



Reference

# AWS Windows AMIs



# AWS Windows AMIs: Reference

Copyright © 2026 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

---

# Table of Contents

<b>AWS Windows AMIs .....</b>	<b>1</b>
Specialized AWS Windows AMIs .....	1
Find an AWS Windows AMI .....	2
SQL Server AMIs .....	4
STIG Hardened AMIs .....	6
NitroTPM AMIs .....	21
How Amazon creates AWS Windows AMIs .....	24
Windows Server installation media .....	24
What to expect from an official AWS Windows AMI .....	24
Validation of software on AWS AMIs .....	25
How Amazon decides which AWS Windows AMIs to offer .....	25
Patches, security updates, and AMI IDs .....	26
Ports and Protocols .....	27
AllJoyn Router .....	27
Cast to Device .....	28
Core Networking .....	32
Delivery Optimization .....	78
Diag Track .....	79
DIAL Protocol Server .....	79
File and Printer Sharing .....	80
File Server Remote Management .....	85
ICMP v4 All .....	85
Microsoft Edge .....	86
Microsoft Media Foundation Network Source .....	86
Multicast .....	87
Remote Desktop .....	87
WindowsDevice Management .....	89
WindowsFeature Experience Pack .....	92
WindowsFirewall Remote Management .....	92
WindowsRemote Management .....	92
Updates applied for AWS Windows AMIs .....	93
Changes in Windows Server AMIs by OS version .....	97
AWS Windows AMI version history .....	99
Monthly AMI updates for 2026 (to date) .....	99

---

<b>Subscribe to AWS Windows AMI notifications .....</b>	<b>231</b>
<b>Security .....</b>	<b>233</b>
<b>Document history .....</b>	<b>234</b>

# AWS Windows AMI reference

AWS provides a set of publicly available Amazon Machine Images (AMIs) that contain software configurations specific to the Windows platform.

You can quickly start building and deploying your applications with Amazon EC2 by using these AMIs. First choose the AMI that meets your specific requirements, and then launch an instance using that AMI. You retrieve the password for the administrator account and then log in to the instance using Remote Desktop Connection, just as you would with any other Windows Server.

In general, the AWS Windows AMIs are configured with the default settings used by the Microsoft installation media. However, Amazon does apply some customizations. For example, the AWS Windows AMIs come with the following software and drivers:

- EC2Launch v2 (Windows Server 2022 and 2025)
- EC2Launch v1 (Windows Server 2016 and 2019)
- EC2Config (through Windows Server 2012 R2)
- AWS Systems Manager
- AWS CloudFormation
- AWS Tools for Windows PowerShell
- Network drivers (SRIOV, ENA, Citrix PV)
- Storage drivers (NVMe, AWS PV, Citrix PV)
- Graphics drivers (NVidia GPU, Elastic GPU)

With the Windows fast launch feature, you can configure pre-provisioned snapshots to launch instances up to 65% faster. For more information, see [Configure Windows fast launch for your Windows Server AMI](#) in the *Amazon EC2 User Guide*.

To view changes to each release of the AWS Windows AMIs, including SQL Server updates, see the [AWS Windows AMI version history](#).

## Specialized AWS Windows AMIs

In addition to its standard operating system version AMIs, Amazon creates the following types of specialized AWS Windows AMIs:

## SQL Server license-included AMIs

Launching an instance from a Windows AMI with Microsoft SQL Server enables you to run the instance as a database server. For more information, see [AWS Windows Server license-included SQL Server AMIs](#).

## STIG Hardened AMIs

STIG Hardened EC2 Windows Server AMIs are pre-configured with over 160 required security settings to help ensure that the instances that you launch follow the latest guidelines for STIG compliance. For more information, see [STIG Hardened AWS Windows Server AMIs](#).

## NitroTPM enabled AMIs

Amazon creates a set of AMIs that are pre-configured with NitroTPM and UEFI Secure Boot requirements. For more information, see [AWS Windows Server NitroTPM enabled AMIs](#).

You can also create your own customized AMI from one of the AWS Windows AMIs with EC2 Image Builder. For more information, see the [EC2 Image Builder User Guide](#).

We recommend PowerShell for the command line examples in this section. To install PowerShell in your environment, see the [Installation](#) page in the *AWS Tools for PowerShell (version 4) User Guide*.

### Note

Not all AMIs are available in all Regions.

## Find an AWS Windows AMI

Each of the specialized AMI pages linked above has its own filtered search examples, as follows:

- [Find Windows Server AMIs with Microsoft SQL Server](#)
- [Find a STIG Hardened AMI](#)
- [Find Windows Server AMIs configured with NitroTPM and UEFI Secure Boot](#)

You can also search for the latest Windows AMIs that include the EC2Launch v2 agent, as shown in the following PowerShell example:

```
Get-SSMLatestEC2Image`
```

```
-Path ami-windows-latest `
-ImageName EC2LaunchV2-Windows* | `
Sort-Object Name
```

### Note

If this command doesn't run in your environment, you might be missing a PowerShell module. For more information about this command, see [Get-SSMLatestEC2Image Cmdlet](#). Alternatively, you can use the [CloudShell console](#) and run `psh` to bring up a PowerShell prompt that already has all of the AWS tools installed. For more information, see the [AWS CloudShell User Guide](#).

## Find an AWS Windows AMI in a specific language

The following language-specific AWS Windows AMIs are included in the monthly release:

- English
- Japanese
- Chinese
- Korean
- Czech
- Dutch
- French
- German
- Hungarian
- Italian
- Polish
- Russian
- Portuguese
- Spanish
- Swedish
- Turkish

The following example uses PowerShell to search for the latest English language AWS Windows AMIs:

```
Get-SSMLatestEC2Image `
  -Path ami-windows-latest `
  -ImageName *Windows_Server-*English* | `
Sort-Object Name
```

### Note

If this command doesn't run in your environment, you might be missing a PowerShell module. For more information about this command, see [Get-SSMLatestEC2Image Cmdlet](#). Alternatively, you can use the [CloudShell console](#) and run `psh` to bring up a PowerShell prompt that already has all of the AWS tools installed. For more information, see the [AWS CloudShell User Guide](#).

## AWS Windows Server license-included SQL Server AMIs

AWS Windows AMIs with Microsoft SQL Server include one of the following SQL Server editions. Launching an instance from a Windows AMI with Microsoft SQL Server enables you to run the instance as a database server.

- SQL Enterprise Edition
- SQL Server Standard
- SQL Server Express
- SQL Server Web

For more information about running Microsoft SQL Server on EC2, see the [Microsoft SQL Server on Amazon EC2 User Guide](#).

Each AWS Windows AMIs with Microsoft SQL Server AMI also includes the following features:

- Automatic Windows and SQL Server updates
- SQL Server Management Studio included
- Preconfigured SQL Server service accounts

## Find Windows Server AMIs with Microsoft SQL Server

AWS managed AMIs always include the AMI creation date as part of the name. The best way to ensure that your search returns the AMIs that you're looking for is to add date filtering for the name. Use one of the following command line options to find an AMI.

### AWS CLI

#### Find the latest SQL AMIs

The following example retrieves a list of the latest Windows Server AMIs that include Microsoft SQL Server.

```
aws ssm get-parameters-by-path \  
  --path "/aws/service/ami-windows-latest" \  
  --recursive \  
  --query 'Parameters[*].{Name:Name,Value:Value}' \  
  --output text | grep ".*Windows_Server-.*SQL.*" | sort
```

#### Find a specific AMI

The following example retrieves Windows Server AMIs with Microsoft SQL Server by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
aws ec2 describe-images \  
  --owners amazon \  
  --filters \  
    "Name=name,Values=*SQL*" \  
    "Name=platform,Values=windows" \  
    "Name=creation-date,Values=2025-05*" \  
  --query 'Images[][Name,ImageId]' \  
  --output text | sort
```

### PowerShell (recommended)

#### Find the latest SQL AMIs

The following example retrieves a list of the latest Windows Server AMIs that include Microsoft SQL Server.

```
Get-SSMLatestEC2Image `
  -Path ami-windows-latest `
  -ImageName *Windows_Server-*SQL* |
Sort-Object Name
```

### Note

If this command doesn't run in your environment, you might be missing a PowerShell module. For more information about this command, see [Get-SSMLatestEC2Image Cmdlet](#).

Alternatively, you can use the [CloudShell console](#) and run `psh` to bring up a PowerShell prompt that already has all of the AWS tools installed. For more information, see the [AWS CloudShell User Guide](#).

## Find a specific AMI

The following example retrieves Windows Server AMIs with Microsoft SQL Server by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
Get-EC2Image `
  -Owner amazon `
  -Filter @(
    @{Name = "name"; Values = @("*SQL*")}
    @{Name = "platform"; Values = @("windows")}
    @{Name = "creation-date"; Values = @("2025-*")}
  ) |
Sort-Object Name |
Format-Table Name, ImageID -AutoSize
```

## STIG Hardened AWS Windows Server AMIs

Security Technical Implementation Guides (STIGs) are the configuration standards created by the Defense Information Systems Agency (DISA) to secure information systems and software. DISA documents three levels of compliance risk, known as categories:

- **Category I** — The highest level of risk. It covers the most severe risks, and includes any vulnerability that can result in a loss of confidentiality, availability, or integrity.

- **Category II** — Medium risk.
- **Category III** — Low risk.

Each compliance level includes all STIG settings from lower levels. This means that the highest level includes all applicable settings from all levels.

To ensure that your systems are compliant with STIG standards, you must install, configure, and test a variety of security settings. STIG Hardened EC2 Windows Server AMIs are pre-configured with over 160 required security settings. Amazon EC2 supports the following operating systems for STIG Hardened AMIs:

- Windows Server 2022
- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2

The STIG Hardened AMIs include updated Department of Defense (DoD) certificates to help you get started and achieve STIG compliance. STIG Hardened AMIs are available in all commercial AWS and GovCloud (US) Regions. You can launch instances from these AMIs directly from the Amazon EC2 console. They are billed using standard Windows pricing. There are no additional charges for using STIG Hardened AMIs.

The following sections list the STIG settings that Amazon applies to Windows Operating Systems and components.

## Topics

- [Find a STIG Hardened AMI](#)
- [Core and base operating systems](#)
- [Microsoft .NET Framework 4.0 STIG Version 2 Release 6](#)
- [Windows Firewall STIG Version 2 Release 2](#)
- [Internet Explorer \(IE\) 11 STIG Version 2 Release 5](#)
- [Microsoft Edge STIG Version 2 Release 2](#)
- [Microsoft Defender STIG Version 2 Release 4](#)
- [Version history](#)

## Find a STIG Hardened AMI

You can search for a STIG Hardened EC2 Windows Server AMI when you launch an instance from the EC2 console, or you can search for an AMI in the CLI or in PowerShell, as follows.

### Name patterns for STIG Hardened Windows AMIs

- Windows\_Server-2022-English-STIG-Full-*YYYY.MM.DD*
- Windows\_Server-2022-English-STIG-Core-*YYYY.MM.DD*
- Windows\_Server-2019-English-STIG-Full-*YYYY.MM.DD*
- Windows\_Server-2019-English-STIG-Core-*YYYY.MM.DD*
- Windows\_Server-2016-English-STIG-Full-*YYYY.MM.DD*
- Windows\_Server-2016-English-STIG-Core-*YYYY.MM.DD*
- Windows\_Server-2012-R2-English-STIG-Full-*YYYY.MM.DD*
- Windows\_Server-2012-R2-English-STIG-Core-*YYYY.MM.DD*

### Console

You can select an AMI from the **Community AMIs** tab when you launch an instance, as follows.

#### Launch an EC2 instance with a STIG Hardened Windows Server AMI

1. Open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/>.
2. Choose **Instances** from the navigation pane. This opens a list of your EC2 instances in the current AWS Region.
3. Choose **Launch instances** from the upper right corner above the list. This opens the **Launch an instance** page.
4. To find a STIG Hardened AMI, choose **Browse more AMIs** on the right side of the **Application and OS Images (Amazon Machine Image)** section. This displays an advanced AMI search.
5. Select the **Community AMIs** tab, and enter part or all of one of the following name patterns in the search bar. Our AMIs indicate that they are "provided by Amazon."

**Note**

The date suffix for the AMI (*YYYY.MM.DD*) is the date when the latest version was created. You can search for the version without the date suffix.

## AWS CLI

**Find the latest STIG AMIs**

The following example retrieves a list of the latest STIG Hardened Windows Server AMIs.

```
aws ssm get-parameters-by-path \  
  --path "/aws/service/ami-windows-latest" \  
  --recursive \  
  --query 'Parameters[*].{Name:Name,Value:Value}' \  
  --output text | grep "Windows_Server-.*STIG" | sort
```

**Find a specific AMI**

The following example retrieves STIG Hardened Windows Server AMIs by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
aws ec2 describe-images \  
  --owners amazon \  
  --filters \  
    "Name=name,Values=*STIG*" \  
    "Name=platform,Values=windows" \  
    "Name=creation-date,Values=2025-05*" \  
  --query 'Images[][Name,ImageId]' \  
  --output text | sort
```

## PowerShell

**Find the latest STIG AMIs**

The following example retrieves a list of the latest STIG Hardened Windows Server AMIs.

```
Get-SSMLatestEC2Image \  
  -Path ami-windows-latest
```

```
-ImageName *Windows_Server-*STIG* |
Sort-Object Name
```

### Note

If this command doesn't run in your environment, you might be missing a PowerShell module. For more information about this command, see [Get-SSMLatestEC2Image Cmdlet](#).

Alternatively, you can use the [CloudShell console](#) and run `psh` to bring up a PowerShell prompt that already has all of the AWS tools installed. For more information, see the [AWS CloudShell User Guide](#).

## Find a specific AMI

The following example retrieves STIG Hardened Windows Server AMIs by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
Get-EC2Image `
  -Owner amazon `
  -Filter @(
    @{Name = "name"; Values = @("*STIG*")}
    @{Name = "platform"; Values = @("amazon")}
    @{Name = "creation-date"; Values = @("2025*")}
  ) |
Sort-Object Name |
Format-Table Name, ImageID -AutoSize
```

## Core and base operating systems

STIG Hardened EC2 AMIs are designed for use as standalone servers, and have the highest level of STIG settings applied.

The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

### **Windows Server 2022 STIG Version 2 Release 4**

This release includes the following STIG settings for Windows operating systems:

V-254335, V-254336, V-254337, V-254338, V-254351, V-254357, V-254363, V-254481, V-254247, V-254265, V-254269, V-254270, V-254271, V-254272, V-254273, V-254274, V-254276, V-254277, V-254278, V-254285, V-254286, V-254287, V-254288, V-254289, V-254290, V-254291, V-254292, V-254300, V-254301, V-254302, V-254303, V-254304, V-254305, V-254306, V-254307, V-254308, V-254309, V-254310, V-254311, V-254312, V-254313, V-254314, V-254315, V-254316, V-254317, V-254318, V-254319, V-254320, V-254321, V-254322, V-254323, V-254324, V-254325, V-254326, V-254327, V-254328, V-254329, V-254330, V-254331, V-254332, V-254333, V-254334, V-254339, V-254341, V-254342, V-254344, V-254345, V-254346, V-254347, V-254348, V-254349, V-254350, V-254355, V-254356, V-254356, V-254358, V-254359, V-254360, V-254361, V-254362, V-254364, V-254365, V-254366, V-254367, V-254368, V-254369, V-254370, V-254371, V-254372, V-254373, V-254375, V-254376, V-254377, V-254379, V-254380, V-254382, V-254383, V-254384, V-254431, V-254432, V-254433, V-254434, V-254435, V-254436, V-254438, V-254439, V-254442, V-254443, V-254444, V-254445, V-254449, V-254450, V-254451, V-254452, V-254453, V-254454, V-254455, V-254456, V-254459, V-254460, V-254461, V-254462, V-254463, V-254464, V-254468, V-254470, V-254471, V-254472, V-254473, V-254476, V-254477, V-254478, V-254479, V-254480, V-254482, V-254483, V-254484, V-254485, V-254486, V-254487, V-254488, V-254489, V-254490, V-254493, V-254494, V-254495, V-254497, V-254499, V-254501, V-254502, V-254503, V-254504, V-254505, V-254507, V-254508, V-254509, V-254510, V-254511, V-254512, V-254293, V-254352, V-254353, V-254354, V-254374, V-254378, V-254381, V-254446, V-254465, V-254466, V-254467, V-254469, V-254474, V-254475, and V-254500

### **Windows Server 2019 STIG Version 3 Release 4**

This release includes the following STIG settings for Windows operating systems:

V-205691, V-205819, V-205858, V-205859, V-205860, V-205870, V-205871, V-205923, V-205625, V-205626, V-205627, V-205629, V-205630, V-205633, V-205634, V-205635, V-205636, V-205637, V-205638, V-205639, V-205643, V-205644, V-205648, V-205649, V-205650, V-205651, V-205652, V-205655, V-205656, V-205659, V-205660, V-205662, V-205671, V-205672, V-205673, V-205675, V-205676, V-205678, V-205679, V-205680,

V-205681, V-205682, V-205683, V-205684, V-205685, V-205686, V-205687, V-205688, V-205689, V-205690, V-205692, V-205693, V-205694, V-205697, V-205698, V-205708, V-205709, V-205712, V-205714, V-205716, V-205717, V-205718, V-205719, V-205720, V-205722, V-205729, V-205730, V-205733, V-205747, V-205751, V-205752, V-205754, V-205756, V-205758, V-205759, V-205760, V-205761, V-205762, V-205764, V-205765, V-205766, V-205767, V-205768, V-205769, V-205770, V-205771, V-205772, V-205773, V-205774, V-205775, V-205776, V-205777, V-205778, V-205779, V-205780, V-205781, V-205782, V-205783, V-205784, V-205795, V-205796, V-205797, V-205798, V-205801, V-205808, V-205809, V-205810, V-205811, V-205812, V-205813, V-205814, V-205815, V-205816, V-205817, V-205821, V-205822, V-205823, V-205824, V-205825, V-205826, V-205827, V-205828, V-205830, V-205832, V-205833, V-205834, V-205835, V-205836, V-205837, V-205838, V-205839, V-205840, V-205841, V-205842, V-205861, V-205863, V-205865, V-205866, V-205867, V-205868, V-205869, V-205872, V-205873, V-205874, V-205911, V-205912, V-205915, V-205916, V-205917, V-205918, V-205920, V-205921, V-205922, V-205924, V-205925, V-236001, V-257503, V-205653, V-205654, V-205711, V-205713, V-205724, V-205725, V-205757, V-205802, V-205804, V-205805, V-205806, V-205849, V-205908, V-205913, V-205914, and V-205919

## Windows Server 2016 STIG Version 2 Release 10

This release includes the following STIG settings for Windows operating systems:

V-224916, V-224917, V-224918, V-224919, V-224931, V-224942, V-225060, V-224850, V-224852, V-224853, V-224854, V-224855, V-224856, V-224857, V-224858, V-224859, V-224866, V-224867, V-224868, V-224869, V-224870, V-224871, V-224872, V-224873, V-224881, V-224882, V-224883, V-224884, V-224885, V-224886, V-224887, V-224888, V-224889, V-224890, V-224891, V-224892, V-224893, V-224894, V-224895, V-224896, V-224897, V-224898, V-224899, V-224900, V-224901, V-224902, V-224903, V-224904, V-224905, V-224906, V-224907, V-224908, V-224909, V-224910, V-224911, V-224912, V-224913, V-224914, V-224915, V-224920, V-224922, V-224924, V-224925, V-224926, V-224927, V-224928, V-224929, V-224930, V-224935, V-224936, V-224937, V-224938, V-224939, V-224940, V-224941, V-224943, V-224944, V-224945, V-224946, V-224947, V-224948, V-224949, V-224951, V-224952, V-224953, V-224955, V-224956, V-224957, V-224959, V-224960, V-224962, V-224963, V-225010, V-225013, V-225014, V-225015, V-225016, V-225017, V-225018, V-225019, V-225021, V-225022, V-225023, V-225024, V-225028, V-225029, V-225030, V-225031, V-225032, V-225033, V-225034, V-225035, V-225038, V-225039, V-225040, V-225041, V-225042, V-225043, V-225047, V-225049, V-225050, V-225051, V-225052, V-225055, V-225056, V-225057, V-225058, V-225059,

V-225061, V-225062, V-225063, V-225064, V-225065, V-225066, V-225067, V-225068, V-225069, V-225072, V-225073, V-225074, V-225076, V-225078, V-225080, V-225081, V-225082, V-225083, V-225084, V-225086, V-225087, V-225088, V-225089, V-225092, V-225093, V-236000, V-257502, V-224874, V-224932, V-224933, V-224934, V-224954, V-224958, V-224961, V-225025, V-225044, V-225045, V-225046, V-225048, V-225053, V-225054, and V-225079

### **Windows Server 2012 R2 MS STIG Version 3 Release 5**

This release includes the following STIG settings for Windows operating systems:

V-225250, V-225318, V-225319, V-225324, V-225327, V-225328, V-225330, V-225331, V-225332, V-225333, V-225334, V-225335, V-225336, V-225342, V-225343, V-225355, V-225357, V-225358, V-225359, V-225360, V-225362, V-225363, V-225376, V-225392, V-225394, V-225412, V-225459, V-225460, V-225462, V-225468, V-225473, V-225476, V-225479, V-225480, V-225481, V-225482, V-225483, V-225484, V-225485, V-225487, V-225488, V-225489, V-225490, V-225511, V-225514, V-225525, V-225526, V-225536, V-225537, V-225239, V-225259, V-225260, V-225261, V-225263, V-225264, V-225265, V-225266, V-225267, V-225268, V-225269, V-225270, V-225271, V-225272, V-225273, V-225275, V-225276, V-225277, V-225278, V-225279, V-225280, V-225281, V-225282, V-225283, V-225284, V-225285, V-225286, V-225287, V-225288, V-225289, V-225290, V-225291, V-225292, V-225293, V-225294, V-225295, V-225296, V-225297, V-225298, V-225299, V-225300, V-225301, V-225302, V-225303, V-225304, V-225305, V-225314, V-225315, V-225316, V-225317, V-225325, V-225326, V-225329, V-225337, V-225338, V-225339, V-225340, V-225341, V-225344, V-225345, V-225346, V-225347, V-225348, V-225349, V-225350, V-225351, V-225352, V-225353, V-225356, V-225367, V-225368, V-225369, V-225370, V-225371, V-225372, V-225373, V-225374, V-225375, V-225377, V-225378, V-225379, V-225380, V-225381, V-225382, V-225383, V-225384, V-225385, V-225386, V-225389, V-225391, V-225393, V-225395, V-225397, V-225398, V-225400, V-225401, V-225402, V-225404, V-225405, V-225406, V-225407, V-225408, V-225409, V-225410, V-225411, V-225413, V-225414, V-225415, V-225441, V-225442, V-225443, V-225448, V-225452, V-225453, V-225454, V-225455, V-225456, V-225457, V-225458, V-225461, V-225463, V-225464, V-225469, V-225470, V-225471, V-225472, V-225474, V-225475, V-225477, V-225478, V-225486, V-225494, V-225500, V-225501, V-225502, V-225503, V-225504, V-225506, V-225508, V-225509, V-225510, V-225513, V-225515, V-225516, V-225517, V-225518, V-225519, V-225520, V-225521, V-225522, V-225523, V-225524, V-225527, V-225528, V-225529, V-225530, V-225531, V-225532, V-225533, V-225534, V-225535, V-225538, V-225539, V-225540, V-225541, V-225542, V-225543,

V-225544, V-225545, V-225546, V-225548, V-225549, V-225550, V-225551, V-225553, V-225554, V-225555, V-225557, V-225558, V-225559, V-225560, V-225561, V-225562, V-225563, V-225564, V-225565, V-225566, V-225567, V-225568, V-225569, V-225570, V-225571, V-225572, V-225573, V-225574, V-225274, V-225354, V-225364, V-225365, V-225366, V-225390, V-225396, V-225399, V-225444, V-225449, V-225491, V-225492, V-225493, V-225496, V-225497, V-225498, V-225505, V-225507, V-225547, V-225552, and V-225556

## Microsoft .NET Framework 4.0 STIG Version 2 Release 6

The following list contains STIG settings that apply to Windows operating system components for STIG Hardened EC2 AMIs. The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

### .NET Framework on Windows Server 2019, 2016, and 2012 R2 MS

V-225238

## WindowsFirewall STIG Version 2 Release 2

The following list contains STIG settings that apply to Windows operating system components for STIG Hardened EC2 AMIs. The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

### WindowsFirewall on Windows Server 2022, 2019, 2016, and 2012 R2 MS

V-241994, V-241995, V-241996, V-241999, V-242000, V-242001, V-242006, V-242007, V-242008, V-241989, V-241990, V-241991, V-241993, V-241998, V-242003, V-241992, V-241997, and V-242002

## Internet Explorer (IE) 11 STIG Version 2 Release 5

The following list contains STIG settings that apply to Windows operating system components for STIG Hardened EC2 AMIs. The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

### IE 11 on Windows Server 2022, 2019, 2016, and 2012 R2 MS

V-223016, V-223056, V-223078, V-223015, V-223017, V-223018, V-223019, V-223020, V-223021, V-223022, V-223023, V-223024, V-223025, V-223026, V-223027, V-223028, V-223029, V-223030, V-223031, V-223032, V-223033, V-223034, V-223035, V-223036, V-223037, V-223038, V-223039, V-223040, V-223041, V-223042, V-223043, V-223044, V-223045, V-223046, V-223048, V-223049, V-223050, V-223051, V-223052, V-223053, V-223054, V-223055, V-223057, V-223058, V-223059, V-223060, V-223061, V-223062, V-223063, V-223064, V-223065, V-223066, V-223067, V-223068, V-223069, V-223070, V-223071, V-223072, V-223073, V-223074, V-223075, V-223076, V-223077, V-223079, V-223080, V-223081, V-223082, V-223083, V-223084, V-223085, V-223086, V-223087, V-223088, V-223089, V-223090, V-223091, V-223092, V-223093, V-223094, V-223095, V-223096, V-223097, V-223098, V-223099, V-223100, V-223101, V-223102, V-223103, V-223104, V-223105, V-223106, V-223107, V-223108, V-223109, V-223110, V-223111, V-223112, V-223113, V-223114, V-223115, V-223116, V-223117, V-223118, V-223119, V-223120, V-223121, V-223122, V-223123, V-223124, V-223125, V-223126, V-223127, V-223128, V-223129, V-223130, V-223131, V-223132, V-223133, V-223134, V-223135, V-223136, V-223137, V-223138, V-223139, V-223140, V-223141, V-223142, V-223143, V-223144, V-223145, V-223146, V-223147, V-223148, V-223149, V-250540, V-250541, and V-252910

## Microsoft Edge STIG Version 2 Release 2

The following list contains STIG settings that apply to Windows operating system components for STIG Hardened EC2 AMIs. The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

## Microsoft Edge on Windows Server 2022

V-235727, V-235731, V-235751, V-235752, V-235765, V-235720, V-235721, V-235723, V-235724, V-235725, V-235726, V-235728, V-235729, V-235730, V-235732, V-235733, V-235734, V-235735, V-235736, V-235737, V-235738, V-235739, V-235740, V-235741, V-235742, V-235743, V-235744, V-235745, V-235746, V-235747, V-235748, V-235749, V-235750, V-235754, V-235756, V-235760, V-235761, V-235763, V-235764, V-235766, V-235767, V-235768, V-235769, V-235770, V-235771, V-235772, V-235773, V-235774, V-246736, V-235758, and V-235759

## Microsoft Defender STIG Version 2 Release 4

The following list contains STIG settings that apply to Windows operating system components for STIG Hardened EC2 AMIs. The following list contains STIG settings that apply for STIG Hardened Windows AMIs. Not all settings apply in all cases. For example, some STIG settings might not apply to standalone servers. Organization-specific policies can also affect which settings apply, such as a requirement for administrators to review document settings.

