

# OCI – Windows In-Place Migration

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This document provides a step-by-step guide on performing an in-place migration of a Windows instance on Oracle Cloud Infrastructure using an OCI-Included license.

February 2025, Version 1.0  
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## 2 Procedure Overview

This migration guide demonstrates the process of upgrading an existing Windows instance in OCI through in-place migration techniques.

The focus is to ensure a smooth transition with minimum downtime and maximal compatibility with the new environment.

The final step involves reactivating the Windows License Key.

- **For BYOL instances:** Simply verify the activation status and if necessary, re-enter your product key.
- **For OCI-Provided license instances:** You must reset the activation and reapply the product key using OCI's KMS. This step is described later in this document.

## 3 Verify Current Windows Edition

Execute the following command in a PowerShell prompt:

- `Get-ComputerInfo -Property WindowsProductName`

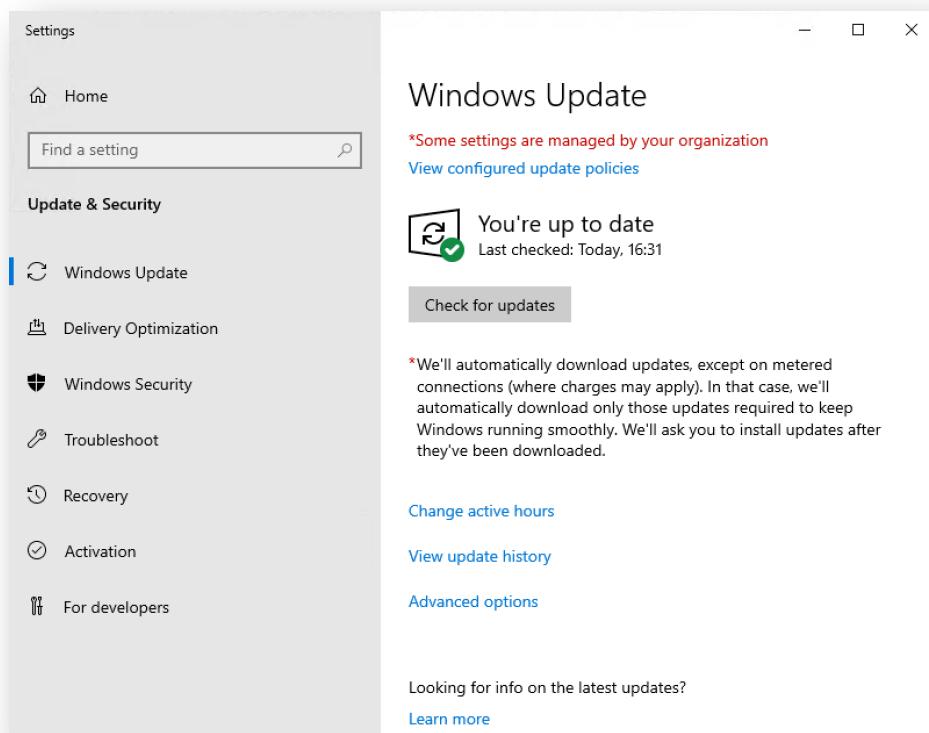


```
PS C:\Users\opc> Get-ComputerInfo -Property WindowsProductName

WindowsProductName
-----
Windows Server 2019 Standard
```

## 4 Update the Windows Instance

Apply the latest updates to your Windows instance.



## 5 Backup your instance

Create a full backup of the boot and attached block volumes.

- <https://docs.oracle.com/en-us/iaas/Content/Block/Concepts/bootvolumebackups.htm>
- <https://docs.oracle.com/en-us/iaas/Content/Block/Concepts/blockvolumebackups.htm>

## 6 Prepare Installation Media

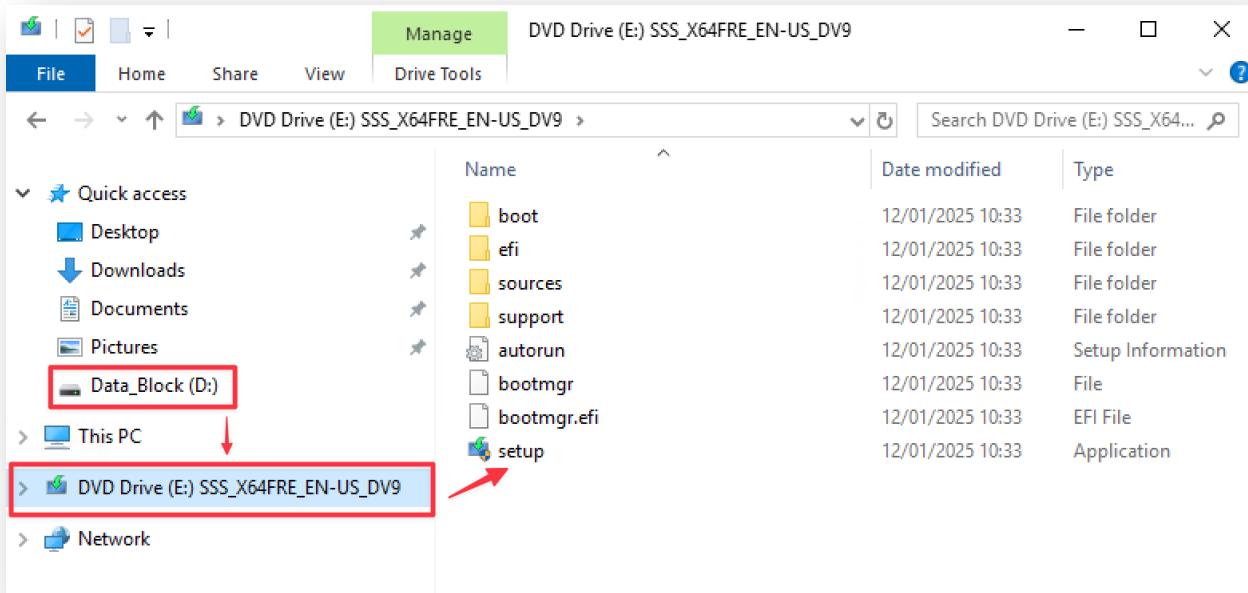
Download the proper Windows Server ISO locally.

If you don't have an attached block volume yet, it's advisable to attach one to store the installation media efficiently.

- <https://docs.oracle.com/en-us/iaas/Content/Block/Tasks/creatingavolume.htm>

## 7 Mount the ISO

Mount the ISO locally on the instance.



## 8 Initiate Setup

Run setup.exe from the mounted ISO.

If prompted for a product key, enter it.

