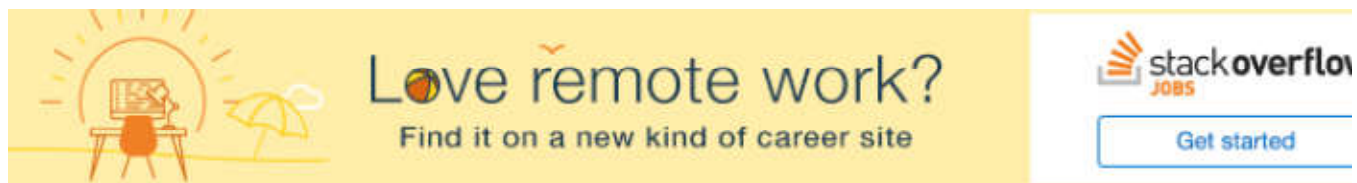




How do I find the .NET version?




208

★
68

How do I find out which version of .NET is installed?

I'm looking for something as simple as "java -version" that I can type at the command prompt and that tells me the current version(s) installed.

I better add that Visual Studio may not be installed - this is typically something that I want to know about a client machine.

.net

edited Apr 23 '17 at 11:23



Peter Mortensen

14.2k 19 88 114

asked Oct 14 '09 at 10:22



sebang



1,915 3 17 23

- 2 Go to run and execute this command: `wmic /namespace:\\root\\cimv2 path win32_product where "name like '%%.NET%%'" get version` – [HENG Vongkol](#) Sep 3 '16 at 13:06

See [How to: Determine Which .NET Framework Versions Are Installed](#) and [Identifying the .NET version you are running \(2.0, 4.5, 4.5.1 or 4.5.2\)](#) – [samis](#) Dec 14 '17 at 19:56

Possible duplicate of [How do I detect what .NET Framework versions and service packs are installed?](#) – [Wai Ha Lee](#) Jan 11 '18 at 11:07

17 Answers


220

✓

Just type **any one** of the below commands to give you the latest version in the first line.

1. CSC
2. GACUTIL /1 ?
3. CLRVER

You can only run these from the Visual Studio Command prompt if you have Visual Studio installed or else if you have the .NET framework SDK then the SDK Command prompt.

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```
4. wmic product get description | findstr /C:".NET Framework"
5. dir /b /ad /o-n %systemroot%\Microsoft.NET\Framework\v?.*
```

The last command (5) will list out **all the versions** (except 4.5) of .NET installed, **latest first**.

You need to run the 4th command to see if .NET 4.5 is installed.

Another three options from the PowerShell command prompt is given below.

```
6. [environment]::Version
7. $PSVersionTable.CLRVersion
8. gci 'HKLM:\SOFTWARE\Microsoft\NET Framework Setup\NDP' -recurse | gp -name
   Version,Release -EA 0 |
   where { $_.PSChildName -match '^(?!S)\p{L}' } | select PSChildName, Version, Release
```

The last command (8) will give you all versions, including .NET 4.5.

edited Apr 23 '17 at 11:25



Peter Mortensen

14.2k 19 88 114

answered Oct 14 '09 at 10:25



Binoj Antony

13k 24 82 94

last command didn't return version 4.5 even though I think I have it installed. The answer at stackoverflow.com/questions/3487265/... included it. – [lmsurprenant](#) Jan 6 '15 at 20:24

10 Cheers for Number 8! – [Lionet Chen](#) Jun 15 '17 at 13:36

More jobs
means more choice



Get started

There is an easier way to get the exact version .NET version installed on your machine from a cmd prompt. Just follow the following instructions;

281

1. Open the command prompt (i.e Windows + R → type "cmd").
2. Type the following command, all on one line:

```
reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP"
```

(This will list all the .NET versions.)

3. If you want to check the latest .NET 4 version.

4. Type following instruction, on a single line:

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```
reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\full"
/v version
```

Please find the attached image below to see how it is shown.

```
C:\>reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP"
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\CDP
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v2.0.50727
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.0
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.5
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4.0

C:\>reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\full" /v version
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\full
version REG_SZ 4.6.01855

C:\>reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.0" /v version
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.0
version REG_SZ 3.0.30729.5428

C:\>reg query "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.5" /v version
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v3.5
version REG_SZ 3.5.30729.5428

C:\>
```

edited Apr 23 '17 at 11:35



Peter Mortensen

14.2k 19 88 114

answered Mar 3 '16 at 13:43



AnandShanbhag

3,785 1 12 13

▲ [.NET Version Detector](#) is a GUI utility that displays which of the six(!) versions of the framework are installed.