For a complete list of Windows STIGs, see the [STIGs Document Library](#). For information about how to view the complete list, see [STIG Viewing Tools](#).

## Microsoft Defender on Windows Server 2022

V-213427, V-213429, V-213430, V-213431, V-213432, V-213433, V-213434, V-213435, V-213436, V-213437, V-213438, V-213439, V-213440, V-213441, V-213442, V-213443, V-213444, V-213445, V-213446, V-213447, V-213448, V-213449, V-213450, V-213451, V-213455, V-213464, V-213465, V-213466, V-213426, V-213452, and V-213453

## Version history

The following table provides version history updates for STIG settings that are applied to Windowsoperating systems and Windowscomponents.

Date	AMIs	Details
06/19/2025	<p>Windows Server 2022 STIG Version 2 Release 4</p> <p>Windows Server 2019 STIG Version 3 Release 4</p> <p>Windows Server 2016 STIG Version 2 Release 10</p> <p>Windows Server 2012 R2 MS STIG Version 3 Release 5</p> <p>Microsoft .NET Framework 4.0 STIG Version 2 Release 6</p> <p>WindowsFirewall STIG Version 2 Release 2</p> <p>Internet Explorer 11 STIG Version 2 Release 5</p> <p>Microsoft Edge STIG Version 2 Release 2</p> <p>Microsoft Defender STIG Version 2 Release 4</p>	AMIs released for 2025 Q1 and Q2 with updated versions where applicable, and applied STIGs.
03/06/2025	<p>Windows Server 2022 STIG Version 2 Release 2</p> <p>Windows Server 2019 STIG Version 3 Release 2</p> <p>Windows Server 2016 STIG Version 2 Release 9</p> <p>Windows Server 2012 R2 MS STIG Version 3 Release 5</p>	AMIs released for 2024 Q4 with updated versions where applicable, and applied STIGs.

Date	AMIs	Details
	<p>Microsoft .NET Framework 4.0 STIG Version 2 Release 2</p> <p>WindowsFirewall STIG Version 2 Release 2</p> <p>Internet Explorer 11 STIG Version 2 Release 5</p> <p>Microsoft Edge STIG Version 2 Release 2</p> <p>Microsoft Defender STIG Version 2 Release 4</p>	
04/24/2023	<p>Windows Server 2022 STIG Version 1 Release 1</p> <p>Microsoft Edge STIG Version 1 Release 6</p> <p>Microsoft Defender STIG Version 2 Release 4</p>	<p>Added support for Windows Server 2022, Microsoft Edge, and Microsoft Defender.</p>
03/01/2023	<p>Windows Server 2019 STIG Version 2 Release 5</p> <p>Windows Server 2016 STIG Version 2 Release 5</p> <p>Windows Server 2012 R2 MS STIG Version 3 Release 5</p> <p>Microsoft .NET Framework 4.0 STIG Version 2 Release 2</p> <p>WindowsFirewall STIG Version 2 Release 1</p> <p>Internet Explorer 11 STIG Version 2 Release 3</p>	<p>AMIs released for 2022 Q4 with updated versions where applicable, and applied STIGs.</p>

Date	AMIs	Details
07/21/20 2	Windows Server 2019 STIG Version 2 R4 Windows Server 2016 STIG Version 2 R4 Windows Server 2012 R2 MS STIG Version 3 R3 Microsoft .NET Framework 4.0 STIG Version 2 R1 WindowsFirewall STIG Version 2 R1 Internet Explorer 11 STIG V1 R19	AMIs released with updated versions where applicable, and applied STIGs.
12/15/20 1	Windows Server 2019 STIG Version 2 R3 Windows Server 2016 STIG Version 2 R3 Windows Server 2012 R2 STIG Version 3 R3 Microsoft .NET Framework 4.0 STIG Version 2 R1 WindowsFirewall STIG Version 2 R1 Internet Explorer 11 STIG V1 R19	AMIs released with updated versions where applicable, and applied STIGs.

Date	AMIs	Details
6/9/2021	Windows Server 2019 STIG Version 2 R2 Windows Server 2016 STIG Version 2 R2 Windows Server 2012 R2 STIG Version 3 R2 Microsoft .NET Framework 4.0 STIG Version 2 R1 WindowsFirewall STIG V1 R7 Internet Explorer 11 STIG V1 R19	Updated versions where applicable, and applied STIGs.
4/5/2021	Windows Server 2019 STIG Version 2 R 1 Windows Server 2016 STIG Version 2 R 1 Windows Server 2012 R2 STIG Version 3 R 1 Microsoft .NET Framework 4.0 STIG Version 2 R 1 WindowsFirewall STIG V1 R 7 Internet Explorer 11 STIG V1 R 19	Updated versions where applicable, and applied STIGs.

Date	AMIs	Details
9/18/202	Windows Server 2019 STIG V1 R 5  Windows Server 2016 STIG V1 R 12  Windows Server 2012 R2 STIG Version 2 R 19  Internet Explorer 11 STIG V1 R 19  Microsoft .NET Framework 4.0 STIG V1 R 9  WindowsFirewall STIG V1 R 7	Updated versions and applied STIGs.
12/6/201	Server 2012 R2 Core and Base V2 R17  Server 2016 Core and Base V1 R11  Internet Explorer 11 V1 R18  Microsoft .NET Framework 4.0 V1 R9  WindowsFirewall STIG V1 R17	Updated versions and applied STIGs.
9/17/201	Server 2012 R2 Core and Base V2 R16  Server 2016 Core and Base V1 R9  Server 2019 Core and Base V1 R2  Internet Explorer 11 V1 R17  Microsoft .NET Framework 4.0 V1 R8	Initial release.

## AWS Windows Server NitroTPM enabled AMIs

Amazon creates a set of AMIs that are pre-configured with NitroTPM and UEFI Secure Boot requirements, as follows:

- The TPM 2.0 Command Response Buffer (CRB) driver is installed
- NitroTPM is enabled
- UEFI Secure Boot mode is enabled with Microsoft keys

For more detailed information about NitroTPM, see [NitroTPM for Amazon EC2 instances](#) in the *Amazon EC2 User Guide*.

## Find Windows Server AMIs configured with NitroTPM and UEFI Secure Boot

AWS managed AMIs always include the AMI creation date as part of the name. The best way to ensure that your search returns the AMIs that you're looking for is to add date filtering for the name. Use one of the following command line options to find an AMI.

### AWS CLI

#### Find the latest NitroTPM and UEFI Secure Boot AMIs

The following example retrieves a list of the latest Windows Server AMIs that are configured for NitroTPM and UEFI Secure Boot.

```
aws ssm get-parameters-by-path \  
  --path "/aws/service/ami-windows-latest" \  
  --recursive \  
  --query 'Parameters[*].{Name:Name,Value:Value}' \  
  --output text | grep "TPM-Windows_Server" | sort
```

#### Find a specific AMI

The following example retrieves Windows Server AMIs that are configured for NitroTPM and UEFI Secure Boot by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
aws ec2 describe-images \  
  --owners amazon \  
  --filters \  
    "Name=name,Values=TPM-Windows_Server-*" \  
    "Name=platform,Values=windows" \  
    "Name=creation-date,Values=2025-05*" \  
  --query 'Images[][Name,ImageId]' \  
  --output table
```

```
--output text | sort
```

PowerShell (recommended)

## Find the latest NitroTPM and UEFI Secure Boot AMIs

The following example retrieves a list of the latest Windows Server AMIs that are configured for NitroTPM and UEFI Secure Boot.

```
Get-SSMLatestEC2Image `
  -Path ami-windows-latest `
  -ImageName TPM-Windows* |
Sort-Object Name
```

### Note

If this command doesn't run in your environment, you might be missing a PowerShell module. For more information about this command, see [Get-SSMLatestEC2Image Cmdlet](#).

Alternatively, you can use the [CloudShell console](#) and run `psh` to bring up a PowerShell prompt that already has all of the AWS tools installed. For more information, see the [AWS CloudShell User Guide](#).

## Find a specific AMI

The following example retrieves Windows Server AMIs that are configured for NitroTPM and UEFI Secure Boot by filtering on the AMI name, the owner, the platform, and the creation date (year and month). Output is formatted as a table with columns for the AMI name and image ID.