**Note:** The product key will be removed during KMS activation.

You should be able to use a Volume Key provided by Microsoft at:

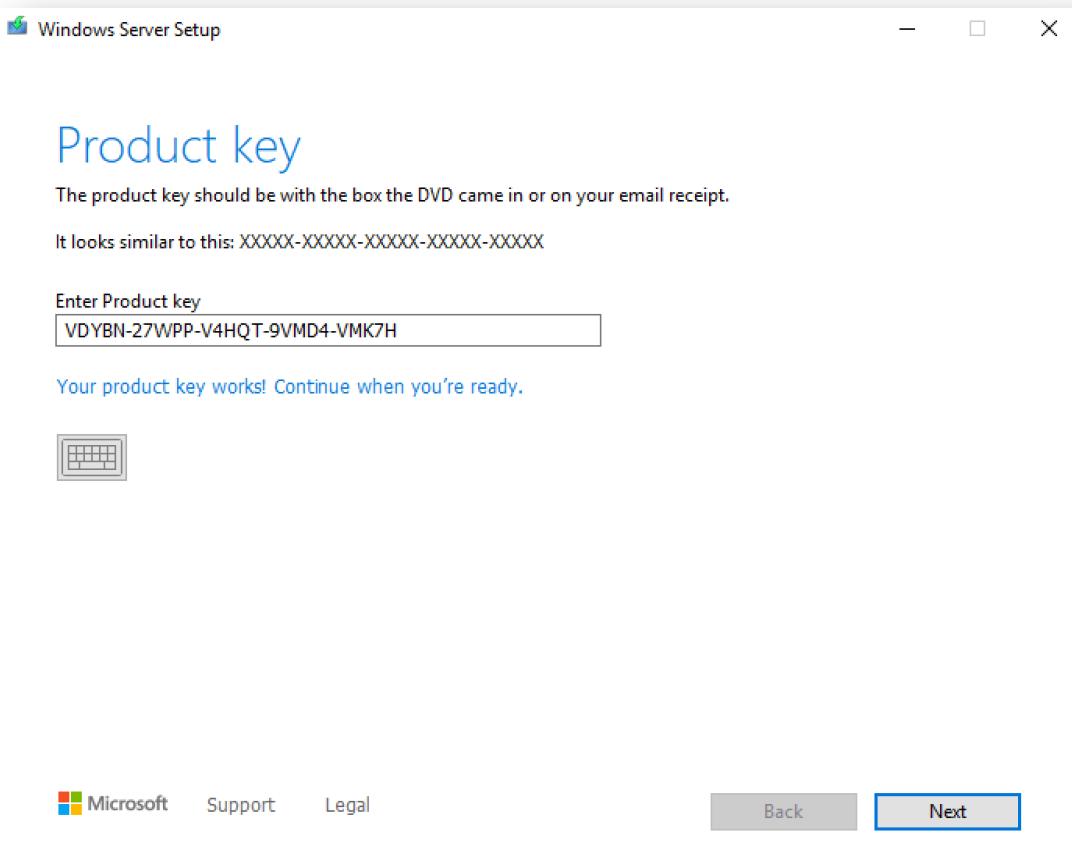
- <https://learn.microsoft.com/en-us/windows-server/get-started/kms-client-activation-keys>
- A Volume key is a product key that can be used during setup but can't be activated.

## Generic Volume License Keys

In the tables that follow, you'll find the GVLKs for each version and edition of Windows. LTSC is *Long-Term Servicing Channel*, while LTSB is *Long-Term Servicing Branch*.

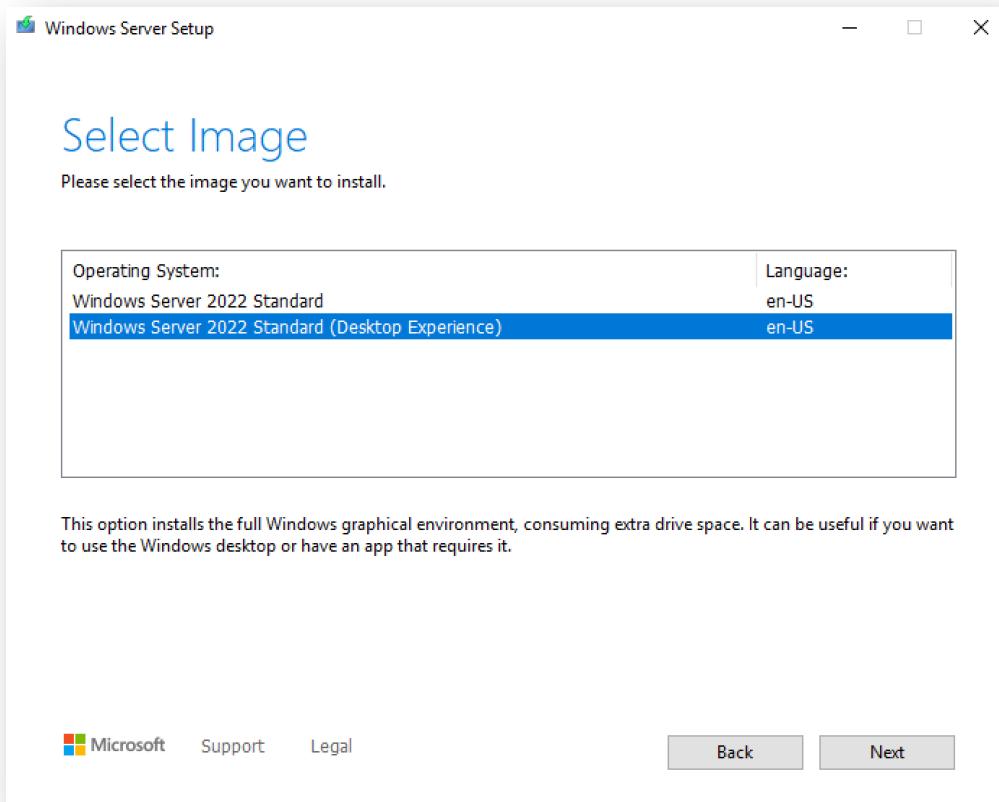
### Windows Server LTSC

Operating system edition	KMS Client Product Key
Windows Server 2022 Standard	VDYBN-27WPP-V4HQT-9VMD4-VMK7H
Windows Server 2022 Datacenter	WX4NM-KYWYW-QJJR4-XV3QB-6VM33
Windows Server 2022 Datacenter: Azure Edition	NTBV8-9K7Q8-V27C6-M2BTB-KHMXV



