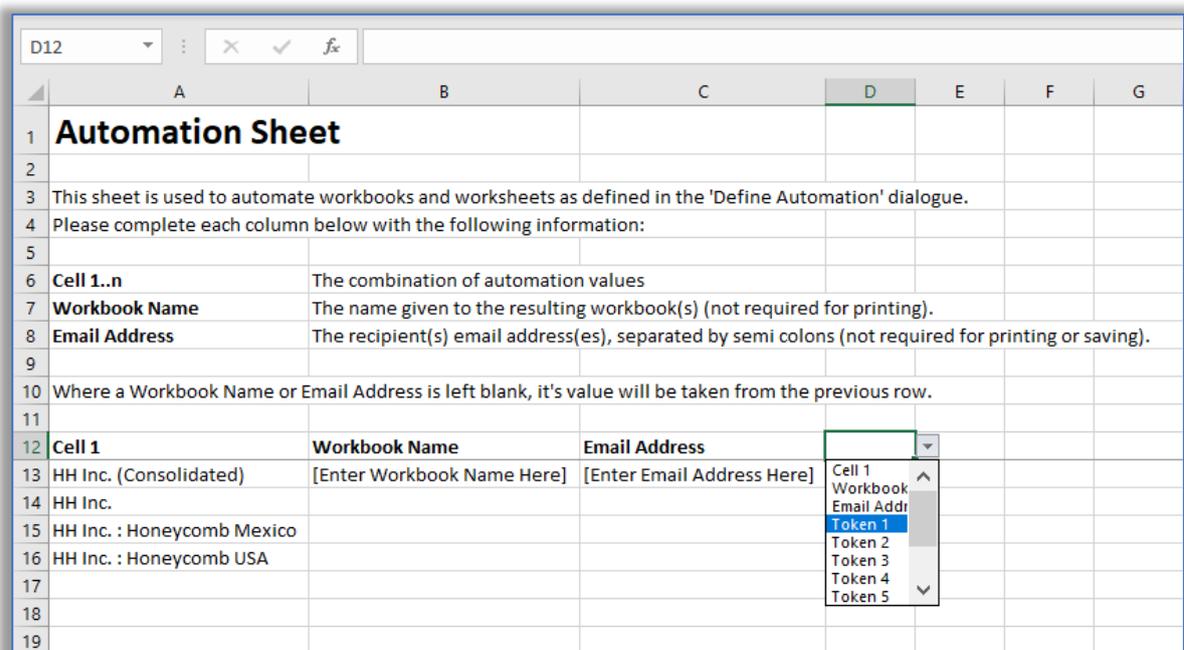
Step 4:

On the Solution 7 ribbon, click **Save Sheet(s)**.

Step 5:

With 'Sheet1' highlighted, select *Copy Sheet Per Automation Row*.

Step 6:

In the *Name Sheet* box, enter 'Income Statement for {1}' (where '{1}' is a placeholder for token 1) and click OK.

When you click OK and each new sheet is generated, the token placeholder in the sheet name will be replaced by the token values provided in column D of the automation 'control' sheet.
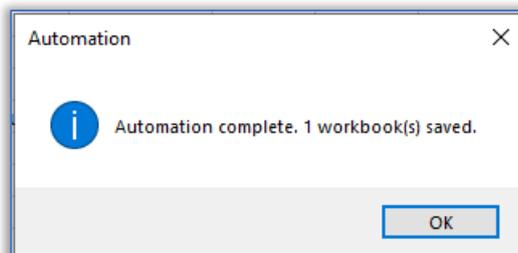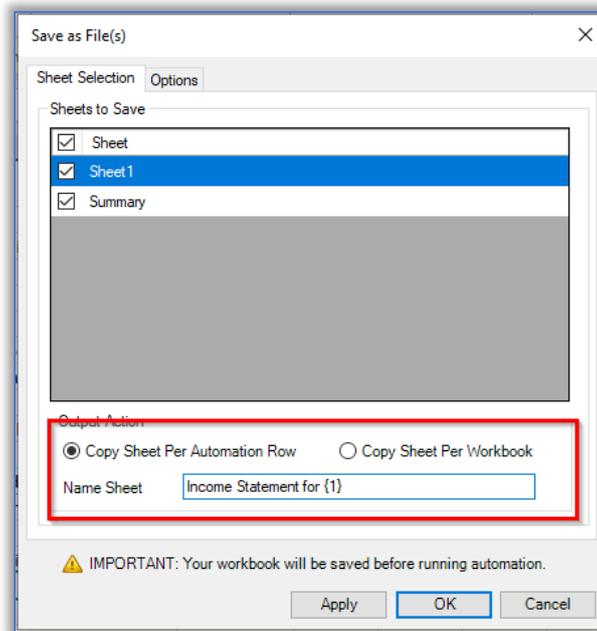
Step 7:

Go to **File** > **Open** to open your automated reports. You will see that the sheets in your generated report will now have more meaningful names than in the previous exercises.

I.e. "Income Statement for Consolidated", "Income Statement for HH Inc." etc.

> **You can also apply token placeholders to the headers & footers of your report and in the Solution 7 "Email Sheet(s)" feature. See Exercise 10: Step 4 of this document to see an example of using tokens when emailing your automated reports.**

Exercise 7 – Grouping worksheets

In this exercise, we will learn how to use automation 'control' sheets to group worksheets into separate workbooks.

Continue with the P&L (Income) Statement and automation 'control' sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

In column A, arrange your values into a logical order for them to be grouped.

In the example below, we intend to group our consolidated and parent subsidiary reports into one workbook and group our child subsidiary reports into a separate workbook.
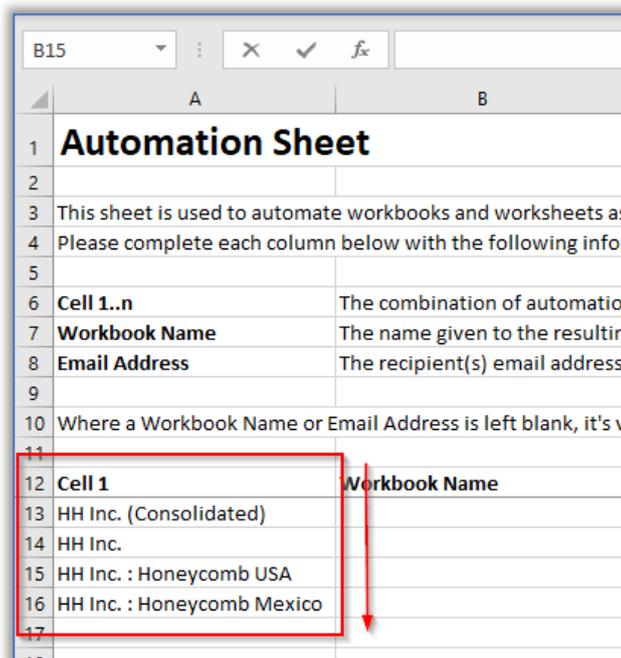
Step 2:

In column B, enter some names for your generated workbooks. (E.g. 'Consolidated' for the consolidated and parent subsidiary reports and 'Americas' for the USA and Mexico subsidiaries).

Step 3:

On the Solution 7 ribbon, click **Save Sheet(s)**.

Step 4:

With 'Sheet1' highlighted, select *Copy Sheet Per Automation Row*.