```
Get-EC2Image `
  -Owner amazon `
  -Filter @(
    @{Name = "name"; Values = @("TPM-Windows*")}
    @{Name = "platform"; Values = @("windows")}
    @{Name = "creation-date"; Values = @("2026*")}
  ) |
Sort-Object Name |
Format-Table Name, ImageID -AutoSize
```

# How Amazon creates AWS Windows AMIs

The following content is a high level overview of the process Amazon uses to create AWS Windows AMIs. Details include what you can expect from an official AWS Windows AMI, as well as the standards that Amazon uses to validate AMI security and reliability.

## Where AWS gets the Windows Server installation media

When a new version of Windows Server is released, we download the Windows ISO from Microsoft and validate the hash Microsoft publishes. An initial AMI is then created from the Windows distribution ISO. The drivers needed to boot on EC2 are included in addition to our EC2 launch agent. To prepare this initial AMI for public release, we perform automated processes to convert the ISO to an AMI. This prepared AMI is used for the monthly automated update and release process.

## What to expect from an official AWS Windows AMI

Amazon provides AWS Windows AMIs with a variety of configurations for popular versions of Microsoft supported Windows Server Operating Systems. As outlined in the previous section, we start with the Windows Server ISO from Microsoft's Volume Licensing Service Center (VLSC) and validate the hash to ensure it matches Microsoft's documentation for new Windows Server operating systems.

We perform the following changes using automation on AWS to take the current Windows Server AMIs and update them:

- Install all Microsoft recommended Windows security patches. We release images shortly after the monthly Microsoft patches are made available.
- Install the latest drivers for AWS hardware, including network and disk drivers, the EC2WinUtil utility for troubleshooting, as well as GPU drivers in selected AMIs.
- Include the following AWS launch agent software by default:
  - [EC2Launch v2](#) for Windows Server 2022 and 2025, and optionally for Windows Server 2019 and 2016 with specific AMIs.
  - [EC2Launch v1](#) for Windows Server 2016 and 2019.
  - [EC2Config](#) for Windows Server 2012 R2 and earlier.
- Configure Windows Time to use the [Amazon Time Sync Service](#).
- Change all power schemes to set the display to never turn off.

- Perform minor bug fixes – generally one-line registry changes to enable or disable features that we have found to improve performance on AWS.
- Tests and validates AMIs across new and existing EC2 platforms to help ensure compatibility, stability, and consistency before release.

For a more detailed list that includes initialization, installation, and configuration settings that are applied, see [Updates applied for AWS Windows AMIs](#).

## How Amazon validates security, integrity, and authenticity of software on AMIs

We take a number of steps during the image build process, to maintain the security, integrity, and authenticity of AWS Windows AMIs. A few examples include:

- AWS Windows AMIs are built using source media obtained directly from Microsoft.
- Windows Updates are downloaded directly from Microsoft's Windows Update Service by Windows, and installed on the instance used to create the AMI during the image build process.
- AWS Software is downloaded from secure S3 buckets and installed in the AMIs.
- Drivers, such as for the chipset and GPU, are obtained directly from the vendor, stored in secure S3 buckets, and installed on the AMIs during the image build process.

## How Amazon decides which AWS Windows AMIs to offer

Each AMI is extensively tested prior to release to the public. We periodically streamline our AMI offerings to simplify customer choice and to reduce costs.

- New AMI offerings are created for new OS releases. You can count on Amazon releasing *Base*, *Core*, and *SQL Express/Standard/Web/Enterprise* offerings in English and other widely used languages. The primary difference between Base and Core offerings is that Base offerings have a desktop/GUI whereas Core offerings are PowerShell command line only. For more information, see [Windows Server Core](#) on the Microsoft website.
- New AMI offerings are created to support new platforms – for example, the Deep Learning and Nvidia AMIs were created to support customers using our GPU-based instance types (P2 and P3, G3, and others).
- Less popular AMIs are sometimes removed. If we see a particular AMI is launched only a few times in its entire lifespan, we will remove it in favor of more widely used options.

If there is an AMI variant that you would like to see, let us know by opening a support case, or by [providing feedback](#).

## Patches, security updates, and AMI IDs

Amazon provides updated, fully-patched AWS Windows AMIs within five business days of Microsoft's patch Tuesday (the second Tuesday of each month). The new AMIs are available immediately from the **Images** page in the Amazon EC2 console. The new AMIs are available in the AWS Marketplace and the **Quick Start** tab of the launch instance wizard within a few days of their release.

### Note

Instances launched from Windows Server 2019 and later AMIs may show a Windows Update dialog message stating "Some settings are managed by your organization." This message appears as a result of changes in Windows Server 2019 and does not impact the behavior of Windows Update or your ability to manage update settings. To remove this warning, see ["Some settings are managed by your organization"](#).

AWS Windows AMIs are publicly available for three months after they are released. Within 10 days after the release of new AMIs, AWS changes access for AMIs that are more than three months old to make them private.

After AWS makes an AMI private, you may no longer retrieve it by any method. In the console, the **AMI ID** field for a private AMI states, Cannot load detail for `ami-1234567890abcdef0`. You may not be permitted to view it.

If an AMI is deprecated but is not yet marked private, you can still use it. However, we recommend that you always use the latest version.

The AWS Windows AMIs; in each release have new AMI IDs. Therefore, we recommend that you write scripts that locate the latest AWS Windows AMIs by their names, rather than by their IDs. For more information, see the following examples:

- [Get-EC2ImageByName](#) (AWS Tools for Windows PowerShell)
- [Query for the Latest AWS Windows AMI Using Systems Manager Parameter Store](#)
- [Walkthrough: Looking Up Amazon Machine Image IDs](#) (AWS Lambda, AWS CloudFormation)

# Ports and Protocols for AWS Windows AMIs

The following tables list the ports, protocols, and directions by workload for AWS Windows Amazon Machine Images (AMIs).

## Contents

- [AllJoyn Router](#)
- [Cast to Device](#)
- [Core Networking](#)
- [Delivery Optimization](#)
- [Diag Track](#)
- [DIAL Protocol Server](#)
- [File and Printer Sharing](#)
- [File Server Remote Management](#)
- [ICMP v4 All](#)
- [Microsoft Edge](#)
- [Microsoft Media Foundation Network Source](#)
- [Multicast](#)
- [Remote Desktop](#)
- [WindowsDevice Management](#)
- [WindowsFeature Experience Pack](#)
- [WindowsFirewall Remote Management](#)
- [WindowsRemote Management](#)

## AllJoyn Router

OS	Rule	Description	Port	Protocol	Direction
Windows Server 2016	AllJoyn Router (TCP-In)	Inbound rule for AllJoyn Router traffic [TCP]	Local: 9955	TCP	In
Windows Server 2019			Remote: Any		

OS	Rule	Description	Port	Protocol	Direction
Windows Server 2022	AllJoyn Router (TCP-Out)	Outbound rule for AllJoyn Router traffic [TCP]	Local: Any Remote: Any	TCP	Out
	AllJoyn Router (UDP-In)	Inbound rule for AllJoyn Router traffic [UDP]	Local: Any Remote: Any	UDP	In
	AllJoyn Router (UDP-Out)	Outbound rule for AllJoyn Router traffic [UDP]	Local: Any Remote: Any	UDP	Out

## Cast to Device

OS	Rule	Description	Port	Protocol	Direction
Windows Server 2016 Windows Server 2019 Windows Server 2022	Cast to Device functionality (qWave-TCP-In)	Inbound rule for the Cast to Device functionality to allow use of the Quality Windows Audio Video Experience Service. [TCP 2177]	Local: 2177 Remote: Any	TCP	In

OS	Rule	Description	Port	Protocol	Direction
	Cast to Device functionality (qWave-TCP-Out)	Outbound rule for the Cast to Device functionality to allow use of the Quality Windows Audio Video Experience Service. [TCP 2177]	Local: Any Remote: 2177	TCP	Out
	Cast to Device functionality (qWave-UDP-In)	Inbound rule for the Cast to Device functionality to allow use of the Quality Windows Audio Video Experience Service. [UDP 2177]	Local: 2177 Remote: Any	UDP	In

OS	Rule	Description	Port	Protocol	Direction
	Cast to Device functionality (qWave-UDP-Out)	Outbound rule for the Cast to Device functionality to allow use of the Quality Windows Audio Video Experience Service. [UDP 2177]	Local: Any  Remote: 2177	UDP	Out
	Cast to Device SSDP Discovery (UDP-In)	Inbound rule to allow discovery of Cast to Device targets using SSDP	Local: Ply2Disc  Remote: Any	UDP	In
	Cast to Device Streaming Server (HTTP-Streaming-In)	Inbound rule for the Cast to Device server to allow streaming using HTTP. [TCP 10246]	Local: 10246  Remote: Any	TCP	In

OS	Rule	Description	Port	Protocol	Direction
	Cast to Device Streaming Server (RTCP-Streaming-In)	Inbound rule for the Cast to Device server to allow streaming using RTSP and RTP. [UDP]	Local: Any Remote: Any	UDP	In
	Cast to Device Streaming Server (RTP-Streaming-Out)	Outbound rule for the Cast to Device server to allow streaming using RTSP and RTP. [UDP]	Local: Any Remote: Any	UDP	Out
	Cast to Device Streaming Server (RTSP-Streaming-In)	Inbound rule for the Cast to Device server to allow streaming using RTSP and RTP. [TCP 23554, 23555, 23556]	Local: 235, 542, 355, 523, 556 Remote: Any	TCP	In

OS	Rule	Description	Port	Protocol	Direction
	Cast to Device UPnP Events (TCP-In)	Inbound rule to allow receiving UPnP Events from Cast to Device targets	Local: 2869 Remote: Any	TCP	In

## Core Networking

Windows Server 2016, 2019, and 2022

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2016	Destination Unreachable (ICMPv6-In)	Destination Unreachable error messages are sent from any node that a packet traverses which is unable to forward the packet for any reason except congestion.		ICMPv6	In
Windows Server 2019					
Windows Server 2022					
	Destination Unreachable Fragmenta	Destination Unreachable Fragmenta		ICMPv4	In

OS	Rule	Definition	Port	Protocol	Direction
	Fragmentation Needed (ICMPv4-In)	Fragmentation Needed error messages are sent from any node that a packet traverses which is unable to forward the packet because fragmentation was needed and the don't fragment bit was set.			

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - DNS (UDP-Out)	Outbound rule to allow DNS requests. DNS responses based on requests that match this rule are permitted regardless of source address. This behavior is classified as loose source mapping.	Local: Any Remote: 53	UDP	Out
	Dynamic Host Configuration Protocol (DHCP-In)	Allows DHCP (Dynamic Host Configuration Protocol) messages for stateful auto-configuration.	Local: 68 Remote: 67	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Dynamic Host Configuration Protocol (DHCP-Out)	Allows DHCP (Dynamic Host Configuration Protocol) messages for stateful auto-configuration.	Local: 68 Remote: 67	UDP	Out
	Dynamic Host Configuration Protocol for IPv6 (DHCPV6-In)	Allows DHCPV6 (Dynamic Host Configuration Protocol for IPv6) messages for stateful and stateless configuration.	Local: 546 Remote: 547	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Dynamic Host Configuration Protocol for IPv6 (DHCPV6-Out)	Allows DHCPV6 (Dynamic Host Configuration Protocol for IPv6) messages for stateful and stateless configuration.	Local: 546 Remote: 547	UDP	Out
	Core Networking - Group Policy (LSASS-Out)	Outbound rule to allow remote LSASS traffic for Group Policy updates.	Local: Any Remote: Any	TCP	Out
	Core Networking - Group Policy (NP-Out)	Core Networking - Group Policy (NP-Out)	Local: Any Remote: 445	TCP	Out
	Core Networking - Group Policy (TCP-Out)	Outbound rule to allow remote RPC traffic for Group Policy updates.	Local: Any Remote: Any	TCP	Out

OS	Rule	Definition	Port	Protocol	Direction
	Internet Group Management Protocol (IGMP-In)	IGMP messages are sent and received by nodes to create, join, and depart multicast groups.		2	In
	Core Networking - Internet Group Management Protocol (IGMP-Out)	IGMP messages are sent and received by nodes to create, join, and depart multicast groups.		2	Out
	Core Networking - IPHTTPS (TCP-In)	Inbound TCP rule to allow IPHTTPS tunneling technology to provide connectivity across HTTP proxies and firewalls.	Local: IPHTTPS Remote: Any	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - IPHTTPS (TCP-Out)	Outbound TCP rule to allow IPHTTPS tunneling technology to provide connectivity across HTTP proxies and firewalls.	Local: Any Remote: IPHTTPS	TCP	Out
	IPv6 (IPv6-In)	Inbound rule required to permit IPv6 traffic for ISATAP ( Intra-Site Automatic Tunnel Addressing Protocol) and 6to4 tunneling services.		41	In

OS	Rule	Definition	Port	Protocol	Direction
	IPv6 (IPv6-Out)	Outbound rule required to permit IPv6 traffic for ISATAP (Intra-Site Automatic Tunnel Addressing Protocol) and 6to4 tunneling services.		41	Out
	Multicast Listener Done (ICMPv6-In)	Multicast Listener Done messages inform local routers that there are no longer any members remaining for a specific multicast address on the subnet.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Done (ICMPv6-Out)	Multicast Listener Done messages inform local routers that there are no longer any members remaining for a specific multicast address on the subnet.		ICMPv6	Out
	Multicast Listener Query (ICMPv6-In)	An IPv6 multicast-capable router uses the Multicast Listener Query message to query a link for multicast group membership.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Query (ICMPv6-Out)	An IPv6 multicast-capable router uses the Multicast Listener Query message to query a link for multicast group membership.		ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report (ICMPv6-In)	The Multicast Listener Report message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report (ICMPv6-Out)	The Multicast Listener Report message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.		ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report v2 (ICMPv6-In)	Multicast Listener Report v2 message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report v2 (ICMPv6-Out)	Multicast Listener Report v2 message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.		ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Advertisement (ICMPv6-In)	Neighbor Discovery Advertisement messages are sent by nodes to notify other nodes of link-layer address changes or in response to a Neighbor Discovery Solicitation request.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Advertisement (ICMPv6-Out)	Neighbor Discovery Advertisement messages are sent by nodes to notify other nodes of link-layer address changes or in response to a Neighbor Discovery Solicitation request.		ICMPv6	Out
	Neighbor Discovery Solicitation (ICMPv6-In)	Neighbor Discovery Solicitations are sent by nodes to discover the link-layer address of another on-link IPv6 node.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Solicitation (ICMPv6-Out)	Neighbor Discovery Solicitations are sent by nodes to discover the link-layer address of another on-link IPv6 node.		ICMPv6	Out
	Packet Too Big (ICMPv6-In)	Packet Too Big error messages are sent from any node that a packet traverses which is unable to forward the packet because the packet is too large for the next link.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Packet Too Big (ICMPv6-Out)	Packet Too Big error messages are sent from any node that a packet traverses which is unable to forward the packet because the packet is too large for the next link.		ICMPv6	Out
	Parameter Problem (ICMPv6-In)	Parameter Problem error messages are sent by nodes when packets are incorrectly generated.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Parameter Problem (ICMPv6-Out)	Parameter Problem error messages are sent by nodes when packets are incorrectly generated.		ICMPv6	Out
	Router Advertisement (ICMPv6-In)	Router Advertisement messages are sent by routers to other nodes for stateless auto-configuration.		ICMPv6	In
	Router Advertisement (ICMPv6-Out)	Router Advertisement messages are sent by routers to other nodes for stateless auto-configuration.		ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Router Solicitation (ICMPv6-In)	Router Solicitation messages are sent by nodes seeking routers to provide stateless auto-configuration.		ICMPv6	In
	Router Solicitation (ICMPv6-Out)	Router Solicitation messages are sent by nodes seeking routers to provide stateless auto-configuration.		ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - Teredo (UDP-In)	Inbound UDP rule to allow Teredo edge traversal. This technology provides address assignment and automatic tunneling for unicast IPv6 traffic when an IPv6/IPv4 host is located behind an IPv4 network address translator.	Local: Teredo Remote: Any	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - Teredo (UDP-Out)	Outbound UDP rule to allow Teredo edge traversal . This technology provides address assignment and automatic tunneling for unicast IPv6 traffic when an IPv6/IPv4 host is located behind an IPv4 network address translator.	Local: Any Remote: Any	UDP	Out

OS	Rule	Definition	Port	Protocol	Direction
	Time Exceeded (ICMPv6-In)	Time Exceeded error messages are generated from any node that a packet traverses if the Hop Limit value is decremented to zero at any point on the path.		ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Time Exceeded (ICMPv6-Out)	Time Exceeded error messages are generated from any node that a packet traverses if the Hop Limit value is decremented to zero at any point on the path.		ICMPv6	Out

## Windows Server 2012 and 2012 R2

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012 Windows Server 2012 R2	Destination Unreachable (ICMPv6-In)	Destination Unreachable error messages are sent from any node that a packet traverses which is unable to forward the	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
		packet for any reason except congestion.			
	Destination Unreachable Fragmentation Needed (ICMPv4-In)	Destination Unreachable Fragmentation Needed error messages are sent from any node that a packet traverses which is unable to forward the packet because fragmentation was needed and the don't fragment bit was set.	Local: 68 Remote: 67	ICMPv4	In

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - DNS (UDP-Out)	Outbound rule to allow DNS requests. DNS responses based on requests that match this rule are permitted regardless of source address. This behavior is classified as loose source mapping.	Local: Any Remote: 53	UDP	Out
	Dynamic Host Configuration Protocol (DHCP-In)	Allows DHCP (Dynamic Host Configuration Protocol) messages for stateful auto-configuration.	Local: 68 Remote: 67	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Dynamic Host Configuration Protocol (DHCP-Out)	Allows DHCP (Dynamic Host Configuration Protocol) messages for stateful auto-configuration.	Local: 68 Remote: 67	UDP	Out
	Dynamic Host Configuration Protocol for IPv6 (DHCPV6-In)	Allows DHCPV6 (Dynamic Host Configuration Protocol for IPv6) messages for stateful and stateless configuration.	Local: 546 Remote: 547	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Dynamic Host Configuration Protocol for IPv6 (DHCPV6-Out)	Allows DHCPV6 (Dynamic Host Configuration Protocol for IPv6) messages for stateful and stateless configuration.	Local: 546 Remote: 547	UDP	Out
	Core Networking - Group Policy (LSASS-Out)	Outbound rule to allow remote LSASS traffic for Group Policy updates.	Local: Any Remote: Any	TCP	Out
	Core Networking - Group Policy (NP-Out)	Core Networking - Group Policy (NP-Out)	Local: Any Remote: 445	TCP	Out
	Core Networking - Group Policy (TCP-Out)	Outbound rule to allow remote RPC traffic for Group Policy updates.	Local: Any Remote: Any	TCP	Out

OS	Rule	Definition	Port	Protocol	Direction
	Internet Group Management Protocol (IGMP-In)	IGMP messages are sent and received by nodes to create, join, and depart multicast groups.	Local: 68 Remote: 67	2	In
	Core Networking - Internet Group Management Protocol (IGMP-Out)	IGMP messages are sent and received by nodes to create, join, and depart multicast groups.	Local: 68 Remote: 67	2	Out
	Core Networking - IPHTTPS (TCP-In)	Inbound TCP rule to allow IPHTTPS tunneling technology to provide connectivity across HTTP proxies and firewalls.	Local: IPHTTPS Remote: Any	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - IPHTTPS (TCP-Out)	Outbound TCP rule to allow IPHTTPS tunneling technology to provide connectivity across HTTP proxies and firewalls.	Local: Any Remote: IPHTTPS	TCP	Out
	IPv6 (IPv6-In)	Inbound rule required to permit IPv6 traffic for ISATAP ( Intra-Site Automatic Tunnel Addressing Protocol) and 6to4 tunneling services.	Local: Any Remote: 445	41	In

OS	Rule	Definition	Port	Protocol	Direction
	IPv6 (IPv6-Out)	Outbound rule required to permit IPv6 traffic for ISATAP (Intra-Site Automatic Tunnel Addressing Protocol) and 6to4 tunneling services.	Local: Any Remote: 445	41	Out
	Multicast Listener Done (ICMPv6-In)	Multicast Listener Done messages inform local routers that there are no longer any members remaining for a specific multicast address on the subnet.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Done (ICMPv6-Out)	Multicast Listener Done messages inform local routers that there are no longer any members remaining for a specific multicast address on the subnet.	Local: 68 Remote: 67	ICMPv6	Out
	Multicast Listener Query (ICMPv6-In)	An IPv6 multicast-capable router uses the Multicast Listener Query message to query a link for multicast group membership.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Query (ICMPv6-Out)	An IPv6 multicast-capable router uses the Multicast Listener Query message to query a link for multicast group membership.	Local: 68 Remote: 67	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report (ICMPv6-In)	The Multicast Listener Report message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report (ICMPv6-Out)	The Multicast Listener Report message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.	Local: 68 Remote: 67	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report v2 (ICMPv6-In)	Multicast Listener Report v2 message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Multicast Listener Report v2 (ICMPv6-Out)	Multicast Listener Report v2 message is used by a listening node to either immediately report its interest in receiving multicast traffic at a specific multicast address or in response to a Multicast Listener Query.	Local: 68 Remote: 67	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Advertisement (ICMPv6-In)	Neighbor Discovery Advertisement messages are sent by nodes to notify other nodes of link-layer address changes or in response to a Neighbor Discovery Solicitation request.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Advertisement (ICMPv6-Out)	Neighbor Discovery Advertisement messages are sent by nodes to notify other nodes of link-layer address changes or in response to a Neighbor Discovery Solicitation request.	Local: 68 Remote: 67	ICMPv6	Out
	Neighbor Discovery Solicitation (ICMPv6-In)	Neighbor Discovery Solicitations are sent by nodes to discover the link-layer address of another on-link IPv6 node.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Neighbor Discovery Solicitation (ICMPv6-Out)	Neighbor Discovery Solicitations are sent by nodes to discover the link-layer address of another on-link IPv6 node.	Local: 68 Remote: 67	ICMPv6	Out
	Packet Too Big (ICMPv6-In)	Packet Too Big error messages are sent from any node that a packet traverses which is unable to forward the packet because the packet is too large for the next link.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Packet Too Big (ICMPv6-Out)	Packet Too Big error messages are sent from any node that a packet traverses which is unable to forward the packet because the packet is too large for the next link.	Local: 68 Remote: 67	ICMPv6	Out
	Parameter Problem (ICMPv6-In)	Parameter Problem error messages are sent by nodes when packets are incorrectly generated.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Parameter Problem (ICMPv6-Out)	Parameter Problem error messages are sent by nodes when packets are incorrectly generated.	Local: 68 Remote: 67	ICMPv6	Out
	Router Advertisement (ICMPv6-In)	Router Advertisement messages are sent by routers to other nodes for stateless auto-configuration.	Local: 68 Remote: 67	ICMPv6	In
	Router Advertisement (ICMPv6-Out)	Router Advertisement messages are sent by routers to other nodes for stateless auto-configuration.	Local: 68 Remote: 67	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Router Solicitation (ICMPv6-In)	Router Solicitation messages are sent by nodes seeking routers to provide stateless auto-configuration.	Local: 68 Remote: 67	ICMPv6	In
	Router Solicitation (ICMPv6-Out)	Router Solicitation messages are sent by nodes seeking routers to provide stateless auto-configuration.	Local: 68 Remote: 67	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - Teredo (UDP-In)	Inbound UDP rule to allow Teredo edge traversal . This technology provides address assignment and automatic tunneling for unicast IPv6 traffic when an IPv6/IPv4 host is located behind an IPv4 network address translator.	Local: Teredo Remote: Any	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	Core Networking - Teredo (UDP-Out)	Outbound UDP rule to allow Teredo edge traversal . This technology provides address assignment and automatic tunneling for unicast IPv6 traffic when an IPv6/IPv4 host is located behind an IPv4 network address translator.	Local: Any Remote: Any	UDP	Out

OS	Rule	Definition	Port	Protocol	Direction
	Time Exceeded (ICMPv6-In)	Time Exceeded error messages are generated from any node that a packet traverses if the Hop Limit value is decremented to zero at any point on the path.	Local: 68 Remote: 67	ICMPv6	In

OS	Rule	Definition	Port	Protocol	Direction
	Time Exceeded (ICMPv6-Out)	Time Exceeded error messages are generated from any node that a packet traverses if the Hop Limit value is decremented to zero at any point on the path.	Local: 68 Remote: 67	ICMPv6	Out

## Delivery Optimization

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2019 Windows Server 2022	DeliveryOptimization-TCP-In	Inbound rule to allow Delivery Optimization to connect to remote endpoints.	Local: 7680 Remote: Any	TCP	In
	DeliveryOptimization-UDP-In	Inbound rule to allow Delivery Optimization	Local: 7680 Remote: Any	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
		to connect to remote endpoints.			

## Diag Track

### Windows Server 2019 and 2022

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2019 Windows Server 2022	Connected User Experiences and Telemetry	Unified Telemetry Client Outbound Traffic.	Local: Any Remote: 443	TCP	Out

### Windows Server 2016

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2016	Connected User Experiences and Telemetry	Unified Telemetry Client Outbound Traffic.	Local: Any Remote: Any	TCP	Out

## DIAL Protocol Server

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2016	DIAL protocol server (HTTP-In)	Inbound rule for DIAL protocol	Local: 10247	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2019		server to allow remote control of Apps using HTTP.	Remote: Any		
Windows Server 2022					

## File and Printer Sharing

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012	File and Printer Sharing (Echo Request - ICMPv4-In)	Echo Request messages are sent as ping requests to other nodes.	Local: 5355 Remote: Any	ICMPv4	In
Windows Server 2012 R2	File and Printer Sharing (Echo Request - ICMPv4-Out)	Echo Request messages are sent as ping requests to other nodes.	Local: 5355 Remote: Any	ICMPv4	Out
	File and Printer Sharing (Echo Request - ICMPv6-In)	Echo Request messages are sent as ping requests to other nodes.	Local: 5355 Remote: Any	ICMPv6	In
	File and Printer Sharing	Echo Request messages are sent as ping	Local: 5355	ICMPv6	Out

OS	Rule	Definition	Port	Protocol	Direction
	(Echo Request - ICMPv6-Out)	requests to other nodes.	Remote: Any		
	File and Printer Sharing (LLMNR-UDP-In)	Inbound rule for File and Printer Sharing to allow Link Local Multicast Name Resolution.	Local: 5355 Remote: Any	UDP	In
	File and Printer Sharing (LLMNR-UDP-Out)	Outbound rule for File and Printer Sharing to allow Link Local Multicast Name Resolution.	Local: Any Remote: 5355	UDP	Out
	File and Printer Sharing (NB-Datagram-In)	Inbound rule for File and Printer Sharing to allow NetBIOS Datagram transmission and reception.	Local: 138 Remote: Any	UDP	In

OS	Rule	Definition	Port	Protocol	Direction
	File and Printer Sharing (NB-Datagram-Out)	Outbound rule for File and Printer Sharing to allow NetBIOS Datagram transmission and reception.	Local: Any Remote: 138	UDP	Out
	File and Printer Sharing (NB-Name-In)	Inbound rule for File and Printer Sharing to allow NetBIOS Name Resolution.	Local: 137 Remote: Any	UDP	In
	File and Printer Sharing (NB-Name-Out)	Outbound rule for File and Printer Sharing to allow NetBIOS Name Resolution.	Local: Any Remote: 137	UDP	Out