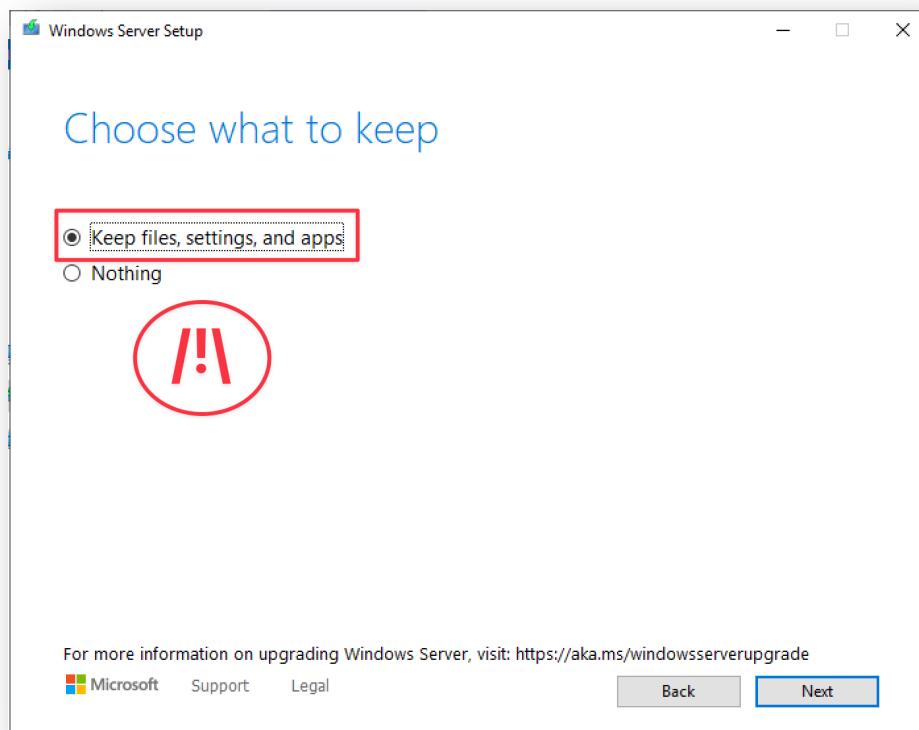
## 9 Select Windows Edition

Choose the correct image, e.g. "Windows Server 2022 Standard with Desktop Experience"



## 10 Configuration Retention

Select what to keep. **If "Keep files, settings and apps" option is greyed out, immediately abort the upgrade to prevent data loss.**

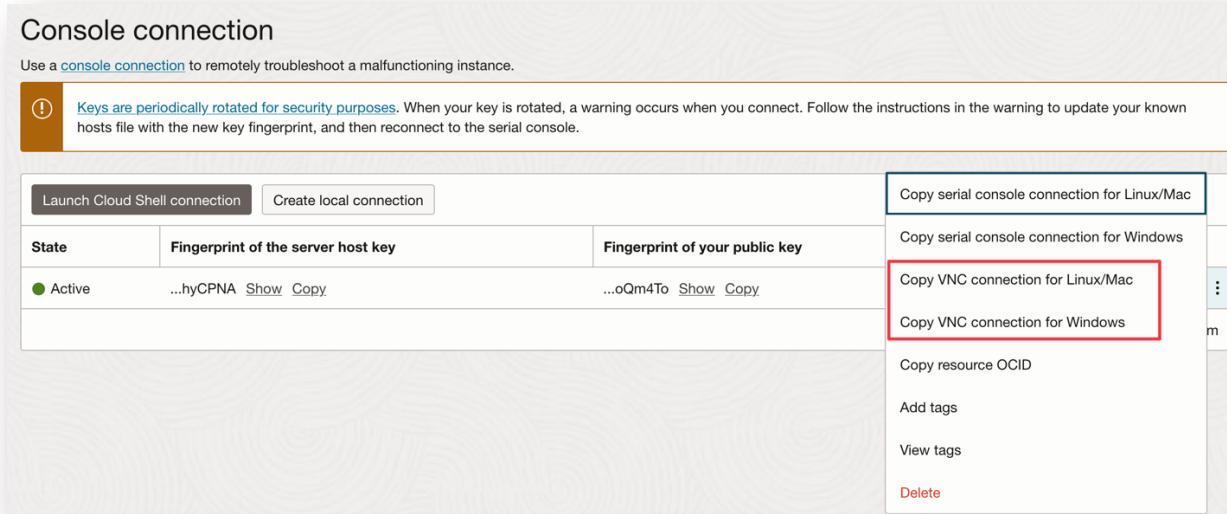


## 11 Monitor Upgrade

Before starting the upgrade, go to your OCI Console, Instance Details and **create a Console Connection**

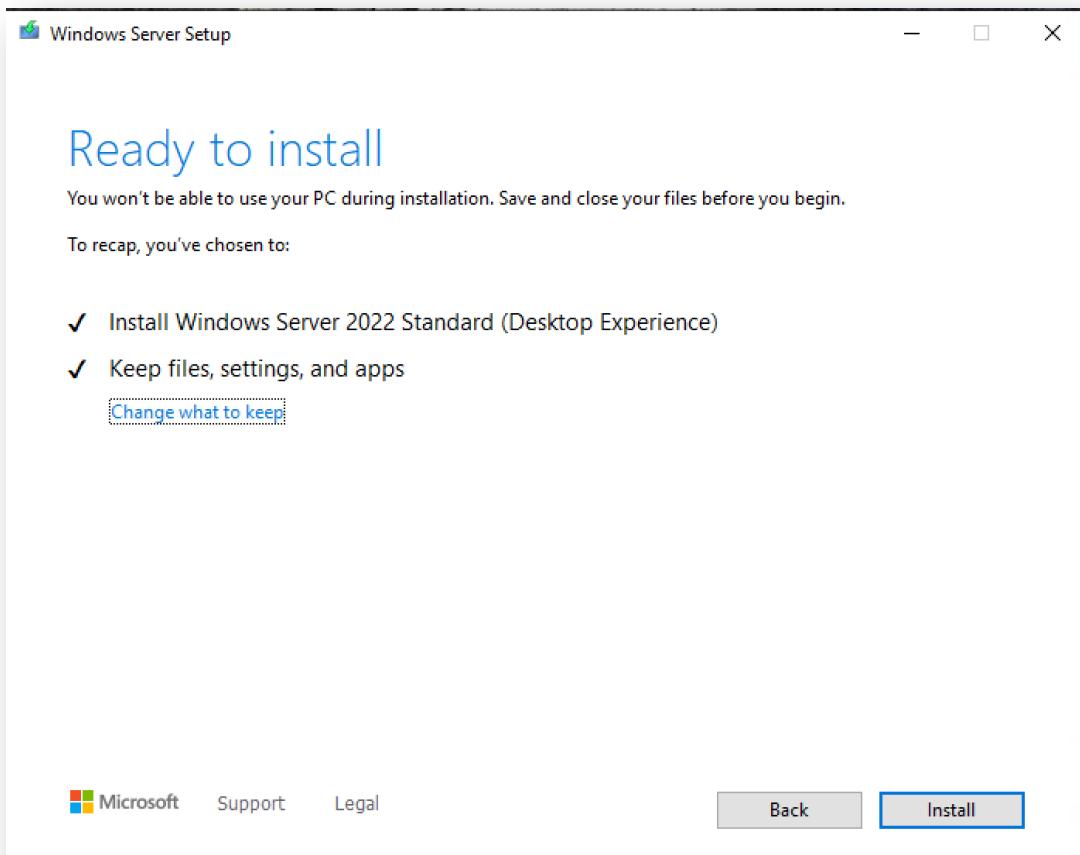
- <https://docs.oracle.com/en-us/iaas/Content/Compute/References/serialconsole.htm>

