

# Amazon Windows AMIs



# Amazon Windows AMIs: Reference

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# Amazon Windows AMI reference

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

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

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 for Windows Instances*.

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

## Specialized Amazon Windows AMIs

You can use specialized Amazon Windows AMIs to create instances for your database and compliance hardening use cases as follows.

## SQL Server AMIs

Some Amazon Windows AMIs include an edition of Microsoft SQL Server (SQL Enterprise Edition, SQL Server Standard, SQL Server Express, or SQL Server Web). Launching an instance from a Windows AMI with Microsoft SQL Server enables you to run the instance as a database server. Alternatively, you can launch an instance from any Windows AMI and then install the database software that you need on the instance.

To discover available SQL Server license-included AMIs, see [Find a SQL Server license-included AMI](#) in the *Microsoft SQL Server on Amazon EC2 User Guide*.

## 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 AmazonWindows Server AMIs](#).

## STIG Hardened AmazonWindows 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 Amazon 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.

You can find the STIG Hardened EC2 Windows Server AMIs in the Community AMIs 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.amazonaws.cn/ec2/>.
2. Choose **Instances** from the navigation pane. This opens a list of your EC2 instances in the current Amazon Web Services 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.

### Name patterns for STIG Hardened AMI names

- 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](#)

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

## Topics

- [Core and base operating systems](#)
- [Microsoft .NET Framework 4.0 STIG Version 2 Release 2](#)
- [WindowsFirewall STIG Version 2 Release 1](#)
- [Internet Explorer \(IE\) 11 STIG Version 2 Release 3](#)
- [Microsoft Edge STIG Version 1 Release 6](#)
- [Microsoft Defender STIG Version 2 Release 4](#)
- [Version history](#)

## 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 1 Release 1

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

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-254293, 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-254335, V-254336, V-254337, V-254338, V-254339, V-254341, V-254342, V-254344, V-254345, V-254346, V-254347, V-254348, V-254349, V-254350, V-254351, V-254352, V-254353, V-254354, V-254355, V-254356, V-254357, V-254358, V-254359, V-254360, V-254361, V-254362, V-254363, V-254364, V-254365, V-254366, V-254367, V-254368, V-254369, V-254370, V-254371, V-254372, V-254373, V-254374, V-254375, V-254376, V-254377, V-254378, V-254379, V-254380, V-254381, V-254382, V-254383, 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-254446, 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-254465, V-254466, V-254467, V-254468, V-254469, V-254470, V-254471, V-254472, V-254473, V-254474, V-254475, V-254476, V-254477, V-254478, V-254479, V-254480, V-254481, 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-254500, V-254501, V-254502, V-254503, V-254504, V-254505, V-254507, V-254508, V-254509, V-254510, V-254511, and V-254512

## **Windows Server 2019 STIG Version 2 Release 5**

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

V-205625, V-205626, V-205627, V-205628, V-205629, V-205630, V-205631, V-205632, V-205633, V-205634, V-205635, V-205636, V-205637, V-205638, V-205639, V-205640, V-205641, V-205642, V-205643, V-205644, V-205645, V-205646, V-205647, V-205648, V-205649, V-205650, V-205651, V-205652, V-205653, V-205654, V-205655, V-205656, V-205657, V-205658, V-205659, V-205660, V-205661, V-205662, V-205663, V-205664, V-205665, V-205666, V-205667, V-205668, V-205669, V-205670, V-205671, V-205672, V-205673, V-205674, V-205675, V-205676, V-205677, 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-205691, V-205692, V-205693, V-205694, V-205695, V-205696, V-205697, V-205698, V-205699, V-205700, V-205701, V-205702, V-205703, V-205704, V-205705, V-205706, V-205707, V-205708, V-205709, V-205710, V-205711, V-205712, V-205713, V-205714, V-205715, V-205716, V-205717, V-205718, V-205719, V-205720, V-205721, V-205722, V-205723, V-205724, V-205725, V-205726, V-205727, V-205728,



V-205729, V-205730, V-205731, V-205732, V-205733, V-205734, V-205735, V-205736, V-205737, V-205738, V-205739, V-205740, V-205741, V-205742, V-205743, V-205744, V-205745, V-205746, V-205747, V-205748, V-205749, V-205750, V-205751, V-205752, V-205753, V-205754, V-205755, V-205756, V-205757, V-205758, V-205759, V-205760, V-205761, V-205762, V-205763, 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-205785, V-205786, V-205787, V-205788, V-205789, V-205790, V-205791, V-205792, V-205793, V-205794, V-205795, V-205796, V-205797, V-205798, V-205799, V-205800, V-205801, V-205802, V-205803, V-205804, V-205805, V-205806, V-205807, V-205808, V-205809, V-205810, V-205811, V-205812, V-205813, V-205814, V-205815, V-205816, V-205817, V-205818, V-205819, V-205820, V-205821, V-205822, V-205823, V-205824, V-205825, V-205826, V-205827, V-205828, V-205829, 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-205843, V-205844, V-205845, V-205846, V-205847, V-205848, V-205849, V-205850, V-205851, V-205852, V-205853, V-205854, V-205855, V-205858, V-205859, V-205860, V-205861, V-205862, V-205863, V-205865, V-205866, V-205867, V-205868, V-205869, V-205870, V-205871, V-205872, V-205873, V-205874, V-205875, V-205876, V-205877, V-205882, V-205883, V-205884, V-205885, V-205886, V-205887, V-205888, V-205890, V-205892, V-205893, V-205894, V-205895, V-205896, V-205897, V-205898, V-205899, V-205900, V-205901, V-205902, V-205903, V-205904, V-205906, V-205907, V-205908, V-205909, V-205910, V-205911, V-205912, V-205913, V-205914, V-205915, V-205916, V-205917, V-205918, V-205919, V-205920, V-205921, V-205922, V-205923, V-205924, V-205925, V-214936, and V-236001

## **Windows Server 2016 STIG Version 2 Release 5**

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

V-224828, V-224832, V-224833, V-224834, V-224835, V-224850, V-224851, 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-224874, V-224877, V-224878, V-224879, V-224880, 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-224916, V-224917, V-224918, V-224919, V-224920, V-224922, V-224924, V-224925, V-224926,

V-224927, V-224928, V-224929, V-224930, V-224931, V-224932, V-224933, V-224934, V-224935, V-224936, V-224937, V-224938, V-224939, V-224940, V-224941, V-224942, V-224943, V-224944, V-224945, V-224946, V-224947, V-224948, V-224949, V-224951, V-224952, V-224953, V-224954, V-224955, V-224956, V-224957, V-224958, V-224959, V-224960, V-224961, V-224962, V-224963, V-225010, V-225013, V-225014, V-225015, V-225016, V-225017, V-225018, V-225019, V-225020, V-225021, V-225022, V-225023, V-225024, V-225025, 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-225044, V-225045, V-225046, V-225047, V-225048, V-225049, V-225050, V-225051, V-225052, V-225053, V-225054, V-225055, V-225056, V-225057, V-225058, V-225060, V-225061, V-225062, V-225063, V-225064, V-225065, V-225066, V-225067, V-225068, V-225069, V-225070, V-225071, V-225072, V-225073, V-225074, V-225076, V-225077, V-225078, V-225079, V-225080, V-225081, V-225082, V-225083, V-225084, V-225085, V-225086, V-225087, V-225088, V-225089, V-225091, V-225092, V-225093, and V-236000

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

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

V-225574, V-225573, V-225572, V-225571, V-225570, V-225569, V-225568, V-225567, V-225566, V-225565, V-225564, V-225563, V-225562, V-225561, V-225560, V-225559, V-225558, V-225557, V-225556, V-225555, V-225554, V-225553, V-225552, V-225551, V-225550, V-225549, V-225548, V-225547, V-225546, V-225545, V-225544, V-225543, V-225542, V-225541, V-225540, V-225539, V-225538, V-225537, V-225536, V-225535, V-225534, V-225533, V-225532, V-225531, V-225530, V-225529, V-225528, V-225527, V-225526, V-225525, V-225524, V-225523, V-225522, V-225521, V-225520, V-225519, V-225518, V-225517, V-225516, V-225515, V-225514, V-225513, V-225512, V-225511, V-225510, V-225509, V-225508, V-225507, V-225506, V-225505, V-225504, V-225503, V-225502, V-225501, V-225500, V-225499, V-225498, V-225497, V-225496, V-225495, V-225494, V-225493, V-225492, V-225491, V-225490, V-225489, V-225488, V-225487, V-225486, V-225485, V-225484, V-225483, V-225482, V-225481, V-225480, V-225479, V-225478, V-225477, V-225476, V-225475, V-225474, V-225473, V-225472, V-225471, V-225470, V-225469, V-225468, V-225467, V-225466, V-225465, V-225464, V-225463, V-225462, V-225461, V-225460, V-225459, V-225458, V-225457, V-225456, V-225455, V-225454, V-225453, V-225452, V-225451, V-225450, V-225449, V-225448, V-225447, V-225446, V-225445, V-225444, V-225443, V-225442, V-225441, V-225440, V-225439, V-225438, V-225437, V-225436, V-225435, V-225434, V-225433, V-225432, V-225431, V-225430, V-225429, V-225428, V-225427, V-225426, V-225425, V-225424, V-225423,

