

# Measure the Performance of SAP IBP Actions

One advantage of using custom VBA code is that several steps can be combined. Within one button, different simulation runs can be triggered, and data changes can be made and saved. This can be useful in different ways. This example builds upon the sample documents that we provided with release 2202 including further measurements.

## HOW TO START

In our example, we explain how you could set up an upgrade test to measure the performance of different actions in the SAP IBP, add-in for Microsoft Excel (Excel add-in). You can also use the test to make sure that those steps are still working after an upgrade of your SAP IBP system.

In the respective .xlsm file for this use case, there is only one worksheet with the upgrade test overview where the performance measurements are collected, as you see in the screenshot below. Different from the sample documents we provided with release 2202, we are opening a specific planning view favorite by using VBA code. Therefore, no second worksheet with an included planning view is needed.

Run Upgrade Test				Reset Status			
Test Step		Time Elapsed (sec)					
Open Favorite							
Refresh							
Simulate							
Run Forecast in Simulation							
Save Data							
Open Master Data Favorite							
Save Changes							

The upgrade test we implemented in this example includes the following steps:

1. Open a planning view favorite.  
Call `IBPAutomationObject.OpenFavorite("My favorite")`
2. Refresh of the planning view.  
Call `IBPAutomationObject.Refresh`
3. Change a cell in the planning view.  
`ActiveSheet.Range("K7").Value = 100`
4. Run **Simulate Basic**.  
Call `IBPAutomationObject.Simulate`

5. Run a statistical forecast operator in simulation mode.  
Call `IBPAutomationObject.Simulate ("My forecast model", "IBPFORECAST")`
6. Save data.  
Call `IBPAutomationObject.SaveData (True)`
7. Open a master data favorite.  
Call `IBPAutomationObject.OpenMasterDataFavorite("My favorite")`
8. Change a cell in the master data worksheet.  
`ActiveSheet.Range("D3").Value = "Test Entry"`
9. Save master data changes.  
Call `IBPAutomationObject.SaveMasterDataSheet(True, True)`

For further information about the used APIs, please see [SAP IBP APIs](#) on the SAP Help Portal.

Additional comments:

- Instead of “My favorite” you need to pass the name of the planning view favorite, or rather the name of the master data favorite you want to open (see [OpenFavorite](#) and [OpenMasterDataFavorite](#) on the SAP Help Portal).
- “My forecast model” is a placeholder for the ID, name, or description of the statistical forecast operator that you want to simulate. You can also pass different operator types apart from the statistical forecast operator “IBPFORECAST” (see [Simulate](#) on the SAP Help Portal).
- When using the API `SaveData` you can suppress the dialog for reason codes, comments, and sharing, so as not to interrupt the performance measurements, by setting the parameter for `suppressReasonCodeCommentDialog` to “True” (see [SaveData](#) on the SAP Help Portal).
- Similarly, when using the API `SaveMasterDataSheet`, you can set the parameter `suppressCommentDialog` and `suppressResultOverviewDialog` to “True”. This way, the dialog for comments and sharing, and the dialog containing the summary of changes is suppressed (see [SaveMasterDataSheet](#) on the SAP Help Portal).

To measure the performance of the different steps, the start and end time is collected, and the difference is added to the specific cells in the upgrade test worksheet, as shown below.

```
StartTime = Timer
Call IBPAutomationObject.Refresh
SecondsElapsed = Timer - StartTime
tester.Range("E8").Interior.ColorIndex = 35
tester.Range("E8").Value = SecondsElapsed
```

The whole code looks like the following, and is part of the worksheet “Testing”:

```
Private IBPAutomationObject As Object

Private Sub RunUpgradeTest_Click()

    Dim StartTime As Double
    Dim SecondsElapsed As Double
    Dim tester As Worksheet

    ResetStatus_Click

    On Error GoTo ErrorHandler:
        If IBPAutomationObject Is Nothing Then Set IBPAutomationObject =
            Application.COMAddIns("IBPXLClient.Connect").Object
        Set tester = ActiveSheet
```

```

'Open Favorite
StartTime = Timer
Call IBPAutomationObject.OpenFavorite("My favorite")
SecondsElapsed = Timer - StartTime
tester.Range("E8").Interior.ColorIndex = 35
tester.Range("E8").Value = SecondsElapsed

'Refresh
StartTime = Timer
Call IBPAutomationObject.Refresh
SecondsElapsed = Timer - StartTime
tester.Range("E9").Interior.ColorIndex = 35
tester.Range("E9").Value = SecondsElapsed

'Change cell and simulate
ActiveSheet.Range("K7").Value = 100
StartTime = Timer
Call IBPAutomationObject.Simulate
SecondsElapsed = Timer - StartTime
tester.Range("E10").Interior.ColorIndex = 35
tester.Range("E10").Value = SecondsElapsed

'Run simulation for forecast model xyz
StartTime = Timer
Call IBPAutomationObject.Simulate ("My forecast model", "IBPFORECAST")
SecondsElapsed = Timer - StartTime
tester.Range("E11").Interior.ColorIndex = 35
tester.Range("E11").Value = SecondsElapsed

'Save data
StartTime = Timer
Call IBPAutomationObject.SaveData(True)
SecondsElapsed = Timer - StartTime
tester.Range("E12").Interior.ColorIndex = 35
tester.Range("E12").Value = SecondsElapsed

'Open Master Data Favorite
StartTime = Timer
Call IBPAutomationObject.OpenMasterDataFavorite("My favorite")
SecondsElapsed = Timer - StartTime
tester.Range("E13").Interior.ColorIndex = 35
tester.Range("E13").Value = SecondsElapsed

'Change a cell and save
ActiveSheet.Range("D3").Value = "Test Entry"
StartTime = Timer
Call IBPAutomationObject.SaveMasterDataSheet(True, True)
SecondsElapsed = Timer - StartTime
tester.Range("E14").Interior.ColorIndex = 35
tester.Range("E14").Value = SecondsElapsed

'show the upgrade test worksheet
tester.Activate

Exit Sub