This will allow continuous access and monitoring without RDP.

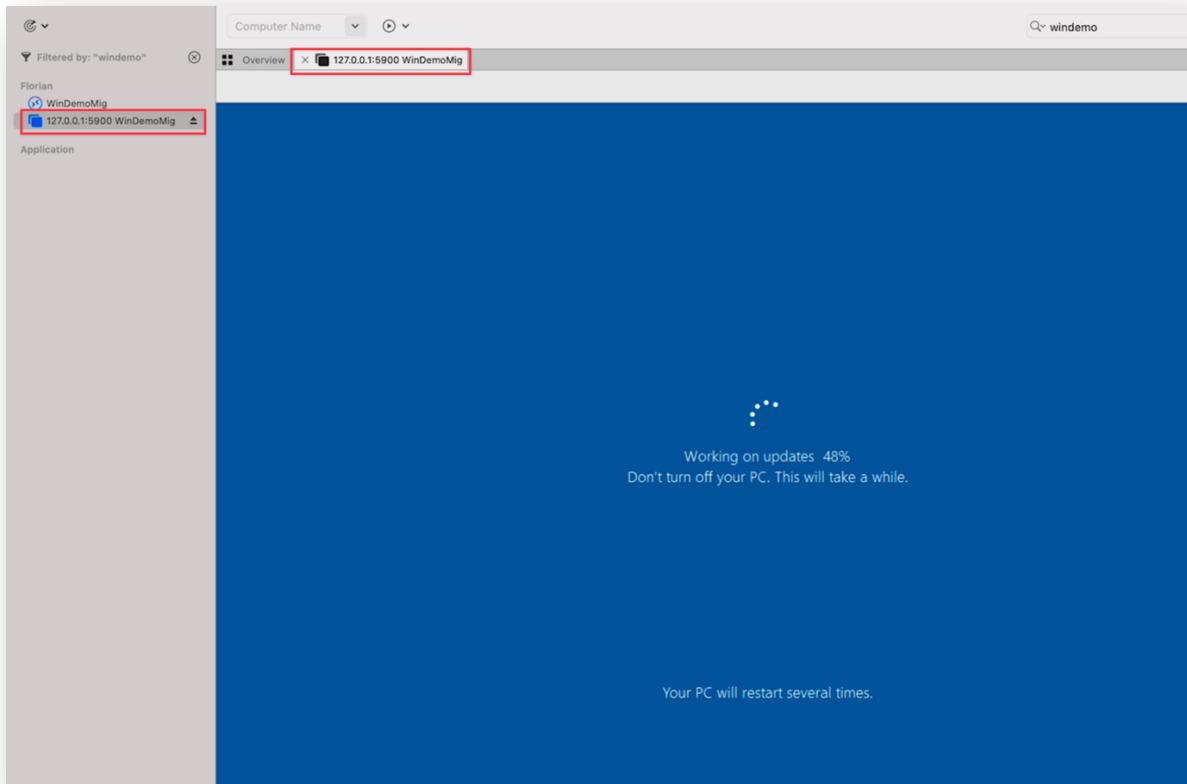
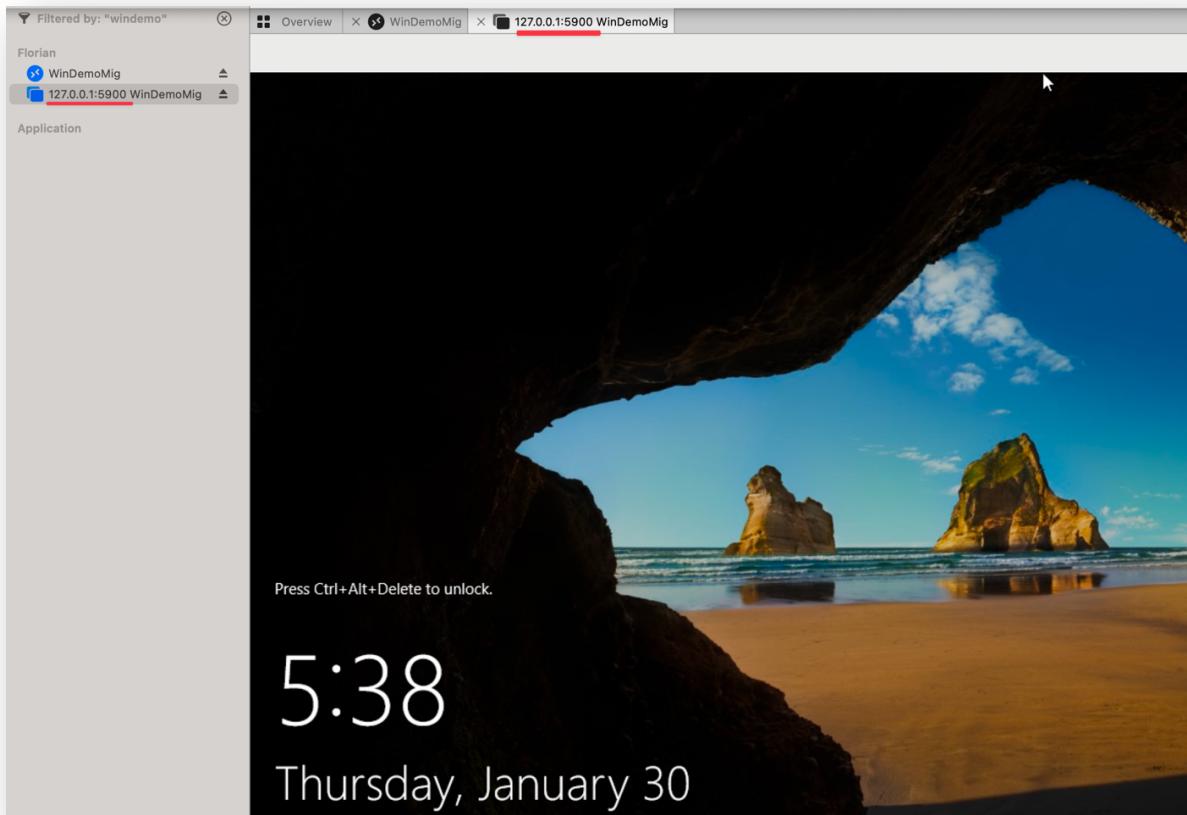


## 12 Start the Installation process

Click **Install** to start the upgrade.