V-225422, V-225421, V-225420, V-225419, V-225418, V-225417, V-225416, V-225415, V-225414, V-225413, V-225412, V-225411, V-225410, V-225409, V-225408, V-225407, V-225406, V-225405, V-225404, V-225402, V-225401, V-225400, V-225399, V-225398, V-225397, V-225396, V-225395, V-225394, V-225393, V-225392, V-225391, V-225390, V-225389, V-225388, V-225387, V-225386, V-225385, V-225384, V-225383, V-225382, V-225381, V-225380, V-225379, V-225378, V-225377, V-225376, V-225375, V-225374, V-225373, V-225372, V-225371, V-225370, V-225369, V-225368, V-225367, V-225366, V-225365, V-225364, V-225363, V-225362, V-225361, V-225360, V-225359, V-225358, V-225357, V-225356, V-225355, V-225354, V-225353, V-225352, V-225351, V-225350, V-225349, V-225348, V-225347, V-225346, V-225345, V-225344, V-225343, V-225342, V-225341, V-225340, V-225339, V-225338, V-225337, V-225336, V-225335, V-225334, V-225333, V-225332, V-225331, V-225330, V-225329, V-225328, V-225327, V-225326, V-225325, V-225324, V-225319, V-225318, V-225317, V-225316, V-225315, V-225314, V-225313, V-225312, V-225311, V-225310, V-225309, V-225308, V-225307, V-225306, V-225305, V-225304, V-225303, V-225302, V-225301, V-225300, V-225299, V-225298, V-225297, V-225296, V-225295, V-225294, V-225293, V-225292, V-225291, V-225290, V-225289, V-225288, V-225287, V-225286, V-225285, V-225284, V-225283, V-225282, V-225281, V-225280, V-225279, V-225278, V-225277, V-225276, V-225275, V-225274, V-225273, V-225272, V-225271, V-225270, V-225269, V-225268, V-225267, V-225266, V-225265, V-225264, V-225263, V-225262, V-225261, V-225260, V-225259, V-225258, V-225257, V-225256, V-225255, V-225254, V-225253, V-225252, V-225251, V-225250, V-225249, V-225248, V-225247, V-225246, V-225245, V-225244, V-225243, V-225242, V-225241, V-225240, and V-225239

## Microsoft .NET Framework 4.0 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](#).

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

V-225238

## WindowsFirewall STIG Version 2 Release 1

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 2019, 2016, and 2012 R2 MS

V-241989, V-241990, V-241991, V-241992, V-241993, V-241994, V-241995, V-241996, V-241997, V-241998, V-241999, V-242000, V-242001, V-242002, V-242003, V-242004, V-242005, V-242006, V-242007, and V-242008

## Internet Explorer (IE) 11 STIG Version 2 Release 3

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 2019, 2016, and 2012 R2 MS

V-46473, V-46475, V-46477, V-46481, V-46483, V-46501, V-46507, V-46509, V-46511, V-46513, V-46515, V-46517, V-46521, V-46523, V-46525, V-46543, V-46545, V-46547, V-46549, V-46553, V-46555, V-46573, V-46575, V-46577, V-46579, V-46581, V-46583, V-46587, V-46589, V-46591, V-46593, V-46597, V-46599, V-46601, V-46603, V-46605, V-46607, V-46609, V-46615, V-46617, V-46619, V-46621, V-46625, V-46629, V-46633, V-46635, V-46637, V-46639, V-46641, V-46643, V-46645, V-46647, V-46649, V-46653, V-46663, V-46665, V-46669, V-46681, V-46685, V-46689, V-46691, V-46693, V-46695, V-46701, V-46705, V-46709, V-46711, V-46713, V-46715, V-46717, V-46719, V-46721, V-46723, V-46725, V-46727, V-46729, V-46731, V-46733, V-46779, V-46781, V-46787, V-46789, V-46791, V-46797, V-46799, V-46801, V-46807, V-46811, V-46815, V-46819, V-46829, V-46841, V-46847, V-46849, V-46853, V-46857, V-46859, V-46861, V-46865, V-46869,

V-46879, V-46883, V-46885, V-46889, V-46893, V-46895, V-46897, V-46903, V-46907, V-46921, V-46927, V-46939, V-46975, V-46981, V-46987, V-46995, V-46997, V-46999, V-47003, V-47005, V-47009, V-64711, V-64713, V-64715, V-64717, V-64719, V-64721, V-64723, V-64725, V-64729, V-72757, V-72759, V-72761, V-72763, V-75169, V-75171, and V-97527

## Microsoft Edge STIG Version 1 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](#).

## Microsoft Edge on Windows Server 2022

V-235720, V-235721, V-235723, V-235724, V-235725, V-235726, V-235727, V-235728, V-235729, V-235730, V-235731, 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-235751, V-235752, V-235754, V-235756, V-235758, V-235759, V-235760, V-235761, V-235763, V-235764, V-235765, V-235766, V-235767, V-235768, V-235769, V-235770, V-235771, V-235772, V-235773, V-235774, and V-246736

## 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-213426, 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-213452, V-213453, V-213455, V-213464, V-213465, and V-213466

## Version history

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

Date	AMIs	Details
04/24/20 3	Windows Server 2022 STIG Version 1 Release 1  Microsoft Edge STIG Version 1 Release 6  Microsoft Defender STIG Version 2 Release 4	Added support for Windows Server 2022, Microsoft Edge, and Microsoft Defender.
03/01/20 3	Windows Server 2019 STIG Version 2 Release 5  Windows Server 2016 STIG Version 2 Release 5  Windows Server 2012 R2 MS STIG Version 3 Release 5  Microsoft .NET Framework 4.0 STIG Version 2 Release 2  WindowsFirewall STIG Version 2 Release 1  Internet Explorer 11 STIG Version 2 Release 3	AMIs released for 2022 Q4 with updated versions where applicable, and applied STIGs.
07/21/20 2	Windows Server 2019 STIG Version 2 R4  Windows Server 2016 STIG Version 2 R4	AMIs released with updated versions where applicable, and applied STIGs.

Date	AMIs	Details
	<p>Windows Server 2012 R2 MS STIG Version 3 R3</p> <p>Microsoft .NET Framework 4.0 STIG Version 2 R1</p> <p>WindowsFirewall STIG Version 2 R1</p> <p>Internet Explorer 11 STIG V1 R19</p>	
12/15/2011	<p>Windows Server 2019 STIG Version 2 R3</p> <p>Windows Server 2016 STIG Version 2 R3</p> <p>Windows Server 2012 R2 STIG Version 3 R3</p> <p>Microsoft .NET Framework 4.0 STIG Version 2 R1</p> <p>WindowsFirewall STIG Version 2 R1</p> <p>Internet Explorer 11 STIG V1 R19</p>	AMIs released with updated versions where applicable, and applied STIGs.
6/9/2021	<p>Windows Server 2019 STIG Version 2 R2</p> <p>Windows Server 2016 STIG Version 2 R2</p> <p>Windows Server 2012 R2 STIG Version 3 R2</p> <p>Microsoft .NET Framework 4.0 STIG Version 2 R1</p> <p>WindowsFirewall STIG V1 R7</p> <p>Internet Explorer 11 STIG V1 R19</p>	Updated versions where applicable, and applied STIGs.

Date	AMIs	Details
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.
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.



Date	AMIs	Details
9/17/2011	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.

## Ports and Protocols for Amazon Windows AMIs

The following tables list the ports, protocols, and directions by workload for Amazon 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 Remote: Any	TCP	In
Windows Server 2019	AllJoyn Router (TCP-In)	Inbound rule for AllJoyn Router traffic [TCP]	Local: 9955 Remote: Any	TCP	In
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	Cast to Device functionality	Inbound rule for the Cast to Device functiona	Local: 2177 Remote: Any	TCP	In

OS	Rule	Description	Port	Protocol	Direction
Windows Server 2019  Windows Server 2022	(qWave-TCP-In)	lity to allow use of the Quality Windows Audio Video Experience Service. [TCP 2177]			
	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 Windows Server 2019 Windows Server 2022	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
	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](#).

## Changes applied for Amazon Windows AMIs

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

### Note

When you launch an instance from an Amazon managed Amazon Windows AMI, the root device for the Windows instance is an Amazon Elastic Block Store (Amazon EBS) volume. Amazon 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 Amazon Tools for Windows PowerShell	All AMIs
Install the current Amazon CloudFormation helper 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 Amazon 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
<p data-bbox="110 867 532 905">Apply the following hotfixes:</p> <ul style="list-style-type: none"> <li data-bbox="110 961 297 1016">• <a href="#">MS15-011</a></li> <li data-bbox="110 1066 318 1104">• <a href="#">KB2582281</a></li> <li data-bbox="110 1155 318 1192">• <a href="#">KB2634328</a></li> <li data-bbox="110 1243 318 1281">• <a href="#">KB2394911</a></li> <li data-bbox="110 1331 318 1369">• <a href="#">KB2780879</a></li> </ul>	Windows Server 2008 SP2 and R2

## Changes in Windows Server 2016 and later AMIs

Amazon provides AMIs for Windows Server 2016 and later. These AMIs include the following high-level changes from earlier Amazon Windows AMIs:

- 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 *Amazon 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.

For more information, see [Windows Server](#) on Microsoft.com.

## Amazon Windows AMI version history

The following tables summarize the changes to each release of the Amazon Windows AMIs. Note that some changes apply to all Amazon 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](#)
- [Amazon NVME driver versions](#)
- [Paravirtual drivers for Windows instances](#)
- [Amazon Tools for PowerShell Change Log](#)

## Monthly AMI updates for 2024 (to date)

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

Release	Changes
2024.05.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Amazon Tools for Windows PowerShell version 4.1.575</li> <li>• EC2Launch v2 version 2.0.1881</li> <li>• SSM Agent version 3.3.380.0</li> <li>• SQL Server CUs installed: <ul style="list-style-type: none"> <li>• SQL_2022: GDR KB5036343</li> <li>• SQL_2019: CU26</li> </ul> </li> <li>• Windows Security Updates current to May 14, 2024</li> </ul> <p>Previous versions of Amazon-published Amazon Windows AMIs dated February 14, 2024 and earlier will be made private after June 10, 2024, 10 AM Pacific.</p>
2024.04.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>