```

*ErrorHandling:*

*'Implement error handling to help the user to understand what went wrong  
MsgBox Err.Description, vbOKOnly, "Microsoft Excel: Custom VBA code"*

End Sub

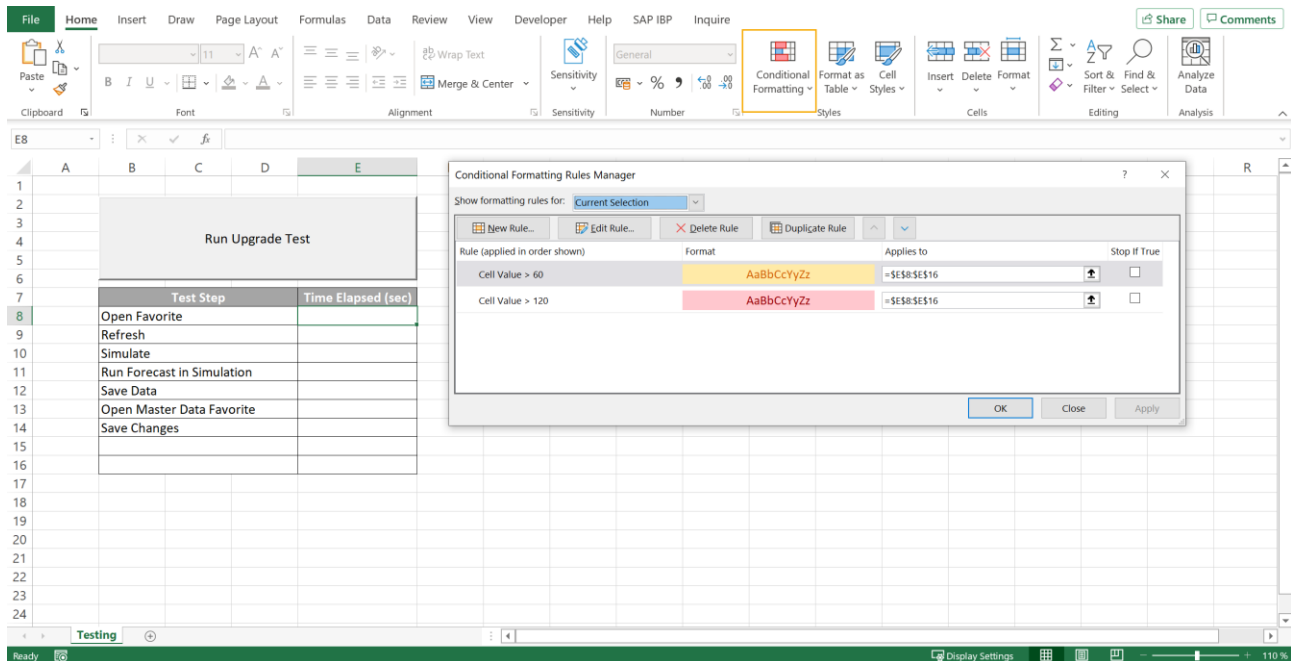
The ResetStatus\_Click is just cleaning the last results:

```
Private Sub ResetStatus_Click()  
    Range("B8:E16").Interior.ColorIndex = 0  
    Range("E8:G16").Value = ""  
End Sub
```

Feel free to adjust and include the steps that you want to test for your use case. You can run further operators in simulation mode, or open further favorites which need to be tested. Please keep in mind that the VBA code will have the same effect as clicking the respective buttons in the **SAP IBP** ribbon. If an error message comes up, the user interaction will be measured as well.

Please note: Code lines which already have been explained in the tutorial for use cases provided with release 2202 are not explained in detail again, so please check those as well.

In our sample xlsx file, we defined conditional formatting rules for the elapsed time. Feel free to adjust it to your needs.



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