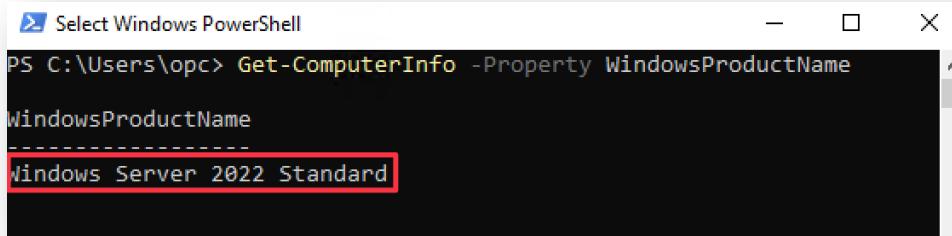
## 12.1 Connect to Console connection via VNC:



## 13 Verify New Windows Edition

Execute the following command in a PowerShell prompt:

```
- Get-ComputerInfo -Property WindowsProductName
```

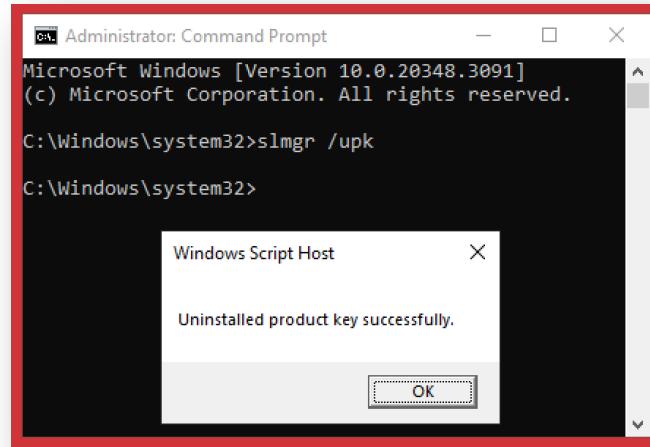


```
PS C:\Users\opc> Get-ComputerInfo -Property WindowsProductName

WindowsProductName
-----
Windows Server 2022 Standard
```

## 14 Remove the existing product key

```
- slmgr /upk
```



```
C:\> Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.3091]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>slmgr /upk

C:\Windows\system32>

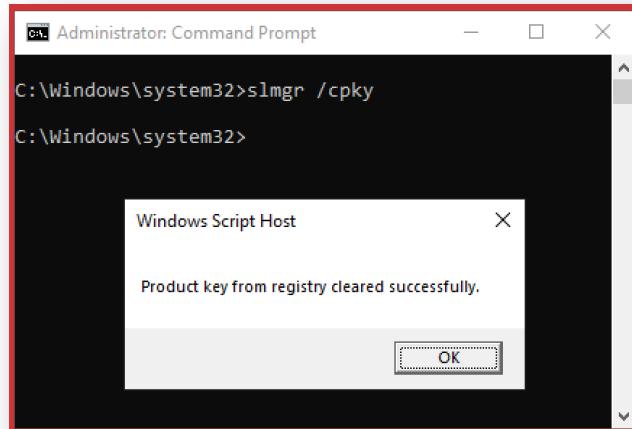
Windows Script Host

Uninstalled product key successfully.

OK
```

## 15 Clear the license key from the registry

```
- slmgr /cpky
```



```
C:\> Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.3091]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>slmgr /cpky

C:\Windows\system32>

Windows Script Host

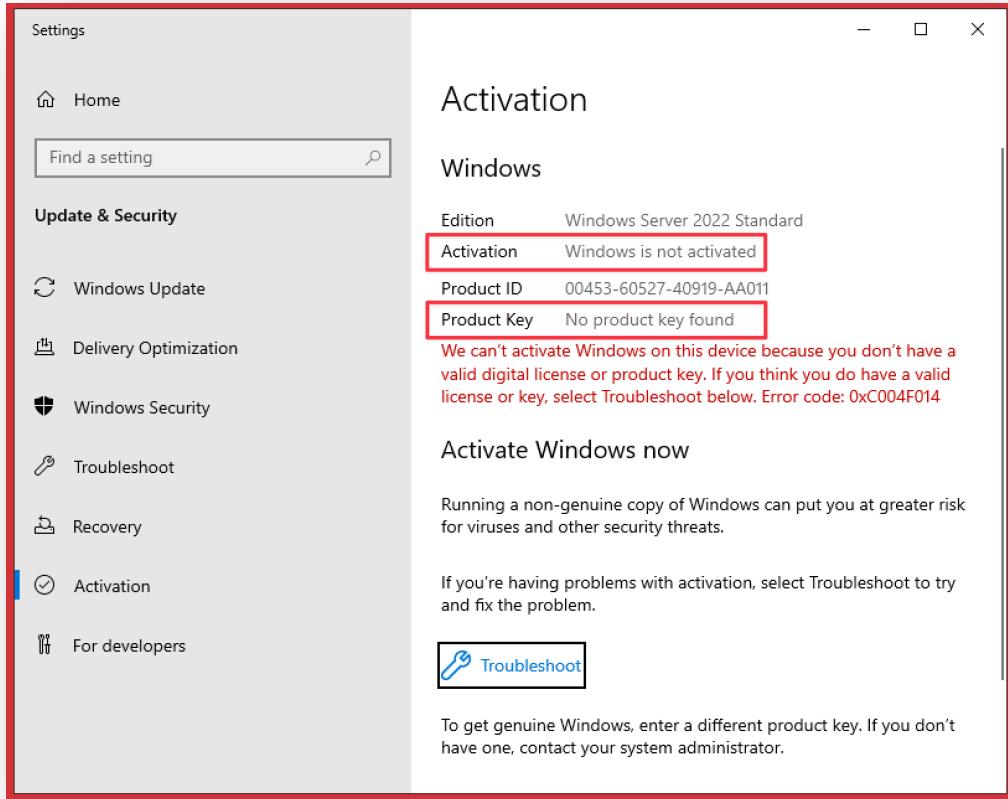
Product key from registry cleared successfully.

OK
```