Release	Changes
	<p>Windows Security Updates current to April 9, 2024</p> <ul style="list-style-type: none"><li>• Amazon Tools for Windows PowerShell version 4.1.551</li><li>• SSM Agent version 3.3.131.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU12</li></ul></li></ul> <p>Previous versions of Amazon-published Amazon 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="401 226 526 260"><b>All AMIs</b></p> <ul data-bbox="401 317 1227 995" style="list-style-type: none"><li data-bbox="401 317 1203 373">• Windows Security Updates current to March 12, 2024</li><li data-bbox="401 407 1227 464">• Amazon Tools for Windows PowerShell version 4.1.530</li><li data-bbox="401 497 883 554">• EC2Launch v2 version 2.0.1815</li><li data-bbox="401 588 865 644">• SSM Agent version 3.2.2303.0</li><li data-bbox="401 678 932 735">• NVIDIA GRID Driver version 538.33</li><li data-bbox="401 768 935 825">• NVIDIA Tesla Driver version 474.82</li><li data-bbox="401 858 797 915">• SQL Server CUs installed:<ul data-bbox="433 928 711 995" style="list-style-type: none"><li data-bbox="433 928 711 995">• SQL_2019: CU25</li></ul></li></ul> <div data-bbox="401 1066 1510 1432" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="433 1108 553 1142"><b> Note</b></p><p data-bbox="480 1163 1479 1388">To ensure that you always receive valid time from your configured Network Time Protocol (NTP) service, Secure Time Seeding (STS) is disabled on all Amazon Windows AMIs from this version forward. Amazon Time Sync Service is the default NTP service for all Amazon Windows AMIs that Amazon provides.</p></div> <p data-bbox="401 1581 1479 1707">Previous versions of Amazon-published Amazon 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><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security Updates current to February 13, 2024</li><li>• Amazon Tools for Windows PowerShell version 4.1.512</li><li>• cfn-init version 2.0.29</li><li>• SSM Agent version 3.2.2222.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2022: CU11</li></ul></li></ul> <p>Previous versions of Amazon-published Amazon Windows AMIs dated November 15, 2023 and earlier will be made private after March 11, 2024, 10 AM Pacific.</p>
2024.01.16	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• EC2Launch v2 version 2.0.1739</li><li>• EC2Launch v1 v1 version 1.3.2004617</li></ul>

Release	Changes
2024.01.10 (Deprecated)	<div data-bbox="402 226 1507 634" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><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 details, see <a href="#">KB5034439: Windows Recovery Environment update for Azure Stack HCI, version 22H2 and Windows Server 2022: January 9, 2024</a> in the Microsoft documentation.</p> <ul style="list-style-type: none"><li>• Amazon 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
	Previous versions of Amazon-published Amazon Windows AMIs dated October 11, 2023 and earlier will be made private after February 12th 2024, 10 AM Pacific.

## Monthly AMI updates for 2023

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

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>• Amazon 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 Amazon 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="399 212 526 243"><b>All AMIs</b></p> <ul data-bbox="399 302 1273 1247" style="list-style-type: none"><li data-bbox="399 302 1273 359">• Windows Security Updates current to November 14, 2023</li><li data-bbox="399 411 1084 443">• Amazon Tools for PowerShell version 4.1.447</li><li data-bbox="399 495 938 527">• EC2Launch v1 version 1.3.2004491</li><li data-bbox="399 579 867 611">• SSM Agent version 3.2.1705.0</li><li data-bbox="399 663 797 695">• SQL Server CUs installed:<ul data-bbox="431 747 732 890" style="list-style-type: none"><li data-bbox="431 747 732 779">• SQL_2022: CU9</li><li data-bbox="431 831 732 863">• SQL_20219: CU23</li></ul></li><li data-bbox="399 936 821 968">• SQL Server GDRs installed:<ul data-bbox="431 1020 797 1247" style="list-style-type: none"><li data-bbox="431 1020 797 1052">• SQL 2017: KB5029376</li><li data-bbox="431 1104 797 1136">• SQL 2016: KB5029186</li><li data-bbox="431 1188 797 1220">• SQL 2014: KB5029185</li></ul></li></ul> <p data-bbox="399 1356 1479 1436">Previous versions of Amazon-published Amazon Windows AMIs dated August 10, 2023 and earlier were made private.</p>

Release	Changes
2023.10.11	<p data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1240 1024" style="list-style-type: none"><li data-bbox="402 369 1240 405">• Windows Security Updates current to October 10, 2023</li><li data-bbox="402 453 748 489">• cfn-init version 2.0.28</li><li data-bbox="402 537 938 573">• EC2Launch v1 version 1.3.2004438</li><li data-bbox="402 621 883 657">• EC2Launch v2 version 2.0.1643</li><li data-bbox="402 705 769 741">• SSM version 3.2.1630.0</li><li data-bbox="402 789 1084 825">• Amazon Tools for PowerShell version 4.1.426</li><li data-bbox="402 873 797 909">• SQL Server CUs installed:<ul data-bbox="435 957 691 993" style="list-style-type: none"><li data-bbox="435 957 691 993">• SQL_2022: CU8</li></ul></li></ul> <p data-bbox="402 1136 1479 1213">Previous versions of Amazon-published Amazon 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>• Amazon Tools for PowerShell version 4.1.407</li><li>• Amazon 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, Amazon 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 Amazon 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 1024" style="list-style-type: none"><li data-bbox="402 369 1206 405">• Windows Security Updates current to August 8, 2023</li><li data-bbox="402 457 1084 493">• Amazon Tools for PowerShell version 4.1.383</li><li data-bbox="402 546 831 581">• EC2Config version 4.9.5467</li><li data-bbox="402 634 773 669">• SSM version 3.1.2282.0</li><li data-bbox="402 722 813 758">• Amazon ENA version 2.6.0</li><li data-bbox="402 810 748 846">• cfn-init version 2.0.26</li><li data-bbox="402 898 797 934">• SQL Server CUs installed:<ul data-bbox="435 966 691 1024" style="list-style-type: none"><li data-bbox="435 987 691 1024">• SQL_2022: CU6</li></ul></li></ul> <p data-bbox="402 1136 1498 1499">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, Amazon 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 1549 1482 1629">Previous versions of Amazon-published Amazon 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>• Amazon 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 Amazon Windows AMIs dated April 12, 2023 and earlier were made private.</p>

Release	Changes
2023.06.14	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1227 674" style="list-style-type: none"><li data-bbox="402 348 1192 407">• Windows Security Updates current to June 13, 2023</li><li data-bbox="402 436 1227 495">• Amazon Tools for Windows PowerShell version 4.1.346</li><li data-bbox="402 525 799 583">• SQL Server CUs installed:<ul data-bbox="435 613 695 674" style="list-style-type: none"><li data-bbox="435 613 695 674">• SQL_2022: CU4</li></ul></li></ul> <p data-bbox="402 781 1479 1106">The Amazon Tools for Windows installation package has been deprecated, and no longer appears as an installed program in Amazon Windows AMIs provided by Amazon. The AWSPowerShell Module is now installed at C:\ProgramFiles\WindowsPowerShell\Modules\AWSPowerShell . The .NET SDK remains located at C:\ProgramFiles(x86)\Amazon SDK for .NET . For more information see <a href="#">the blog announcement</a>.</p> <p data-bbox="402 1150 1479 1423">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, Amazon 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 1470 1479 1648">For more information about Microsoft End of Support on Amazon, 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 1692 1479 1772">Previous versions of Amazon-published Amazon 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="402 352 1263 940" style="list-style-type: none"><li data-bbox="402 352 1166 407">• Windows Security Updates current to May 9, 2023</li><li data-bbox="402 457 1263 491">• Amazon Tools for Windows PowerShell version 3.15.2072</li><li data-bbox="402 541 883 575">• EC2Launch v2 version 2.0.1303</li><li data-bbox="402 625 750 659">• cfn-init version 2.0.25</li><li data-bbox="402 709 799 764">• SQL Server CUs installed:<ul data-bbox="435 793 711 940" style="list-style-type: none"><li data-bbox="435 793 695 848">• SQL_2022: CU3</li><li data-bbox="435 877 711 932">• SQL_2019: CU20</li></ul></li></ul> <p data-bbox="402 1045 1474 1129">Previous versions of Amazon-published Amazon 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 1263 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 1263 495">• Amazon Tools for Windows PowerShell version 3.15.2035</li><li data-bbox="402 546 932 583">• Amazon NVMe driver version 1.4.2</li><li data-bbox="402 634 799 672">• SQL Server CUs installed:<ul data-bbox="431 701 701 760" 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 1474 1549">Previous versions of Amazon-published Amazon 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>• Amazon 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 Amazon Windows AMIs dated December 28, 2022 and earlier were made private.</p>

Release	Changes
2023.02.15	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1263 583" style="list-style-type: none"><li data-bbox="402 348 1263 407">• Windows Security Updates current to February 14, 2023</li><li data-bbox="402 436 1263 495">• Amazon Tools for Windows PowerShell version 3.15.1958</li><li data-bbox="402 525 792 583">• Amazon PV version 8.4.3</li></ul> <p data-bbox="402 659 824 688"><b>New Amazon Windows AMIs</b></p> <ul data-bbox="402 747 1347 1075" style="list-style-type: none"><li data-bbox="402 747 1347 806">• TPM-Windows_Server-2019-English-Full-SQL_2019_Enterprise</li><li data-bbox="402 835 1347 894">• TPM-Windows_Server-2019-English-Full-SQL_2019_Standard</li><li data-bbox="402 924 1347 982">• TPM-Windows_Server-2022-English-Full-SQL_2022_Enterprise</li><li data-bbox="402 1012 1347 1071">• TPM-Windows_Server-2022-English-Full-SQL_2022_Standard</li></ul> <p data-bbox="402 1180 1455 1402">New Amazon Windows AMIs with Microsoft SQL Server with support for <a href="#">NitroTPM</a> and <a href="#">UEFI Secure Boot</a> 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.</p> <p data-bbox="402 1453 1412 1530">Previous versions of Amazon-published Amazon Windows AMIs dated November 21, 2022 and earlier were made private.</p>



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 Amazon 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>• Amazon 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2022](#).