OS	Rule	Definition	Port	Protocol	Direction
	File and Printer Sharing (NB-Session-In)	Inbound rule for File and Printer Sharing to allow NetBIOS Session Service connections.	Local: 139 Remote: Any	TCP	In
	File and Printer Sharing (NB-Session-Out)	Outbound rule for File and Printer Sharing to allow NetBIOS Session Service connections.	Local: Any Remote: 139	TCP	Out
	File and Printer Sharing (SMB-In)	Inbound rule for File and Printer Sharing to allow Server Message Block transmission and reception via Named Pipes.	Local: 445 Remote: Any	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
	File and Printer Sharing (SMB-Out)	Outbound rule for File and Printer Sharing to allow Server Message Block transmission and reception via Named Pipes.	Local: Any Remote: 445	TCP	Out
	File and Printer Sharing (Spooler Service - RPC)	Inbound rule for File and Printer Sharing to allow the Print Spooler Service to communicate via TCP/RPC.	Local: RPC Remote: Any	TCP	In
	File and Printer Sharing (Spooler Service - RPC-EPMAP)	Inbound rule for the RPCSS service to allow RPC/TCP traffic for the Spooler Service.	Local: RPC-EPMAP Remote: Any	TCP	In

## File Server Remote Management

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012  Windows Server 2012 R2	File Server Remote Management (DCOM-In)	Inbound rule to allow DCOM traffic to manage the File Services role.	Local: 135  Remote: Any	TCP	In
	File Server Remote Management (SMB-In)	Inbound rule to allow SMB traffic to manage the File Services role.	Local: 445  Remote: Any	TCP	In
	WMI-In	Inbound rule to allow WMI traffic to manage the File Services role.	Local: RPC  Remote: Any	TCP	In

## ICMP v4 All

OS	Rule	Port	Protocol	Direction
Windows Server 2012  Windows Server 2012 R2	All ICMP v4	Local: 139  Remote: Any	ICMPv4	In

## Microsoft Edge

OS	Rule	Port	Protocol	Direction
Windows Server 2022	Microsoft Edge (mDNS-In)	Local: 5353 Remote: Any	UDP	In

## Microsoft Media Foundation Network Source

OS	Rule	Port	Protocol	Direction
Windows Server 2022	Microsoft Media Foundation Network Source IN [TCP 554]	Local: 554, 8554-8558 Remote: Any	TCP	In
	Microsoft Media Foundation Network Source IN [UDP 5004-5009]	Local: 5000-5020 Remote: Any	UDP	In
	Microsoft Media Foundation Network Source OUT [TCP ALL]	Local: Any Remote: 554, 8554-8558	TCP	In

## Multicast

### Windows Server 2019 and 2022

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2019	mDNS (UDP-In)	Inbound rule for mDNS traffic.	Local: 5353 Remote: Any	UDP	In
Windows Server 2022	mDNS (UDP-Out)	Outbound rule for mDNS traffic.	Local: Any Remote: 5353	UDP	Out

### Windows Server 2016

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2016	mDNS (UDP-In)	Inbound rule for mDNS traffic.	Local: mDNS Remote: Any	UDP	In
	mDNS (UDP-Out)	Outbound rule for mDNS traffic.	Local: 5353 Remote: Any	UDP	Out

## Remote Desktop

### Windows Server 2012 R2, 2016, 2019, and 2022

OS	Rule	Definition	Port	Protocol	Direction
	Remote Desktop	Inbound rule for the	Local: Any	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012 R2	- Shadow (TCP-In)	Remote Desktop service to allow shadowing of an existing Remote Desktop session.	Remote: Any		
Windows Server 2016					
Windows Server 2019					
Windows Server 2022	Remote Desktop - User Mode (TCP-In)	Inbound rule for the Remote Desktop service to allow RDP traffic.	Local: 3389 Remote: Any	TCP	In
	Remote Desktop - User Mode (UDP-In)	Inbound rule for the Remote Desktop service to allow RDP traffic.	Local: 3389 Remote: Any	UDP	In

## Windows Server 2012

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012	Remote Desktop - User Mode (TCP-In)	Inbound rule for the Remote Desktop service to	Local: 3389 Remote: Any	TCP	In

OS	Rule	Definition	Port	Protocol	Direction
		allow RDP traffic.			
	Remote Desktop - User Mode (UDP-In)	Inbound rule for the Remote Desktop service to allow RDP traffic.	Local: 3389 Remote: Any	UDP	In

## WindowsDevice Management

### Windows Server 2022

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2022	WindowsDevice Management Certificate Installer (TCP out)	Allow outbound TCP traffic from WindowsDevice Management Certificate Installer.	Local: Any Remote: Any	TCP	Out
	WindowsDevice Management Device Enroller (TCP out)	Allow outbound TCP traffic from WindowsDevice Management	Local: Any Remote: 80, 443	TCP	Out

OS	Rule	Definition	Port	Protocol	Direction
		t Device Enroller.			
	WindowsDevice Management Enrollment Service (TCP out)	Allow outbound TCP traffic from WindowsDevice Management Enrollment Service.	Local: Any Remote: Any	TCP	Out
	WindowsDevice Management Sync Client (TCP out)	Allow outbound TCP traffic from WindowsDevice Management Sync Client.	Local: Any Remote: Any	TCP	Out

## Windows Server 2019

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2019	WindowsDevice Management Certificate Installer (TCP out)	Allow outbound TCP traffic from WindowsDevice Management	Local: Any Remote: Any	TCP	Out

OS	Rule	Definition	Port	Protocol	Direction
		t Certificate Installer.			
	WindowsDevice Management Enrollment Service (TCP out)	Allow outbound TCP traffic from WindowsDevice Management Enrollment Service.	Local: Any Remote: Any	TCP	Out
	WindowsDevice Management Sync Client (TCP out)	Allow outbound TCP traffic from WindowsDevice Management Sync Client .	Local: Any Remote: Any	TCP	Out
	WindowsEnrollment WinRT (TCP Out)	Allow outbound TCP traffic from WindowsEnrollment WinRT.	Local: Any Remote: Any	TCP	Out

## WindowsFeature Experience Pack

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2022	WindowsFeature Experience Pack	WindowsFeature Experience Pack.		Any	Out

## WindowsFirewall Remote Management

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012 R2	WindowsFirewall Remote Management (RPC)	Inbound rule for the WindowsFirewall to be remotely managed via RPC/TCP.	Local: RPC Remote: Any	TCP	In
	WindowsFirewall Remote Management (RPC-EPMAP)	Inbound rule for the RPCSS service to allow RPC/TCP traffic for the Windows Firewall.	Local: RPC-EPMAP Remote: Any	TCP	In

## WindowsRemote Management

OS	Rule	Definition	Port	Protocol	Direction
Windows Server 2012	WindowsRe mote Management (HTTP-In)	Inbound rule for WindowsRe mote Managemen t via WS- Manage ment.	Local: 5985 Remote: Any	TCP	In
Windows Server 2012 R2					
Windows Server 2016					
Windows Server 2019					
Windows Server 2022					

For more information about Amazon EC2 security groups, see [Amazon EC2 Security Groups for WindowsInstances](#).

## Updates applied for AWS Windows AMIs

To help ensure a smooth and consistent launch experience, AWS Windows AMIs include the following updates for initialization, installation, and configuration.

### Note

When you launch an instance from an Amazon managed AWS Windows AMI, the root device for the Windows instance is an Amazon Elastic Block Store (Amazon EBS) volume. AWS Windows AMIs don't support instance store for the root device.

## Clean and prepare

Description	Applies to
Check for pending file renames or reboots, and reboot as needed	All AMIs
Delete .dmp files	All AMIs
Delete logs (event logs, Systems Manager, EC2Config)	All AMIs
Delete temporary folders and files for Sysprep	All AMIs
Perform virus scan	All AMIs
Pre-compile queued .NET assemblies (before Sysprep)	All AMIs
Restore default values for Microsoft browsers	All AMIs
Reset the Windows wallpaper	All AMIs
Run Sysprep	All AMIs
Set EC2Launch v1 to run at the next launch	Windows Server 2016 and 2019
Run Windows maintenance tools	Windows Server 2012 R2 and later
Clear recent history (Start menu, Windows Explorer, and more)	Windows Server 2012 R2 and earlier
Restore default values for EC2Config	Windows Server 2012 R2 and earlier

## Install and configure

Description	Applies to
Disable Secure Time Seeding	All AMIs

Description	Applies to
Add links to the Amazon EC2 Windows Guide	All AMIs
Attach instance storage volumes to extended mount points	All AMIs
Install the current AWS Tools for Windows PowerShell	All AMIs
Install the current CloudFormation bootstrap scripts	All AMIs
Disable RunOnce for Internet Explorer	All AMIs
Enable remote PowerShell	All AMIs
Disable hibernation and delete the hibernation file	All AMIs
Disable the Connected User Experiences and Telemetry service	All AMIs
Set the performance options for best performance	All AMIs
Set the power setting to high performance	All AMIs
Disable the screen saver password	All AMIs
Set the RealTimeIsUniversal registry key	All AMIs
Set the timezone to UTC	All AMIs
Disable Windows updates and notifications	All AMIs
Run Windows Update and reboot until there are no pending updates	All AMIs
Set the display in all power schemes to never turn off	All AMIs
Set the PowerShell execution policy to "Unrestricted"	All AMIs

Description	Applies to
<p>If Microsoft SQL Server is installed:</p> <ul style="list-style-type: none"> <li>• Install service packs</li> <li>• Configure to start automatically</li> <li>• Add BUILTIN\Administrators to the SysAdmin role</li> <li>• Open TCP port 1433 and UDP port 1434</li> </ul>	All AMIs
<p>Configure a paging file on the system volume as follows:</p> <ul style="list-style-type: none"> <li>• Windows Server 2016 and later - Managed by the system</li> <li>• Windows Server 2012 R2 - Initial size and max size are 8 GB</li> <li>• Windows Server 2012 and earlier - Initial size is 512 MB, max size is 8 GB</li> </ul>	All AMIs
Install the current EC2Launch v2 and SSM Agent	Windows Server 2022 and later
Install the current EC2Launch v1 and SSM Agent	Windows Server 2016 and 2019
Install the current SRIOV drivers	Windows Server 2012 R2 and later
Install the current EC2WinUtil driver	Windows Server 2008 R2 and later
Install the current EC2Config and SSM Agent	Windows Server 2012 R2 and earlier
Install the current AWS PV, ENA, and NVMe drivers	Windows Server 2008 R2 and later

Description	Applies to
Allow ICMP traffic through the firewall	Windows Server 2012 R2 and earlier
Configure an additional system managed paging file on Z:, if available	Windows Server 2012 R2 and earlier
Enable file and printer sharing	Windows Server 2012 R2 and earlier
Install the current Citrix PV driver	Windows Server 2008 SP2 and earlier
Install PowerShell 2.0 and 3.0	Windows Server 2008 SP2 and R2
Apply the following hotfixes: <ul style="list-style-type: none"> <li>• <a href="#">MS15-011</a></li> <li>• <a href="#">KB2582281</a></li> <li>• <a href="#">KB2634328</a></li> <li>• <a href="#">KB2394911</a></li> <li>• <a href="#">KB2780879</a></li> </ul>	Windows Server 2008 SP2 and R2

## Changes in Windows Server AMIs by OS version

AWS provides AMIs for Windows Server 2016 and later. These AMIs include the following high-level changes between AWS Windows AMIs for different Windows operating system versions:

### Windows Server 2025

- Windows Server 2025 AMIs use UEFI boot mode by default, except for Windows Server 2025 AMIs named `BIOS-Windows_Server-2025-English-Full-Base`.

**Note**

EC2 metal instance sizes and some EC2 instance types do not support UEFI boot mode for Windows Server. To launch Windows Server 2025 on these instances, you must use the AWS managed BIOS-`Windows_Server-2025-English-Full-Base` AMI, or an AMI that is based on that image. For more information about UEFI requirements, see [Requirements for UEFI boot mode](#) in the *Amazon EC2 User Guide*.

- Windows Server 2025 AMIs support Nitro EC2 instance types only.
- Windows Server 2025 AMIs use gp3 EBS volume types by default.
- Windows Server 2025 AMIs use the AWS.Tools PowerShell module.

## Windows Server 2016-2022

- To accommodate the change from .NET Framework to .NET Core, the EC2Config service has been deprecated on Windows Server 2016 AMIs and replaced by EC2Launch. EC2Launch is a bundle of Windows PowerShell scripts that perform many of the tasks performed by the EC2Config service. For more information, see [Configure a Windows instance using EC2Launch](#). EC2Launch v2 replaces EC2Launch in Windows Server 2022 and later. For more information, see [Configure a Windows instance using EC2Launch v2](#).
- On earlier versions of Windows Server AMIs, you can use the EC2Config service to join an EC2 instance to a domain and configure integration with Amazon CloudWatch. On Windows Server 2016 and later AMIs, you can use the CloudWatch agent to configure integration with Amazon CloudWatch. For more information about configuring instances to send log data to CloudWatch, see [Collect Metrics and Logs from Amazon EC2 Instances and On-Premises Servers with the CloudWatch Agent](#). For information about joining an EC2 instance to a domain, see [Join an Instance to a Domain Using the AWS-JoinDirectoryServiceDomain JSON Document](#) in the *AWS Systems Manager User Guide*.

## Other differences

Note the following additional important differences for instances created from Windows Server 2016 and later AMIs.

- By default, EC2Launch does not initialize secondary EBS volumes. You can configure EC2Launch to initialize disks automatically by either scheduling the script to run or by calling EC2Launch in

user data. For the procedure to initialize disks using EC2Launch, see "Initialize Drives and Drive Letter Mappings" in [Configure EC2Launch](#).

- If you previously enabled CloudWatch integration on your instances by using a local configuration file (`AWS.EC2.Windows.CloudWatch.json`), you can configure the file to work with the SSM Agent on instances created from Windows Server 2016 and later AMIs.

## AWS Windows AMI version history

The following tables summarize the changes to each release of the AWS Windows AMIs. Note that some changes apply to all AWS Windows AMIs, while others apply to only a subset of these AMIs.

For more information about components included in these AMIs, see the following:

- [EC2Launch v2 version history](#)
- [EC2Launch v1 version history](#)
- [EC2Config version history](#)
- [Systems Manager SSM Agent Release Notes](#)
- [Amazon ENA driver versions](#)
- [AWS NVMe driver versions](#)
- [Paravirtual drivers for Windows instances](#)
- [AWS Tools for PowerShell Change Log](#)

## Monthly AMI updates for 2026 (to date)

Release	Changes
2026.03.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• AWS PowerShell version 5.0.166</li> <li>• EC2Launch v1 version 1.4.299</li> <li>• EC2Launch v2 version 2.4.0</li> <li>• SSM Agent version 3.3.3797.0</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2025: CU 2</li></ul></li><li>• SQL Server GDR installed:<ul style="list-style-type: none"><li>• SQL_2025: KB5077466</li><li>• SQL_2022: KB5077464</li><li>• SQL_2019: KB5077469</li><li>• SQL_2017: KB5077471</li><li>• SQL_2016: KB5077474</li></ul></li><li>• Windows Security Updates current to March 10, 2026</li></ul> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"><li>• TPM-Windows_Server-2025-English-Full-SQL_2025_Enterprise</li><li>• TPM-Windows_Server-2025-English-Full-SQL_2025_Standard</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated December 10, 2025 and earlier will be made private after April 13, 2026, 10 AM Pacific.</p>

Release	Changes
2026.02.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 5.0.148</li><li>• EC2Launch v1 version 1.4.183</li><li>• EC2WinUtil version 3.1.0</li><li>• SSM Agent version 3.3.3598.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2025: CU 1</li><li>• SQL_2022: CU 2</li></ul></li><li>• Windows Security Updates current to February 10, 2026</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated November 12, 2025 and earlier will be made private after March 9, 2026, 10 AM Pacific.</p>

Release	Changes
2026.01.14	<p data-bbox="402 226 527 262"><b>All AMIs</b></p> <ul data-bbox="402 315 1230 987" style="list-style-type: none"><li data-bbox="402 315 901 367">• AWS PowerShell version 5.0.128</li><li data-bbox="402 409 844 462">• cfn-bootstrap version 2.0.38</li><li data-bbox="402 504 868 556">• EC2Launch v2 version 2.3.108</li><li data-bbox="402 598 868 651">• SSM Agent version 3.3.3270.0</li><li data-bbox="402 693 803 745">• SQL Server GDR installed:<ul data-bbox="430 766 803 903" style="list-style-type: none"><li data-bbox="430 766 803 819">• SQL_2025: KB5073177</li><li data-bbox="430 861 803 903">• SQL_2022: KB5072936</li></ul></li><li data-bbox="402 945 1230 987">• Windows Security Updates current to January 13, 2026</li></ul> <p data-bbox="402 1092 1485 1228">Previous versions of Amazon-published AWS Windows AMIs dated October 15, 2025 and earlier will be made private after February 9, 2026, 10 AM Pacific.</p>

## Monthly AMI updates for 2025

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2025 \(KB894199\)](#) on the Microsoft website.

### Note

Beginning January 2026, AWS Windows AMIs will ship with version 5 of AWS PowerShell or AWS.Tools for PowerShell. This major version update includes changes that may impact existing scripts and workflows. For more information, review the following documents:

- [Migrating to V5](#) in the *AWS.Tools for PowerShell User Guide*

- [AWS.Tools for PowerShell V5 release announcement](#)

Release	Changes
2025.12.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• AWS PowerShell version 4.1.953</li> <li>• cfn-bootstrap version 2.0.37</li> <li>• SSM Agent version 3.3.3185.0</li> <li>• SQL Server CUs installed: <ul style="list-style-type: none"> <li>• SQL_2022: CU 22</li> </ul> </li> <li>• Windows Security Updates current to December 9, 2025</li> </ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated September 10, 2025 and earlier will be made private after January 12, 2026, 10 AM Pacific.</p>
2025.11.20	<p><b>New AWS Windows AMIs with Microsoft SQL Server 2025.</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2025-English-Full-SQL_2025_Enterprise</li> <li>• Windows_Server-2025-English-Full-SQL_2025_Standard</li> <li>• Windows_Server-2025-English-Full-SQL_2025_Express</li> <li>• Windows_Server-2025-Japanese-Full-SQL_2025_Enterprise</li> <li>• Windows_Server-2025-Japanese-Full-SQL_2025_Standard</li> <li>• Windows_Server-2025-Korean-Full-SQL_2025_Enterprise</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• Windows_Server-2025-Korean-Full-SQL_2025_Standard</li></ul>
2025.11.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.935</li><li>• EC2Launch v2 version 2.3.56</li><li>• SQL Server GDR installed:<ul style="list-style-type: none"><li>• SQL_2022: KB5068406</li><li>• SQL_2019: KB5068404</li><li>• SQL_2017: KB5068402</li><li>• SQL_2016: KB5068401</li></ul></li><li>• Windows Security Updates current to November 11, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated August 13, 2025 and earlier will be made private after December 8, 2025, 10 AM Pacific.</p>

Release	Changes
2025.10.15	<p data-bbox="402 226 526 260"><b>All AMIs</b></p> <ul data-bbox="402 319 1234 823" style="list-style-type: none"><li data-bbox="402 319 899 373">• AWS PowerShell version 4.1.915</li><li data-bbox="402 403 880 457">• AWS NVMe driver version 1.7.0</li><li data-bbox="402 487 828 541">• EC2Launch v1 version 1.4.6</li><li data-bbox="402 571 799 646">• SQL Server CUs installed:<ul data-bbox="435 655 717 730" style="list-style-type: none"><li data-bbox="435 655 717 730">• SQL_2022: CU 21</li></ul></li><li data-bbox="402 760 1234 823">• Windows Security Updates current to October 15, 2025</li></ul> <p data-bbox="402 928 1458 1054">Previous versions of Amazon-published AWS Windows AMIs dated July 9, 2025 and earlier will be made private after November 10, 2025, 10 AM Pacific.</p>


Release	Changes
2025.09.10	<p data-bbox="402 226 526 260"><b>All AMIs</b></p> <ul data-bbox="402 319 1256 1176" style="list-style-type: none"><li data-bbox="402 319 899 373">• AWS PowerShell version 4.1.892</li><li data-bbox="402 407 750 462">• cfn-bootstrap v2.0.36</li><li data-bbox="402 495 1081 550">• Elastic Network Adapter (ENA) version 2.11.0</li><li data-bbox="402 583 867 638">• SSM Agent version 3.3.3050.0</li><li data-bbox="402 672 808 726">• SQL Server GDR installed:<ul data-bbox="431 760 808 1087" style="list-style-type: none"><li data-bbox="431 760 808 814">• SQL_2022: KB5065220</li><li data-bbox="431 848 808 903">• SQL_2019: KB5065222</li><li data-bbox="431 936 808 991">• SQL_2017: KB5065225</li><li data-bbox="431 1024 808 1079">• SQL_2016: KB5065226</li></ul></li><li data-bbox="402 1121 1256 1176">• Windows Security Updates current to September 9, 2025</li></ul> <p data-bbox="402 1281 1500 1365">Previous versions of Amazon-published AWS Windows AMIs dated June 11, 2025 and earlier will be made private after October 13, 2025, 10 AM Pacific.</p>

Release	Changes
2025.08.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.872</li><li>• EC2Launch v2 version 2.2.63</li><li>• Elastic Network Adapter (ENA) version 2.10.0</li><li>• SSM Agent version 3.3.2656.0</li><li>• SQL Server GDR installed:<ul style="list-style-type: none"><li>• SQL_2022: KB5063814</li><li>• SQL_2019: KB5063757</li><li>• SQL_2017: KB5063759</li><li>• SQL_2016: KB5063762</li></ul></li><li>• Windows Security Updates current to August 12, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated May 15, 2025 and earlier will be made private after September 8, 2025, 10 AM Pacific.</p> <p>New Windows AMIs:</p> <ul style="list-style-type: none"><li>• <code>Windows_Server-2025-French-Full-Base</code></li><li>• <code>Windows_Server-2025-German-Full-Base</code></li></ul>

Release	Changes
2025.07.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.853</li><li>• SSM Agent version 3.3.2471.0</li><li>• SQL Server GDR installed:<ul style="list-style-type: none"><li>• SQL_2022: KB5058721</li><li>• SQL_2019: KB5058722</li><li>• SQL_2017: KB5058714</li><li>• SQL_2016: KB5058718</li></ul></li><li>• Windows Security Updates current to July 8, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated April 9, 2025 and earlier will be made private after August 11, 2025, 10 AM Pacific.</p> <div data-bbox="402 1228 1510 1850"><p><b>Note</b></p><p>The following image types are no longer receiving updates and the final versions will become private after September 8th, 2025. If you wish to retain access to one of these image types, you can create a copy in your account prior to this date.</p><ul style="list-style-type: none"><li>• Windows_Server-2016-English-Core-SQL_2016_SP3_Enterprise</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP3_Standard</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP3_Web</li><li>• </li></ul></div>

Release	Changes
	<p>Windows_Server-2016-English-Full-HyperV</p> <ul style="list-style-type: none"><li>• Windows_Server-2016-English-Tesla</li><li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP3_Enterprise</li><li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP3_Express</li><li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP3_Standard</li><li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP3_Web</li><li>• Windows_Server-2019-English-Full-HyperV</li></ul>
2025.06.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.834</li><li>• AWS PV driver version 8.6.0</li><li>• EC2Launch v2 version 2.1.1</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU 19</li></ul></li><li>• Windows Security Updates current to June 10, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated March 12, 2025 and earlier will be made private after July 7, 2025, 10 AM Pacific.</p>

Release	Changes
2025.05.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.814</li><li>• SSM Agent version 3.3.2299.0</li><li>• Windows Security Updates current to May 13, 2025</li></ul> <p>New Windows AMIs: BIOS-Windows_Server-2025-English-Core-Base.</p> <p>Previous versions of Amazon-published AWS Windows AMIs dated February 12, 2025 and earlier will be made private after June 9, 2025, 10 AM Pacific.</p>
2025.04.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.791</li><li>• cfn-bootstrap v2.0.34</li><li>• EC2Launch v2 version 2.0.2107</li><li>• SSM Agent version 3.3.1957.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU 18</li></ul></li><li>• Windows Security Updates current to April 8, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated January 15, 2025 and earlier will be made private after May 13, 2025, 10 AM Pacific.</p>


Release	Changes
2025.03.12	<p data-bbox="402 226 527 262"><b>All AMIs</b></p> <ul data-bbox="402 315 1201 913" style="list-style-type: none"><li data-bbox="402 315 893 367">• AWS PowerShell version 4.1.771</li><li data-bbox="402 409 747 462">• cfn-bootstrap v2.0.33</li><li data-bbox="402 504 941 556">• EC2Launch v1 version 1.3.2005119</li><li data-bbox="402 598 876 651">• EC2Launch v2 version 2.0.2081</li><li data-bbox="402 693 795 745">• SQL Server CUs installed:<ul data-bbox="430 766 714 819" style="list-style-type: none"><li data-bbox="430 766 714 819">• SQL_2019: CU 32</li></ul></li><li data-bbox="402 861 1201 913">• Windows Security Updates current to March 11, 2025</li></ul> <p data-bbox="402 1018 1477 1144">Previous versions of Amazon-published AWS Windows AMIs dated December 13, 2024 and earlier will be made private after April 8, 2025, 10 AM Pacific.</p> <div data-bbox="402 1186 1510 1648" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="430 1228 552 1260"><b> Note</b></p><p data-bbox="479 1281 1477 1606">Beginning March 2025, R Services and Machine Learning Services with R and Python runtimes are no longer enabled by default on SQL Server 2016, 2017, and 2019 AMIs. These features include runtimes that are not maintained through SQL server cumulative updates. You can enable these features on your instance launched from our SQL Server AMIs using the SQL installation media included at C:\SQLServerSetup.</p></div>

Release	Changes
2025.02.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.749</li><li>• SSM Agent version 3.3.1611.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU 17</li></ul></li><li>• Windows Security Updates current to February 12, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated November 19, 2024 and earlier will be made private after March 11, 2025, 10 AM Pacific.</p>
2025.01.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.731</li><li>• cfn-init v2.0.32</li><li>• Elastic Network Adapter (ENA) version 2.9.0</li><li>• Windows Security Updates current to January 14, 2025</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated October 9, 2024 and earlier will be made private after February 11, 2025, 10 AM Pacific.</p>


## Monthly AMI updates for 2024

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2024](#) on the Microsoft website.

Release	Changes
2024.12.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.713</li><li>• AWS PV driver version 8.5.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 30</li></ul></li><li>• Windows Security Updates current to December 10, 2024</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated September 11, 2024 and earlier will be made private after January 15, 2025, 10 AM Pacific.</p>
2024.11.19	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• SSM Agent version 3.3.1345.0</li></ul> <p>This SSM Agent version addresses an issue where Windows Server 2025 instances may not connect to Systems Manager Sessions Manager or Fleet Manager RDP.</p>

Release	Changes
	<div data-bbox="402 212 1507 428"><p> <b>Note</b></p><p>This is a partial release. Only Windows Server 2025 AMIs are included in this release.</p></div>
2024.11.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PowerShell version 4.1.694</li><li>• AWS NVMe driver version 1.6.0</li><li>• cfn-init v2.0.31</li><li>• EC2Launch v1 version 1.3.2005065</li><li>• SSM Agent version 3.3.1230.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: GDR KB5046862</li><li>• SQL_2019: CU 29 + GDR KB5046860</li><li>• SQL_2017: GDR KB5046858</li><li>• SQL_2006_SP3: KB5046855</li></ul></li><li>• Windows Security Updates current to November 12, 2024</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated August 14, 2024 and earlier will be made private after December 11, 2024, 10 AM Pacific.</p>

Release	Changes
2024.11.04	<p data-bbox="402 226 971 260">Release AMIs for Windows Server 2025.</p> <p data-bbox="402 306 1481 483">Windows Server 2025 AMIs are configured with UEFI boot-mode, gp3 root volumes, and have IMDS V2 enabled by default. A BIOS configured AMI is available for use on Bare Metal platforms and Nitro instances where UEFI support is not available.</p> <ul data-bbox="402 583 1481 1348" style="list-style-type: none"><li data-bbox="402 583 1481 798">• AWS.Tools version 4.1.691 <p data-bbox="480 663 1481 798">AWS.Tools PowerShell modules is a modularized version of the PowerShell toolset that reduces module load time. For more information see the <a href="#">AWS Tools for PowerShell User Guide</a>.</p></li><li data-bbox="402 877 1481 932">• SSM Agent version 3.3.1230.0</li><li data-bbox="402 982 1481 1213">• You may encounter an issue connecting AWS Systems Manager Sessions Manager to a Windows Server 2025 instance. To address this issue, log onto the instance, then navigate to Settings &gt; Apps &gt; Optional Features , and add WMIC. Restart the SSM Agent service or reboot the instance, and Sessions Manager should connect.</li><li data-bbox="402 1264 1481 1348">• Windows Credential Guard is not supported on EC2 instances running Windows Server 2025.</li></ul>

Release	Changes