37



edited Apr 23 '17 at 11:30



Peter Mortensen

14.2k 19 88 114

answered Oct 14 '09 at 10:32



Phil Devaney

15.3k 5 36 29

Still works for Windows 10. Thanks! – Tung Mar 20 at 21:00

▲ Before going to a command prompt, please follow these steps...

28



Open *My Computer* → double click "C:" drive → double click "*Windows*" → double click "*Microsoft.NET*" → double click "*Framework*" → Inside this folder, there will be folder(s) like "v1.0.3705" and/or "v2.0.50727" and/or "v3.5" and/or "v4.0.30319".

Your latest .NET version would be in the highest v number folder, so if v4.0.30319 is available that would hold your latest .NET framework. However, the v4.0.30319 does not mean that you have the .NET framework version 4.0. The v4.0.30319 is your Visual C# compiler version, therefore, in order to find the .NET framework version do the following.

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Go to a command prompt and follow this path:

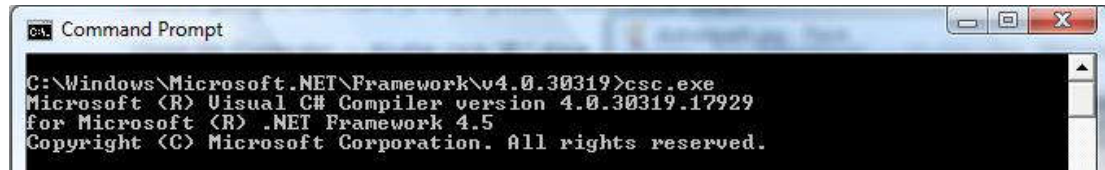
C:\Windows\Microsoft.NET\Framework\v4.0.30319 (or whatever the highest v number folder)

C:\Windows\Microsoft.NET\Framework\v4.0.30319 > csc.exe

Output:

Microsoft (R) Visual C# Compiler version 4.0.30319.17929 for **Microsoft (R) .NET Framework 4.5** Copyright (C) Microsoft Corporation. All rights reserved.

Example below:



edited Apr 23 '17 at 11:33



Peter Mortensen

14.2k 19 88 114

answered Jan 23 '13 at 14:46



Sunimal Kaluarachchi

384 4 5

9

For the version of the framework that is installed, it varies depending on which service packs and hotfixes you have installed. Take a look at [this MSDN page](#) for more details. It suggests looking in %systemroot%\Microsoft.NET\Framework to get the version.

[Environment.Version](#) will programmatically give you the version of the CLR.

Note that this is the version of the CLR, and not necessarily the same as the latest version of the framework you have installed (.NET 3.0 and 3.5 both use v2 of the CLR).

edited Apr 23 '17 at 11:29



Peter Mortensen

14.2k 19 88 114

answered Oct 14 '09 at 10:26



adrianbanks

67.9k 18 150 187

Environment.Version seems to give you the application version. Say, from LinqPad I want to find .NET version it is running against and it gives me not the .NET version, but LinqPad version – [Naomi](#) Jul 29 '13 at 23:26

@Naomi: no, it gives the version of the CLR. From the docs: "Gets a Version object that describes the major, minor, build, and revision numbers of the common language runtime." – [adrianbanks](#) Jul 30 '13 at 15:48

What I am supposed to see in this object? I am seeing 2.0.50727.5472 2 Minor 0 Build 50727 Revision 5472 MajorRevision 0 MinorRevision 5472 which doesn't look like CLR version runtime to me – [Naomi](#) Jul 30 '13 at 19:16

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to add the latest version of LinqPad and now I am getting 4.0.30319.18052 for the version. The previous version was targeting .NET 3.5 version. So, I am still a bit



6

If you open a command prompt and type the following two commands, all framework versions that are installed on the current machine will be listed (each one is stored in a separate directory within this directory).



```
cd %systemroot%\Microsoft.NET\Framework
```

```
dir /A:D
```

edited Apr 23 '17 at 11:31



Peter Mortensen

14.2k 19 88 114

answered Oct 14 '09 at 10:55



Michael Arnell

833 1 8 16

7

Not recommended because this is possibly misleading. If you upgraded 4.0 => 4.5.2, the directory might only show v4.0.30319. See Sunimal Kaluarachchi's example. – [Dinah](#) Jun 18 '15 at 10:53