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 1263 279">• Amazon 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="402 226 824 260"><b>New Amazon Windows AMIs</b></p> <ul data-bbox="402 315 1299 1533" style="list-style-type: none"><li data-bbox="402 315 1266 369">• Windows_Server-2019-English-Full-SQL_2022_Enterprise</li><li data-bbox="402 403 1230 457">• Windows_Server-2019-English-Full-SQL_2022_Express</li><li data-bbox="402 491 1253 546">• Windows_Server-2019-English-Full-SQL_2022_Standard</li><li data-bbox="402 579 1185 634">• Windows_Server-2019-English-Full-SQL_2022_Web</li><li data-bbox="402 667 1299 722">• Windows_Server-2019-Japanese-Full-SQL_2022_Enterprise</li><li data-bbox="402 756 1282 810">• Windows_Server-2019-Japanese-Full-SQL_2022_Standard</li><li data-bbox="402 844 1214 898">• Windows_Server-2019-Japanese-Full-SQL_2022_Web</li><li data-bbox="402 932 1269 987">• Windows_Server-2022-English-Full-SQL_2022_Enterprise</li><li data-bbox="402 1020 1230 1075">• Windows_Server-2022-English-Full-SQL_2022_Express</li><li data-bbox="402 1108 1253 1163">• Windows_Server-2022-English-Full-SQL_2022_Standard</li><li data-bbox="402 1197 1185 1251">• Windows_Server-2022-English-Full-SQL_2022_Web</li><li data-bbox="402 1285 1299 1339">• Windows_Server-2022-Japanese-Full-SQL_2022_Enterprise</li><li data-bbox="402 1373 1282 1428">• Windows_Server-2022-Japanese-Full-SQL_2022_Standard</li><li data-bbox="402 1461 1214 1516">• Windows_Server-2022-Japanese-Full-SQL_2022_Web</li></ul> <p data-bbox="402 1604 1412 1688">Previous versions of Amazon-published Amazon 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>• Amazon 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 additional details, see <a href="https://learn.microsoft.com/en-us/windows/release-health/status-windows-10-20h2#2924msgdesc">https://learn.microsoft.com/en-us/windows/release-health/status-windows-10-20h2#2924msgdesc</a>.</li></ul> <p>Previous versions of Amazon-published Amazon 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>• Amazon 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>• Amazon 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 Amazon 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>• Amazon 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 Amazon 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>• Amazon 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 Amazon 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>• Amazon Tools for Windows PowerShell version 3.15.1678</li> <li>• Amazon 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 Amazon Microsoft FAQ:</p> <ul style="list-style-type: none"> <li>• <a href="https://docs.microsoft.com/en-us/lifecycle/products/microsoft-sql-server-2012">https://docs.microsoft.com/en-us/lifecycle/products/microsoft-sql-server-2012</a></li> <li>• <a href="https://aws.amazon.com/windows/faq/#eos-m">https://aws.amazon.com/windows/faq/#eos-m</a><a href="https://aws.amazon.com/windows/faq/#eos-m">https://aws.amazon.com/windows/faq/#eos-m</a></li> </ul>
2022.05.25	<p><b>All AMIs</b></p> <ul style="list-style-type: none"> <li>• Out-of-band updates applied to resolve issues resulting from May patches. For additional details, see <a href="https://docs.microsoft.com/en-us/windows/release-health/status-windows-10-20h2#2826msgdesc">https://docs.microsoft.com/en-us/windows/release-health/status-windows-10-20h2#2826msgdesc</a>.</li> </ul> <p>Previous versions of Amazon-published Amazon Windows AMIs dated February 10, 2022 and earlier were made private.</p>

Release	Changes
2022.05.11	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Windows Security updates current to May 10th, 2022</li><li>• Amazon Tools for Windows PowerShell version 3.15.1643</li><li>• Amazon PV version 8.4.2</li><li>• Amazon ENA version 2.4.0</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL_2019: CU 16</li><li>• SQL_2017: CU 29</li></ul></li></ul>
2022.05.05	<p><b>New Amazon Windows AMIs</b></p> <p>New Amazon 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 style="list-style-type: none"><li>• TPM-Windows_Server-2022-English-Core-Base-2022.05.05</li><li>• TPM-Windows_Server-2022-English-Full-Base-2022.05.05</li><li>• TPM-Windows_Server-2019-English-Core-Base-2022.05.05</li><li>• TPM-Windows_Server-2019-English-Full-Base-2022.05.05</li><li>• TPM-Windows_Server-2016-English-Core-Base-2022.05.05</li><li>• TPM-Windows_Server-2016-English-Full-Base-2022.05.05</li></ul>

Release	Changes
2022.04.13	<p data-bbox="402 226 527 262"><b>All AMIs</b></p> <ul data-bbox="402 315 1266 462" style="list-style-type: none"><li data-bbox="402 315 1266 367">• Windows Security updates current to April 12th, 2022</li><li data-bbox="402 409 1266 462">• Amazon Tools for Windows PowerShell version 3.15.1620</li></ul> <p data-bbox="402 535 1485 619">Previous versions of Amazon-published Amazon Windows AMIs dated January 21, 2022 and earlier were made private.</p> <p data-bbox="402 661 1477 798">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 data-bbox="402 850 1372 1848" style="list-style-type: none"><li data-bbox="402 850 1372 903">• Windows_Server-2019-English-Full-SQL_2016_SP2_Web</li><li data-bbox="402 945 1372 997">• Windows_Server-2019-English-Full-SQL_2016_SP2_Standard</li><li data-bbox="402 1039 1372 1092">• Windows_Server-2019-English-Full-SQL_2016_SP2_Express</li><li data-bbox="402 1134 1372 1186">• Windows_Server-2019-English-Full-SQL_2016_SP2_Enterprise</li><li data-bbox="402 1228 1372 1281">• Windows_Server-2016-Korean-Full-SQL_2016_SP2_Standard</li><li data-bbox="402 1323 1372 1375">• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Web</li><li data-bbox="402 1417 1372 1470">• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Standard</li><li data-bbox="402 1512 1372 1564">• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Express</li><li data-bbox="402 1606 1372 1659">• Windows_Server-2016-Japanese-Full-SQL_2016_SP2_Enterprise</li><li data-bbox="402 1701 1372 1753">• Windows_Server-2016-English-Full-SQL_2016_SP2_Web</li><li data-bbox="402 1795 1372 1848">• Windows_Server-2016-English-Full-SQL_2016_SP2_Standard</li><li data-bbox="402 1848 422 1856">•</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 data-bbox="399 226 526 260"><b>All AMIs</b></p> <ul data-bbox="399 317 1398 953" style="list-style-type: none"><li data-bbox="399 317 1219 373">• Windows Security updates current to March 8th, 2022</li><li data-bbox="399 426 1263 462">• Amazon Tools for Windows PowerShell version 3.15.1583</li><li data-bbox="399 514 1398 600">• Amazon ENA version 2.2.3 (reverted due to potential performance degradation on 6th generation EC2 instances)</li><li data-bbox="399 653 833 688">• EC2Config version 4.9.4556</li><li data-bbox="399 741 773 777">• SSM version 3.1.1045.0</li><li data-bbox="399 829 797 865">• SQL Server CUs installed:<ul data-bbox="431 917 719 953" style="list-style-type: none"><li data-bbox="431 917 719 953">• SQL_2019: CU 15</li></ul></li></ul> <p data-bbox="399 1031 1495 1117">Previous versions of Amazon-published Amazon 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 1263 1087" style="list-style-type: none"><li data-bbox="401 317 1263 373">• Windows Security updates current to February 8th, 2022</li><li data-bbox="401 401 1263 457">• Amazon 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="401 821 751 877">• SSM version 3.1.804.0</li><li data-bbox="401 905 797 961">• SQL Server CUs installed:<ul data-bbox="433 1010 719 1087" style="list-style-type: none"><li data-bbox="433 1010 719 1087">• SQL_2017: CU 28</li></ul></li></ul> <p data-bbox="401 1163 1495 1241">Previous versions of Amazon-published Amazon 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 1535" style="list-style-type: none"><li data-bbox="401 1379 1446 1535">• Out-of-band updates applied to resolve issues resulting from January patches. For more details, see <a href="https://docs.microsoft.com/en-us/windows/release-health/windows-message-center#2777">https://docs.microsoft.com/en-us/windows/release-health/windows-message-center#2777</a>.</li></ul> <p data-bbox="401 1610 1495 1688">Previous versions of Amazon-published Amazon 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>• Amazon Tools for Windows PowerShell version 3.15.1511</li><li>• Amazon 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2021](#).

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>• Amazon Tools for Windows PowerShell version 3.15.1494</li><li>• Amazon 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 Amazon 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="402 436 1279 495">• Amazon Tools for Windows PowerShell version 3.15.1451</li><li data-bbox="402 525 1279 583">• Amazon ENA version 2.2.4</li><li data-bbox="402 613 1279 760">• SQL Server CUs installed:<ul data-bbox="435 701 721 760" style="list-style-type: none"><li data-bbox="435 701 721 760">• SQL_2017: CU 26</li></ul></li></ul> <p data-bbox="402 869 824 898"><b>New Amazon 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 1045 1477 1104">• Windows_Server-2022-Japanese-Full-SQL_2019_Standard-2021.11.10</li><li data-bbox="402 1134 1477 1192">• Windows_Server-2022-Japanese-Full-SQL_2019_Web-2021.11.10</li><li data-bbox="402 1222 1477 1281">• Windows_Server-2022-Japanese-Full-SQL_2017_Enterprise-2021.11.10</li><li data-bbox="402 1310 1477 1369">• Windows_Server-2022-Japanese-Full-SQL_2017_Standard-2021.11.10</li><li data-bbox="402 1398 1477 1461">• Windows_Server-2022-Japanese-Full-SQL_2017_Web-2021.11.10</li></ul>

Release	Changes
2021.10.13	<p data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1260 579" style="list-style-type: none"><li data-bbox="402 348 1260 405">• Windows Security updates current to October 12, 2021</li><li data-bbox="402 436 1260 493">• Amazon Tools for Windows PowerShell version 3.15.1421</li><li data-bbox="402 525 753 579">• SSM version 3.1.338.0</li></ul> <p data-bbox="402 688 1273 720"><b>Windows Server 2022 and EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 779 862 835" style="list-style-type: none"><li data-bbox="402 779 862 835">• EC2Launch v2 version 2.0.651</li></ul> <p data-bbox="402 945 997 976"><b>Windows Server 2012 RTM and R2 AMIs</b></p> <ul data-bbox="402 1035 833 1092" style="list-style-type: none"><li data-bbox="402 1035 833 1092">• EC2Config version 4.9.4508</li></ul> <p data-bbox="402 1201 824 1232"><b>New Amazon Windows AMIs</b></p> <ul data-bbox="402 1291 1448 1843" style="list-style-type: none"><li data-bbox="402 1291 1448 1348">• Windows_Server-2022-English-Full-SQL_2019_Enterprise-2021.10.13</li><li data-bbox="402 1379 1432 1436">• Windows_Server-2022-English-Full-SQL_2019_Standard-2021.10.13</li><li data-bbox="402 1467 1365 1524">• Windows_Server-2022-English-Full-SQL_2019_Web-2021.10.13</li><li data-bbox="402 1556 1406 1612">• Windows_Server-2022-English-Full-SQL_2019_Express-2021.10.13</li><li data-bbox="402 1644 1448 1701">• Windows_Server-2022-English-Full-SQL_2017_Enterprise-2021.10.13</li><li data-bbox="402 1732 1432 1789">• Windows_Server-2022-English-Full-SQL_2017_Standard-2021.10.13</li><li data-bbox="402 1820 418 1843">•</li></ul>

