



Microsoft Windows 7 for Embedded Systems (FES)
Extended Security Update (ESU) Program
Deployment Guide

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DISCLAIMER - PLEASE READ!

EFI is providing this document “as is” to help inform you about the general ESU deployment process and to help you plan and prepare. Information provided in this document, including URL and other Internet Web site references, may change without notice.

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Introduction to Extended Security Updates (ESU)

What is the Microsoft ESU program?

Microsoft developed the ESU program to provide up to three years of security updates for Windows 7 for Embedded Systems (FES) that have reached the end of their Microsoft 10-year mainstream and extended support periods.

Microsoft ESU Program	Product support end date
Windows 7 for Embedded Systems (FES)	January 14, 2020

Deployment Overview

There are three pre-requisites that must be installed on the device prior to installing ESU Security Updates:

- 1 ESU Licensing Update - Expands the key range of the original product key so that the ESU key can be installed on a device.

Detailed instructions can be found on Microsoft Knowledge Base Article [KB4519972](#):

<https://support.microsoft.com/en-us/help/4519972/windows-7-update-kb4519972>

- 2 ESU Key - A preactivated key that allows a device to receive ESU Security Updates.

A new key must be installed each year. No activation is required.

- 3 ESU Servicing Stack Update (SSU) - A special update that enables a device to receive ESU Security Updates.

Detailed instructions can be found on Microsoft Knowledge Base Article [KB4531786](#):

<https://support.microsoft.com/en-us/help/4531786/servicing-stack-update-for-windows-7-sp1-and-server-2008-r2-sp1>

Once these items are installed, the devices will be ready for ESU Security Updates as they become available.

The first ESU Security Update for Windows 7 FES is scheduled for February 11, 2020. Security updates typically occur on the second Tuesday of each month. Microsoft may release an out of band update for security issues under active attack.

Important notes:

- The KB numbers mentioned above may change. You should look for the 10C release of the monthly preview Rollup (e.g. 2019-10 Preview of Monthly Quality Rollup for Windows 7).
- No online activation of the ESU Key will be required.
- The ESU Licensing Update must be installed before installing the ESU Key.
- The ESU Key will only work on Windows 7 for Embedded Systems (FES).
- The ESU Key is an add-on key and will not affect the current OS license or the activation state.

The prerequisites and updates for ESU are constructed the same way as the updates that Microsoft has historically released monthly on “patch Tuesday.” As a result, you can install the Licensing Update, ESU Servicing Stack Update (SSU), and eventually, the ESU Security Updates using the **same processes and tools you have been using to install security updates since you first installed the operating system.** In short, whatever method you have used to get updates to the device today can be used with the ESU prerequisites and ESU Security Updates. This means you can use the same tools you have been using, including your third-party tools.

For devices not connected to the Internet, Microsoft recommends that you batch the installation of the ESU Licensing Update, ESU Key, and ESU Servicing Stack Update (SSU) with your regular servicing schedule to avoid additional device downtime and servicing cost. You may, however, choose to install the Licensing Update and the ESU Key first and then subsequently install the ESU Servicing Stack Update (SSU) at a later date. All three must be installed before you can install the ESU Security Updates.

You will need to plan for some downtime for the installation of these pre-requisites. The Licensing Update is in a normal monthly cumulative update. Thus, a reboot will be required. The ESU Servicing Stack Update (SSU) does not require a reboot. The amount of downtime time required will vary depending on CPU speed, disk speed, and memory in the device. But in general, installing these pre-requisites should not take any longer than you have experienced with any previous cumulative updates. The ESU Key can be installed on a running device so key installation should not require downtime.

Where to find updates

Both the pre-requisites, ESU Licensing Update and ESU Servicing Stack Update (SSU), and the subsequent monthly ESU Security Updates will be published via all standard channels including: Windows Update (WU), Windows Server Update Services (WSUS), and the Microsoft Update Catalog catalog.update.microsoft.com.

ESU Deployment and Installation

Installing the Prerequisites

As mentioned above, whether your devices are network connected (remote deployment) or offline (local deployment) you can install the ESU Licensing Update, ESU Servicing Stack Update (SSU), and eventually, the ESU Security Updates using the **same processes and tools you have been using to install security updates since you first installed the operating system**. Please see the [Appendix](#) for more details.

Install the ESU Key

Once you have installed the ESU Licensing Update, you can install the appropriate Year1/Year2/Year3 ESU licensing key. *A new key is required each year for each of the three years that you participate in ESU.*

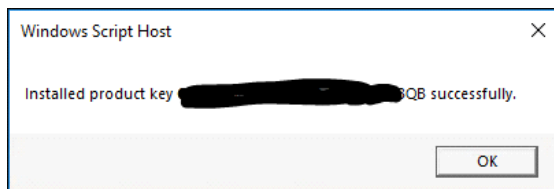
Note: The ESU Licensing Update must be installed on the device before installing the ESU Key.

Depending on your environment there are a couple of methods you can use to deploy the ESU Key. One method would be a local deployment where the key is manually inserted onto each device. Other methods include a remote deployment using the Microsoft VAMT tool or using a custom script that gets pushed to each device. EFI expects each customer to know if any of the remote deployment methods can be used for their devices.