6

MSDN details it [here](#) very nicely on how to check it from registry:



To find .NET Framework versions by viewing the registry (.NET Framework 1-4)

1. On the Start menu, choose Run.
2. In the Open box, enter regedit.exe. You must have administrative credentials to run regedit.exe.
3. In the Registry Editor, open the following subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP

The installed versions are listed under the NDP subkey. The version number is stored in the Version entry. For the .NET Framework 4 the Version entry is under the Client or Full subkey (under NDP), or under both subkeys.

To find .NET Framework versions by viewing the registry (.NET Framework 4.5 and later)

1. On the Start menu, choose Run.
2. In the Open box, enter regedit.exe. You must have administrative credentials to run regedit.exe.
3. In the Registry Editor, open the following subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\Full

Note that the path to the Full subkey includes the subkey Net Framework rather than .NET Framework

Check for a DWORD value named `Release` . The existence of the Release DWORD indicates that the .NET Framework 4.5 or newer has been installed on that computer.

| Value of the Release DWORD | Version |
|---|--|
| 378389 | .NET Framework 4.5 |
| 378675 | .NET Framework 4.5.1 installed with Windows 8.1 or Windows Server 2012 R2 |
| 378758 | .NET Framework 4.5.1 installed on Windows 8, Windows 7 SP1, or Windows Vista SP2 |
| 379893 | .NET Framework 4.5.2 |
| On Windows 10 systems: 393295 | .NET Framework 4.6 |
| On all other OS versions: 393297 | |
| On Windows 10 November Update systems: 394254 | .NET Framework 4.6.1 |
| On all other OS versions: 394271 | |
| On Windows 10 Anniversary Update: 394802 | .NET Framework 4.6.2 |
| On all other OS versions: 394806 | |
| On Windows 10 Creators Update: 460798 | .NET Framework 4.7 |
| On all other OS versions: 460805 | |
| On Windows 10 Fall Creators Update: 461308 | .NET Framework 4.7.1 |
| On all other OS versions: 461310 | |

Note: The last row in the above snapshot which got clipped reads `on all other OS versions: 461310` . I tried my level best to avoid the information getting clipped while taking the screenshot but the table was way to big.

edited Mar 1 '18 at 9:01

answered Dec 23 '17 at 9:53



RBT

10.1k

7

82

109

Just type the following in the command line:

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```
dir /b /ad /o:n %systemroot%\Microsoft.NET\Framework\v?.*
```



Your dotnet version will be shown as the highest number.

edited Sep 14 '17 at 17:17



Dov Benyomin
Sohacheski

2,829 5 20 44

answered Sep 14 '17 at 16:21



Steve Junior
59 1 4



3



To just get the installed version(s) at the command line, I recommend using [net-version](#).

- It's just a [single binary](#).
- It uses the [guidelines provided by Microsoft](#) to get version information.
- It doesn't require the SDK to be installed.
- Or the Visual Studio command prompt.
- It doesn't require you to use regedit and hunt down registry keys yourself. You can even pipe the output in a command line tool if you need to.

Source code is available on [github.com](#)

Full disclosure: I created this tool myself out of frustration.

edited Mar 22 '17 at 13:02

answered Oct 27 '15 at 21:09



Dan Esparza

20.1k 25 89 124

If that (incomplete) set of version information is good enough for you, more power to you.
– [Dan Esparza](#) Mar 22 '17 at 13:00

@Shiva You indicate that you think that command shows everything, and I respectfully disagree with you. Please look at the link with the guidelines provided by Microsoft. For example: Your query doesn't show I have .NET 4.6.1 installed. Also, it indicates I have 'CDF' installed, which isn't a .NET framework version. – [Dan Esparza](#) Mar 22 '17 at 13:10



3



In your terminal type `dotnet --version`

edited Jan 27 '18 at 23:51



Udo Held

9,498 11 52 79

answered Jan 27 '18 at 23:27



FelixAVeras

34 7

12 It's applicable to .NET Core only. – [Sunil](#) Jan 28 '18 at 5:04





`clrver` is an excellent one. Just execute it in the .NET prompt and it will list all available framework versions.

answered Jul 15 '14 at 20:53



James Poulouse
1,826 16 21

- 3 This tool requires not only the .NET framework to be installed, but Visual Studio. The OP indicated that Visual Studio might not be installed. – [Dan Esparza](#) Oct 17 '16 at 12:52

And it does not show all (or even most) versions. For my Win7 PC it shows only V2.0 & 4.0 but some of the other methods above also show versions: 3.0, 3.5, 4.5, 4.5.1, 4.5.2, 4.6.1 and 4.7. – [Zeek2](#) Jul 25 '17 at 10:40

- 1 @Zeek `clrver` shows installed **.net runtime(s)**, which can be *shared among .net version(s)*. See [How to: Determine Which .NET Framework Versions Are Installed](#) and [Identifying the .NET version you are running \(2.0, 4.5, 4.5.1 or 4.5.2\)](#) – [samis](#) Dec 14 '17 at 19:52



Try [.NET Checker](#) by Scott Hanselman.

answered Jan 13 '17 at 19:21



A.I.
908 1 9 16

- 1 A great suggestion. The OP specifically indicated a command line tool, though. – [Dan Esparza](#) Mar 22 '17 at 13:12



If you do this fairly frequently (as I tend to do) you can create a shortcut on your desktop as follows:

1. Right click on the desktop and select *New* → *Shortcut*.
2. In the location field, paste this string: `powershell.exe -noexit -command "gci 'HKLM:\SOFTWARE\Microsoft\NET Framework Setup\NDP' -recurse | gp -name Version,Release -EA 0 | where { $_.PSChildName -match '^(?!S)\p{L}' } | select PSChildName, Version, Release"` (this is from [Binoj Antony's post](#)).
3. Hit *Next*. Give the shortcut a name and *Finish*.

(NOTE: I am not sure if this works for 4.5, but I can confirm that it does work for 4.6, and versions prior to 4.5.)

edited May 23 '17 at 11:54



Community ♦

answered May 3 '16 at 22:57



kmote
11.5K 8 52 77

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1



For anyone running Windows 10 **1607** and looking for **.net 4.7**. Disregard all of the above.

It's not in the *Registry*, *C:\Windows\Microsoft.NET* folder or the *Installed Programs* list or the WMIC display of that same list.

Look for "installed updates" KB3186568.

answered Oct 3 '17 at 8:36



skrie

11 1

1 It's in the registry, as [documented by Microsoft](#). HKLM\SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\Full - the Release value will be 460798 for 4.7 on W10 1607. – [Richard Deeming](#) Oct 3 '17 at 10:03

It is not. The "Full" key does not even exist. – [skrie](#) Oct 3 '17 at 14:08

It is, and it does. I'm running 1607, and I'm looking at the Full key right now!
– [Richard Deeming](#) Oct 3 '17 at 18:34



0



Per Microsoft in powershell:

```
Get-ChildItem "hk\m:SOFTWARE\Microsoft\NET Framework Setup\NDP\v4\Full\" | Get-ItemPropertyValue -Name Release | % { $_ -ge 394802 }
```

See the table at this link to get the DWORD value to search for specific versions:

https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/how-to-determine-which-versions-are-installed#ps_a

answered Oct 25 '17 at 14:01



lightwing

84 10



0



If you'r developing some .Net app (for ex. web app), you can make 1 line of error code (like invoke wrong function name) and reload your page, the .Net version will be

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show

Server Error in '/' Application.

The resource cannot be found.

Description: HTTP 404. The resource you are looking for (or one of its dependencies) could have been removed or renamed.

Requested URL: ~~http://localhost:12345/~~

Version Information: Microsoft .NET Framework Version:4.0.30319; ASP.NET Version:4.7.2633.0

answered Apr 13 '18 at 14:54



Sy C Dang

9 2



-1



There is an easier way to get the exact version .NET version installed on your machine from a cmd prompt. Just follow the following instructions;

Open the command prompt (i.e Windows + R → type “cmd”) and type the following command, all on one line: %windir%\Microsoft.NET\Framework, and then navigating to the directory with the latest version number.

Refer to <http://dotnettec.com/check-dot-net-framework-version/>

answered Jan 22 '18 at 18:47



Julia

5 1

I'm getting this error while trying to follow your answer:

'C:\Windows\Microsoft.NET\Framework' is not recognized as an internal or external command, operable program or batch file. – [pavjel](#) Apr 17 at 12:35