Release	Changes
	<p data-bbox="431 212 1365 247">Windows_Server-2022-English-Full-SQL_2017_Web-2021.10.13</p> <ul data-bbox="402 275 1406 331" style="list-style-type: none"> <li data-bbox="402 275 1406 331">• Windows_Server-2022-English-Full-SQL_2017_Express-2021.10.13</li> </ul> <p data-bbox="402 443 764 478"><b>New EC2Launch v2 AMIs</b></p> <p data-bbox="402 520 1507 653">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 data-bbox="402 709 1495 1440" style="list-style-type: none"> <li data-bbox="402 709 1455 766">• EC2Launch v1V2-Windows_Server-2019-English-Full-Base-2021.10.13</li> <li data-bbox="402 814 1468 850">• EC2Launch v1V2-Windows_Server-2019-English-Core-Base-2021.10.13</li> <li data-bbox="402 898 1455 989">• EC2Launch v1V2-Windows_Server-2019-English-Full-ContainersLatest-2021.10.13</li> <li data-bbox="402 1037 1455 1073">• EC2Launch v1V2-Windows_Server-2016-English-Full-Base-2021.10.13</li> <li data-bbox="402 1121 1468 1157">• EC2Launch v1V2-Windows_Server-2016-English-Core-Base-2021.10.13</li> <li data-bbox="402 1205 1495 1295">• EC2Launch v1V2-Windows_Server-2012_R2_RTM-English-Full-Base-2021.10.13</li> <li data-bbox="402 1344 1490 1434">• EC2Launch v1V2-Windows_Server-2012_RTM-English-Full-Base-2021.10.13</li> </ul> <p data-bbox="402 1549 1503 1822">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="402 638 1214 693">• Windows_Server-2004-English-Core-ContainersLatest</li></ul> <p>Previous versions of Amazon-published Amazon 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">• Amazon Tools for Windows PowerShell version 3.15.1398</li><li data-bbox="402 516 753 575">• SSM version 3.1.282.0</li><li data-bbox="402 600 799 659">• 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 1276 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 1490 1547">Previous versions of Amazon-published Amazon Windows AMIs dated June 9, 2021 and earlier were made private.</p>

Release	Changes
2021.09.01	<p data-bbox="402 260 824 289"><b>New Amazon 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 1222 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 1388 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 overview</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 Amazon 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="402 348 1279 848" style="list-style-type: none"><li data-bbox="402 348 1279 407">• Windows Security updates current to August 10th, 2021</li><li data-bbox="402 436 1279 495">• Amazon Tools for Windows PowerShell version 3.15.13571</li><li data-bbox="402 525 1279 583">• EC2Launch v1 version 1.3.2003411</li><li data-bbox="402 613 1279 672">• SSM version 3.0.1181.0</li><li data-bbox="402 701 1279 848">• SQL Server CUs installed:<ul data-bbox="435 793 708 848" style="list-style-type: none"><li data-bbox="435 793 708 848">• SQL_2019: CU11</li></ul></li></ul> <p data-bbox="402 957 867 987"><b>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 2.0.548</li></ul> <p data-bbox="402 1213 1490 1293">Previous versions of Amazon-published Amazon Windows AMIs dated April 14, 2021 and earlier were made private.</p>

Release	Changes
2021.07.14	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1266 762" style="list-style-type: none"><li data-bbox="399 348 1203 407">• Windows Security updates current to July 13th, 2021</li><li data-bbox="399 436 1265 495">• Amazon Tools for Windows PowerShell version 3.15.1350</li><li data-bbox="399 525 940 583">• EC2Launch v1 version 1.3.2003364</li><li data-bbox="399 613 797 672">• SQL Server CUs installed:<ul data-bbox="431 701 711 762" style="list-style-type: none"><li data-bbox="431 701 711 762">• SQL_2017: CU24</li></ul></li></ul>


Release	Changes
2021.07.07	<p data-bbox="407 260 532 289"><b>All AMIs</b></p> <p data-bbox="407 338 1484 422">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="402 464 1507 779" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="431 501 553 533"><b>Note</b></p><p data-bbox="480 560 1425 737">HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows NT\Printers\PointAndPrint is not defined on Amazon Windows AMIs provided by Amazon, which is the default state.</p></div> <p data-bbox="407 884 781 915">For more information, see:</p> <ul data-bbox="407 968 1500 1213" style="list-style-type: none"><li data-bbox="407 968 1500 1031">• <a href="https://msrc.microsoft.com/update-guide/vulnerability/CVE-2021-34527">https://msrc.microsoft.com/update-guide/vulnerability/CVE-2021-34527</a></li><li data-bbox="407 1052 1500 1213">• <a href="https://support.microsoft.com/en-us/topic/kb5005010-restricting-installation-of-new-printer-drivers-after-applying-the-july-6-2021-updates-31b91c02-05bc-4ada-a7ea-183b129578a7">https://support.microsoft.com/en-us/topic/kb5005010-restricting-installation-of-new-printer-drivers-after-applying-the-july-6-2021-updates-31b91c02-05bc-4ada-a7ea-183b129578a7</a></li></ul> <p data-bbox="407 1318 1479 1402">Previous versions of Amazon-published Amazon 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 1263 583" style="list-style-type: none"><li data-bbox="399 348 1195 405">• Windows Security updates current to June 8th, 2021</li><li data-bbox="399 436 1263 493">• Amazon Tools for Windows PowerShell version 3.15.1326</li><li data-bbox="399 525 773 583">• SSM version 3.0.1124.0</li></ul> <p data-bbox="399 688 1013 720"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="399 779 831 835" style="list-style-type: none"><li data-bbox="399 779 831 835">• 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 1448 898" style="list-style-type: none"><li data-bbox="402 352 1208 407">• Windows Security updates current to May 11th, 2021</li><li data-bbox="402 457 1263 491">• Amazon Tools for Windows PowerShell version 3.15.1302</li><li data-bbox="402 541 938 575">• EC2Launch v1 version 1.3.2003312</li><li data-bbox="402 625 799 659">• SQL Server CUs installed:<ul data-bbox="435 709 711 764" style="list-style-type: none"><li data-bbox="435 709 711 764">• SQL_2019: CU10</li></ul></li><li data-bbox="402 814 1448 898">• Previous versions of Amazon-published Amazon Windows AMIs dated February 10, 2021 and earlier were made private.</li></ul> <p data-bbox="402 1003 1013 1037"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="402 1100 831 1247" style="list-style-type: none"><li data-bbox="402 1100 831 1155">• EC2Config version 4.9.4381</li><li data-bbox="402 1184 753 1239">• SSM version 3.0.529.0</li></ul> <p data-bbox="402 1352 669 1386"><b>NVIDIA GPU AMIs</b></p> <ul data-bbox="402 1449 727 1587" style="list-style-type: none"><li data-bbox="402 1449 727 1503">• GRID version 462.31</li><li data-bbox="402 1533 727 1587">• Tesla version 462.31</li></ul> <p data-bbox="402 1692 672 1726"><b>Radeon GPU AMIs</b></p> <ul data-bbox="402 1789 837 1843" style="list-style-type: none"><li data-bbox="402 1789 837 1843">• 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>• Amazon Tools for Windows PowerShell version 3.15.1280</li> <li>• Amazon 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>• Amazon 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 Amazon 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="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1498 1346" style="list-style-type: none"><li data-bbox="402 348 1214 405">• Windows Security updates current to March 9th, 2021</li><li data-bbox="402 436 1263 493">• Amazon Tools for Windows PowerShell version 3.15.1248</li><li data-bbox="402 525 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="402 663 938 720">• EC2Launch v1 version 1.3.2003236</li><li data-bbox="402 751 849 808">• SSM Agent version 3.0.529.0</li><li data-bbox="402 840 841 896">• NVIDIA GRID version 461.33</li><li data-bbox="402 928 800 984">• SQL Server CUs installed:<ul data-bbox="435 1016 776 1167" style="list-style-type: none"><li data-bbox="435 1016 776 1073">• SQL 2016_SP2: CU16</li><li data-bbox="435 1104 686 1161">• SQL 2019: CU9</li></ul></li><li data-bbox="402 1199 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="402 1455 1507 1717" style="border: 1px solid #add8e6; border-radius: 10px; padding: 10px;"><p data-bbox="435 1493 553 1524"><b> Note</b></p><p data-bbox="480 1549 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="402 214 954 247"><b>Windows Server 2016 and 2019 AMIs</b></p> <ul data-bbox="402 302 1338 361" style="list-style-type: none"><li data-bbox="402 302 1338 361">• Updated from default .NET framework versions to version 4.8.</li></ul> <p data-bbox="402 470 1013 504"><b>Windows Server 2012RTM/2012 R2 AMIs</b></p> <ul data-bbox="402 558 850 701" style="list-style-type: none"><li data-bbox="402 558 850 617">• EC2Config version 4.9.4326</li><li data-bbox="402 642 850 701">• SSM Agent version 3.0.431.0</li></ul>

Release	Changes
2021.02.10	<p data-bbox="399 258 526 289"><b>All AMIs</b></p> <ul data-bbox="399 348 1281 579" style="list-style-type: none"><li data-bbox="399 348 1281 405">• Windows Security updates current to February 9th, 2021</li><li data-bbox="399 436 1281 493">• Amazon Tools for Windows PowerShell version 3.15.1224</li><li data-bbox="399 525 1281 579">• NVIDIA GRID version 461.09</li></ul> <p data-bbox="399 688 1443 919">Beginning in March 2021, Amazon Windows AMIs provided by Amazon 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 data-bbox="399 968 1453 1167" style="list-style-type: none"><li data-bbox="399 968 1453 1077">• <a href="http://www.amazonaws.cn/blogs/security/how-to-prepare-for-aws-move-to-its-own-certificate-authority/">http://www.amazonaws.cn/blogs/security/how-to-prepare-for-aws-move-to-its-own-certificate-authority/</a></li><li data-bbox="399 1108 1453 1167">• <a href="https://forums.aws.csdn.net/ann.jspa?annID=7541">https://forums.aws.csdn.net/ann.jspa?annID=7541</a></li></ul> <p data-bbox="399 1272 1495 1545">Additionally, Amazon will apply "update for Removal of Adobe Flash Player" (KB4577586) to all Amazon 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 on the End of Support of Adobe Flash Player, see:</p> <ul data-bbox="399 1598 1437 1797" style="list-style-type: none"><li data-bbox="399 1598 1437 1707">• <a href="https://blogs.windows.com/msedgedev/2020/09/04/update-adobe-flash-end-support/">https://blogs.windows.com/msedgedev/2020/09/04/update-adobe-flash-end-support/</a></li><li data-bbox="399 1738 1437 1797">• <a href="https://www.adobe.com/products/flashplayer/end-of-life.html">https://www.adobe.com/products/flashplayer/end-of-life.html</a></li></ul>

Release	Changes
	<p><b>EC2Launch v1V2_Preview AMIs</b></p> <ul style="list-style-type: none"> <li>• EC2Launch v2 version 2.0.207</li> </ul> <p><b>New Amazon 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>• Amazon Tools for Windows PowerShell version 3.15.1204</li> <li>• Amazon 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2020](#).