2024.10.09	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1214 1205" style="list-style-type: none"><li data-bbox="402 348 1175 407">• AWS Tools for Windows PowerShell version 4.1.667</li><li data-bbox="402 436 883 495">• EC2Launch v2 version 2.0.2046</li><li data-bbox="402 525 1062 583">• Elastic Network Adapter (ENA) version 2.8.0</li><li data-bbox="402 613 850 672">• SSM Agent version 3.3.859.0</li><li data-bbox="402 701 802 760">• SQL Server CUs installed:<ul data-bbox="435 789 987 1121" style="list-style-type: none"><li data-bbox="435 789 987 848">• SQL_2022: CU15 + GDR KB5046059</li><li data-bbox="435 877 873 936">• SQL_2019: GDR KB5046060</li><li data-bbox="435 966 873 1024">• SQL_2017: GDR KB5046061</li><li data-bbox="435 1054 948 1113">• SQL_2016_SP3: GDR KB5046063</li></ul></li><li data-bbox="402 1142 1214 1205">• Windows Security Updates current to October 8, 2024</li></ul> <p data-bbox="402 1360 1474 1486">Previous versions of Amazon-published AWS Windows AMIs dated July 10, 2024 and earlier will be made private after November 11, 2024, 10 AM Pacific.</p> <div data-bbox="402 1533 1510 1852" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="435 1570 555 1600"><b> Note</b></p><p data-bbox="480 1629 1409 1852">Starting in October, default root volume sizes on some AMIs changed to provide additional free space for the configuration changes applied to the images. For all Core or Full Base Images, including EC2Launch v2 and TPM versions, the root volume size remains 30GB. For all Windows AMIs with SQL Server, the root</p></div>

Release	Changes
	<p>volume size is now 75GB. For all other Windows AMI configurations, the root volume size is now 50GB.</p>
2024.09.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS Tools for Windows PowerShell version 4.1.648</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: GDR KB5042578</li><li>• SQL_2019: GDR KB5042749</li><li>• SQL_2017: GDR KB5042215</li><li>• SQL_2016_SP3: GDR KB5042207</li></ul></li><li>• Windows Security Updates current to September 10, 2024</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated June 13, 2024 and earlier will be made private after October 7, 2024, 10 AM Pacific.</p>


Release	Changes
2024.08.14	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1218 1117" style="list-style-type: none"><li data-bbox="402 352 1175 403">• AWS Tools for Windows PowerShell version 4.1.628</li><li data-bbox="402 445 915 495">• EC2Launch v1 version 3.2005008</li><li data-bbox="402 537 883 588">• EC2Launch v2 version 2.0.1981</li><li data-bbox="402 630 799 680">• SQL Server CUs installed:<ul data-bbox="435 705 948 1033" style="list-style-type: none"><li data-bbox="435 705 721 756">• SQL_2022: CU 14</li><li data-bbox="435 798 721 848">• SQL_2019: CU 28</li><li data-bbox="435 890 870 940">• SQL_2017: GDR KB5040940</li><li data-bbox="435 982 948 1033">• SQL_2016_SP3: GDR KB5040946</li></ul></li><li data-bbox="402 1075 1218 1117">• Windows Security Updates current to August 13, 2024</li></ul> <p data-bbox="402 1276 1477 1402">Previous versions of Amazon-published AWS Windows AMIs dated May 15, 2024 and earlier will be made private after September 9, 2024, 10 AM Pacific.</p>

Release	Changes
2024.07.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS Tools for Windows PowerShell version 4.1.611</li><li>• EC2Launch v1 version 3.2004959</li><li>• EC2Launch v2 version 2.0.1948</li><li>• SSM Agent version 3.3.551.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 27</li></ul></li><li>• NVIDIA Tesla version 475.14</li><li>• Windows Security Updates current to July 10, 2024</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated April 10, 2024 and earlier will be made private after August 12, 2024, 10 AM Pacific.</p>

Release	Changes
2024.06.13	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1182 1205" style="list-style-type: none"><li data-bbox="402 352 1182 407">• AWS Tools for Windows PowerShell version 4.1.593</li><li data-bbox="402 436 912 491">• EC2Launch v1 version 3.2004891</li><li data-bbox="402 520 886 575">• EC2Launch v2 version 2.0.1924</li><li data-bbox="402 604 792 659">• EC2WinUtil version 3.0.0</li><li data-bbox="402 688 1065 743">• Elastic Network Adapter (ENA) version 2.7.0</li><li data-bbox="402 772 850 827">• SSM Agent version 3.3.484.0</li><li data-bbox="402 856 802 911">• SQL Server CUs installed:<ul data-bbox="435 953 721 1016" style="list-style-type: none"><li data-bbox="435 953 721 1016">• SQL_2022: CU 13</li></ul></li><li data-bbox="402 1045 841 1100">• NVIDIA Tesla version 475.06</li><li data-bbox="402 1129 1182 1205">• Windows Security Updates current to June 11, 2024</li></ul> <p data-bbox="402 1360 1507 1444">Previous versions of Amazon-published AWS Windows AMIs dated March 13, 2024 and earlier will be made private after July 8, 2024, 10 AM Pacific.</p>

Release	Changes
2024.05.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1175 940" style="list-style-type: none"><li data-bbox="402 348 1175 407">• AWS Tools for Windows PowerShell version 4.1.575</li><li data-bbox="402 436 880 495">• EC2Launch v2 version 2.0.1881</li><li data-bbox="402 525 847 583">• SSM Agent version 3.3.380.0</li><li data-bbox="402 613 799 672">• SQL Server CUs installed:<ul data-bbox="431 701 873 852" style="list-style-type: none"><li data-bbox="431 701 873 760">• SQL_2022: GDR KB5036343</li><li data-bbox="431 789 711 848">• SQL_2019: CU26</li></ul></li><li data-bbox="402 882 1175 940">• Windows Security Updates current to May 14, 2024</li></ul> <p data-bbox="402 1096 1490 1222">Previous versions of Amazon-published AWS Windows AMIs dated February 14, 2024 and earlier will be made private after June 10, 2024, 10 AM Pacific.</p>

Release	Changes
2024.04.10	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1170 758" style="list-style-type: none"><li data-bbox="402 348 1170 407">• Windows Security Updates current to April 9, 2024</li><li data-bbox="402 436 1170 495">• AWS Tools for Windows PowerShell version 4.1.551</li><li data-bbox="402 525 846 583">• SSM Agent version 3.3.131.0</li><li data-bbox="402 613 797 672">• SQL Server CUs installed:<ul data-bbox="435 701 711 758" style="list-style-type: none"><li data-bbox="435 701 711 758">• SQL_2022: CU12</li></ul></li></ul> <p data-bbox="402 919 1503 995">Previous versions of Amazon-published AWS Windows AMIs dated January 16, 2024 and earlier will be made private after May 13, 2024, 10 AM Pacific.</p>

Release	Changes
2024.03.13	<p data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1203 1024" style="list-style-type: none"><li data-bbox="402 348 1203 405">• Windows Security Updates current to March 12, 2024</li><li data-bbox="402 436 1203 493">• AWS Tools for Windows PowerShell version 4.1.530</li><li data-bbox="402 525 1203 581">• EC2Launch v2 version 2.0.1815</li><li data-bbox="402 613 1203 669">• SSM Agent version 3.2.2303.0</li><li data-bbox="402 701 1203 758">• NVIDIA GRID Driver version 538.33</li><li data-bbox="402 789 1203 846">• NVIDIA Tesla Driver version 474.82</li><li data-bbox="402 877 1203 1024">• SQL Server CUs installed:<ul data-bbox="435 961 1203 1024" style="list-style-type: none"><li data-bbox="435 961 1203 1024">• SQL_2019: CU25</li></ul></li></ul> <div data-bbox="402 1136 1507 1495" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="435 1171 553 1203"><b> Note</b></p><p data-bbox="480 1230 1479 1451">To ensure that you always receive valid time from your configured Network Time Protocol (NTP) service, Secure Time Seeding (STS) is disabled on all AWS Windows AMIs from this version forward. Amazon Time Sync Service is the default NTP service for all AWS Windows AMIs that Amazon provides.</p></div> <p data-bbox="402 1677 1484 1803">Previous versions of Amazon-published AWS Windows AMIs dated December 13, 2023 and earlier will be made private after April 8, 2024, 10 AM Pacific.</p>

Release	Changes
2024.02.14	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1230 848" style="list-style-type: none"><li data-bbox="402 369 1230 407">• Windows Security Updates current to February 13, 2024</li><li data-bbox="402 457 1175 495">• AWS Tools for Windows PowerShell version 4.1.512</li><li data-bbox="402 546 750 583">• cfn-init version 2.0.29</li><li data-bbox="402 634 867 672">• SSM Agent version 3.2.2222.0</li><li data-bbox="402 722 799 760">• SQL Server CUs installed:<ul data-bbox="431 798 708 848" style="list-style-type: none"><li data-bbox="431 814 708 848">• SQL_2022: CU11</li></ul></li></ul> <p data-bbox="402 957 1481 1087">Previous versions of Amazon-published AWS Windows AMIs dated November 15, 2023 and earlier will be made private after March 11, 2024, 10 AM Pacific.</p>
2024.01.16	<p data-bbox="402 1167 526 1197"><b>All AMIs</b></p> <ul data-bbox="402 1255 980 1398" style="list-style-type: none"><li data-bbox="402 1276 883 1314">• EC2Launch v2 version 2.0.1739</li><li data-bbox="402 1365 980 1398">• EC2Launch v1 v1 version 1.3.2004617</li></ul>

Release	Changes
2024.01.10 (Deprecated)	<div data-bbox="402 254 1507 667" style="border: 1px solid #add8e6; border-radius: 10px; padding: 15px;"><p><b>Note</b></p><p><i>Due to functional issues with EC2Launch v1 and EC2Launch v2, this AMI version is marked as deprecated. The AMIs are still available for launch, and are described by directly referencing their AMI ID. However, they will no longer appear in search results for public AMIs. We recommend that you use the latest AMI version, dated 2024.01.16.</i></p></div> <p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security Updates current to January 9, 2024</li></ul> <p><i>Note:</i> Due to a known update installation issue, we excluded the standalone Windows update KB5034439 on Windows Server 2022 Core AMIs. The update only applies to Windows installations with a separate WinRE partition. These partitions are not included with our EC2 Windows Server AMIs. For more information, see <a href="#">KB5042322: Windows Recovery Environment update for Windows Server 2022: January 9, 2024</a> on the Microsoft website.</p> <ul style="list-style-type: none"><li>• AWS Tools for PowerShell version 4.1.486</li><li>• EC2Launch v1 v1 version 1.3.2004592</li><li>• EC2Launch v2 version 2.0.1702</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU24</li></ul></li></ul>

Release	Changes
	<p>Previous versions of Amazon-published AWS Windows AMIs dated October 11, 2023 and earlier will be made private after February 12th 2024, 10 AM Pacific.</p>

## Monthly AMI updates for 2023

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2023](#) on the Microsoft website.

Release	Changes
2023.12.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security Updates current to December 12, 2023</li> <li>• AWS Tools for PowerShell version 4.1.468</li> <li>• AMD Radeon Pro Driver version 22.10.01.12</li> <li>• NVIDIA GRID Driver version 537.70</li> <li>• NVIDIA Tesla Driver version 474.64</li> <li>• SQL Server CUs installed: <ul style="list-style-type: none"> <li>• SQL_2022: CU10</li> </ul> </li> </ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated September 13, 2023 and earlier will be made private after January 8th 2024, 10 AM Pacific.</p>
2023.11.15	

Release	Changes
	<p data-bbox="402 214 526 243"><b>All AMIs</b></p> <ul data-bbox="402 302 1273 1247" style="list-style-type: none"><li data-bbox="402 323 1273 357">• Windows Security Updates current to November 14, 2023</li><li data-bbox="402 415 1036 449">• AWS Tools for PowerShell version 4.1.447</li><li data-bbox="402 508 938 541">• EC2Launch v1 version 1.3.2004491</li><li data-bbox="402 600 867 634">• SSM Agent version 3.2.1705.0</li><li data-bbox="402 684 799 718">• SQL Server CUs installed:<ul data-bbox="435 768 734 894" style="list-style-type: none"><li data-bbox="435 768 695 802">• SQL_2022: CU9</li><li data-bbox="435 852 734 886">• SQL_20219: CU23</li></ul></li><li data-bbox="402 945 821 978">• SQL Server GDRs installed:<ul data-bbox="435 1029 799 1247" style="list-style-type: none"><li data-bbox="435 1029 799 1062">• SQL 2017: KB5029376</li><li data-bbox="435 1113 799 1146">• SQL 2016: KB5029186</li><li data-bbox="435 1197 799 1230">• SQL 2014: KB5029185</li></ul></li></ul> <p data-bbox="402 1356 1474 1440">Previous versions of Amazon-published AWS Windows AMIs dated August 10, 2023 and earlier were made private.</p>

Release	Changes
2023.10.11	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1240 1029" style="list-style-type: none"><li data-bbox="402 348 1240 407">• Windows Security Updates current to October 10, 2023</li><li data-bbox="402 436 750 495">• cfn-init version 2.0.28</li><li data-bbox="402 525 938 583">• EC2Launch v1 version 1.3.2004438</li><li data-bbox="402 613 883 672">• EC2Launch v2 version 2.0.1643</li><li data-bbox="402 701 773 760">• SSM version 3.2.1630.0</li><li data-bbox="402 789 1036 848">• AWS Tools for PowerShell version 4.1.426</li><li data-bbox="402 877 799 936">• SQL Server CUs installed:<ul data-bbox="431 966 695 1024" style="list-style-type: none"><li data-bbox="431 966 695 1024">• SQL_2022: CU8</li></ul></li></ul> <p data-bbox="402 1138 1484 1213">Previous versions of Amazon-published AWS Windows AMIs dated July 12, 2023 and earlier were made private.</p>

Release	Changes
2023.09.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security Updates current to September 12, 2023</li><li>• EC2Launch v2 version 2.0.1580</li><li>• SSM version 3.2.1377.0</li><li>• AWS Tools for PowerShell version 4.1.407</li><li>• AWS NVMe driver version 1.5.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU7</li><li>• SQL_2019: CU22</li></ul></li></ul> <p>Windows Server 2012 RTM and Windows Server 2012 R2 will reach End of Support (EOS) on October 10, 2023 and will no longer receive regular security updates from Microsoft. On this date, AWS will no longer publish or distribute Windows Server 2012 RTM or Windows Server 2012 R2 AMIs. Existing instances running Windows Server 2012 RTM and Windows Server 2012 R2 will not be impacted. Custom AMIs in your account will also not be impacted. You can continue to use them normally after the EOS date.</p> <p>Previous versions of Amazon-published AWS Windows AMIs dated June 14, 2023 and earlier were made private.</p>

Release	Changes
2023.08.10	<p data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1206 1031" style="list-style-type: none"><li data-bbox="402 348 1206 407">• Windows Security Updates current to August 8, 2023</li><li data-bbox="402 436 1036 495">• AWS Tools for PowerShell version 4.1.383</li><li data-bbox="402 525 831 583">• EC2Config version 4.9.5467</li><li data-bbox="402 613 773 672">• SSM version 3.1.2282.0</li><li data-bbox="402 701 764 760">• AWS ENA version 2.6.0</li><li data-bbox="402 789 751 848">• cfn-init version 2.0.26</li><li data-bbox="402 877 797 936">• SQL Server CUs installed:<ul data-bbox="435 966 695 1024" style="list-style-type: none"><li data-bbox="435 966 695 1024">• SQL_2022: CU6</li></ul></li></ul> <p data-bbox="402 1136 1498 1314">Windows Server 2012 RTM and Windows Server 2012 R2 will reach End of Support (EOS) on October 10, 2023 and will no longer receive regular security updates from Microsoft. On this date, AWS will no longer publish or distribute Windows Server 2012 RTM or Windows Server 2012 R2 AMIs. Existing instances running Windows Server 2012 RTM and Windows Server 2012 R2 will not be impacted. Custom AMIs in your account will also not be impacted. You can continue to use them normally after the EOS date.</p> <p data-bbox="402 1503 1484 1583">Previous versions of Amazon-published AWS Windows AMIs dated May 10, 2023 and earlier were made private.</p>

Release	Changes
2023.07.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security Updates current to July 11, 2023</li><li>• AWS Tools for Windows PowerShell version 4.1.366</li><li>• EC2Launch v1 version 1.3.2004256</li><li>• EC2Launch v2 version 2.0.1521</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU5</li><li>• SQL_2019: CU21</li></ul></li></ul> <p>.NET Framework 3.5 is now enabled in Windows Server 2012 R2 AMIs due to Microsoft security updates. If these updates are applied before .NET 3.5 is enabled, it is no longer possible to enable the feature. If you prefer to disable .NET 3.5, you can do so through Server Manager or <code>dism</code> commands.</p> <p>Previous versions of Amazon-published AWS Windows AMIs dated April 12, 2023 and earlier were made private.</p>

Release	Changes
2023.06.14	<p data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1192 674" style="list-style-type: none"><li data-bbox="402 369 1192 401">• Windows Security Updates current to June 13, 2023</li><li data-bbox="402 459 1175 491">• AWS Tools for Windows PowerShell version 4.1.346</li><li data-bbox="402 550 797 581">• SQL Server CUs installed:<ul data-bbox="435 640 691 672" style="list-style-type: none"><li data-bbox="435 640 691 672">• SQL_2022: CU4</li></ul></li></ul> <p data-bbox="402 783 1490 1056">The AWS Tools for Windows installation package has been deprecated, and no longer appears as an installed program in AWS Windows AMIs provided by AWS. The AWSPowerShell Module is now installed at <code>C:\ProgramFiles\WindowsPowerShell\Modules\AWSPowerShell</code>. The .NET SDK remains located at <code>C:\ProgramFiles (x86)\AWS SDK for .NET</code>. For more information see <a href="#">the blog announcement</a>.</p> <p data-bbox="402 1102 1479 1375">Windows Server 2012 RTM and Windows Server 2012 R2 will reach End of Support (EOS) on October 10, 2023 and will no longer receive regular security updates from Microsoft. On this date, AWS will no longer publish or distribute Windows Server 2012 RTM or Windows Server 2012 R2 AMIs. Existing RTM/R2 instances and custom AMIs in your account will not be impacted, and you can continue to use them after the EOS date.</p> <p data-bbox="402 1421 1495 1600">For more information about Microsoft End of Support on AWS, including upgrade and import options, as well as a full list of AMIs that will no longer be published or distributed on October 10, 2023, see the <a href="#">End of Support for Microsoft Products FAQ</a>.</p> <p data-bbox="402 1646 1458 1719">Previous versions of Amazon-published AWS Windows AMIs dated March 15, 2023 and earlier were made private.</p>

Release	Changes
2023.05.10	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1214 940" style="list-style-type: none"><li data-bbox="402 369 1166 407">• Windows Security Updates current to May 9, 2023</li><li data-bbox="402 457 1214 495">• AWS Tools for Windows PowerShell version 3.15.2072</li><li data-bbox="402 546 883 583">• EC2Launch v2 version 2.0.1303</li><li data-bbox="402 634 750 672">• cfn-init version 2.0.25</li><li data-bbox="402 722 799 760">• SQL Server CUs installed:<ul data-bbox="435 798 711 940" style="list-style-type: none"><li data-bbox="435 814 695 852">• SQL_2022: CU3</li><li data-bbox="435 903 711 940">• SQL_2019: CU20</li></ul></li></ul> <p data-bbox="402 1050 1500 1129">Previous versions of Amazon-published AWS Windows AMIs dated February 15, 2023 and earlier were made private.</p>

Release	Changes
2023.04.12	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1211 848" style="list-style-type: none"><li data-bbox="402 369 1192 407">• Windows Security Updates current to April 11, 2023</li><li data-bbox="402 457 1211 495">• AWS Tools for Windows PowerShell version 3.15.2035</li><li data-bbox="402 546 880 583">• AWS NVMe driver version 1.4.2</li><li data-bbox="402 634 799 672">• SQL Server CUs installed:<ul data-bbox="431 709 701 760" style="list-style-type: none"><li data-bbox="431 722 701 760">• SQL_2022: CU 2</li></ul></li><li data-bbox="402 810 773 848">• SSM version 3.1.2144.0</li></ul> <p data-bbox="402 957 977 995"><b>Windows Server 2016, 2019, and 2022</b></p> <ul data-bbox="402 1054 997 1104" style="list-style-type: none"><li data-bbox="402 1054 997 1104">• Intel 82599 VF driver version 2.1.249.0</li></ul> <p data-bbox="402 1213 776 1251"><b>Windows Server 2012 R2</b></p> <ul data-bbox="402 1310 997 1360" style="list-style-type: none"><li data-bbox="402 1310 997 1360">• Intel 82599 VF driver version 1.2.317.0</li></ul> <p data-bbox="402 1470 1487 1549">Previous versions of Amazon-published AWS Windows AMIs dated January 19, 2023 and earlier were made private.</p>

Release	Changes
2023.03.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security Updates current to March 14, 2023</li><li>• AWS Tools for Windows PowerShell version 3.15.1998</li><li>• EC2Config version 4.9.5288</li><li>• EC2Launch v1 version 1.3.2004052</li><li>• EC2Launch v2 version 2.0.1245</li><li>• cfn-init version 2.0.24</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU 1</li><li>• SQL_2019: CU 19</li></ul></li><li>• SQL Server GDRs installed:<ul style="list-style-type: none"><li>• SQL_2017: KB5021126</li><li>• SQL_2016: KB5021129</li><li>• SQL_2014: KB5021045</li></ul></li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated December 28, 2022 and earlier were made private.</p>

Release	Changes
---------	---------

2023.02.15

### All AMIs

- Windows Security Updates current to February 14, 2023
- AWS Tools for Windows PowerShell version 3.15.1958
- AWS PV version 8.4.3

### New AWS Windows AMIs

- TPM-Windows\_Server-2019-English-Full-SQL\_2019\_Enterprise
- TPM-Windows\_Server-2019-English-Full-SQL\_2019\_Standard
- TPM-Windows\_Server-2022-English-Full-SQL\_2022\_Enterprise
- TPM-Windows\_Server-2022-English-Full-SQL\_2022\_Standard

New AWS Windows AMIs with Microsoft SQL Server with support for [NitroTPM](#) and [UEFI Secure Boot](#) have been released. The images include Windows Server 2019 or Windows Server 2022 with SQL Server 2019 or SQL Server 2022. Each SQL Server version is available in Standard and Enterprise editions.

Previous versions of Amazon-published AWS Windows AMIs dated November 21, 2022 and earlier were made private.

Release	Changes
2023.01.19	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• cfn-init version 2.0.21</li> </ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated October 27, 2022 and earlier were made private.</p>
2023.01.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to January 10, 2023</li> <li>• AWS Tools for Windows PowerShell version 3.15.1919</li> <li>• EC2Launch v1 version 1.3.2003975</li> <li>• EC2Launch v2 version 2.0.1121</li> </ul>

## Monthly AMI updates for 2022

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2022](#) on the Microsoft website.

Release	Changes
2022.12.28	<p><b>Windows Server 2016 and 2019 AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v1 version 1.3.2003975</li> </ul>
2022.12.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to December 13th, 2022</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li data-bbox="402 226 1214 279">• AWS Tools for Windows PowerShell version 3.15.1886</li><li data-bbox="402 310 833 363">• EC2Config version 4.9.5103</li><li data-bbox="402 394 938 447">• EC2Launch v1 version 1.3.2003961</li><li data-bbox="402 478 881 531">• EC2Launch v2 version 2.0.1082</li><li data-bbox="402 562 776 615">• SSM version 3.1.1856.0</li><li data-bbox="402 646 751 699">• cfn-init version 2.0.19</li></ul>

Release	Changes
2022.11.21	<p data-bbox="402 226 773 260"><b>New AWS Windows AMIs</b></p> <ul data-bbox="402 317 1299 1533" style="list-style-type: none"><li data-bbox="402 317 1268 373">• Windows_Server-2019-English-Full-SQL_2022_Enterprise</li><li data-bbox="402 401 1230 457">• Windows_Server-2019-English-Full-SQL_2022_Express</li><li data-bbox="402 485 1252 541">• Windows_Server-2019-English-Full-SQL_2022_Standard</li><li data-bbox="402 569 1187 625">• Windows_Server-2019-English-Full-SQL_2022_Web</li><li data-bbox="402 653 1295 709">• Windows_Server-2019-Japanese-Full-SQL_2022_Enterprise</li><li data-bbox="402 737 1279 793">• Windows_Server-2019-Japanese-Full-SQL_2022_Standard</li><li data-bbox="402 821 1214 877">• Windows_Server-2019-Japanese-Full-SQL_2022_Web</li><li data-bbox="402 905 1268 961">• Windows_Server-2022-English-Full-SQL_2022_Enterprise</li><li data-bbox="402 989 1230 1045">• Windows_Server-2022-English-Full-SQL_2022_Express</li><li data-bbox="402 1073 1252 1129">• Windows_Server-2022-English-Full-SQL_2022_Standard</li><li data-bbox="402 1157 1187 1213">• Windows_Server-2022-English-Full-SQL_2022_Web</li><li data-bbox="402 1241 1295 1297">• Windows_Server-2022-Japanese-Full-SQL_2022_Enterprise</li><li data-bbox="402 1325 1279 1381">• Windows_Server-2022-Japanese-Full-SQL_2022_Standard</li><li data-bbox="402 1409 1214 1465">• Windows_Server-2022-Japanese-Full-SQL_2022_Web</li></ul> <p data-bbox="402 1608 1474 1688">Previous versions of Amazon-published AWS Windows AMIs dated August 10, 2022 and earlier were made private.</p>

Release	Changes
2022.11.17	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Config version 4.9.5064.</li></ul> <p>This is an out of band release for images that use EC2Config as the default launch agent. This includes all Windows Server 2012 RTM and Windows Server 2012 R2 AMIs. This release updates EC2Config to the latest version to improve support for our newest EC2 instance types.</p>
2022.11.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to November 8th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1846</li><li>• EC2Launch v1 version 1.3.2003923</li><li>• EC2Launch v2 version 2.0.1011</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 18</li><li>• SQL_2017: CU 31</li></ul></li><li>• cfn-init version 2.0.18</li></ul>

Release	Changes
2022.10.27	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Out-of-band updates applied to resolve issues resulting from October patches. For more information, see <a href="#">Windows release health</a> on the Microsoft website.</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated July 13, 2022 and earlier were made private.</p>
2022.10.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to October 11th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1809</li><li>• EC2Launch v1 version 1.3.2003857</li><li>• SSM version 3.1.1732.0</li><li>• cfn-init version 2.0.16</li></ul>

Release	Changes
2022.09.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to September 13th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1772</li><li>• EC2Launch v1 version 1.3.2003824</li><li>• SQL Server CU installed:<ul style="list-style-type: none"><li>• SQL_2019: CU17</li></ul></li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated June 15, 2022 and earlier were made private.</p>
2022.08.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to August 9th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1737</li><li>• cfn-init version 2.0.15</li><li>• SSM version 3.1.1634.0 (only AMIs that include EC2Launch v1 v1 or v2)</li><li>• SQL Server CU installed:<ul style="list-style-type: none"><li>• SQL_2017: CU30</li></ul></li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated May 25, 2022 and earlier were made private.</p>

Release	Changes
2022.07.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to July 12th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1706</li><li>• cfn-init version 2.0.12</li><li>• EC2Launch v1 version 1.3.2003691</li><li>• EC2Launch v2 version 2.0.863</li><li>• SQL Server GDRs installed:<ul style="list-style-type: none"><li>• SQL_2019: KB5014353</li><li>• SQL_2017: KB5014553</li><li>• SQL_2016: KB5014355</li><li>• SQL_2014: KB5014164</li></ul></li></ul> <p>Windows Server version 20H2 will reach end-of-support on August 9, 2022. Existing instances and custom images owned by your account that are based on Windows Server version 20H2 will not be impacted. If you would like to retain access to Windows Server version 20H2, create a custom image in your account prior to August 9, 2022. All public versions of the following images will be made private on the end-of-support date.</p> <ul style="list-style-type: none"><li>• Windows_Server-20H2-English-Core-Base</li><li>• Windows_Server-20H2-English-Core-ContainersLatest</li></ul>

Release	Changes
	Previous versions of Amazon-published AWS Windows AMIs dated April 13, 2022 and earlier were made private.

Release	Changes
2022.06.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to June 14th, 2022</li> <li>• AWS Tools for Windows PowerShell version 3.15.1678</li> <li>• AWS NVMe version 1.4.1</li> <li>• EC2Config version 4.9.4588</li> <li>• EC2Launch v1 version 1.3.2003639</li> <li>• SSM version 3.1.1188.0</li> </ul> <p>Microsoft SQL Server 2012 is reaching end-of-support on July 12th, 2022. All public versions of the following images have been made private. Existing instances and custom images owned by your account that are based on Windows Server images containing SQL Server 2012 will not be impacted.</p> <ul style="list-style-type: none"> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2012_SP4_Enterprise-*</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2012_SP4_Enterprise-*</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2012_SP4_Express-*</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2012_SP4_Standard-*</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2012_SP4_Web-*</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2012_SP4_Express-*</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2012_SP4_Standard-*</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2012_SP4_Web-*</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• Windows_Server-2016-English-64Bit-SQL_2012_SP4_Enterprise-*</li><li>• Windows_Server-2016-English-Full-SQL_2012_SP4_Standard-*</li></ul> <p>For more information on Windows Server product lifecycles, please consult the following Microsoft documentation and AWS Microsoft FAQ:</p> <ul style="list-style-type: none"><li>• <a href="#">Microsoft SQL Server 2012</a></li><li>• <a href="#">End-of-Support for Microsoft Products</a></li></ul>