## 16 Restart instance

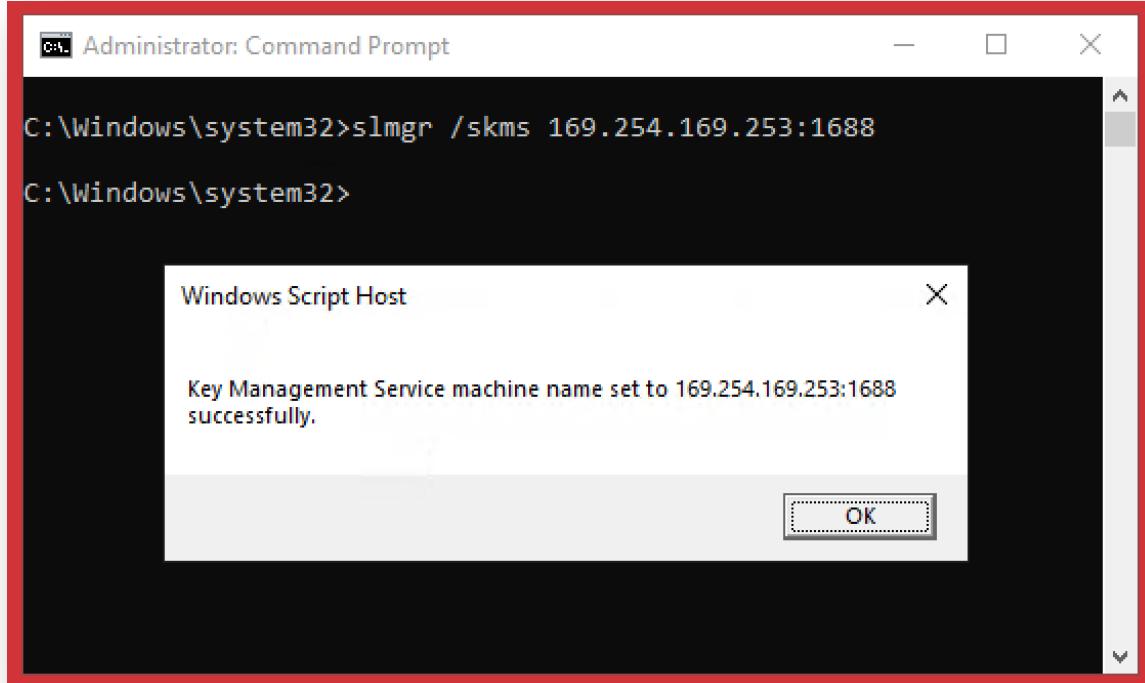
```
- shutdown /r /t 0
```

## 17 License key removed and activation disabled



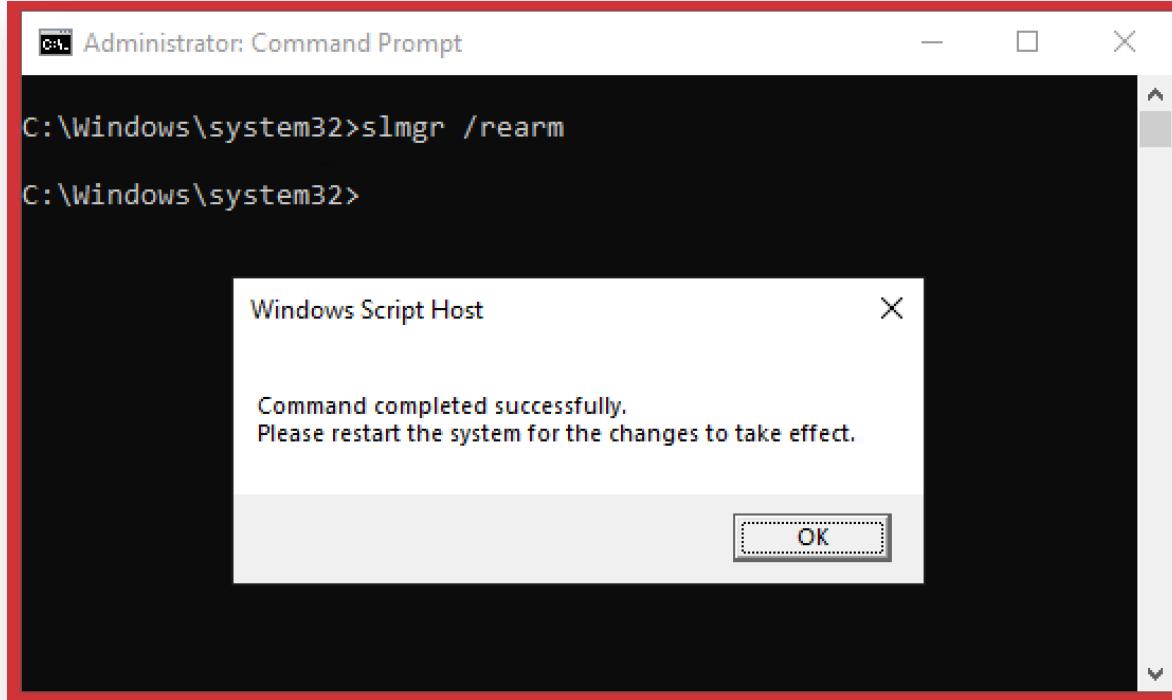
## 18 Register the OCI KMS Server

```
- slmgr /skms 169.254.169.253:1688
```



## 19 Reset Activation State

```
- slmgr /rearm
```



## 20 Restart instance

```
- shutdown /r /t 0
```

## 21 Retrieve the Generic Volume License Key

Key Management Services (KMS) client activation and product keys:

- <https://learn.microsoft.com/en-us/windows-server/get-started/kms-client-activation-keys>

## Generic Volume License Keys

In the tables that follow, you'll find the GVLKs for each version and edition of Windows. LTSC is *Long-Term Servicing Channel*, while LTSB is *Long-Term Servicing Branch*.

