



Microsoft Windows Embedded Standard 7 (WES)  
Extended Security Update (ESU) Program  
Deployment Guide Year 2  
(October 14, 2021 to October 13, 2022)





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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 Embedded Standard 7 (WES) that have reached the end of their Microsoft 10-year mainstream and extended support periods.

Microsoft ESU Program	Product support end date
Windows Embedded Standard 7 (WES)	October 13, 2020

## Deployment Overview

The following are prerequisites that should be installed on the device prior to installing ESU Security Updates:

- a. A device that is up to date with latest updates. Although a fully up to date device is not always necessary it is difficult to determine what is needed on devices that are not updated with most recent updates.
- b. Operating System activated using a non-eval key. Devices using evaluation keys are not supported.
- c. SHA2 Update (depending on how up to date your Device is, you may not need this as it might already have been installed.): [KB4474419](#)
- d. Servicing Stack Update (SSU). [KB4490628](#)
- e. ESU Servicing Stack Update (SSU). [KB4550738](#) or later
- f. Extended Security Updates (ESU) Licensing Preparation Package. [KB4538483](#)
- g. **ESU Key (a new key must be installed each year, no activation is required). The key will be provided by your vendor.**

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

### Important notes:

- Every month you should review the prerequisites for that particular month's and install those prior to installing the latest security update(s)
- No online activation of the ESU Key will be required.
- The ESU Key will only work on Windows Embedded Standard 7 (WES).
- 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 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 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. Microsoft anticipates that the ESU SSU will also 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

All pre-requisites 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](http://catalog.update.microsoft.com).

# ESU Deployment and Installation

## 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!**

## 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.*

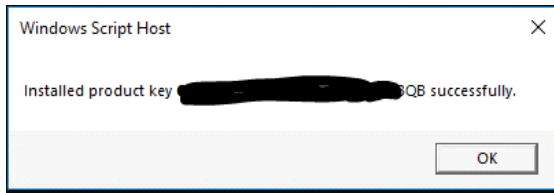
Depending on your environment there are a couple of methods you can use to deploy the ESU Key. One method would be a local deployment where the key is manually inserted onto each device. Other methods include a remote deployment using the Microsoft VAMT tool or using a custom script that gets pushed 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'
```

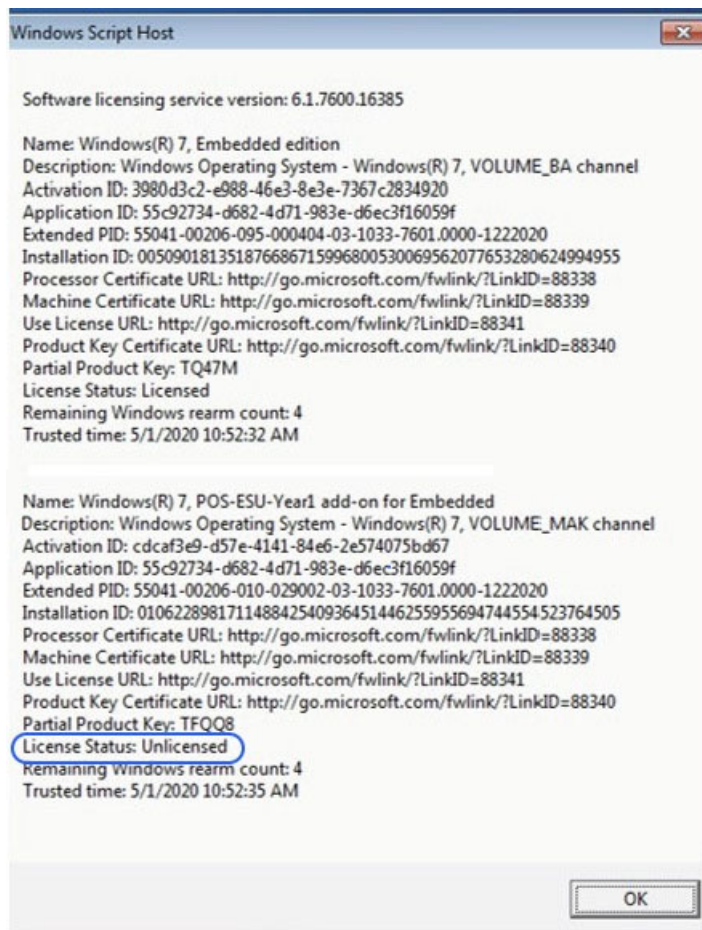
```
$licensingService.InstallProductKey($productKey)
```

```
$licensingService.RefreshLicenseStatus()
```



# Troubleshooting

- 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-YearX add-on for [*EDITION*]'
  - d A License Status of Unlicensed is normal and does not indicate a problem.



## Important notes:

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.

# Definitions/Glossary

**ESU Licensing Update** – This update expands the key range of the original product key so that the ESU Key will install on the device.

**ESU Servicing Stack Update (SSU)** – SSU allows the device to receive ESU Security Updates.