

Outlook's slow add-ins resiliency logic and how to always enable slow add-ins



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Overview

This post explains how to deploy registry settings that would force Outlook to always load a specific add-in.

The information in this post only applies to slow (VSTO) add-ins in Outlook 2013 or higher. If Outlook disables your add-in to prevent a crash, this blog post isn't for you.

Disclaimer

Outlook natively allows add-ins to be enabled one at a time. That's the only official supported way to enable slow add-ins!

This blog post is a best effort to allow users to automate the process at a large scale. This doesn't mean Microsoft CSS is obligated in any way to support this, it's simply a best effort.

Requirements

Outlook 2013 or 2016.

How it works

Outlook 2013 and 2016's resiliency logic is triggered when one of the criteria enumerated in the Performance criteria for keeping add-ins enabled section of the [New in Outlook for developers](#) MSDN article.

Outlook's resiliency logic was introduced with Outlook 2013 and it builds on the foundation set by the resiliency logic in Outlook 2010. As opposed to 2010, Outlook 2013 allows controlling how slow add-ins are handled, giving the users the option to go with the default logic and disable add-ins that take longer than 1 second to load or unload for example, or choose to always enable a certain add-in.

This logic only applies to VSTO add-ins, it doesn't touch COM add-ins. This is why you'll see that add-ins such as the Microsoft Exchange add-in or the Skype for Business add-in are never disabled. Only VSTO add-ins are touched.

One other aspect to note is that if a VSTO add-in requires a module that is not loaded in Outlook's memory, the first add-in to require that module will incur a "penalty" for each additional module that is loaded. This will apply for all add-ins if a required module is not present, the load time of each module that is required will be added to the load time of the add-in.

In addition to modules, the first add-in to load will incur a penalty for loading the .Net Framework.

In conclusion:

1. The first add-in to be loaded will have a load time equal to: `LOAD_NECESSARY_MODULES + LOAD_.NET_FRAMEWORK + LOAD_VSTO_RUNTIME + RUN_ADDIN_STARTUP_CODE`
2. All future add-ins to be loaded will have a load time equal to: `LOAD_NECESSARY_MODULES + RUN_ADDIN_STARTUP_CODE`.

Detailed Steps

REGISTRY

To work around the resiliency logic, one can use a simple .reg file and add the add-in to the trusted addins list or a Group Policy Object to deploy the same values that would be generated locally to all the users in the domain:

1. Add a **dword** entry called **ADDIN_NAME** with a value data of **1** under **HKEY_CURRENT_USER\SOFTWARE\Policies\Microsoft\Office\1x.0\Outlook\Resiliency\AddinList**
2. Set the **LoadBehavior** (US English spelling!) **dword** value to **3** under **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\Outlook\Addins\AD**

DIN_NAME

3. **Delete** the **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DisabledItems** key
4. Re-create the **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DisabledItems** key
5. **Delete** the **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\CrashingAddinList** key
6. Re-create the **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\CrashingAddinList** key
7. Add a **dword** entry called **ADDIN_NAME** with a value of **1** under **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DoNotDisableAddinList**
8. Add a **dword** entry called **ADDIN_NAME\dtype** with a value of **0** under **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\NotificationReminderAddinData**
9. Add a **dword** entry called **ADDIN_NAME** with a value of **967a844d** hexadecimal or 2524611661 decimal under **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\NotificationReminderAddinData**

Where:

- *ADDIN_NAME* is the name of the add-in as found under **HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\Outlook\Addins**
- *1x.0* is the office version, for example 15.0 for Office 2013 and 16.0 for Office 2016

Here is a REG file example:

```
Windows Registry Editor Version 5.00
```

```
[HKEY_CURRENT_USER\Software\Policies\Microsoft\Office\1x.0\Outlook\Resiliency\AddinList]
```

```
"ADDIN_NAME"=dword:00000001
```

```
[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\Outlook\Addins\ADDIN_NAME]
```

```
"LoadBehavior"=dword:00000003
```

```
[-HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DisabledItems]
```

```
[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DisabledItems]
```

```
[ -HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\CrashingAddinList]

[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\CrashingAddinList]

[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\DoNotDisableAddinList]

"ADDIN_NAME"=dword:00000001

[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\NotificationReminderAddinData]

"ADDIN_NAME\dtype"=dword:00000000

[HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\1x.0\Outlook\Resiliency\NotificationReminderAddinData]

"ADDIN_NAME"=dword:967a844d
```

GPO (Group Policy Object)

As far as group policy objects go, please find below the procedure:

1. Open the **Group Policy Management** console on a domain controller
2. Navigate to the domain node, right click it and select **Create a GPO in this domain, and Link it here**
3. Give the GPO the desired name
4. Right click the newly created GPO and click on **Edit**
5. In the **Group Policy Management Editor**, expand **Preferences** under **User Configuration**
6. Afterwards expand **Windows Settings**
7. Right click **Registry** and create the following 9 entries:

Name	Order	Action	Hive	KeyValue
ADDIN_NAME	1	Create	HKEY_CURRENT_USER	SOFTWARE\Policies\Microsoft\Office\1x.
LoadBehavior	2	Update	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\Outlook\Addi
DisabledItems	3	Delete	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook
DisabledItems	4	Create	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook
CrashingAddinList	5	Delete	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook

CrashingAddinList	6	Create	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook
ADDIN_NAME	7	Create	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook
ADDIN_NAME	8	Create	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook
ADDIN_NAME	9	Create	HKEY_CURRENT_USER	SOFTWARE\Microsoft\Office\1x.0\Outlook

POWERSHELL SCRIPT

Please find below a PowerShell script sample that sets the above registry settings. Please save the script block as Enable-AddIn.ps1.

The syntax to run the script is **Enable-AddIn.ps1 -AddinName ADDIN_NAME**, where add-in name is the name of the add-in to always enable. The script will run once and set a registry value as a checkpoint. To force it to run again you can use the **-Force** parameter.

For example:

- **Enable-AddIn.ps1 -AddinName MyAddIn** to run the script once and always enable MyAddIn
- **Enable-AddIn.ps1 -AddinName MyAddIn -Force** to always run the script and enable MyAddIn

For more information on how to configure a script via GPO, please check the following article: [Assign User Logon Scripts](#)

```
param(
    [Parameter(Mandatory=$true)]
    [string]$AddinName,
    [Parameter(Mandatory=$false)]
    [switch]$Force
)

$AddinList = $null
$CrashingAddinList = $null
$DoNotDisableAddinList = $null

function Get-Key
(
    [string]$ParentKey,
    [string]$KeyName)
```

```

{
    for ($i = 0; $i -lt $KeyName.Split("\").Count; $i++)
    {
        try
        {
            $Key = get-item -Path ("{0}:\{1}" -f $ParentKey,($KeyName.split("\")[0.
.$i] -join "\"))
        }
        catch
        {
            $Key = new-item -Path ("{0}:\{1}" -f $ParentKey,($KeyName.split("\")[0.
.$i] -join "\"))
        }
    }
    return $Key
}

$errorActionPreference = [System.Management.Automation.ActionPreference]::Stop
$OutlookVersion = (Get-ItemProperty HKLM:\SOFTWARE\Classes\Outlook.Application\Cur
Ver)."(default)".Replace("Outlook.Application.", "")

if ($Force)
{
    $checkPoint = $null
}
else
{
    try
    {
        $CheckPoint = (Get-Item "HKCU:\Software\Microsoft\Office\$OutlookVersion.0
\Outlook\Resiliency" | Get-ItemProperty)."CheckPoint" -eq 1
    }
    catch
    {
        $checkPoint = $false
    }
}
}

```

```

if (-not $checkPoint)
{
    Get-Key -ParentKey HKCU -KeyName "Software\Policies\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\AddinList" | Set-ItemProperty -Name $AddinName -Value 1

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\DoNotDisableAddinList" | Set-ItemProperty -Name $AddinName -Value 1

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\DisabledItems" | Remove-Item

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\DisabledItems" | Out-Null

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\CrashingAddinList" | Remove-Item

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\CrashingAddinList" | Out-Null

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\NotificationReminderAddinData" | Set-ItemProperty -Name ([string]::Format("{0}\dtype",$AddinName)) -Value 2

    Get-Key -ParentKey HKCU -KeyName "Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency\NotificationReminderAddinData" | Set-ItemProperty -Name $AddinName -Value 2524611661

    Get-Item "HKCU:\Software\Microsoft\Office\${OutlookVersion.0}\Outlook\Resiliency" | Set-ItemProperty -Name "CheckPoint" -Value 1
}

```

Notes

Please follow the instructions carefully and for best results use the PowerShell script above.

References

[New in Outlook for developers](#)

[Assign User Logon Scripts](#)

Assign User Logon Scripts

Change Log

Date	Author	Type	Description
2017-08-02	Andrei Ghita	Original	

2017-10-31	Andrei Ghita	Update	Corrected the registry entries.
2017-11-27	Andrei Ghita	Update	Added additional entries to account for crashing add-ins.
2018-12-10	Natercia Gomes	Update	Added additional entries for Outlook 2016.

Tags [2013](#) [2016](#) [add-in](#) [always](#) [DevMsgTeam](#) [enable](#) [Outlook](#) [registry](#) [resiliency](#) [slow](#)