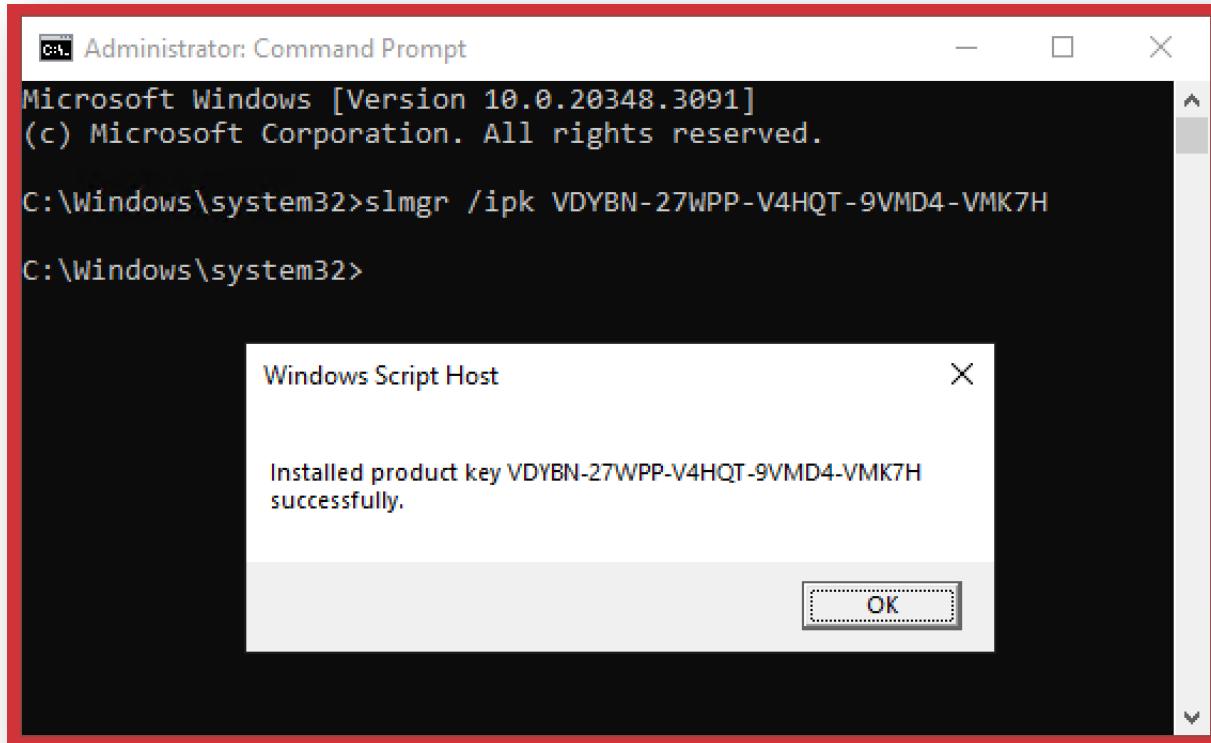
### Windows Server LTSC

Operating system edition	KMS Client Product Key
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Windows Server 2022 Datacenter	WX4NM-KYWYW-QJR4-XV3QB-6VM33
Windows Server 2022 Datacenter: Azure Edition	NTBV8-9K7Q8-V27C6-M2BTB-KHMXV

## 22 Install the KMS Client Key

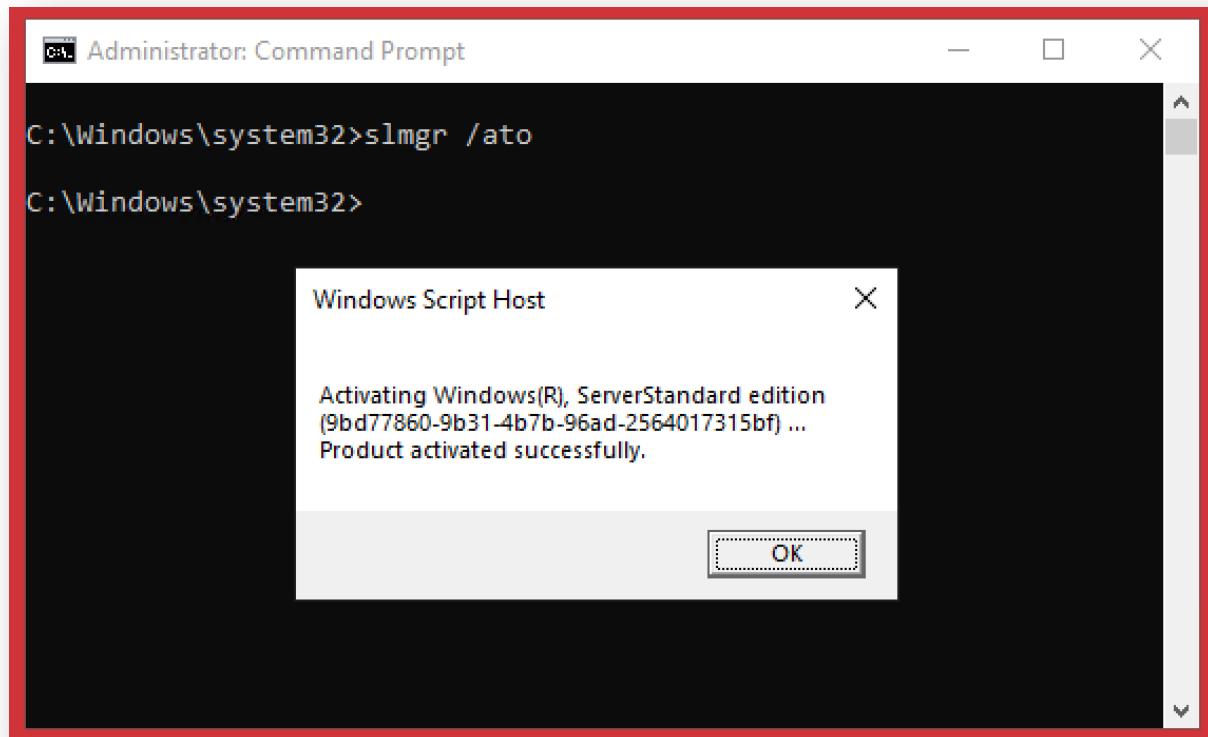
Example using GVL key for Windows 2022 standard:

```
- slmgr /ipk VDYBN-27WPP-V4HQT-9VMD4-VMK7H
```