2022.05.25	<b>All AMIs</b> <ul style="list-style-type: none"><li>• Out-of-band updates applied to resolve issues resulting from May patches. For more information, see <a href="#">Windows release health</a> on the Microsoft website.</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated February 10, 2022 and earlier were made private.</p>

Release	Changes
2022.05.11	<p data-bbox="401 226 526 260"><b>All AMIs</b></p> <ul data-bbox="401 317 1211 905" style="list-style-type: none"><li data-bbox="401 317 1211 373">• Windows Security updates current to May 10th, 2022</li><li data-bbox="401 401 1211 457">• AWS Tools for Windows PowerShell version 3.15.1643</li><li data-bbox="401 485 740 541">• AWS PV version 8.4.2</li><li data-bbox="401 569 764 625">• AWS ENA version 2.4.0</li><li data-bbox="401 653 797 709">• SQL Server CUs installed:<ul data-bbox="431 737 721 905" style="list-style-type: none"><li data-bbox="431 737 721 793">• SQL_2019: CU 16</li><li data-bbox="431 821 721 905">• SQL_2017: CU 29</li></ul></li></ul>
2022.05.05	<p data-bbox="401 953 773 987"><b>New AWS Windows AMIs</b></p> <p data-bbox="401 1035 1479 1209">New AWS Windows AMIs with support for <a href="#">NitroTPM</a> and <a href="#">UEFI Secure Boot</a> have been released. These images feature EC2Launch v2 as the default launch agent. They are available to launch on any instance type that supports NitroTPM and UEFI boot mode.</p> <ul data-bbox="401 1266 1292 1766" style="list-style-type: none"><li data-bbox="401 1266 1292 1323">• TPM-Windows_Server-2022-English-Core-Base-2022.05.05</li><li data-bbox="401 1350 1279 1407">• TPM-Windows_Server-2022-English-Full-Base-2022.05.05</li><li data-bbox="401 1434 1292 1491">• TPM-Windows_Server-2019-English-Core-Base-2022.05.05</li><li data-bbox="401 1518 1279 1575">• TPM-Windows_Server-2019-English-Full-Base-2022.05.05</li><li data-bbox="401 1602 1292 1659">• TPM-Windows_Server-2016-English-Core-Base-2022.05.05</li><li data-bbox="401 1686 1279 1766">• TPM-Windows_Server-2016-English-Full-Base-2022.05.05</li></ul>

Release	Changes
2022.04.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to April 12th, 2022</li> <li>• AWS Tools for Windows PowerShell version 3.15.1620</li> </ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated January 21, 2022 and earlier were made private.</p> <p>After June 2022, we will no longer release updated versions of the following images that include SQL Server 2016 SP2. SQL Server SP3 AMIs are available and will continue to be updated and released monthly.</p> <ul style="list-style-type: none"> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Web</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Express</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Enterprise</li> <li>• Windows_Server-2016-Korean-Full-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Web</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Express</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Enterprise</li> <li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Web</li> <li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Standard</li> <li>•</li> </ul>

Release	Changes
	<p>Windows_Server-2016-English-Full-SQL_2016_SP2_Express</p> <ul style="list-style-type: none"> <li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Enterprise</li> <li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Web</li> <li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Express</li> <li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Enterprise</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Web</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Express</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Enterprise</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Web</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Standard</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Express</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Enterprise</li> </ul>

Release	Changes
2022.03.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to March 8th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1583</li><li>• AWS ENA version 2.2.3 (reverted due to potential performance degradation on 6th generation EC2 instances)</li><li>• EC2Config version 4.9.4556</li><li>• SSM version 3.1.1045.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 15</li></ul></li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated December 12, 2021 and earlier were made private.</p>

Release	Changes
2022.02.10	<p data-bbox="401 226 526 260"><b>All AMIs</b></p> <ul data-bbox="401 317 1260 1087" style="list-style-type: none"><li data-bbox="401 317 1260 373">• Windows Security updates current to February 8th, 2022</li><li data-bbox="401 401 1211 457">• AWS Tools for Windows PowerShell version 3.15.1546</li><li data-bbox="401 485 748 541">• cfn-init version 2.0.10</li><li data-bbox="401 569 833 625">• EC2Config version 4.9.4536</li><li data-bbox="401 653 938 709">• EC2Launch v1 version 1.3.2003498</li><li data-bbox="401 737 862 793">• EC2Launch v2 version 2.0.698</li><li data-bbox="401 821 753 877">• SSM version 3.1.804.0</li><li data-bbox="401 905 797 961">• SQL Server CUs installed:<ul data-bbox="431 1010 719 1087" style="list-style-type: none"><li data-bbox="431 1010 719 1087">• SQL_2017: CU 28</li></ul></li></ul> <p data-bbox="401 1163 1446 1241">Previous versions of Amazon-published AWS Windows AMIs dated November 16, 2021 and earlier were made private.</p>
2022.01.19	<p data-bbox="401 1289 526 1323"><b>All AMIs</b></p> <ul data-bbox="401 1379 1446 1528" style="list-style-type: none"><li data-bbox="401 1379 1446 1528">• Out-of-band updates applied to resolve issues resulting from January patches. For more information, see <a href="#">Windows release health</a> on the Microsoft website.</li></ul> <p data-bbox="401 1604 1490 1682">Previous versions of Amazon-published AWS Windows AMIs dated October 13, 2021 and earlier were made private.</p>

Release	Changes
2022.01.12	<b>All AMIs</b> <ul style="list-style-type: none"><li>• Windows Security updates current to January 11th, 2022</li><li>• AWS Tools for Windows PowerShell version 3.15.1511</li><li>• AWS PV version 8.4.1</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 14</li></ul></li></ul>

## Monthly AMI updates for 2021

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2021](#) on the Microsoft website.

Release	Changes
2021.12.15	<b>All AMIs</b> <ul style="list-style-type: none"><li>• Windows Security updates current to December 14th, 2021</li><li>• AWS Tools for Windows PowerShell version 3.15.1494</li><li>• AWS NVMe version 1.4.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2017: CU 27</li><li>• SQL_2019: CU 13</li></ul></li></ul>

Release	Changes
	<p>Previous versions of Amazon-published AWS Windows AMIs dated September 15, 2021 and earlier were made private.</p>
2021.11.16	<p><b>Windows Server 2022 and EC2Launch v1V2-* AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Launch v2 version 2.0.674</li></ul> <p>Windows Server 2004 reached End-of-support on December 14, 2021. All public versions of the following images have been made private. Existing instances and custom images owned by your account that are based on Windows Server 2004 will not be impacted.</p> <ul style="list-style-type: none"><li>• Windows_Server-2004-English-Core-Base</li><li>• Windows_Server-2004-English-Core-ContainersLatest</li></ul>

Release	Changes
2021.11.10	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1279 760" style="list-style-type: none"><li data-bbox="402 348 1279 407">• Windows Security updates current to November 9th, 2021</li><li data-bbox="402 432 1211 491">• AWS Tools for Windows PowerShell version 3.15.1451</li><li data-bbox="402 516 763 575">• AWS ENA version 2.2.4</li><li data-bbox="402 600 799 659">• SQL Server CUs installed:<ul data-bbox="431 697 721 760" style="list-style-type: none"><li data-bbox="431 697 721 760">• SQL_2017: CU 26</li></ul></li></ul> <p data-bbox="402 869 773 898"><b>New AWS Windows AMIs</b></p> <ul data-bbox="402 957 1477 1461" style="list-style-type: none"><li data-bbox="402 957 1477 1016">• Windows_Server-2022-Japanese-Full-SQL_2019_Enterprise-2021.11.10</li><li data-bbox="402 1041 1464 1100">• Windows_Server-2022-Japanese-Full-SQL_2019_Standard-2021.11.10</li><li data-bbox="402 1125 1393 1184">• Windows_Server-2022-Japanese-Full-SQL_2019_Web-2021.11.10</li><li data-bbox="402 1209 1477 1268">• Windows_Server-2022-Japanese-Full-SQL_2017_Enterprise-2021.11.10</li><li data-bbox="402 1293 1464 1352">• Windows_Server-2022-Japanese-Full-SQL_2017_Standard-2021.11.10</li><li data-bbox="402 1377 1393 1436">• Windows_Server-2022-Japanese-Full-SQL_2017_Web-2021.11.10</li></ul>

Release	Changes
2021.10.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to October 12, 2021</li> <li>• AWS Tools for Windows PowerShell version 3.15.1421</li> <li>• SSM version 3.1.338.0</li> </ul> <p><b>Windows Server 2022 and EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v2 version 2.0.651</li> </ul> <p><b>Windows Server 2012 RTM and R2 AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Config version 4.9.4508</li> </ul> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2022-English-Full-SQL_2019_Enterprise-2021.10.13</li> <li>• Windows_Server-2022-English-Full-SQL_2019_Standard-2021.10.13</li> <li>• Windows_Server-2022-English-Full-SQL_2019_Web-2021.10.13</li> <li>• Windows_Server-2022-English-Full-SQL_2019_Express-2021.10.13</li> <li>• Windows_Server-2022-English-Full-SQL_2017_Enterprise-2021.10.13</li> <li>• Windows_Server-2022-English-Full-SQL_2017_Standard-2021.10.13</li> <li>• </li> </ul>

Release	Changes
	<p>Windows_Server-2022-English-Full-SQL_2017_Web-2021.10.13</p> <ul style="list-style-type: none"> <li>Windows_Server-2022-English-Full-SQL_2017_Express-2021.10.13</li> </ul> <p><b>New EC2Launch v2 AMIs</b></p> <p>The following AMIs with EC2Launch v2 long-term support are now available . The following AMIs include EC2Launch v1 v2 as the default launch agent and will be updated with new versions each month.</p> <ul style="list-style-type: none"> <li>EC2Launch v1V2-Windows_Server-2019-English-Full-Base-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2019-English-Core-Base-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2019-English-Full-ContainersLatest-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2016-English-Full-Base-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2016-English-Core-Base-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2012_R2_RTM-English-Full-Base-2021.10.13</li> <li>EC2Launch v1V2-Windows_Server-2012_RTM-English-Full-Base-2021.10.13</li> </ul> <p>EC2Launch v1V2_Preview AMIs are discontinued, and will not be updated with new versions. However, earlier versions will continue to be available until January 2022. Existing images and custom images based on EC2Launch v1V2_Preview AMIs will not be impacted, and you can continue to use them in your account. We recommend that you use the new EC2Launch v2 AMIs going forward to receive security and software updates.</p>


Release	Changes
	<p>Windows Server 2004 will reach End-of-support on December 14, 2021. All public versions of the following images will be made private on December 14, 2021. Existing instances and custom images owned by your account that are based on Windows Server 2004 will not be impacted. If you want to retain access to Windows Server 2004, create a custom image in your account prior to December 14th.</p> <ul style="list-style-type: none"><li data-bbox="402 541 1036 596">• Windows_Server-2004-English-Core-Base</li><li data-bbox="402 630 1214 684">• Windows_Server-2004-English-Core-ContainersLatest</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated July 14, 2021 and earlier were made private.</p>

Release	Changes
2021.09.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1276 848" style="list-style-type: none"><li data-bbox="402 348 1276 407">• Windows Security updates current to September 14, 2021</li><li data-bbox="402 432 1276 491">• AWS Tools for Windows PowerShell version 3.15.1398</li><li data-bbox="402 516 1276 575">• SSM version 3.1.282.0</li><li data-bbox="402 600 1276 848">• SQL Server CUs installed:<ul data-bbox="431 701 721 848" style="list-style-type: none"><li data-bbox="431 701 721 760">• SQL_2019: CU12</li><li data-bbox="431 785 721 848">• SQL_2017: CU 25</li></ul></li></ul> <p data-bbox="402 957 1266 987"><b>Windows Server 2022 and EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 1045 867 1104" style="list-style-type: none"><li data-bbox="402 1045 867 1104">• EC2Launch v2 version 2.0.592</li></ul> <p data-bbox="402 1213 997 1243"><b>Windows Server 2012 RTM and R2 AMIs</b></p> <ul data-bbox="402 1302 834 1360" style="list-style-type: none"><li data-bbox="402 1302 834 1360">• EC2Config version 4.9.4500</li></ul> <p data-bbox="402 1465 1474 1547">Previous versions of Amazon-published AWS Windows AMIs dated June 9, 2021 and earlier were made private.</p>

Release	Changes
2021.09.01	<p data-bbox="402 260 773 289"><b>New AWS Windows AMIs</b></p> <ul data-bbox="402 348 1409 1822" style="list-style-type: none"><li data-bbox="402 369 1198 399">• Windows_Server-2022-English-Full-Base-2021.08.25</li><li data-bbox="402 457 1385 487">• Windows_Server-2022-English-Full-ContainersLatest-2021.08.25</li><li data-bbox="402 546 1219 575">• Windows_Server-2022-English-Core-Base-2021.08.25</li><li data-bbox="402 634 1398 663">• Windows_Server-2022-English-Core-ContainersLatest-2021.08.25</li><li data-bbox="402 722 1377 751">• Windows_Server-2022-Chinese_Simplified-Full-Base-2021.08.25</li><li data-bbox="402 810 1386 840">• Windows_Server-2022-Chinese_Traditional-Full-Base-2021.08.25</li><li data-bbox="402 898 1187 928">• Windows_Server-2022-Czech-Full-Base-2021.08.25</li><li data-bbox="402 987 1187 1016">• Windows_Server-2022-Dutch-Full-Base-2021.08.25</li><li data-bbox="402 1075 1198 1104">• Windows_Server-2022-French-Full-Base-2021.08.25</li><li data-bbox="402 1163 1216 1192">• Windows_Server-2022-German-Full-Base-2021.08.25</li><li data-bbox="402 1251 1252 1281">• Windows_Server-2022-Hungarian-Full-Base-2021.08.25</li><li data-bbox="402 1339 1192 1369">• Windows_Server-2022-Italian-Full-Base-2021.08.25</li><li data-bbox="402 1428 1235 1457">• Windows_Server-2022-Japanese-Full-Base-2021.08.25</li><li data-bbox="402 1516 1203 1545">• Windows_Server-2022-Korean-Full-Base-2021.08.25</li><li data-bbox="402 1604 1187 1633">• Windows_Server-2022-Polish-Full-Base-2021.08.25</li><li data-bbox="402 1692 1365 1722">• Windows_Server-2022-Portuguese_Brazil-Full-Base-2021.08.25</li><li data-bbox="402 1780 1409 1810">• Windows_Server-2022-Portuguese_Portugal-Full-Base-2021.08.25</li></ul>


Release	Changes
	<ul style="list-style-type: none"><li>• Windows_Server-2022-Russian-Full-Base-2021.08.25</li><li>• Windows_Server-2022-Spanish-Full-Base-2021.08.25</li><li>• Windows_Server-2022-Swedish-Full-Base-2021.08.25</li><li>• Windows_Server-2022-Turkish-Full-Base-2021.08.25</li></ul> <p>Windows Server 2022 AMIs include EC2Launch v2 by default. For more information, see <a href="#">EC2Launch v2</a>.</p> <p><b>EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Launch v2 version 2.0.592</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated May 12, 2021 and earlier were made private.</p>

Release	Changes
2021.08.11	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1247 848" style="list-style-type: none"><li data-bbox="402 352 1247 407">• Windows Security updates current to August 10th, 2021</li><li data-bbox="402 436 1247 491">• AWS Tools for Windows PowerShell version 3.15.13571</li><li data-bbox="402 520 1247 575">• EC2Launch v1 version 1.3.2003411</li><li data-bbox="402 604 1247 659">• SSM version 3.0.1181.0</li><li data-bbox="402 688 1247 848">• SQL Server CUs installed:<ul data-bbox="435 785 704 848" style="list-style-type: none"><li data-bbox="435 785 704 848">• SQL_2019: CU11</li></ul></li></ul> <p data-bbox="402 953 867 982"><b>EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 1045 867 1100" style="list-style-type: none"><li data-bbox="402 1045 867 1100">• EC2Launch v2 version 2.0.548</li></ul> <p data-bbox="402 1205 1500 1289">Previous versions of Amazon-published AWS Windows AMIs dated April 14, 2021 and earlier were made private.</p>


Release	Changes
2021.07.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to July 13th, 2021</li><li>• AWS Tools for Windows PowerShell version 3.15.1350</li><li>• EC2Launch v1 version 1.3.2003364</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2017: CU24</li></ul></li></ul>
2021.07.07	<p><b>All AMIs</b></p> <p>Out-of-band AMI release that applies the July out-of-band security update recently released by Microsoft as an additional mitigation to CVE-34527.</p> <div data-bbox="402 1041 1507 1310" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p> <b>Note</b></p><p>HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows NT\Printers\PointAndPrint is not defined on AWS Windows AMIs provided by AWS, which is the default state.</p></div> <ul style="list-style-type: none"><li>• For more information, see <a href="https://www.microsoft.com/security/advisories/cve-2021-34527">CVE-2021-34527</a> on the Microsoft website.</li></ul> <p>Previous versions of Amazon-published AWS Windows AMIs dated March 10, 2021 and earlier were made private.</p>

Release	Changes
2021.06.09	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1214 583" style="list-style-type: none"><li data-bbox="399 369 1198 405">• Windows Security updates current to June 8th, 2021</li><li data-bbox="399 457 1214 493">• AWS Tools for Windows PowerShell version 3.15.1326</li><li data-bbox="399 546 773 581">• SSM version 3.0.1124.0</li></ul> <p data-bbox="399 688 1013 724"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="399 783 834 835" style="list-style-type: none"><li data-bbox="399 783 834 835">• EC2Config version 4.9.4419</li></ul>

Release	Changes
2021.05.12	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1393 898" style="list-style-type: none"><li data-bbox="402 373 1205 403">• Windows Security updates current to May 11th, 2021</li><li data-bbox="402 457 1211 487">• AWS Tools for Windows PowerShell version 3.15.1302</li><li data-bbox="402 550 938 579">• EC2Launch v1 version 1.3.2003312</li><li data-bbox="402 642 799 672">• SQL Server CUs installed:<ul data-bbox="435 714 711 756" style="list-style-type: none"><li data-bbox="435 730 711 760">• SQL_2019: CU10</li></ul></li><li data-bbox="402 823 1393 898">• Previous versions of Amazon-published AWS Windows AMIs dated February 10, 2021 and earlier were made private.</li></ul> <p data-bbox="402 1012 1013 1041"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="402 1104 831 1243" style="list-style-type: none"><li data-bbox="402 1125 831 1155">• EC2Config version 4.9.4381</li><li data-bbox="402 1209 753 1239">• SSM version 3.0.529.0</li></ul> <p data-bbox="402 1352 669 1381"><b>NVIDIA GPU AMIs</b></p> <ul data-bbox="402 1457 727 1583" style="list-style-type: none"><li data-bbox="402 1465 727 1495">• GRID version 462.31</li><li data-bbox="402 1549 727 1579">• Tesla version 462.31</li></ul> <p data-bbox="402 1692 672 1722"><b>Radeon GPU AMIs</b></p> <ul data-bbox="402 1797 837 1839" style="list-style-type: none"><li data-bbox="402 1806 837 1835">• Radeon version 20.10.25.04</li></ul>

Release	Changes
2021.04.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to April 13th, 2021</li> <li>• AWS Tools for Windows PowerShell version 3.15.1280</li> <li>• AWS PV version 8.4.0</li> <li>• cfn-init version 2.0.6. This package includes Microsoft Visual C++ 2015-2019 Redistributable version 14.28.29913.0 as a dependency.</li> <li>• AWS ENA version 2.2.3</li> <li>• EC2Launch v1 version 1.3.2003284</li> <li>• SQL Server CUs installed: <ul style="list-style-type: none"> <li>• SQL_2017: CU23</li> </ul> </li> <li>• Previous versions of Amazon-published AWS Windows AMIs dated January 13, 2021 and earlier were made private.</li> <li>• <div data-bbox="435 1266 1507 1675" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px; margin: 10px 0;"> <p> <b>Note</b></p> <p>Windows Server 1909 reaches End of Support on May 11, 2021. All public versions of the following images will be made private on May 11th, 2021. Existing instances and custom images owned by your account that are based on Windows Server 1909 will not be impacted. To retain access to Windows Server 1909, create a custom image in your account prior to May 11, 2021.</p> </div> </li> <li>• Windows_Server-1909-English-Core-Base</li> <li>•</li> </ul>

Release	Changes
	<p data-bbox="464 212 1247 247">Windows_Server-1909-English-Core-ContainersLatest</p> <p data-bbox="402 352 867 388"><b>EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 443 867 499" style="list-style-type: none"><li data-bbox="402 443 867 499">• EC2Launch v2 version 2.0.285</li></ul>

Release	Changes
2021.03.11	<p data-bbox="401 258 526 289"><b>All AMIs</b></p> <ul data-bbox="401 348 1498 1346" style="list-style-type: none"><li data-bbox="401 369 1214 401">• Windows Security updates current to March 9th, 2021</li><li data-bbox="401 459 1211 491">• AWS Tools for Windows PowerShell version 3.15.1248</li><li data-bbox="401 550 1417 632">• cfn-init version 2.0.5. This package includes Microsoft Visual C++ 2015-2019 Redistributable version 14.28.29910.0 as a dependency.</li><li data-bbox="401 690 938 722">• EC2Launch v1 version 1.3.2003236</li><li data-bbox="401 781 846 812">• SSM Agent version 3.0.529.0</li><li data-bbox="401 871 837 903">• NVIDIA GRID version 461.33</li><li data-bbox="401 961 797 993">• SQL Server CUs installed:<ul data-bbox="433 1045 776 1163" style="list-style-type: none"><li data-bbox="433 1045 776 1077">• SQL 2016_SP2: CU16</li><li data-bbox="433 1129 683 1161">• SQL 2019: CU9</li></ul></li><li data-bbox="401 1222 1498 1346">• KB4577586 update for the removal of Adobe Flash Player installed on all applicable images (Adobe Flash player is not enabled by default on all images).</li></ul> <div data-bbox="401 1455 1507 1719" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="433 1497 553 1528"><b> Note</b></p><p data-bbox="480 1556 1471 1682">Amazon Root CAs have been added to the Trusted Root Certification Authorities certificate store on all AMIs. For more information, see <a href="https://www.amazontrust.com/repository/#rootcas">https://www.amazontrust.com/repository/#rootcas</a>.</p></div>

Release	Changes
	<p data-bbox="402 212 954 243"><b>Windows Server 2016 and 2019 AMIs</b></p> <ul data-bbox="402 302 1338 359" style="list-style-type: none"><li data-bbox="402 302 1338 359">• Updated from default .NET framework versions to version 4.8.</li></ul> <p data-bbox="402 468 1013 499"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="402 558 850 699" style="list-style-type: none"><li data-bbox="402 558 850 615">• EC2Config version 4.9.4326</li><li data-bbox="402 642 850 699">• SSM Agent version 3.0.431.0</li></ul>

Release	Changes
2021.02.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to February 9th, 2021</li><li>• AWS Tools for Windows PowerShell version 3.15.1224</li><li>• NVIDIA GRID version 461.09</li></ul> <p>Beginning in March 2021, AWS Windows AMIs provided by AWS include Amazon Root CAs in the certificate store to minimize potential disruption from the upcoming S3 and CloudFront certificate migration, which is scheduled for March 23rd, 2021. For more information, see the following:</p> <ul style="list-style-type: none"><li>• <a href="#">How to Prepare for the AWS Move to Its Own Certificate Authority</a></li><li>• <a href="#">[Announcement] CloudFront &amp; S3 migrating default certificates to Amazon Trust Services March 23rd 2021</a></li></ul> <p>Additionally, AWS will apply "update for Removal of Adobe Flash Player" (KB4577586) to all AWS Windows AMIs in March to remove the built-in Adobe Flash player, which ended support on December 31, 2020. If your use case requires the built-in Adobe Flash player, we recommend creating a custom image based on AMIs with version 2021.02.10 or earlier. For more information about the End of Support of Adobe Flash Player, see <a href="#">Update on Adobe Flash Player End of Support</a></p> <p><b>EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Launch v2 version 2.0.207</li></ul>

Release	Changes
	<p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2016-Japanese-Full-SQL_2019_Enterprise-2021.02.10</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2019_Standard-2021.02.10</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2019_Web-2021.02.10</li> <li>• Windows_Server-2019-Japanese-Full-SQL_2019_Enterprise-2021.02.10</li> <li>• Windows_Server-2019-Japanese-Full-SQL_2019_Standard-2021.02.10</li> <li>• Windows_Server-2019-Japanese-Full-SQL_2019_Web-2021.02.10</li> </ul>
2021.01.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to January 12th, 2021</li> <li>• AWS Tools for Windows PowerShell version 3.15.1204</li> <li>• AWS ENA version 2.2.2</li> <li>• EC2Launch v1 v1 version 1.3.2003210</li> </ul> <p><b>Windows Server SAC/2019/2016 AMIs</b></p> <ul style="list-style-type: none"> <li>• SSM Agent version 3.0.431.0</li> </ul>

## Monthly AMI updates for 2020

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2020](#) on the Microsoft website.

Release	Changes
2020.12.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to December 8th, 2020</li> <li>• AWS Tools for Windows PowerShell version 3.15.1181</li> <li>• All SQL Server Enterprise, Standard, and Web AMIs now include SQL Server installation media at C:\SQLServerSetup</li> <li>• EC2Launch v1 v1 version 1.3.2003189</li> <li>• Previous versions of Amazon-published AWS Windows AMIs dated September 9, 2020 and earlier were made private.</li> </ul> <p><b>Windows Server 2012/2012 R2 AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Config version 4.9.4279</li> <li>• SSM Agent version 2.3.871.0</li> </ul> <p><b>EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v2 version 2.0.160</li> </ul>
2020.11.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to November 10th, 2020</li> <li>• AWS Tools for Windows PowerShell version 3.15.1160</li> <li>• SQL Server CUs installed:</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• SQL 2016 SP2: CU15</li><li>• SQL 2017: CU22</li><li>• SQL 2019: CU8</li><li>• SSM Agent version 2.3.1644.0</li><li>• EC2Launch v2 Preview AMIs: EC2Launch v1 version 2.0.153</li><li>• Previous versions of Amazon-published AWS Windows AMIs dated August 12, 2020 and earlier were made private.</li></ul> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"><li>• Windows_Server-20H2-English-Core-Base-2020.11.11</li><li>• Windows_Server-20H2-English-Core-ContainersLatest-2020.11.11</li></ul>

Release	Changes
2020.10.14	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1461 982" style="list-style-type: none"><li data-bbox="402 352 1266 407">• Windows Security updates current to October 13th, 2020</li><li data-bbox="402 449 1211 491">• AWS Tools for Windows PowerShell version 3.15.1140</li><li data-bbox="402 533 837 575">• NVIDIA GRID version 452.39</li><li data-bbox="402 617 1299 659">• EC2Launch v2 Preview AMIs: EC2Launch v1 version 2.0.146</li><li data-bbox="402 701 756 743">• AWS ENA version 2.2.1</li><li data-bbox="402 785 750 827">• cfn-init version 1.4.34</li><li data-bbox="402 869 1461 982">• Previous versions of Amazon-published AWS Windows AMIs dated July 15, 2020 and earlier were made private.</li></ul>

Release	Changes
2020.9.25	<p>A new version of Amazon Machine Images with SQL Server 2019 dated 2020.09.25 has been released. This release includes the same software components as the previous release dated 2020.09.09 but does not include CU7 for SQL 2019, which has recently been removed from public availability by Microsoft due to a known issue with reliability of the database snapshot feature. For more information, see the following Microsoft blog post: <a href="#">Cumulative update 7 for SQL Server 2019 RTM</a> on the Microsoft website.</p> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2016-English-Full-SQL_2019_Enterprise-2020.09.25</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Express-2020.09.25</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Standard-2020.09.25</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Web-2020.09.25</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Enterprise-2020.09.25</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Express-2020.09.25</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Standard-2020.09.25</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Web-2020.09.25</li> </ul> <p><b>EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v1V2_Preview-Windows_Server-2019-English-Full-SQL_2019_Express-2020.09.25</li> </ul>

Release	Changes