Click OK to run Automation and create your reports.
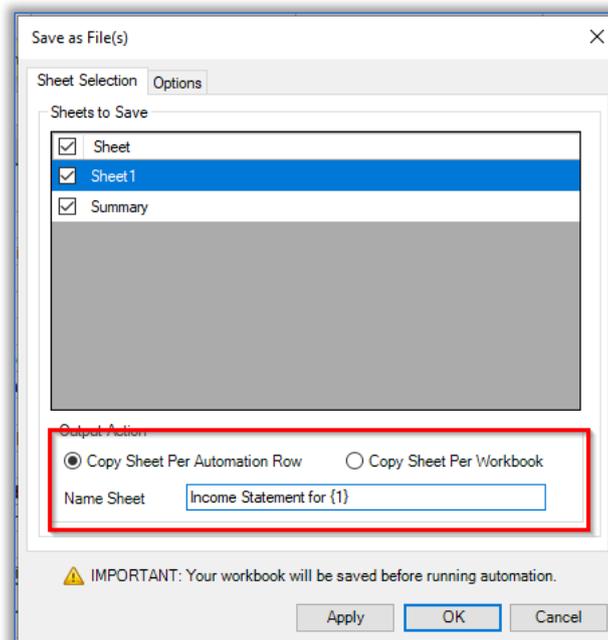
Step 5:

Go to **File** > **Open** and open both of your newly generated workbooks 'Americas.xlsx' and 'Consolidated.xlsx'.

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Excel Financial Reporting

Both workbooks contain two reports on separate worksheets - the USA and Mexico subsidiary reports in the 'Americas' workbook and the consolidated subsidiary reports in the 'Consolidated' workbook.

Exercise 8 – Using file paths

In the previous exercises, we learned how to save our automated reports to the current folder by entering a simple name in column B. In this exercise, we will use the same automation 'control' sheet from Exercise 7 and learn how to save our report directly to an alternative folder using a file path.

Continue with the P&L (Income) Statement and automation 'control' sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

Click on cell B13.

Go to the formula bar and enter a file path preceding the workbook name.
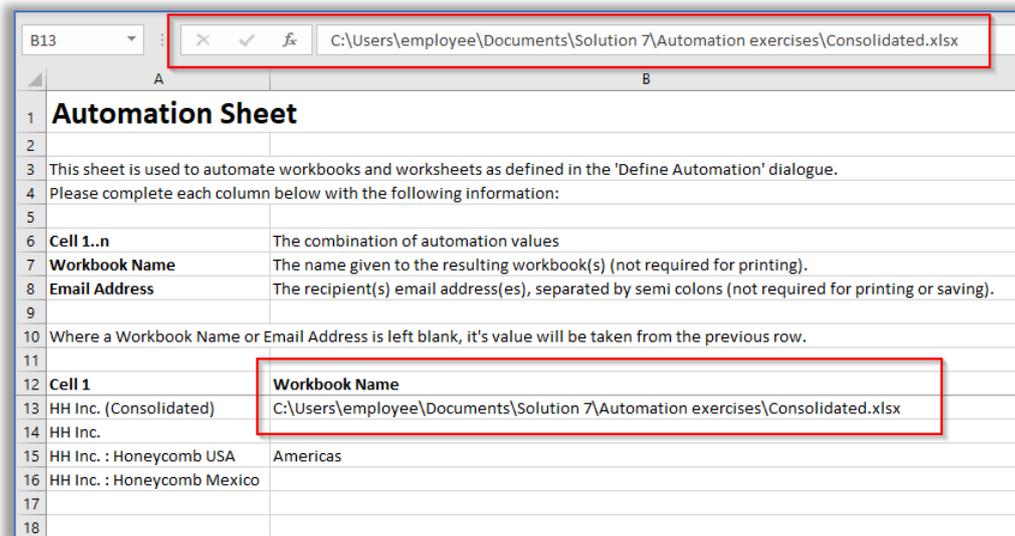
Step 2:

End the file path with '.xlsx'. This will save your worksheets as Excel files in the folder specified.

Step 3:

Repeat steps 1-2 for your other workbook names. (I.e.'Americas').

Step 4:

From the Solution 7 ribbon, click **Save Sheet(s)**.

Step 5:

With 'Sheet1' highlighted, select *Copy Sheet Per Automation Row*.

Click OK to run Automation. Your reports will be saved to the file paths specified in column B.

Step 6:

Go to **File** > **Open** and open your automated reports.