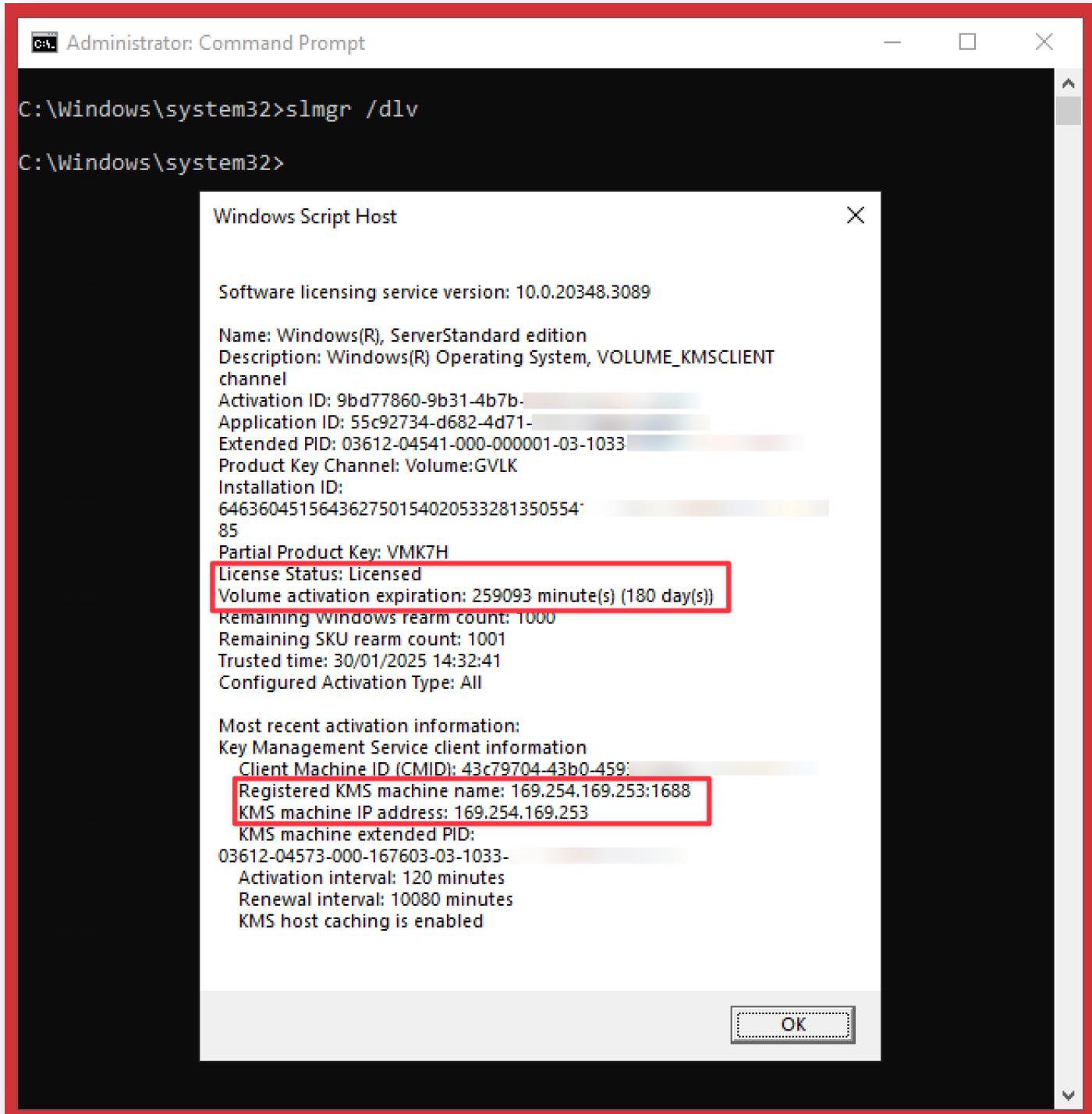
## 23 Force activation

```
- slmgr /ato
```



## 24 Check the activation status

```
- slmgr /dlv
```



The screenshot shows the Windows Settings application window. On the left, there's a sidebar with various options: Home, Find a setting (with a search icon), Update & Security, Windows Update, Delivery Optimization, Windows Security, Troubleshoot, Recovery, Activation (which is selected and highlighted with a blue bar at the bottom), and For developers. The main content area is titled "Activation" and shows "Windows". It displays two pieces of information: "Edition" (Windows Server 2022 Standard) and "Activation" (Windows is activated using your organization's activation service). The "Activation" section is highlighted with a red rectangular border. Below this, there's a section titled "Update product key" with a note about selecting "Change product key" if a different key is needed.

Settings

Home

Find a setting

Update & Security

Windows Update

Delivery Optimization

Windows Security

Troubleshoot

Recovery

Activation

For developers

Activation

Windows

Edition Windows Server 2022 Standard

Activation Windows is activated using your organization's activation service

Update product key

To use a different product key on this device, select Change product key.

Change product key

## 25 Why OCI-Provided licenses use KMS ?

Using a Key Management Service (KMS) allows assigning a temporary key that is periodically renewed, rather than a permanent key.

This activation model is dynamic and designed to support enterprises managing a large number of licenses across multiple servers and client computers in an internal network environment.

### 25.1 How KMS Works:

#### - Temporary Key:

- The key used for activation via KMS is not permanent and is regularly reactivated by an internal KMS server.
- This key must be renewed at regular intervals to ensure that the operating system remains activated without interruption.

#### - Renewal Period:

- By default, a machine activated via KMS must "renew" or "revalidate" its activation on a regular basis. (Default: 6 months)
- However, the attempts to reactivate are much more frequent.

#### - Renewal Tolerance:

- While the activation interval is set at 180 days, systems attempt to reactivate every 7 days.
- This helps prevent service interruptions in case of KMS server issues or other network errors that could impede activation during this time.

## 25.2 Why a Renewal Model?

Using KMS as an activation method is particularly beneficial for large organizations for several reasons:

#### - Centralized Management:

- KMS allows administrators to manage activations through an internal network, centralizing license administration without requiring an external connection for each activation.

#### - License Compliance:

- This model helps businesses stay compliant with Microsoft licensing agreements, as it ensures only verified and approved machines are activated.

#### - Flexibility:

- It provides flexibility in license management, particularly useful in cases of frequent hardware or software configuration changes, common in large IT environments.

This repeated temporary approach ensures that any machine no longer part of the network or organization loses its activation, thereby helping to secure and regulate the use of software licenses.

## 26 Resources:

### 26.1 Importing Custom Image Windows:

- <https://docs.oracle.com/en-us/iaas/Content/Compute/Tasks/importingcustomimagewindows.htm>
- <https://docs.oracle.com/en-us/iaas/Content/Compute/Tasks/changewinlicense.htm#changing the windows license>
- <https://docs.oracle.com/en-us/iaas/Content/Compute/References/microsoftlicensing.htm>