2020.9.9	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1471 1075" style="list-style-type: none"><li data-bbox="402 369 1292 399">• Windows Security updates current to September 8th, 2020</li><li data-bbox="402 457 847 487">• AWS PV drivers version 8.3.4</li><li data-bbox="402 546 763 575">• AWS ENA version 2.2.0</li><li data-bbox="402 634 1214 663">• AWS Tools for Windows PowerShell version 3.15.1110</li><li data-bbox="402 722 789 751">• SQL Server CUs installed<ul data-bbox="431 810 782 936" style="list-style-type: none"><li data-bbox="431 819 782 848">• SQL_2016_SP2: CU14</li><li data-bbox="431 907 691 936">• SQL_2019: CU7</li></ul></li><li data-bbox="402 995 1471 1075">• Previous versions of Amazon-published AWS Windows AMIs dated June 10, 2020 and earlier were made private.</li></ul> <p data-bbox="402 1184 1263 1213"><b>Windows Server 2016/2019/1809/1903/1909/2004 AMIs</b></p> <ul data-bbox="402 1281 938 1419" style="list-style-type: none"><li data-bbox="402 1289 938 1318">• EC2Launch v1 version 1.3.2003155</li><li data-bbox="402 1377 867 1407">• SSM Agent version 2.3.1319.0</li></ul> <p data-bbox="402 1528 867 1558"><b>EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 1617 867 1671" style="list-style-type: none"><li data-bbox="402 1625 867 1654">• EC2Launch v2 version 2.0.124</li></ul>

Release	Changes
2020.8.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to August 11th, 2020</li><li>• AWS Tools for Windows PowerShell version 3.15.1084</li><li>• G3 AMIs: NVIDIA GRID version 451.48</li><li>• EC2Launch v2 Preview AMIs: EC2Launch v1 version 2.0.104</li><li>• SQL CUs installed<ul style="list-style-type: none"><li>• SQL_2019: CU6</li></ul></li><li>• Previous versions of Amazon-published AWS Windows AMIs dated May 13, 2020 and earlier were made private.</li></ul>
2020.7.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to July 14th, 2020</li><li>• AWS Tools for Windows PowerShell version 3.15.1064</li><li>• ENA version 2.1.5</li><li>• SQL Server CUs installed<ul style="list-style-type: none"><li>• SQL_2017: CU21</li><li>• SQL_2019: CU5</li></ul></li><li>• Previous versions of Amazon-published AWS Windows AMIs dated April 15, 2020 and earlier were made private.</li></ul>

Release	Changes
2020.7.01	<p>A new version of Amazon Machine Images has been released. These images include EC2Launch v2 and serve as a functional preview of the new launch agent in advance of it being included by default on all AWS Windows AMIs currently provided by AWS later this year. Note that some SSM documents and dependent services, such as EC2 Image Builder, may require updates to support EC2 Launch v2. These updates will follow in the coming weeks. These images are not recommended for use in production environments. You can read more about EC2Launch v2 at <a href="https://aws.amazon.com/about-aws/whats-new/2020/07/introducing-ec2-launch-v2-simplify-customizing-windows-instances/">https://aws.amazon.com/about-aws/whats-new/2020/07/introducing-ec2-launch-v2-simplify-customizing-windows-instances/</a> and <a href="#">Configure a Windows instance using EC2Launch v2</a>. All current Windows Server AMIs will continue to be provided without changes to the current launch agent, either EC2Config (Server 2012 RTM or 2012 R2) or EC2Launch v1 v1 (Server 2016 or later), for the next several months. In the near future, all Windows Server AMIs currently provided by AWS will be migrated to use EC2Launch v2 by default as part of the monthly release. EC2Launch v1V2_Preview AMIs will be updated monthly and remain available until this migration occurs.</p> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v1V2_Preview-Windows_Server-2004-English-Core-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2019-English-Full-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2019-English-Core-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2016-English-Full-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2016-English-Core-Base-2020.06.30</li> </ul>

Release	Changes
	<ul style="list-style-type: none"> <li>• EC2Launch v1V2_Preview-Windows_Server-2012_R2_RTM-English-Full-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2012_R2_RTM-English-Core-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2012_RTM-English-Full-Base-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2019-English-Full-SQL_2019_Express-2020.06.30</li> <li>• EC2Launch v1V2_Preview-Windows_Server-2016-English-Full-SQL_2017_Express-2020.06.30</li> </ul>
2020.6.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows Security updates current to June 9th, 2020</li> <li>• AWS Tools for Windows PowerShell version 3.15.1034</li> <li>• cfn-init version 1.4.33</li> <li>• SQL CU installed: SQL_2016_SP2: CU13</li> </ul>
2020.5.27	<p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2004-English-Core-Base-2020.05.27</li> <li>• Windows_Server-2004-English-Core-ContainersLatest-2020.05.27</li> </ul>

Release	Changes
2020.5.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to May 12th, 2020</li><li>• AWS Tools for Windows PowerShell version 3.15.1013</li><li>• EC2Launch v1 version 1.3.2003150</li></ul>
2020.4.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to April 14th, 2020</li><li>• AWS Tools for Windows PowerShell version 3.15.998</li><li>• EC2Config version 4.9.4222</li><li>• EC2Launch v1 version 1.3.2003040</li><li>• SSM Agent version 2.3.842.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2017: CU 20</li><li>• SQL_2019: CU 4</li></ul></li></ul>
2020.3.18	<p><b>Windows Server 2019 AMIs</b></p> <p>Resolves an intermittent issue discovered in the 2020.3.11 release in which the Background Intelligent Transfer Service (BITS) may not start within the expected time after initial OS boot, potentially resulting in timeouts, BITS errors in the event log, or failures of cmdlets involving BITS invoked quickly after the initial boot. Other Windows Server AMIs are not affected by this issue, and their latest version remains 2020.03.11.</p>

Release	Changes
2020.3.11	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1490 1297" style="list-style-type: none"><li data-bbox="402 352 1240 407">• Windows Security updates current to March 10th, 2020</li><li data-bbox="402 457 1192 491">• AWS Tools for Windows PowerShell version 3.15.969</li><li data-bbox="402 541 834 575">• EC2Config version 4.9.4122</li><li data-bbox="402 625 938 659">• EC2Launch v1 version 1.3.2002730</li><li data-bbox="402 709 850 743">• SSM Agent version 2.3.814.0</li><li data-bbox="402 793 802 848">• SQL Server CUs installed:<ul data-bbox="435 877 1403 1121" style="list-style-type: none"><li data-bbox="435 877 786 932">• SQL_2016_SP2: CU 12</li><li data-bbox="435 982 721 1016">• SQL_2017: CU 19</li><li data-bbox="435 1066 1403 1121">• SQL_2019: CU 2 not applied due to known issue with SQL Agent</li></ul></li><li data-bbox="402 1171 1490 1297">• Out of band security update (KB4551762) for server core 1909 and 1903 applied to mitigate CVE-2020-0796. Other Windows Server versions are not impacted by this issue.</li></ul>

Release	Changes
2020.2.12	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1279 1205" style="list-style-type: none"><li data-bbox="399 348 1279 407">• Windows Security updates current to February 11th, 2020</li><li data-bbox="399 436 1192 495">• AWS Tools for Windows PowerShell version 3.15.945</li><li data-bbox="399 525 815 583">• Intel SRIOV driver updates<ul data-bbox="431 613 984 852" style="list-style-type: none"><li data-bbox="431 613 984 672">• 2019/1903/1909: version 2.1.185.0</li><li data-bbox="431 701 896 760">• 2016/1809: version 2.1.186.0</li><li data-bbox="431 789 850 848">• 2012 R2: version 1.2.199.0</li></ul></li><li data-bbox="399 882 799 940">• SQL Server CUs installed:<ul data-bbox="431 970 721 1205" style="list-style-type: none"><li data-bbox="431 970 721 1029">• SQL_2019: CU 1</li><li data-bbox="431 1058 721 1117">• SQL_2017: CU 18</li><li data-bbox="431 1146 789 1205">• SQL_2016_SP2: CU 11</li></ul></li></ul> <p data-bbox="399 1314 1247 1346"><b>Windows Server 2008 SP2 and Windows Server 2008 R2</b></p> <p data-bbox="399 1392 1484 1665">Windows Server 2008 SP2 and Windows Server 2008 R2 reached End of Support (EOS) on 01/14/20 and will no longer receive regular security updates from Microsoft. AWS will no longer publish or distribute Windows Server 2008 SP2 or Windows Server 2008 R2 AMIs. Existing 2008 SP2/R2 instances and custom AMIs in your account are not impacted, and you can continue to use them after the EOS date.</p> <p data-bbox="399 1711 1490 1793">For more information about Microsoft End of Service on AWS, including upgrade and import options, as well as a full list of AMIs that are no longer</p>

Release	Changes
	published as of 01/14/2020, see <a href="#">End of Support (EOS) for Microsoft Products</a> .
2020.1.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to January 14, 2020</li> <li>• AWS Tools for Windows PowerShell version 3.15.925</li> <li>• ENA version 2.1.4</li> </ul> <p><b>Windows Server 2008 SP2 and Windows Server 2008 R2</b></p> <p>Windows Server 2008 SP2 and Window Server 2008 R2 reached End of Support (EOS) on 01/14/20 and will no longer receive regular security updates from Microsoft. AWS will no longer publish or distribute Windows Server 2008 SP2 or Windows Server 2008 R2 AMIs. Existing 2008 SP2/R2 instances and custom AMIs in your account are not impacted, and you can continue to use them after the EOS date.</p> <p>For more information about Microsoft End of Service on AWS, including upgrade and import options, as well as a full list of AMIs that are no longer published as of 01/14/2020, see <a href="#">End of Support (EOS) for Microsoft Products</a>.</p>

## Monthly AMI updates for 2019

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2019](#) on the Microsoft website.

Release	Changes
2019.12.16	

Release	Changes
	<p data-bbox="399 212 526 243"><b>All AMIs</b></p> <ul data-bbox="399 300 1266 443" style="list-style-type: none"><li data-bbox="399 300 1266 359">• Microsoft security updates current to December 10, 2019</li><li data-bbox="399 390 1195 443">• AWS Tools for Windows PowerShell version 3.15.903</li></ul> <p data-bbox="399 554 1247 585"><b>Windows Server 2008 SP2 and Windows Server 2008 R2</b></p> <p data-bbox="399 632 1474 905">Microsoft will end mainstream support for Windows Server 2008 SP2 and Windows Server 2008 R2 on January 14, 2020. On this date, AWS will no longer publish or distribute Windows Server 2008 SP2 or Windows Server 2008 R2 AMIs. Existing 2008 SP2/R2 instances and custom AMIs in your account will not be impacted and you can continue to use them after the end-of-service (EOS) date.</p> <p data-bbox="399 951 1490 1129">For more information about Microsoft EOS on AWS, including upgrade and import options, along with a full list of AMIs that will no longer be published or distributed on January 14, 2020, see <a href="#">End of Support (EOS) for Microsoft Products</a>.</p>



Release	Changes
2019.11.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• AWS Tools for Windows PowerShell version 3.15.876</li> <li>• Windows Security updates current to November 12th, 2019</li> <li>• EC2 Config version 4.9.3865</li> <li>• EC2 Launch version 1.3.2002240</li> <li>• SSM Agent v2.3.722.0</li> </ul> <p>Previous versions of AMIs have been marked private.</p> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-1909-English-Core-Base-2019.11.13</li> <li>• Windows_Server-1909-English-Core-ContainersLatest-2019.11.13</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Enterprise-2019.11.13</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Express-2019.11.13</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Standard-2019.11.13</li> <li>• Windows_Server-2016-English-Full-SQL_2019_Web-2019.11.13</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Enterprise-2019.11.13</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Express-2019.11.13</li> <li>• Windows_Server-2019-English-Full-SQL_2019_Standard-2019.11.13</li> <li>• </li> </ul>

Release	Changes
	Windows_Server-2019-English-Full-SQL_2019_Web-2019.11.13
2019.11.05	<p data-bbox="402 352 773 386"><b>New AWS Windows AMIs</b></p> <p data-bbox="402 432 756 466">New SQL AMIs available:</p> <ul data-bbox="402 520 1448 1201" style="list-style-type: none"><li data-bbox="402 520 1448 579">• Windows_Server-2016-English-Full-SQL_2019_Enterprise-2019.11.05</li><li data-bbox="402 604 1448 663">• Windows_Server-2016-English-Full-SQL_2019_Express-2019.11.05</li><li data-bbox="402 688 1448 747">• Windows_Server-2016-English-Full-SQL_2019_Standard-2019.11.05</li><li data-bbox="402 772 1448 831">• Windows_Server-2016-English-Full-SQL_2019_Web-2019.11.05</li><li data-bbox="402 856 1448 915">• Windows_Server-2019-English-Full-SQL_2019_Enterprise-2019.11.05</li><li data-bbox="402 940 1448 999">• Windows_Server-2019-English-Full-SQL_2019_Express-2019.11.05</li><li data-bbox="402 1024 1448 1083">• Windows_Server-2019-English-Full-SQL_2019_Standard-2019.11.05</li><li data-bbox="402 1108 1448 1167">• Windows_Server-2019-English-Full-SQL_2019_Web-2019.11.05</li></ul>

Release	Changes
2019.10.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS Tools for Windows PowerShell version 3.15.846</li><li>• Windows Security updates current to October 8th, 2019</li><li>• Windows Defender platform updates current and update block via registry removed. For more information, see <a href="#">SFC incorrectly flags Windows Defender PowerShell module files as corrupted</a> on the Microsoft website.</li></ul> <p><b>New AWS Windows AMIs</b></p> <p>New ECS-optimized AMI available:</p> <ul style="list-style-type: none"><li>• Windows_Server-2019-English-Core-ECS_Optimized-2019.10.09</li></ul>
2019.09.12	<p><b>New AWS Windows AMI</b></p> <ul style="list-style-type: none"><li>• amzn2-ami-hvm-2.0.20190618-x86_64-gp2-mono</li></ul> <p>.NET Core 2.2, Mono 5.18, and PowerShell 6.2 pre-installed to run your .NET applications on Amazon Linux 2 with Long Term Support (LTS)</p>

Release	Changes
2019.09.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• AWS PV driver version 8.3.2</li> <li>• AWS NVMe driver version 1.3.2</li> <li>• AWS Tools for Windows PowerShell version 3.15.826</li> <li>• NLA enabled on all OS 2012 RTM to 2019 AMIs</li> <li>• Intel 82599 VF driver reverted to version 2.0.210.0 (Server 2016) or version 2.1.138.0 (Server 2019) due to customer reported issues. Engagement with Intel concerning these issues ongoing.</li> <li>• Windows Security updates current to September 10, 2019</li> <li>• Windows Defender platform update blocked via registry due to SFC failures introduced by latest client. Will be reenabled when patch available. For more information, see <a href="#">SFC incorrectly flags Windows Defender PowerShell module files as corrupted</a> on the Microsoft website.</li> </ul> <p>Platform update block: HKLM:\SOFTWARE\Microsoft\Windows Defender\Miscellaneous Configuration\PreventPlatformUpdate type=DWORD, value=1</p> <p>Previous versions of AMIs have been marked private.</p> <p><b>New AWS Windows AMIs</b></p> <p>New STIG-compliant AMIs available:</p> <ul style="list-style-type: none"> <li>• Windows_Server-2012-R2-English-STIG-Full</li> <li>• Windows_Server-2012-R2-English-STIG-Core</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• Windows_Server-2016-English-STIG-Full</li><li>• Windows_Server-2016-English-STIG-Core</li><li>• Windows_Server-2019-English-STIG-Full</li><li>• Windows_Server-2019-English-STIG-Core</li></ul> <p><b>Windows Server 2008 R2 SP1</b></p> <p>Includes the following updates, which are required for Microsoft Extended Security (ESU) updates.</p> <ul style="list-style-type: none"><li>• KB4490628</li><li>• KB4474419</li><li>• KB4516655</li></ul> <p><b>Windows Server 2008 SP2</b></p> <p>Includes the following updates, which are required for Microsoft Extended Security (ESU) updates.</p> <ul style="list-style-type: none"><li>• KB4493730</li><li>• KB4474419</li><li>• KB4517134</li></ul>

Release	Changes
	<div data-bbox="431 243 1507 474"><p> <b>Note</b></p><p>NLA is now enabled on all 2012 RTM, 2012 R2, and 2016 AMIs to increase default RDP security posture. NLA remains enabled on 2019 AMIs.</p></div>
2019.08.16	<p data-bbox="399 541 526 575"><b>All AMIs</b></p> <ul data-bbox="399 634 1481 1239" style="list-style-type: none"><li>• Microsoft security updates current to August 13th, 2019. Includes KBs addressing CVE-2019-1181, CVE-2019-1182, CVE-2019-1222, and CVE-2019-1226.</li><li>• EC2Config version 4.9.3519</li><li>• SSM Agent version 2.3.634.0</li><li>• AWS Tools for Windows PowerShell version 3.15.802</li><li>• Windows Defender platform update blocked via registry due to SFC failures introduced by update. Update will be re-enabled when new patch is available.</li></ul> <div data-bbox="431 1281 1507 1549"><p> <b>Note</b></p><p>Starting in September, NLA will be enabled on all 2012 RTM, 2012 R2, and 2016 AMIs to increase default RDP security posture.</p></div>

Release	Changes
2019.07.19	<b>New AWS Windows AMIs</b> <ul style="list-style-type: none"><li data-bbox="402 352 1357 407">• Windows_Server-2016-English-Full-ECS_Optimized-2019.07.19</li><li data-bbox="402 436 1357 491">• Windows_Server-2019-English-Full-ECS_Optimized-2019.07.19</li></ul>
2019.07.12	<b>All AMIs</b> <ul style="list-style-type: none"><li data-bbox="402 663 1192 718">• Microsoft security updates current to July 9th, 2019</li></ul>

Release	Changes
2019.06.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to June 11th, 2019</li> <li>• AWS SDK version 3.15.756</li> <li>• AWS PV driver version 8.2.7</li> <li>• AWS NVMe driver version 1.3.1</li> <li>• The following "P3" AMIs will be renamed as "Tesla" AMIs. These AMIs will support all GPU-backed AWS instances using the Tesla driver. P3 AMIs will no longer be updated after this release and will be removed as part of our regular cycle.</li> <li>• Windows_Server-2012-R2_RTM-English-P3-2019.06.12 replaced with Windows_Server-2012-R2_RTM-English-Tesla-2019.06.12</li> <li>• Windows_Server-2016-English-P3-2016.06.12 replaced with Windows_Server-2016-English-Tesla-2019.06.12</li> </ul> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2019-English-Tesla-2019.06.12</li> </ul> <p>Previous versions of AMIs have been marked private.</p>
2019.05.21	<p><b>Windows Server, version 1903</b></p> <ul style="list-style-type: none"> <li>• AMIs are now available</li> </ul>

Release	Changes
2019.05.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1211 667" style="list-style-type: none"><li data-bbox="402 348 1211 407">• Microsoft security updates current to May 14th, 2019</li><li data-bbox="402 436 834 495">• EC2Config version 4.9.3429</li><li data-bbox="402 525 850 583">• SSM Agent version 2.3.542.0</li><li data-bbox="402 613 818 667">• AWS SDK version 3.15.735</li></ul>
2019.04.26	<p data-bbox="402 749 526 779"><b>All AMIs</b></p> <ul data-bbox="402 837 1458 1035" style="list-style-type: none"><li data-bbox="402 837 1458 1035">• Fixed AMIs for Windows Server 2019 with SQL to address edge cases where the first launch of an instance may result in Instance Impairment and Windows displays the message "Please wait for the User Profile Service".</li></ul>
2019.04.21	<p data-bbox="402 1121 526 1150"><b>All AMIs</b></p> <ul data-bbox="402 1209 1279 1268" style="list-style-type: none"><li data-bbox="402 1209 1279 1268">• AWS PV Driver rollback to version 8.2.6 from version 8.3.0</li></ul>

Release	Changes
2019.04.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to April 9, 2019</li><li>• AWS SDK version 3.15.715</li><li>• AWS PV Driver version 8.3.0</li><li>• EC2Launch v1 version 1.3.2001360</li></ul> <p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"><li>• Windows_Server-2016-English-Full-SQL_2012_SP4_Standard-2019.04.10</li><li>• Windows_Server-2016-English-Full-SQL_2014_SP3_Standard-2019.04.10</li><li>• Windows_Server-2016-English-Full-SQL_2014_SP3_Enterprise-2019.04.10</li></ul>
2019.03.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to March 12, 2019</li><li>• AWS SDK version 3.15.693</li><li>• EC2Launch v1 version 1.3.2001220</li><li>• NVIDIA Tesla driver version 412.29 for Deep Learning and P3 AMIs (<a href="https://nvidia.custhelp.com/app/answers/detail/a_id/4772">https://nvidia.custhelp.com/app/answers/detail/a_id/4772</a>)</li></ul> <p>Previous versions of AMIs have been marked private</p>

Release	Changes
2019.02.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to February 12, 2019</li><li>• SSM Agent version 2.3.444.0</li><li>• AWS SDK version 3.15.666</li><li>• EC2Launch v1 version 1.3.2001040</li><li>• EC2Config version 4.9.3289</li><li>• AWS PV driver 8.2.6</li><li>• <a href="#">EBS NVMe tool</a></li></ul> <p>SQL 2014 with Service Pack 2 and SQL 2016 with Service Pack 1 will no longer be updated after this release.</p>
2019.02.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS Windows AMIs have been updated. New AMIs can be found with the following date versions: November "2018.11.29" December "2018.12.13" January "2019.02.09" Previous versions of AMIs have been marked private</li></ul>

Release	Changes
2019.01.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to January 10, 2019</li> <li>• SSM Agent version 2.3.344.0</li> <li>• AWS SDK version 3.15.647</li> <li>• EC2Launch v1 version 1.3.2000930</li> <li>• EC2Config version 4.9.3160</li> </ul> <p><b>All AMIs with SQL Server</b></p> <ul style="list-style-type: none"> <li>• Latest cumulative updates</li> </ul>

## Monthly AMI updates for 2018

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2018](#) on the Microsoft website.

Release	Changes
2018.12.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to December 12, 2018</li> <li>• SSM Agent version 2.3.274.0</li> <li>• AWS SDK version 3.15.629</li> <li>• EC2Launch v1 version 1.3.2000760</li> </ul>

Release	Changes
	<p><b>New AWS Windows AMIs</b></p> <ul style="list-style-type: none"> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2014_SP3_Standard-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2014_SP3_Express-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2014_SP3_Enterprise-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2014_SP3_Standard-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2014_SP3_Express-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2014_SP3_Web-2018.12.12</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2014_SP3_Express-2018.12.12</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2014_SP3_Standard-2018.12.12</li> <li>• Windows_Server-2012-RTM-Japanese-64Bit-SQL_2014_SP3_Web-2018.12.12</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2014_SP3_Standard-2018.12.12</li> <li>• Windows_Server-2012-RTM-English-64Bit-SQL_2014_SP3_Express-2018.12.12</li> <li>•</li> </ul>

Release	Changes
	<p>Windows_Server-2012-RTM-English-64Bit-SQL_2014_SP3_Web-2018.12.12</p> <ul style="list-style-type: none"> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Web-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Express-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Enterprise-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Standard-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Express-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP2_Web-2018.12.12</li> <li>• Windows_Server-2012-R2_RTM-Japanese-64Bit-SQL_2016_SP2_Standard-2018.12.12</li> <li>• Windows_Server-2016-Korean-Full-SQL_2016_SP2_Standard-2018.12.12</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Enterprise-2018.12.12</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Web-2018.12.12</li> <li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Web-2018.12.12</li> <li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Standard-2018.12.12</li> </ul>

Release	Changes
	<ul style="list-style-type: none"><li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Express-2018.12.12</li><li>• Windows_Server-2016-English-Full-SQL_2016_SP2_Standard-2018.12.12</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Enterprise-2018.12.12</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Web-2018.12.12</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Express-2018.12.12</li><li>• Windows_Server-2016-English-Core-SQL_2016_SP2_Standard-2018.12.12</li><li>• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Standard-2018.12.12</li><li>• Windows_Server-2016-Korean-Full-SQL_2016_SP2_Standard-2018.12.12</li><li>• Windows_Server-2019-Spanish-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Japanese-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Portuguese_Portugal-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Chinese_Traditional-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Italian-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Swedish-Full-Base-2018.12.12</li><li>• Windows_Server-2019-English-Core-Base-2018.12.12</li><li>• Windows_Server-2019-Hungarian-Full-Base-2018.12.12</li><li>• Windows_Server-2019-Polish-Full-Base-2018.12.12</li></ul>

Release	Changes
	<ul style="list-style-type: none"> <li>• Windows_Server-2019-Turkish-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Korean-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Dutch-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-German-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Russian-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Czech-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-English-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-French-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Portuguese_Brazil-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-Chinese_Simplified-Full-Base-2018.12.12</li> <li>• Windows_Server-2019-English-Full-HyperV-2018.12.12</li> <li>• Windows_Server-2019-English-Full-ContainersLatest-2018.12.12</li> <li>• Windows_Server-2019-English-Core-ContainersLatest-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2017_Enterprise-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2017_Standard-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2017_Web-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2017_Express-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Enterprise-2018.12.12</li> </ul>

Release	Changes
	<ul style="list-style-type: none"> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Standard-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Web-2018.12.12</li> <li>• Windows_Server-2019-English-Full-SQL_2016_SP2_Express-2018.12.12</li> </ul> <p><b>Updated Linux AMI</b></p> <ul style="list-style-type: none"> <li>• amzn2-ami-hvm-2.0.20180622.1-x86_64-gp2-dotnetcore-2018.12.12</li> </ul>
2018.11.28	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• SSM Agent version 2.3.235.0</li> <li>• Changes in all power schemes to set the display to never turn off</li> </ul>
2018.11.20	<p><b>Windows_Server-2016-English-Deep-Learning</b></p> <p><b>Windows_Server-2016-English-Deep-Learning</b></p> <ul style="list-style-type: none"> <li>• TensorFlow version 1.12</li> <li>• MXNet version 1.3</li> <li>• NVIDIA version 392.05</li> </ul>

Release	Changes
2018.11.19	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1341 762" style="list-style-type: none"><li data-bbox="399 348 1268 405">• Microsoft security updates current to November 19, 2018</li><li data-bbox="399 436 846 493">• AWS SDK version 3.15.602.0</li><li data-bbox="399 525 846 581">• SSM Agent version 2.3.193.0</li><li data-bbox="399 613 829 669">• EC2Config version 4.9.3067</li><li data-bbox="399 701 1341 758">• Intel Chipset INF configurations to support new instance types</li></ul> <p data-bbox="399 867 850 898"><b>Windows Server, version 1809</b></p> <ul data-bbox="399 957 773 1014" style="list-style-type: none"><li data-bbox="399 957 773 1014">• AMIs are now available.</li></ul>

Release	Changes
2018.10.14	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1484 894" style="list-style-type: none"><li data-bbox="402 348 1218 407">• Microsoft security updates current to October 9, 2018</li><li data-bbox="402 432 1201 491">• AWS Tools for Windows PowerShell version 3.3.365.0</li><li data-bbox="402 516 873 575">• CloudFormation version 1.4.31</li><li data-bbox="402 600 834 659">• AWS PV Driver version 8.2.4</li><li data-bbox="402 684 1484 806">• AWS PCI Serial Driver version 1.0.0.0 (support for Windows 2008R2 and 2012 on Bare Metal instances)</li><li data-bbox="402 831 782 890">• ENA Driver version 1.5.0</li></ul> <p data-bbox="402 1003 1497 1033"><b>Windows Server 2016 Datacenter and Standard Editions for Nano Server</b></p> <p data-bbox="402 1083 1490 1205">Microsoft ended mainstream support for Windows Server 2016 Datacenter and Standard Editions for Nano Server installation options as of April 10, 2018.</p>

Release	Changes
2018.09.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1279 760" style="list-style-type: none"><li data-bbox="402 348 1279 407">• Microsoft security updates current to September 12, 2018</li><li data-bbox="402 436 1175 495">• AWS Tools for Windows PowerShell version 3.3.343</li><li data-bbox="402 525 938 583">• EC2Launch v1 version 1.3.2000430</li><li data-bbox="402 613 883 672">• AWS NVMe Driver version 1.3 0</li><li data-bbox="402 701 893 760">• EC2 WinUtil Driver version 2.0.0</li></ul> <p data-bbox="402 869 899 898"><b>Windows Server 2016 Base Nano</b></p> <p data-bbox="402 949 1490 1222">Access to all public versions of Windows_Server-2016-English-Nano-Base will be removed in September 2018. For more information about Nano Server lifecycle, including details on launching Nano Server as a Container, see <a href="https://learn.microsoft.com/en-us/previous-versions/windows-server/it-pro/windows-server-2016/get-started/nano-in-semi-annual-channel">https://learn.microsoft.com/en-us/previous-versions/windows-server/it-pro/windows-server-2016/get-started/nano-in-semi-annual-channel</a> on the Microsoft website.</p>