Local deployment

Install ESU Year 1 product key using **slmgr**:

- 1 Open **cmd** window as an Administrator.
- 2 Run “**slmgr /ipk <ESU Licensing key>**”
- 3 Verify product key installed successfully.



Key does not require activation.

Example of running slmgr within a script

Customers managing devices using custom scripts can run the following command:

```
cscript c:\windows\system32\slmgr.vbs /ipk <Your ESU Licensing Key>
```

Example of a Powershell script

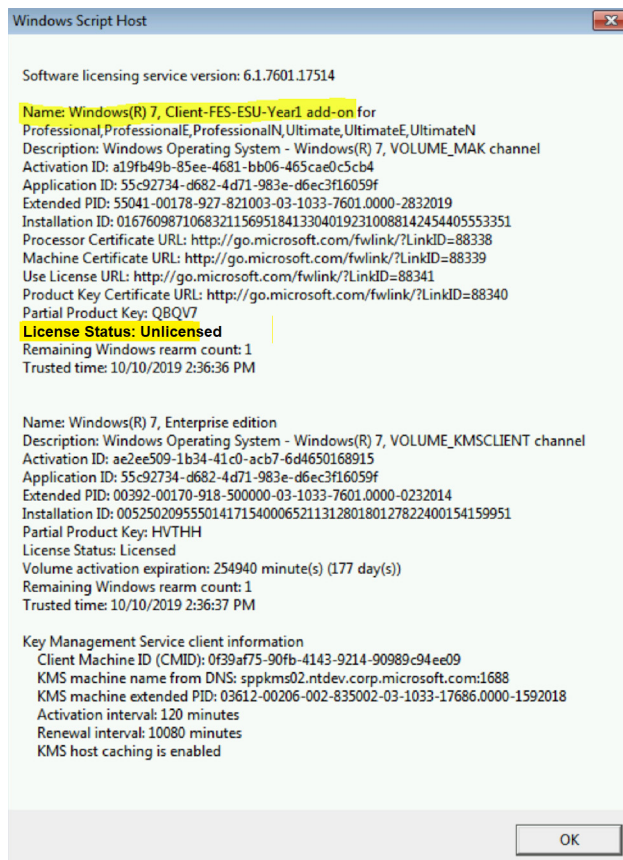
```
$productkey = "Your ESU Licensing Key"  
  
Write-Host "Installing product key $productKey..."  
  
$licensingService = Get-WmiObject -Query 'SELECT * FROM SoftwareLicensingService'  
  
$licensingService.InstallProductKey($productKey)  
  
$licensingService.RefreshLicenseStatus()
```

Install the ESU Security Updates

Install the ESU Security Update packages the same way you install security updates today. Please see the [Appendix](#) for more details.

Troubleshooting

- 1 Verify licensing status of the ESU SKU.
 - a Open cmd prompt.
 - b Run “**slmgr /dlv**”.
 - c Correctly installed keys will produce a resulting output indicating '[*PRODUCT Type*]-ESU-Year*X* add-on for [*EDITION*]'
 - d A License Status of Unlicensed is normal and does not indicate a problem.



- 2 Verify correct installation of the ESU Servicing Stack Update (SSU):
 - a Open cmd prompt.
 - b Run “**wmic qfe**”.
 - c ESU Servicing Stack Update (SSU)
 - **KB4531786** or later for Windows 7 For Embedded Systems

3 Validating Windows 7 system can get Extended Security Updates from Microsoft

This optional non-security update will help you verify that your eligible Windows 7 Service Pack 1 (SP1) devices can continue to get Extended Security Updates (ESUs) after the end of support date of January 14, 2020.

Notes:

- This update has no actual security content. This update is a test package Microsoft recommend that you deploy in your test environment. Install this update on your devices that are eligible for ESU.
- This update can be installed on x86 and x64-based architecture for Windows 7 SP1
- Installing this update has no impact on getting security updates after January 14, 2020.

For more information, visit <https://support.microsoft.com/en-us/help/4528069/update-for-eligible-windows-7-and-server-2008-r2-devices-can-get-esu>

Appendix

Installing prerequisites and ESU Security Updates

There are several ways to install these updates and the method you use should be consistent with the process that you use to install updates today. Each item might have an associated KB. The method you currently use may include one of the following:

- Volume Activation Management Tool (VAMT)
- System Center Configuration Manager (SCCM)
- Windows Server Update Services (WSUS)
- Windows Update (WU)
- Manually using scripts
- 3rd party tools (that you currently use for installing updates)

Important notes:

The ESU Licensing Update must be installed first. Do not install the ESU Key before installing the Licensing update!

Access to Microsoft resources for replacement of Security Updates will be terminated following the end of the term specified. If the files downloaded while enrolled in Extended Security Update Program are lost, damaged or otherwise rendered unusable after the term of enrollment has expired, re-enrollment is required to regain access.

EFI strongly suggests performing a full system image backup after downloading and installing the latest security updates from Microsoft.