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>• Amazon 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 Amazon 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>•</li> </ul>

Release	Changes
	<p>Windows Security updates current to November 10th, 2020</p> <ul style="list-style-type: none"><li>• Amazon Tools for Windows PowerShell version 3.15.1160</li><li>• SQL Server CUs installed:<ul style="list-style-type: none"><li>• SQL 2016 SP2: CU15</li><li>• SQL 2017: CU22</li><li>• SQL 2019: CU8</li></ul></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 Amazon Windows AMIs dated August 12, 2020 and earlier were made private.</li></ul> <p><b>New Amazon 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 1446 982" style="list-style-type: none"><li data-bbox="402 352 1268 407">• Windows Security updates current to October 13th, 2020</li><li data-bbox="402 457 1263 491">• Amazon Tools for Windows PowerShell version 3.15.1140</li><li data-bbox="402 541 841 575">• NVIDIA GRID version 452.39</li><li data-bbox="402 625 1300 659">• EC2Launch v2 Preview AMIs: EC2Launch v1 version 2.0.146</li><li data-bbox="402 709 808 743">• Amazon ENA version 2.2.1</li><li data-bbox="402 793 748 827">• cfn-init version 1.4.34</li><li data-bbox="402 877 1446 982">• Previous versions of Amazon-published Amazon 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, please see the following Microsoft blog post: <a href="https://techcommunity.microsoft.com/t5/sql-server/cumulative-update-7-for-sql-server-2019-rtm-removed/ba-p/1629317">https://techcommunity.microsoft.com/t5/sql-server/cumulative-update-7-for-sql-server-2019-rtm-removed/ba-p/1629317</a>.</p> <p><b>New Amazon 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="402 352 1448 1075" style="list-style-type: none"><li data-bbox="402 352 1292 403">• Windows Security updates current to September 8th, 2020</li><li data-bbox="402 457 896 487">• Amazon PV drivers version 8.3.4</li><li data-bbox="402 541 815 571">• Amazon ENA version 2.2.0</li><li data-bbox="402 625 1263 655">• Amazon Tools for Windows PowerShell version 3.15.1110</li><li data-bbox="402 709 792 739">• SQL Server CUs installed<ul data-bbox="435 793 782 940" style="list-style-type: none"><li data-bbox="435 793 782 844">• SQL_2016_SP2: CU14</li><li data-bbox="435 877 695 928">• SQL_2019: CU7</li></ul></li><li data-bbox="402 982 1448 1075">• Previous versions of Amazon-published Amazon Windows AMIs dated June 10, 2020 and earlier were made private.</li></ul> <p data-bbox="402 1180 1273 1209"><b>Windows Server 2016/2019/1809/1903/1909/2004 AMIs</b></p> <ul data-bbox="402 1272 938 1419" style="list-style-type: none"><li data-bbox="402 1272 938 1323">• EC2Launch v1 version 1.3.2003155</li><li data-bbox="402 1356 867 1407">• SSM Agent version 2.3.1319.0</li></ul> <p data-bbox="402 1524 867 1554"><b>EC2Launch v1V2_Preview AMIs</b></p> <ul data-bbox="402 1608 867 1659" style="list-style-type: none"><li data-bbox="402 1608 867 1659">• 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>• Amazon 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 Amazon 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>• Amazon 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 Amazon 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 Amazon Windows AMIs currently provided by Amazon 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="http://www.amazonaws.cn/about-aws/whats-new/2020/07/introducing-ec2-launch-v2-simplify-customizing-windows-instances/">http://www.amazonaws.cn/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 Amazon 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 Amazon 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>•</li> </ul>

Release	Changes
	<p>EC2Launch v1V2_Preview-Windows_Server-2016-English-Core-Base-2020.06.30</p> <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>• Amazon 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 Amazon 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>• Amazon 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>• Amazon 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="402 348 1490 1346" style="list-style-type: none"><li data-bbox="402 369 1240 399">• Windows Security updates current to March 10th, 2020</li><li data-bbox="402 457 1240 487">• Amazon Tools for Windows PowerShell version 3.15.969</li><li data-bbox="402 546 831 575">• EC2Config version 4.9.4122</li><li data-bbox="402 634 938 663">• EC2Launch v1 version 1.3.2002730</li><li data-bbox="402 722 847 751">• SSM Agent version 2.3.814.0</li><li data-bbox="402 810 799 840">• SQL Server CUs installed:<ul data-bbox="435 890 1403 1117" style="list-style-type: none"><li data-bbox="435 911 792 940">• SQL_2016_SP2: CU 12</li><li data-bbox="435 999 721 1029">• SQL_2017: CU 19</li><li data-bbox="435 1087 1403 1117">• SQL_2019: CU 2 not applied due to known issue with SQL Agent</li></ul></li><li data-bbox="402 1167 1490 1346">• 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. For details, see <a href="https://portal.msrc.microsoft.com/en-US/security-guidance/advisory/CVE-2020-0796">https://portal.msrc.microsoft.com/en-US/security-guidance/advisory/CVE-2020-0796</a></li></ul>

Release	Changes
2020.2.12	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1279 1205" style="list-style-type: none"><li data-bbox="402 348 1279 407">• Windows Security updates current to February 11th, 2020</li><li data-bbox="402 436 1279 495">• Amazon Tools for Windows PowerShell version 3.15.945</li><li data-bbox="402 525 1279 852">• Intel SRIOV driver updates<ul data-bbox="435 617 987 852" style="list-style-type: none"><li data-bbox="435 617 987 676">• 2019/1903/1909: version 2.1.185.0</li><li data-bbox="435 705 987 764">• 2016/1809: version 2.1.186.0</li><li data-bbox="435 793 987 852">• 2012 R2: version 1.2.199.0</li></ul></li><li data-bbox="402 882 1279 1205">• SQL Server CUs installed:<ul data-bbox="435 974 721 1205" style="list-style-type: none"><li data-bbox="435 974 721 1033">• SQL_2019: CU 1</li><li data-bbox="435 1062 721 1121">• SQL_2017: CU 18</li><li data-bbox="435 1150 721 1205">• SQL_2016_SP2: CU 11</li></ul></li></ul> <p data-bbox="402 1314 1247 1344"><b>Windows Server 2008 SP2 and Windows Server 2008 R2</b></p> <p data-bbox="402 1394 1490 1667">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. Amazon 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="402 1709 1490 1793">For more information about Microsoft End of Service on Amazon, 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>• Amazon 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 Windows Server 2008 R2 reached End of Support (EOS) on 01/14/20 and will no longer receive regular security updates from Microsoft. Amazon 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 Amazon, 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2019](#).

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 1266 443">• Amazon 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 1487 905">Microsoft will end mainstream support for Windows Server 2008 SP2 and Windows Server 2008 R2 on January 14, 2020. On this date, Amazon 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 1492 1129">For more information about Microsoft EOS on Amazon, 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 data-bbox="402 258 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1300 758" style="list-style-type: none"><li data-bbox="402 369 1243 401">• Amazon Tools for Windows PowerShell version 3.15.876</li><li data-bbox="402 459 1300 491">• Windows Security updates current to November 12th, 2019</li><li data-bbox="402 550 841 581">• EC2 Config version 4.9.3865</li><li data-bbox="402 640 906 672">• EC2 Launch version 1.3.2002240</li><li data-bbox="402 730 753 762">• SSM Agent v2.3.722.0</li></ul> <p data-bbox="402 869 1157 900">Previous versions of AMIs have been marked private.</p> <p data-bbox="402 949 824 980"><b>New Amazon Windows AMIs</b></p> <ul data-bbox="402 1039 1450 1854" style="list-style-type: none"><li data-bbox="402 1060 1214 1092">• Windows_Server-1909-English-Core-Base-2019.11.13</li><li data-bbox="402 1150 1390 1182">• Windows_Server-1909-English-Core-ContainersLatest-2019.11.13</li><li data-bbox="402 1241 1450 1272">• Windows_Server-2016-English-Full-SQL_2019_Enterprise-2019.11.13</li><li data-bbox="402 1331 1409 1362">• Windows_Server-2016-English-Full-SQL_2019_Express-2019.11.13</li><li data-bbox="402 1421 1433 1453">• Windows_Server-2016-English-Full-SQL_2019_Standard-2019.11.13</li><li data-bbox="402 1512 1365 1543">• Windows_Server-2016-English-Full-SQL_2019_Web-2019.11.13</li><li data-bbox="402 1602 1450 1633">• Windows_Server-2019-English-Full-SQL_2019_Enterprise-2019.11.13</li><li data-bbox="402 1692 1409 1724">• Windows_Server-2019-English-Full-SQL_2019_Express-2019.11.13</li><li data-bbox="402 1782 1433 1814">• Windows_Server-2019-English-Full-SQL_2019_Standard-2019.11.13</li><li data-bbox="402 1833 415 1864">•</li></ul>