Release	Changes
2018.08.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to August 14, 2018</li><li>• AWS Tools for Windows PowerShell version 3.3.335</li><li>• AMIs now default to use Amazon's NTP service at IP 169.254.169.123 for time synchronization. For more information, see <a href="#">Set the time for your Windows instance</a>.</li></ul> <p><b>Windows Server 2016 Base Nano</b></p> <p>Access to all public versions of Windows_Server-2016-English-Nano-Base will be removed in September 2018. For more information about Nano Server lifecycle, including details on launching Nano Server as a Container, see <a href="https://learn.microsoft.com/en-us/previous-versions/windows-server/it-pro/windows-server-2016/get-started/nano-in-semi-annual-channel">https://learn.microsoft.com/en-us/previous-versions/windows-server/it-pro/windows-server-2016/get-started/nano-in-semi-annual-channel</a> on the Microsoft website.</p>
2018.07.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to July 10, 2018</li><li>• EC2Config version 4.9.2756</li><li>• SSM Agent 2.2.800.0</li></ul>
2018.06.22	<p><b>Windows Server 2008 R2</b></p> <ul style="list-style-type: none"><li>• Resolves an issue with the 2018.06.13 AMIs when changing an instance from a previous generation to a current generation (for example, M4 to M5).</li></ul>

Release	Changes
2018.06.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to June 12, 2018</li><li>• EC2Config version 4.9.2688</li><li>• SSM Agent 2.2.619.0</li><li>• AWS Tools for Windows PowerShell 3.3.283.0</li><li>• AWS NVMe driver 1.2.0</li><li>• AWS PV driver 8.2.3</li></ul>
2018.05.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to May 9, 2018</li><li>• EC2Config version 4.9.2644</li><li>• SSM Agent 2.2.493.0</li><li>• AWS Tools for Windows PowerShell 3.3.270.0</li></ul> <p><b>Windows Server, version 1709 and Windows Server, version 1803</b></p> <ul style="list-style-type: none"><li>• AMIs are now available. For more information, see <a href="#">Windows Server version 1709 and 1803 AMIs for Amazon EC2</a>.</li></ul>

Release	Changes
2018.04.11	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1463 898" style="list-style-type: none"><li data-bbox="399 348 1187 405">• Microsoft security updates current to April 10, 2018</li><li data-bbox="399 436 833 493">• EC2Config version 4.9.2586</li><li data-bbox="399 525 737 581">• SSM Agent 2.2.392.0</li><li data-bbox="399 613 1089 669">• AWS Tools for Windows PowerShell 3.3.256.0</li><li data-bbox="399 701 919 758">• CloudFormation templates 1.4.30</li><li data-bbox="399 789 1463 898">• Serial INF and Intel Chipset INF configurations to support new instance types</li></ul> <p data-bbox="399 1003 651 1035"><b>SQL Server 2017</b></p> <ul data-bbox="399 1094 824 1150" style="list-style-type: none"><li data-bbox="399 1094 824 1150">• Cumulative update 5 (CU5)</li></ul> <p data-bbox="399 1255 716 1287"><b>SQL Server 2016 SP1</b></p> <ul data-bbox="399 1346 824 1402" style="list-style-type: none"><li data-bbox="399 1346 824 1402">• Cumulative update 8 (CU8)</li></ul>

Release	Changes
2018.03.24	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to March 13, 2018</li><li>• EC2Config version 4.9.2565</li><li>• SSM Agent 2.2.355.0</li><li>• AWS Tools for Windows PowerShell 3.3.245.0</li><li>• AWS PV driver 8.2</li><li>• AWS ENA driver 1.2.3.0</li><li>• Amazon EC2 Hibernate Agent 1.0 (rollback from 2.1.0 in the 2018.03.16 AMI release)</li><li>• AWS EC2WinUtilDriver 1.0.1 (for troubleshooting)</li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>• EC2Launch v1 1.3.2000080</li></ul>
2018.03.16	AWS has removed all AWS Windows AMIs dated 2018.03.16 due to an issue with an unquoted path in the configuration for the Amazon EC2 Hibernate Agent.
2018.03.06	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PV driver 8.2.1</li></ul>

Release	Changes
2018.02.23	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• AWS PV driver 7.4.6 (rollback from 8.2 in the 2018.02.13 AMI release)</li></ul>
2018.02.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to February 13, 2018</li><li>• EC2Config version 4.9.2400</li><li>• SSM Agent 2.2.160.0</li><li>• AWS Tools for Windows PowerShell 3.3.225.1</li><li>• AWS PV driver 8.2</li><li>• AWS ENA driver 1.2.3.0</li><li>• AWS NVMe driver 1.0.0.146</li><li>• Amazon EC2 HibernateAgent 1.0.0</li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>• EC2Launch v1 1.3.740</li></ul>
2018.01.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to January 9, 2018</li></ul>

Release	Changes
2018.01.05	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to January 2018</li> <li>• Registry settings to enable mitigations for the Spectre and Meltdown exploits</li> <li>• AWS Tools for Windows PowerShell 3.3.215</li> <li>• EC2Config version 4.9.2262</li> </ul>

## Monthly AMI updates for 2017

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2017](#) on the Microsoft website.

Release	Changes
2017.12.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to December 12, 2017</li> <li>• EC2Config version 4.9.2218</li> <li>• CloudFormation templates 1.4.27</li> <li>• AWS NVMe driver 1.02</li> <li>• SSM Agent 2.2.93.0</li> <li>• AWS Tools for Windows PowerShell 3.3.201</li> </ul>
2017.11.29	

Release	Changes
	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>Removed components for Volume Shadow Copy Service (VSS) included in 2017.11.18 and 2017.11.19 due to a compatibility issue with Windows Backup.</li></ul>
2017.11.19	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>EC2 Hibernate Agent 1.0 (supports hibernation for Spot Instances)</li></ul>
2017.11.18	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>Microsoft security updates current to November 14, 2017</li><li>EC2Config version 4.9.2218</li><li>SSM Agent 2.2.64.0</li><li>AWS Tools for Windows PowerShell 3.3.182</li><li>Elastic Network Adapter (ENA) driver 1.08 (rollback from 1.2.2 in the 2017.10.13 AMI release)</li><li><a href="#">Query for the latest AWS Windows AMI using Systems Manager Parameter Store</a></li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>EC2Launch v1 1.3.640</li></ul>

Release	Changes
2017.10.13	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1442 806" style="list-style-type: none"><li data-bbox="402 352 1237 407">• Microsoft security updates current to October 11, 2017</li><li data-bbox="402 449 834 491">• EC2Config version 4.9.2188</li><li data-bbox="402 533 717 575">• SSM Agent 2.2.30.0</li><li data-bbox="402 617 919 659">• CloudFormation templates 1.4.24</li><li data-bbox="402 701 1442 806">• Elastic Network Adapter (ENA) driver 1.2.2. (Windows Server 2008 R2 through Windows Server 2016)</li></ul>

Release	Changes
2017.10.04	<p data-bbox="401 260 721 291"><b>Microsoft SQL Server</b></p> <p data-bbox="401 338 1495 422">Windows Server 2016 with Microsoft SQL Server 2017 AMIs are now public in all regions.</p> <ul data-bbox="401 478 1446 800" style="list-style-type: none"><li data-bbox="401 499 1446 531">• Windows_Server-2016-English-Full-SQL_2017_Enterprise-2017.10.04</li><li data-bbox="401 583 1430 615">• Windows_Server-2016-English-Full-SQL_2017_Standard-2017.10.04</li><li data-bbox="401 667 1365 699">• Windows_Server-2016-English-Full-SQL_2017_Web-2017.10.04</li><li data-bbox="401 751 1406 783">• Windows_Server-2016-English-Full-SQL_2017_Express-2017.10.04</li></ul> <p data-bbox="401 909 1268 940">Microsoft SQL Server 2017 supports the following features:</p> <ul data-bbox="401 997 1495 1829" style="list-style-type: none"><li data-bbox="401 1018 1406 1102">• Machine Learning Services with Python (ML and AI) and R language support</li><li data-bbox="401 1155 824 1186">• Automatic database tuning</li><li data-bbox="401 1239 867 1270">• Clusterless Availability Groups</li><li data-bbox="401 1323 1495 1501">• Runs on Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and Ubuntu. For more information, see <a href="#">Installation guidance for SQL Server on Linux</a> on the Microsoft website. Not supported on Amazon Linux.</li><li data-bbox="401 1554 954 1585">• Windows-Linux cross-OS migrations</li><li data-bbox="401 1638 886 1669">• Resumable online index rebuild</li><li data-bbox="401 1722 954 1753">• Improved adaptive query processing</li><li data-bbox="401 1806 415 1829">•</li></ul>

Release	Changes
	Graph data support
2017.09.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to September 13, 2017</li><li>• EC2Config version 4.9.2106</li><li>• SSM Agent 2.0.952.0</li><li>• AWS Tools for Windows PowerShell 3.3.143</li><li>• CloudFormation templates 1.4.21</li></ul>
2017.08.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to August 9, 2017</li><li>• EC2Config version 4.9.2016</li><li>• SSM Agent 2.0.879.0</li></ul> <p><b>Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Due to an internal error, these AMIs were released with an older version of AWS Tools for Windows PowerShell, 3.3.58.0.</li></ul>

Release	Changes
2017.07.13	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1175 583" style="list-style-type: none"><li data-bbox="399 348 1175 407">• Microsoft security updates current to July 13, 2017</li><li data-bbox="399 436 829 495">• EC2Config version 4.9.1981</li><li data-bbox="399 525 737 583">• SSM Agent 2.0.847.0</li></ul> <p data-bbox="399 688 727 720"><b>Windows Server 2016</b></p> <ul data-bbox="399 779 837 837" style="list-style-type: none"><li data-bbox="399 779 837 837">• Intel SRIOV Driver 2.0.210.0</li></ul>

Release	Changes
2017.06.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to June 14, 2017</li> <li>• Updates for .NET Framework 4.7 installed from Windows Update</li> <li>• Microsoft updates to address the "privilege not held" error using the PowerShell Stop-Computer cmdlet. For more information, see <a href="#">Privilege not held error</a> on the Microsoft website.</li> <li>• EC2Config version 4.9.1900</li> <li>• SSM Agent 2.0.805.0</li> <li>• AWS Tools for Windows PowerShell 3.3.99.0</li> <li>• Internet Explorer 11 for the desktop is the default, instead of the immersive Internet Explorer</li> </ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v1 1.3.610</li> </ul>
2017.05.30	<p>The Windows_Server-2008-SP2-English-32Bit-Base-2017.05.10 AMI was updated to the Windows_Server-2008-SP2-English-32Bit-Base-2017.05.30 AMI to resolve an issue with password generation.</p>
2017.05.22	<p>The Windows_Server-2016-English-Full-Base-2017.05.10 AMI was updated to the Windows_Server-2016-English-Full-Base-2017.05.22 AMI after some log cleaning.</p>

Release	Changes
2017.05.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to May 9, 2017</li><li>• AWS PV Driver v7.4.6</li><li>• AWS Tools for Windows PowerShell 3.3.83.0</li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>• SSM Agent 2.0.767</li></ul>
2017.04.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to April 11, 2017</li><li>• AWS Tools for Windows PowerShell 3.3.71.0</li><li>• CloudFormation templates 1.4.18</li></ul> <p><b>Windows Server 2003 to Windows Server 2012</b></p> <ul style="list-style-type: none"><li>• EC2Config version 4.9.1775</li><li>• SSM Agent 2.0.761.0</li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>• SSM Agent 2.0.730.0</li></ul>

Release	Changes
2017.03.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1208 583" style="list-style-type: none"><li data-bbox="402 348 1208 407">• Microsoft security updates current to March 14, 2017</li><li data-bbox="402 436 1062 495">• Current AWS Tools for Windows PowerShell</li><li data-bbox="402 525 938 583">• Current CloudFormation templates</li></ul> <p data-bbox="402 688 1101 718"><b>Windows Server 2003 to Windows Server 2012</b></p> <ul data-bbox="402 777 831 928" style="list-style-type: none"><li data-bbox="402 777 831 835">• EC2Config version 4.7.1631</li><li data-bbox="402 865 737 924">• SSM Agent 2.0.682.0</li></ul> <p data-bbox="402 1033 727 1062"><b>Windows Server 2016</b></p> <ul data-bbox="402 1121 769 1272" style="list-style-type: none"><li data-bbox="402 1121 737 1180">• SSM Agent 2.0.706.0</li><li data-bbox="402 1209 769 1268">• EC2Launch v1 v1.3.540</li></ul>
2017.02.21	<p data-bbox="402 1314 1458 1444">Microsoft recently <a href="#">announced</a> that they will not release monthly patches or security updates for the month of February. All February patches and security updates will be included in the March update.</p> <p data-bbox="402 1486 1435 1575">Amazon Web Services did not release updated Windows Server AMIs in February.</p>

Release	Changes
2017.01.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to January 10, 2017</li> <li>• Current AWS Tools for Windows PowerShell</li> <li>• Current CloudFormation templates</li> </ul> <p><b>Windows Server 2003 to Windows Server 2012</b></p> <ul style="list-style-type: none"> <li>• EC2Config version 4.2.1442</li> <li>• SSM Agent 2.0.599.0</li> </ul>

## Monthly AMI updates for 2016

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2016](#) on the Microsoft website.

Release	Changes
2016.12.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to December 13, 2016</li> <li>• Current AWS Tools for Windows PowerShell</li> </ul> <p><b>Windows Server 2003 to Windows Server 2012</b></p> <ul style="list-style-type: none"> <li>• Released EC2Config version 4.1.1396</li> </ul>

Release	Changes
	<ul style="list-style-type: none"> <li>Elastic Network Adapter (ENA) driver 1.0.9.0 (Windows Server 2008 R2 only)</li> </ul> <p><b>Windows Server 2016</b></p> <p>New AMIs available in all regions:</p> <ul style="list-style-type: none"> <li>Windows_Server-2016-English-Core-Base</li> </ul> <p><b>Microsoft SQL Server</b></p> <p>All Microsoft SQL Server AMIs with the latest service pack are now public in all regions. These new AMIs replace old SQL Service Pack AMIs going forward.</p> <ul style="list-style-type: none"> <li>Windows_Server-2008-R2_SP1-English-64Bit-SQL_2012_SP3_ <i>edition</i>-2016.12.14</li> <li>Windows_Server-2012-RTM-English-64Bit-SQL_2012_SP3_ <i>edition</i>-2016.12.14</li> <li>Windows_Server-2012-R2_RTM-English-64Bit-SQL_2014_SP2_ <i>edition</i>-2016.12.14</li> <li>Windows_Server-2012-RTM-English-64Bit-SQL_2014_SP2_ <i>edition</i>-2016.12.14</li> <li>Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_SP1_ <i>edition</i>-2016.12.14</li> <li>Windows_Server-2016-English-Full-SQL_2016_SP1_ <i>edition</i>-2016.12.14</li> </ul>

Release	Changes
	<p>SQL Server 2016 SP1 is a major release. The following features, which were previously available in Enterprise edition only, are now enabled in Standard, Web, and Express editions with SQL Server 2016 SP1:</p> <ul style="list-style-type: none"><li>• Row-level security</li><li>• Dynamic Data Masking</li><li>• Change Data Capture</li><li>• Database snapshot</li><li>• Column store</li><li>• Partitioning</li><li>• Compression</li><li>• In Memory OLTP</li><li>• Always Encrypted</li></ul>
2016.11.23	<p><b>Windows Server 2003 to Windows Server 2012</b></p> <ul style="list-style-type: none"><li>• Released EC2Config version 4.1.1378</li><li>• The AMIs released this month, and going forward, use the EC2Config service to process boot-time configurations and SSM Agent to process AWS Systems Manager Run Command and Config requests. EC2Config no longer processes requests for Systems Manager Run Command and State Manager. The latest EC2Config installer installs SSM Agent side-by-side with the EC2Config service. For more information, see <a href="#">Configure a Windows instance using the EC2Config service (legacy)</a>.</li></ul>

Release	Changes
2016.11.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to November 8 2016</li> <li>• Released AWS PV driver, version 7.4.3.0 for Windows 2008 R2 and later</li> <li>• Current AWS Tools for Windows PowerShell</li> </ul>
2016.10.18	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to October 12, 2016</li> <li>• Current AWS Tools for Windows PowerShell</li> </ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"> <li>• Released AMIs for Windows Server 2016. These AMIs include significant changes. For example, they don't include the EC2Config service.</li> </ul>
2016.9.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to September 13, 2016</li> <li>• Current AWS Tools for Windows PowerShell</li> <li>• Renamed AMI Windows_Server-2012-RTM-Japanese-64Bit-SQL_2008_R3_SP2_Standard to Windows_Server-2012-RTM-Japanese-64Bit-SQL_2008_R2_SP3_Standard</li> </ul>
2016.8.26	<p>All Windows Server 2008 R2 AMIs dated 2016.08.11 were updated to fix a known issue. New AMIs are dated 2016.08.25.</p>

Release	Changes
2016.8.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Config v3.19.1153</li><li>• Microsoft security updates current to August 10, 2016</li><li>• Enabled the registry key User32 exception handler hardening feature in Internet Explorer for MS15-124</li></ul> <p><b>Windows Server 2008 R2, Windows Server 2012 RTM, and Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Elastic Network Adapter (ENA) Driver 1.0.8.0</li><li>• ENA AMI property set to enabled</li><li>• AWS PV Driver for Windows Server 2008 R2 was re-released this month because of a known issue. Windows Server 2008 R2 AMI's were removed in July because of this issue.</li></ul>
2016.8.2	<p>All Windows Server 2008 R2 AMIs for July were removed and rolled back to AMIs dated 2016.06.15, because of an issue discovered in the AWS PV driver. The AWS PV driver issue has been fixed. The August AMI release will include Windows Server 2008 R2 AMIs with the fixed AWS PV driver and July/August Windows updates.</p>

Release	Changes
2016.7.26	<p data-bbox="399 260 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1490 588" style="list-style-type: none"><li data-bbox="399 348 756 407">• EC2Config v3.18.1118</li><li data-bbox="399 457 1490 588">• 2016.07.13 AMIs were missing security patches. AMIs were re-patched. Additional processes were put in place to verify successful patch installations going forward.</li></ul>
2016.7.13	<p data-bbox="399 667 526 697"><b>All AMIs</b></p> <ul data-bbox="399 756 1123 1079" style="list-style-type: none"><li data-bbox="399 756 1123 814">• Microsoft security updates current to July 2016</li><li data-bbox="399 865 1062 903">• Current AWS Tools for Windows PowerShell</li><li data-bbox="399 953 883 991">• Updated AWS PV Driver 7.4.2.0</li><li data-bbox="399 1041 1062 1079">• AWS PV Driver for Windows Server 2008 R2</li></ul>

Release	Changes
2016.6.16	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to June 2016</li><li>• Current AWS Tools for Windows PowerShell</li><li>• EC2Config service version 3.17.1032</li></ul> <p><b>Microsoft SQL Server</b></p> <ul style="list-style-type: none"><li>• Released 10 AMIs that include 64-bit versions of Microsoft SQL Server 2016. If using the Amazon EC2 console, navigate to <b>Images, AMIs, Public Images</b>, and type <b>Windows_Server-2012-R2_RTM-English-64Bit-SQL_2016_Standard</b> in the search bar.</li></ul>
2016.5.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to May 2016</li><li>• Current AWS Tools for Windows PowerShell</li><li>• EC2Config service version 3.16.930</li><li>• MS15-011 Active Directory patch installed</li></ul> <p><b>Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Intel SRIOV Driver 1.0.16.1</li></ul>

Release	Changes
2016.4.13	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1133 583" style="list-style-type: none"><li data-bbox="399 348 1133 407">• Microsoft security updates current to April 2016</li><li data-bbox="399 436 1062 495">• Current AWS Tools for Windows PowerShell</li><li data-bbox="399 525 938 583">• EC2Config service version 3.15.880</li></ul>
2016.3.9	<p data-bbox="399 659 526 690"><b>All AMIs</b></p> <ul data-bbox="399 749 1154 984" style="list-style-type: none"><li data-bbox="399 749 1154 808">• Microsoft security updates current to March 2016</li><li data-bbox="399 837 1062 896">• Current AWS Tools for Windows PowerShell</li><li data-bbox="399 926 938 984">• EC2Config service version 3.14.786</li></ul>
2016.2.10	<p data-bbox="399 1060 526 1092"><b>All AMIs</b></p> <ul data-bbox="399 1150 1203 1386" style="list-style-type: none"><li data-bbox="399 1150 1203 1209">• Microsoft security updates current to February 2016</li><li data-bbox="399 1239 1062 1297">• Current AWS Tools for Windows PowerShell</li><li data-bbox="399 1327 938 1386">• EC2Config service version 3.13.727</li></ul>
2016.1.25	<p data-bbox="399 1461 526 1493"><b>All AMIs</b></p> <ul data-bbox="399 1551 1187 1787" style="list-style-type: none"><li data-bbox="399 1551 1187 1610">• Microsoft security updates current to January 2016</li><li data-bbox="399 1640 1062 1698">• Current AWS Tools for Windows PowerShell</li><li data-bbox="399 1728 938 1787">• EC2Config service version 3.12.649</li></ul>

Release	Changes
2016.1.5	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Current AWS Tools for Windows PowerShell</li> </ul>

## Monthly AMI updates for 2015

For more information, see [Description of Software Update Services and Windows Server Update Services changes in content for 2015](#) on the Microsoft website.

Release	Changes
2015.12.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to December 2015</li> <li>• Current AWS Tools for Windows PowerShell</li> </ul>
2015.11.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Microsoft security updates current to November 2015</li> <li>• Current AWS Tools for Windows PowerShell</li> <li>• EC2Config service version 3.11.521</li> <li>• CFN Agent updated to latest version</li> </ul>
2015.10.26	Corrected boot volume sizes of base AMIs to be 30GB instead of 35GB
2015.10.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>

Release	Changes
	<p>Microsoft security updates current to October 2015</p> <ul style="list-style-type: none"><li>• EC2Config service version 3.10.442</li><li>• Current AWS Tools for Windows PowerShell</li><li>• Updated SQL Service Packs to latest versions for all SQL variants</li><li>• Removed old entries in Event Logs</li><li>• AMI Names have been changed to reflect the latest service pack. For example, the latest AMI with Server 2012 and SQL 2014 Standard is named "Windows_Server-2012-RTM-English-64Bit-SQL_2014_SP1_Standard-2015.10.26", not "Windows_Server-2012-RTM-English-64Bit-SQL_2014_RTM_Standard-2015.10.26".</li></ul>
2015.9.9	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to September 2015</li><li>• EC2Config service version 3.9.359</li><li>• Current AWS Tools for Windows PowerShell</li><li>• Current CloudFormation helper scripts</li></ul>

Release	Changes
2015.8.18	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to August 2015</li><li>• EC2Config service version 3.8.294</li><li>• Current AWS Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 and Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• AWS PV Driver 7.3.2</li></ul>
2015.7.21	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to July 2015</li><li>• EC2Config service version 3.7.308</li><li>• Current AWS Tools for Windows PowerShell</li><li>• Modified AMI descriptions of SQL images for consistency</li></ul>

Release	Changes
2015.6.10	<p data-bbox="402 260 526 294"><b>All AMIs</b></p> <ul data-bbox="402 348 1133 672" style="list-style-type: none"><li data-bbox="402 369 1133 403">• Microsoft security updates current to June 2015</li><li data-bbox="402 457 922 491">• EC2Config service version 3.6.269</li><li data-bbox="402 546 1062 579">• Current AWS Tools for Windows PowerShell</li><li data-bbox="402 634 987 667">• Current CloudFormation helper scripts</li></ul> <p data-bbox="402 781 1013 814"><b>Only AMIs with Windows Server 2012 R2</b></p> <ul data-bbox="402 869 721 903" style="list-style-type: none"><li data-bbox="402 890 721 924">• AWS PV Driver 7.3.1</li></ul>
2015.5.13	<p data-bbox="402 1003 526 1037"><b>All AMIs</b></p> <ul data-bbox="402 1092 1127 1323" style="list-style-type: none"><li data-bbox="402 1113 1127 1146">• Microsoft security updates current to May 2015</li><li data-bbox="402 1201 922 1234">• EC2Config service version 3.5.228</li><li data-bbox="402 1289 1062 1323">• Current AWS Tools for Windows PowerShell</li></ul>
2015.04.15	<p data-bbox="402 1407 526 1440"><b>All AMIs</b></p> <ul data-bbox="402 1495 1133 1726" style="list-style-type: none"><li data-bbox="402 1516 1133 1549">• Microsoft security updates current to April 2015</li><li data-bbox="402 1604 922 1638">• EC2Config service version 3.3.174</li><li data-bbox="402 1692 1062 1726">• Current AWS Tools for Windows PowerShell</li></ul>

Release	Changes
2015.03.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to March 2015</li><li>• EC2Config service version 3.2.97</li><li>• Current AWS Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• AWS PV Driver 7.3.0</li></ul>
2015.02.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to February 2015</li><li>• EC2Config service version 3.0.54</li><li>• Current AWS Tools for Windows PowerShell</li><li>• Current CloudFormation helper scripts</li></ul>
2015.01.14	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to January 2015</li><li>• EC2Config service version 2.3.313</li><li>• Current AWS Tools for Windows PowerShell</li><li>• Current CloudFormation helper scripts</li></ul>

# Subscribe to AWS Windows AMI notifications

Whenever AWS Windows AMIs are released, we send notifications to the subscribers of the `ec2-windows-ami-update` topic. Whenever released AWS Windows AMIs are made private, we send notifications to the subscribers of the `ec2-windows-ami-private` topic. If you no longer want to receive these notifications, use the following procedure to unsubscribe.

To be notified when new AMIs are released or when previously released AMIs are made private, subscribe to notifications using Amazon SNS.

## To subscribe to AWS Windows AMI notifications

1. Open the Amazon SNS console at <https://console.aws.amazon.com/sns/v3/home>.
2. In the navigation bar, change the Region to **US East (N. Virginia)**, if necessary. You must use this Region because the Amazon SNS notifications that you are subscribing to were created in this Region.
3. In the navigation pane, choose **Subscriptions**.
4. Choose **Create subscription**.
5. For the **Create subscription** dialog box, do the following:
  - a. For **Topic ARN**, copy and paste one of the following Amazon Resource Names (ARNs):
    - `arn:aws:sns:us-east-1:801119661308:ec2-windows-ami-update`
    - `arn:aws:sns:us-east-1:801119661308:ec2-windows-ami-private`

For **AWS GovCloud (US) Regions**:

`arn:aws-us-gov:sns:us-gov-west-1:077303321853:ec2-windows-ami-update`

- b. For **Protocol**, choose **Email**.
  - c. For **Endpoint**, enter an email address that you can use to receive the notifications.
  - d. Choose **Create subscription**.
6. You'll receive a confirmation email with the subject line `AWS Notification - Subscription Confirmation`. Open the email and choose **Confirm subscription** to complete your subscription.

## To unsubscribe from AWS Windows AMI notifications

1. Open the Amazon SNS console at <https://console.aws.amazon.com/sns/v3/home>.
2. In the navigation bar, change the Region to **US East (N. Virginia)**, if necessary. You must use this Region because the Amazon SNS notifications were created in this Region.
3. In the navigation pane, choose **Subscriptions**.
4. Select the subscriptions and then choose **Delete**. When prompted for confirmation, choose **Delete**.

# Security in AWS Windows AMI

Cloud security at AWS is the highest priority. As an AWS customer, you benefit from a data center and network architecture that is built to meet the requirements of the most security-sensitive organizations.

Security is a shared responsibility between AWS and you. The [shared responsibility model](#) describes this as security of the cloud and security in the cloud:

- **Security of the cloud** – AWS is responsible for protecting the infrastructure that runs AWS services in the AWS Cloud. AWS also provides you with services that you can use securely. Third-party auditors regularly test and verify the effectiveness of our security as part of the [AWS Compliance Programs](#). To learn about the compliance programs that apply to Windows AMI, see [AWS Services in Scope by Compliance Program](#).
- **Security in the cloud** – Your responsibility is determined by the AWS service that you use. You are also responsible for other factors including the sensitivity of your data, your company's requirements, and applicable laws and regulations

For detailed information about how to configure Amazon EC2 to meet your security and compliance objectives, see [Security in Amazon EC2](#) in the *User Guide for Windows Instances*.

# Document history for the AWS Windows AMI reference

The following table describes documentation changes for the AWS Windows AMI reference content. For monthly AMI version release notes, see [AWS Windows AMI version history](#).

Change	Description	Date
<a href="#">Archive 2014 release notes</a>	Yearly archive of release notes more than ten years old.	January 21, 2025
<a href="#">Add support for Windows Server 2025</a>	Release AMIs for Windows Server 2025.	November 4, 2024
<a href="#">Initial release</a>	Initial release of the AWS Windows AMI reference.	April 30, 2024