Exercise 9 – Generating PDFs

As well as saving your automated reports as Excel workbooks, you can use Automation to quickly and easily generate your reports as PDFs (Portable Document Format). This allows the document to be viewed as a PDF file and prevent the reports from being edited.

Continue with the automation sheet from the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

In column B, specify a '.pdf' extension for your workbook name. See the example below: 'C:\Users\employee\Documents\Solution 7\Automation exercises\Consolidated.**pdf**'

Step 2:

From the Solution 7 ribbon, click **Save Sheet(s)**.

Step 3:

With 'Sheet1' highlighted, select *Copy Sheet Per Automation Row.*

Click OK to run Automation and generate your reports as PDF documents.

Step 4:

Go to **File** > **Open** to open your new PDF report templates.

> You may need to provide additional formatting and page layout options in your Excel document for your reports to format correctly in a PDF. These options are beyond the scope of this document.

Exercise 10 – Emailing reports

In this exercise, we will learn how to use Automation to email reports to recipients.

Continue with the P&L (Income) Statement and automation 'control' sheet built in the previous exercise and with Solution 7 activated, follow these steps:-

Step 1:

In cell C13, under **Email Address**, enter your email address. In the below example, all the workbooks will be sent to one recipient (you).

| C13			fx	Budget.Holder@solution7.co.uk		
	A		B		C	D
1	**Automation Sheet**					
2						
3	This sheet is used to automate workbooks and worksheets as defined in the 'Define Automation' dialogue.					
4	Please complete each column below with the following information:					
5						
6	Cell 1..n		The combination of automation values			
7	**Workbook Name**		The name given to the resulting workbook(s) (not required for printing).			
8	**Email Address**		The recipient(s) email address(es), separated by semi colons (not required for printing or saving).			
9						
10	Where a Workbook Name or Email Address is left blank, it's value will be taken from the previous row.					
11						
12	Cell 1		Workbook Name		Email Address	Token 1
13	HH Inc. (Consolidated)		C:\Users\evie.rourke\Documents\Solution 7\Automation exercises\Consolidated		Budget.Holder@solution7.co.uk	Consolidated
14	HH Inc.					HH Inc.
15	HH Inc. : Honeycomb USA		C:\Users\evie.rourke\Documents\Solution 7\Automation exercises\Americas			USA
16	HH Inc. : Honeycomb Mexico					Mexico
17						
18						

Step 2:

On the Solution 7 ribbon, click **Email Sheet(s)**.

Step 3:

Make sure the settings are retained from the previous exercise.
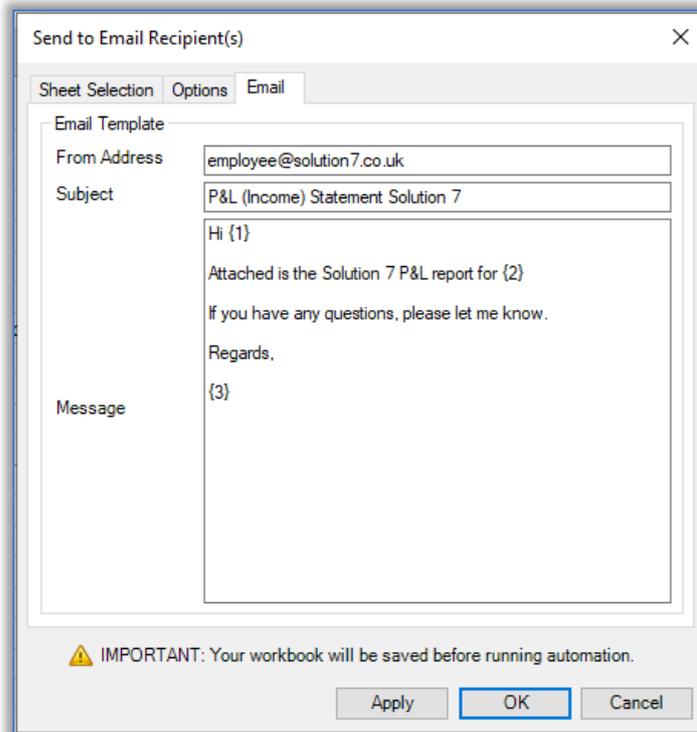
Select the **Email** tab.
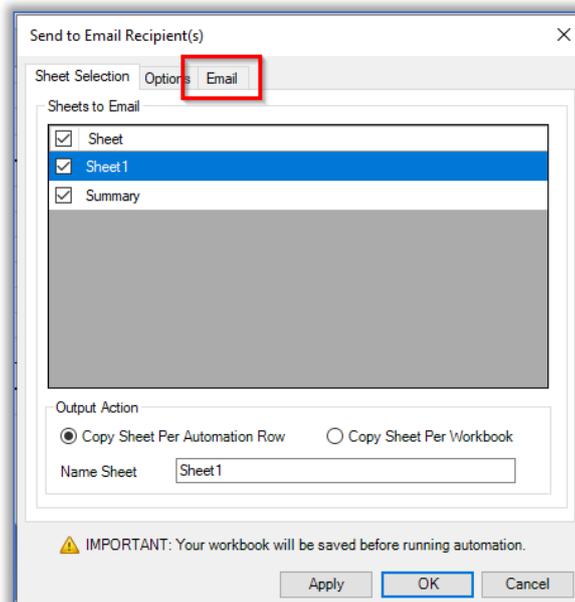
Step 4:

Make sure the *From Address* is set as your own email address.

In the *Subject* box, enter 'P&L (Income) Statement Solution 7'.
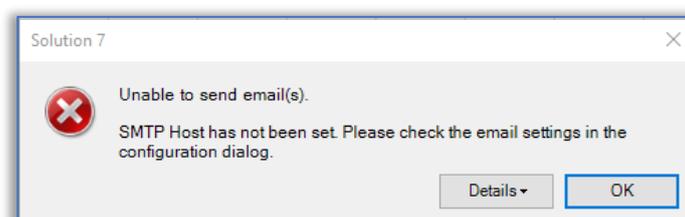
Enter an email message.

Send to Email Recipient(s)

Sheet Selection | Options | Email

Email Template

From Address: employee@solution7.co.uk

Subject: P&L (Income) Statement Solution 7

Message:

Hi {1}

Attached is the Solution 7 P&L report for {2}

If you have any questions, please let me know.

Regards,

{3}

⚠ IMPORTANT: Your workbook will be saved before running automation.

Apply | OK | Cancel

Step 5:

Click OK to run automation and send your generated reports to the email address(es) specified in the automation 'control' sheet.

> **Email addresses can be grouped in the automation 'control' sheet in a similar way to how we grouped the worksheets in Exercise 7: Grouping Worksheets.**
>
> **Enter one email address to send all reports to a single recipient, enter one email address per automation row to send each report to a single recipient, or enter multiple email addresses separated by semi-colons to send to each report to multiple recipients.**

Unable to send email(s) error

If you see this error message, you need to configure your email settings to your Solution 7 instance. To do this, please see the **Configuration Guide** or contact support@solution7.co.uk.

Solution 7

❌ Unable to send email(s).
SMTP Host has not been set. Please check the email settings in the configuration dialog.

Details ▾ | OK

Lesson Summary

In this lesson, we have learned how to produce and use Solution 7's Automation features to easily generate and distribute multiple reports from a single template. To understand the basic concepts of Automation, we initially learned how to automate a single cell then multiple cells in a blank workbook. We then applied that knowledge to automate an existing report template and generate multiple reports across your various NetSuite segments.

When running Automation, we have seen how using the formula options we can retain, lock or remove formulas in a report and give additional control over what the end user will receive. Furthermore, we have seen how we can incorporate a summary sheet into our generated workbooks to help drive your reports. We have investigated how we can further control our output by using tokens to improve sheet names, group reports into separate documents and specify output folders by providing file paths.

Finally, we learned how to generate our reports as PDFs and distribute them automatically to email recipients.

If you require any further assistance building or automating a report in Solution 7, please contact support@solution7.co.uk