Release	Changes
	Windows_Server-2019-English-Full-SQL_2019_Web-2019.11.13
2019.11.05	<p data-bbox="402 352 824 386"><b>New Amazon 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>• Amazon 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 details, see <a href="https://support.microsoft.com/en-us/help/4513240/sfc-incorrectly-flags-windows-defender-ps-files-as-corrupted">https://support.microsoft.com/en-us/help/4513240/sfc-incorrectly-flags-windows-defender-ps-files-as-corrupted</a></li></ul> <p><b>New Amazon 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 Amazon 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>• Amazon PV driver version 8.3.2</li><li>• Amazon NVMe driver version 1.3.2</li><li>• Amazon 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. See <a href="https://support.microsoft.com/en-us/help/4513240/sfc-incorrectly-flags-windows-defender-ps-files-as-corrupted">https://support.microsoft.com/en-us/help/4513240/sfc-incorrectly-flags-windows-defender-ps-files-as-corrupted</a>. Platform update block: HKLM:\SOFTWARE\Microsoft\Windows Defender\Miscellaneous Configuration\PreventPlatformUpdate type=DWORD, value=1</li></ul> <p>Previous versions of AMIs have been marked private.</p> <p><b>New Amazon 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>• Amazon 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 Amazon Windows AMIs</b> <ul style="list-style-type: none"><li data-bbox="402 352 1354 407">• Windows_Server-2016-English-Full-ECS_Optimized-2019.07.19</li><li data-bbox="402 436 1354 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 1188 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>• Amazon SDK version 3.15.756</li><li>• Amazon PV driver version 8.2.7</li><li>• Amazon 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 Amazon 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 Amazon 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="402 260 526 294"><b>All AMIs</b></p> <ul data-bbox="402 348 1208 674" style="list-style-type: none"><li data-bbox="402 348 1208 411">• Microsoft security updates current to May 14th, 2019</li><li data-bbox="402 436 831 499">• EC2Config version 4.9.3429</li><li data-bbox="402 525 847 588">• SSM Agent version 2.3.542.0</li><li data-bbox="402 613 867 674">• Amazon SDK version 3.15.735</li></ul>
2019.04.26	<p data-bbox="402 749 526 783"><b>All AMIs</b></p> <ul data-bbox="402 840 1458 1041" style="list-style-type: none"><li data-bbox="402 840 1458 1041">• 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 1155"><b>All AMIs</b></p> <ul data-bbox="402 1211 1328 1266" style="list-style-type: none"><li data-bbox="402 1211 1328 1266">• Amazon 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>• Amazon SDK version 3.15.715</li><li>• Amazon PV Driver version 8.3.0</li><li>• EC2Launch v1 version 1.3.2001360</li></ul> <p><b>New Amazon 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>• Amazon 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>• Amazon SDK version 3.15.666</li><li>• EC2Launch v1 version 1.3.2001040</li><li>• EC2Config version 4.9.3289</li><li>• Amazon 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>• Amazon 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>• Amazon 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2018](#).

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>• Amazon SDK version 3.15.629</li><li>• EC2Launch v1 version 1.3.2000760</li></ul>

Release	Changes
	<p><b>New Amazon 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="399 436 894 493">• Amazon SDK version 3.15.602.0</li><li data-bbox="399 525 849 581">• SSM Agent version 2.3.193.0</li><li data-bbox="399 613 833 669">• EC2Config version 4.9.3067</li><li data-bbox="399 701 1341 762">• 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 1471 894" style="list-style-type: none"><li data-bbox="402 369 1219 399">• Microsoft security updates current to October 9, 2018</li><li data-bbox="402 457 1252 487">• Amazon Tools for Windows PowerShell version 3.3.365.0</li><li data-bbox="402 546 873 575">• CloudFormation version 1.4.31</li><li data-bbox="402 634 886 663">• Amazon PV Driver version 8.2.4</li><li data-bbox="402 722 1471 802">• Amazon PCI Serial Driver version 1.0.0.0 (support for Windows 2008R2 and 2012 on Bare Metal instances)</li><li data-bbox="402 861 781 890">• ENA Driver version 1.5.0</li></ul> <p data-bbox="402 1003 1495 1033"><b>Windows Server 2016 Datacenter and Standard Editions for Nano Server</b></p> <p data-bbox="402 1087 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 1224 495">• Amazon 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="402 613 932 672">• Amazon NVMe Driver version 1.3 0</li><li data-bbox="402 701 889 760">• 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 1171">Access to all public versions of Windows_Server-2016-English-Nano-Base will be removed in September 2018. Additional information about Nano Server lifecycle, including details on launching Nano Server as a Container, can be found here: <a href="https://docs.microsoft.com/en-us/windows-server/get-started/nano-in-semi-annual-channel">https://docs.microsoft.com/en-us/windows-server/get-started/nano-in-semi-annual-channel</a>.</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>• Amazon 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. Additional information about Nano Server lifecycle, including details on launching Nano Server as a Container, can be found here: <a href="https://docs.microsoft.com/en-us/windows-server/get-started/nano-in-semi-annual-channel">https://docs.microsoft.com/en-us/windows-server/get-started/nano-in-semi-annual-channel</a>.</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 data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1188 848" style="list-style-type: none"><li data-bbox="402 348 1188 407">• Microsoft security updates current to June 12, 2018</li><li data-bbox="402 432 834 491">• EC2Config version 4.9.2688</li><li data-bbox="402 516 737 575">• SSM Agent 2.2.619.0</li><li data-bbox="402 600 1143 659">• Amazon Tools for Windows PowerShell 3.3.283.0</li><li data-bbox="402 684 818 743">• Amazon NVMe driver 1.2.0</li><li data-bbox="402 768 769 827">• Amazon PV driver 8.2.3</li></ul>
2018.05.09	<p data-bbox="402 928 526 957"><b>All AMIs</b></p> <ul data-bbox="402 1016 1162 1339" style="list-style-type: none"><li data-bbox="402 1016 1162 1075">• Microsoft security updates current to May 9, 2018</li><li data-bbox="402 1100 834 1159">• EC2Config version 4.9.2644</li><li data-bbox="402 1184 737 1243">• SSM Agent 2.2.493.0</li><li data-bbox="402 1268 1143 1327">• Amazon Tools for Windows PowerShell 3.3.270.0</li></ul> <p data-bbox="402 1449 1386 1478"><b>Windows Server, version 1709 and Windows Server, version 1803</b></p> <ul data-bbox="402 1537 1406 1642" style="list-style-type: none"><li data-bbox="402 1537 1406 1642">• 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 1141 669">• Amazon Tools for Windows PowerShell 3.3.256.0</li><li data-bbox="399 701 1045 758">• Amazon 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>• Amazon Tools for Windows PowerShell 3.3.245.0</li><li>• Amazon PV driver 8.2</li><li>• Amazon 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>• Amazon 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	Amazon has removed all Amazon 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>• Amazon 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>• Amazon 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>• Amazon Tools for Windows PowerShell 3.3.225.1</li><li>• Amazon PV driver 8.2</li><li>• Amazon ENA driver 1.2.3.0</li><li>• Amazon 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>• Amazon Tools for Windows PowerShell 3.3.215</li> <li>• EC2Config version 4.9.2262</li> </ul>

## Monthly AMI updates for 2017

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

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>• Amazon CloudFormation templates 1.4.27</li> <li>• Amazon NVMe driver 1.02</li> <li>• SSM Agent 2.2.93.0</li> <li>• Amazon 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>Amazon 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 Amazon 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="402 260 526 294"><b>All AMIs</b></p> <ul data-bbox="402 348 1442 810" style="list-style-type: none"><li data-bbox="402 348 1237 407">• Microsoft security updates current to October 11, 2017</li><li data-bbox="402 436 831 495">• EC2Config version 4.9.2188</li><li data-bbox="402 525 717 583">• SSM Agent 2.2.30.0</li><li data-bbox="402 613 1045 672">• Amazon CloudFormation templates 1.4.24</li><li data-bbox="402 701 1442 810">• 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="401 258 721 289"><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="401 474 1448 800" style="list-style-type: none"><li data-bbox="401 495 1448 527">• Windows_Server-2016-English-Full-SQL_2017_Enterprise-2017.10.04</li><li data-bbox="401 579 1433 611">• Windows_Server-2016-English-Full-SQL_2017_Standard-2017.10.04</li><li data-bbox="401 663 1365 695">• Windows_Server-2016-English-Full-SQL_2017_Web-2017.10.04</li><li data-bbox="401 747 1409 779">• Windows_Server-2016-English-Full-SQL_2017_Express-2017.10.04</li></ul> <p data-bbox="401 905 1268 936">Microsoft SQL Server 2017 supports the following features:</p> <ul data-bbox="401 999 1495 1829" style="list-style-type: none"><li data-bbox="401 1020 1409 1104">• Machine Learning Services with Python (ML and AI) and R language support</li><li data-bbox="401 1146 824 1178">• Automatic database tuning</li><li data-bbox="401 1230 867 1262">• Clusterless Availability Groups</li><li data-bbox="401 1325 1495 1503">• Runs on Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and Ubuntu. For more information, see the following Microsoft article: <a href="#">Installation guidance for SQL Server on Linux</a>. Not supported on Amazon Linux.</li><li data-bbox="401 1566 954 1598">• Windows-Linux cross-OS migrations</li><li data-bbox="401 1650 886 1682">• Resumable online index rebuild</li><li data-bbox="401 1734 954 1766">• Improved adaptive query processing</li><li data-bbox="401 1808 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>• Amazon Tools for Windows PowerShell 3.3.143</li><li>• Amazon 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 Amazon Tools for Windows PowerShell, 3.3.58.0.</li></ul>

Release	Changes
2017.07.13	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1175 583" style="list-style-type: none"><li data-bbox="402 352 1175 407">• Microsoft security updates current to July 13, 2017</li><li data-bbox="402 436 831 491">• EC2Config version 4.9.1981</li><li data-bbox="402 520 737 575">• SSM Agent 2.0.847.0</li></ul> <p data-bbox="402 688 727 718"><b>Windows Server 2016</b></p> <ul data-bbox="402 781 837 835" style="list-style-type: none"><li data-bbox="402 781 837 835">• 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 site.</li> <li>• EC2Config version 4.9.1900</li> <li>• SSM Agent 2.0.805.0</li> <li>• Amazon 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>• Amazon PV Driver v7.4.6</li><li>• Amazon 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>• Amazon Tools for Windows PowerShell 3.3.71.0</li><li>• Amazon 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><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to March 14, 2017</li><li>• Current Amazon Tools for Windows PowerShell</li><li>• Current Amazon CloudFormation templates</li></ul> <p><b>Windows Server 2003 to Windows Server 2012</b></p> <ul style="list-style-type: none"><li>• EC2Config version 4.7.1631</li><li>• SSM Agent 2.0.682.0</li></ul> <p><b>Windows Server 2016</b></p> <ul style="list-style-type: none"><li>• SSM Agent 2.0.706.0</li><li>• EC2Launch v1 v1.3.540</li></ul>
2017.02.21	<p>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>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 Amazon Tools for Windows PowerShell</li> <li>• Current Amazon 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 about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2016](#).

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 Amazon 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 Amazon 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 Amazon PV driver, version 7.4.3.0 for Windows 2008 R2 and later</li><li>• Current Amazon 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 Amazon 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 Amazon 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>

Release	Changes
2016.8.26	All Windows Server 2008 R2 AMIs dated 2016.08.11 were updated to fix a known issue. New AMIs are dated 2016.08.25.
2016.8.11	<p data-bbox="399 386 526 420"><b>All AMIs</b></p> <ul data-bbox="399 474 1484 756" style="list-style-type: none"><li data-bbox="399 474 753 529">• EC2Config v3.19.1153</li><li data-bbox="399 567 1221 621">• Microsoft security updates current to August 10, 2016</li><li data-bbox="399 659 1484 756">• Enabled the registry key User32 exception handler hardening feature in Internet Explorer for MS15-124</li></ul> <p data-bbox="399 865 1422 945"><b>Windows Server 2008 R2, Windows Server 2012 RTM, and Windows Server 2012 R2</b></p> <ul data-bbox="399 999 1455 1335" style="list-style-type: none"><li data-bbox="399 999 1081 1054">• Elastic Network Adapter (ENA) Driver 1.0.8.0</li><li data-bbox="399 1092 906 1146">• ENA AMI property set to enabled</li><li data-bbox="399 1184 1455 1335">• Amazon 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	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 Amazon PV driver. The Amazon PV driver issue has been fixed. The August AMI release will include Windows Server 2008 R2 AMIs with the fixed Amazon PV driver and July/August Windows updates.

Release	Changes
2016.7.26	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 348 1490 590" style="list-style-type: none"><li data-bbox="402 348 756 407">• EC2Config v3.18.1118</li><li data-bbox="402 457 1490 590">• 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="402 669 526 699"><b>All AMIs</b></p> <ul data-bbox="402 758 1122 1079" style="list-style-type: none"><li data-bbox="402 758 1122 816">• Microsoft security updates current to July 2016</li><li data-bbox="402 867 1114 896">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="402 947 935 976">• Updated Amazon PV Driver 7.4.2.0</li><li data-bbox="402 1047 1114 1077">• Amazon 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 Amazon 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. For more information, see <a href="#">What's New in SQL Server 2016</a> on MSDN.</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 Amazon 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 1133 495">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="399 525 1133 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 1154 896">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="399 926 1154 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 1203 1297">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="399 1327 1203 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 1187 1698">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="399 1728 1187 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 Amazon Tools for Windows PowerShell</li> </ul>

## Monthly AMI updates for 2015

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

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 Amazon 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 Amazon 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 Amazon 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 Amazon Tools for Windows PowerShell</li><li>• Current Amazon 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 Amazon 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>• Amazon 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 Amazon Tools for Windows PowerShell</li><li>• Modified AMI descriptions of SQL images for consistency</li></ul>

Release	Changes
2015.6.10	<p data-bbox="402 260 526 289"><b>All AMIs</b></p> <ul data-bbox="402 352 1133 676" style="list-style-type: none"><li data-bbox="402 373 1133 403">• Microsoft security updates current to June 2015</li><li data-bbox="402 457 922 487">• EC2Config service version 3.6.269</li><li data-bbox="402 550 1117 579">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="402 642 1117 672">• Current Amazon CloudFormation helper scripts</li></ul> <p data-bbox="402 781 1013 810"><b>Only AMIs with Windows Server 2012 R2</b></p> <ul data-bbox="402 873 776 903" style="list-style-type: none"><li data-bbox="402 894 776 924">• Amazon PV Driver 7.3.1</li></ul>
2015.5.13	<p data-bbox="402 1003 526 1033"><b>All AMIs</b></p> <ul data-bbox="402 1096 1133 1327" style="list-style-type: none"><li data-bbox="402 1117 1133 1146">• Microsoft security updates current to May 2015</li><li data-bbox="402 1209 922 1239">• EC2Config service version 3.5.228</li><li data-bbox="402 1302 1117 1331">• Current Amazon Tools for Windows PowerShell</li></ul>
2015.04.15	<p data-bbox="402 1407 526 1436"><b>All AMIs</b></p> <ul data-bbox="402 1499 1133 1730" style="list-style-type: none"><li data-bbox="402 1520 1133 1549">• Microsoft security updates current to April 2015</li><li data-bbox="402 1612 922 1642">• EC2Config service version 3.3.174</li><li data-bbox="402 1705 1117 1734">• Current Amazon 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 Amazon Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Amazon 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 Amazon Tools for Windows PowerShell</li><li>• Current Amazon 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 Amazon Tools for Windows PowerShell</li><li>• Current Amazon CloudFormation helper scripts</li></ul>

## Monthly AMI updates for 2014

For more information about Microsoft updates, see [Description of Software Update Services and Windows Server Update Services changes in content for 2014](#).

Release	Changes
2014.12.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to December 2014</li><li>• EC2Config service version 2.2.12</li><li>• Current Amazon Tools for Windows PowerShell</li></ul>
2014.11.19	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to November 2014</li><li>• EC2Config service version 2.2.11</li><li>• Current Amazon Tools for Windows PowerShell</li></ul>
2014.10.15	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to October 2014</li><li>• EC2Config service version 2.2.10</li><li>• Current Amazon Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>•</li></ul>



Release	Changes
	Amazon PV Driver 7.2.4.1 (resolves the issues with Plug and Play Cleanup, which is now enabled by default)
2014.09.10	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to September 2014</li><li>• EC2Config service version 2.2.8</li><li>• Current Amazon Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Disable Plug and Play Cleanup (see <a href="#">Important information</a>)</li><li>• Amazon PV Driver 7.2.2.1 (resolves issues with the uninstaller)</li></ul>
2014.08.13	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to August 2014</li><li>• EC2Config service version 2.2.7</li><li>• Current Amazon Tools for Windows PowerShell</li></ul> <p><b>Only AMIs with Windows Server 2012 R2</b></p> <ul style="list-style-type: none"><li>• Amazon PV Driver 7.2.2.1 (improves disk performance, resolves issues with reconnecting multiple network interfaces and lost network settings )</li></ul>

Release	Changes
2014.07.10	<p data-bbox="402 260 526 294"><b>All AMIs</b></p> <ul data-bbox="402 348 1123 583" style="list-style-type: none"><li data-bbox="402 348 1123 407">• Microsoft security updates current to July 2014</li><li data-bbox="402 436 883 495">• EC2Config service version 2.2.5</li><li data-bbox="402 525 1114 583">• Current Amazon Tools for Windows PowerShell</li></ul>
2014.06.12	<p data-bbox="402 659 526 693"><b>All AMIs</b></p> <ul data-bbox="402 747 1416 1071" style="list-style-type: none"><li data-bbox="402 747 1133 806">• Microsoft security updates current to June 2014</li><li data-bbox="402 835 883 894">• EC2Config service version 2.2.4</li><li data-bbox="402 924 1416 982">• Removed NVIDIA drivers (except for Windows Server 2012 R2 AMIs)</li><li data-bbox="402 1012 1114 1071">• Current Amazon Tools for Windows PowerShell</li></ul>
2014.05.14	<p data-bbox="402 1155 526 1188"><b>All AMIs</b></p> <ul data-bbox="402 1243 1188 1566" style="list-style-type: none"><li data-bbox="402 1243 1123 1302">• Microsoft security updates current to May 2014</li><li data-bbox="402 1331 883 1390">• EC2Config service version 2.2.2</li><li data-bbox="402 1419 1114 1478">• Current Amazon Tools for Windows PowerShell</li><li data-bbox="402 1507 1188 1566">• Amazon CloudFormation helper scripts version 1.4.0</li></ul>

Release	Changes
2014.04.09	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to April 2014</li><li>• Current Amazon Tools for Windows PowerShell</li><li>• Current Amazon CloudFormation helper scripts</li></ul>
2014.03.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to March 2014</li></ul>
2014.02.12	<p><b>All AMIs</b></p> <ul style="list-style-type: none"><li>• Microsoft security updates current to February 2014</li><li>• EC2Config service version 2.2.1</li><li>• Current Amazon Tools for Windows PowerShell</li><li>• <a href="#">KB2634328</a></li><li>• Remove the BCDEdit useplatformclock value</li></ul> <p><b>Only AMIs with Microsoft SQL Server</b></p> <ul style="list-style-type: none"><li>• Microsoft SQL Server 2012 SP1 cumulative update package 8</li><li>• Microsoft SQL Server 2008 R2 cumulative update package 10</li></ul>

# Subscribe to Amazon Windows AMI notifications

Whenever Amazon Windows AMIs are released, we send notifications to the subscribers of the `ec2-windows-ami-update` topic. Whenever released Amazon 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 Amazon Windows AMI notifications

1. Open the Amazon SNS console at <https://console.amazonaws.cn/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 **Amazon 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 `Amazon Notification - Subscription Confirmation`. Open the email and choose **Confirm subscription** to complete your subscription.

## To unsubscribe from Amazon Windows AMI notifications

1. Open the Amazon SNS console at <https://console.amazonaws.cn/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 Amazon Windows AMI

Cloud security at Amazon is the highest priority. As an Amazon 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 Amazon and you. The [shared responsibility model](#) describes this as security of the cloud and security in the cloud:

- **Security of the cloud** – Amazon is responsible for protecting the infrastructure that runs Amazon services in the Amazon Cloud. Amazon 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 [Amazon Compliance Programs](#). To learn about the compliance programs that apply to Windows AMI, see [Amazon Services in Scope by Compliance Program](#).
- **Security in the cloud** – Your responsibility is determined by the Amazon 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 Amazon Windows AMI reference

The following table describes the documentation releases for Amazon Windows AMI.

Change	Description	Date
<a href="#">Initial release</a>	Initial release of the Amazon Windows AMI reference.	April 30, 2024