

## SQL Server Tutorial

### Part 129 - Difference between DateTime and DateTime2 in SQL Server

Venkat

PRAGIM Technologies

[kudvenkat@gmail.com](mailto:kudvenkat@gmail.com)

<http://csharp-video-tutorials.blogspot.com>

PragimTech.com | facebook.com/pragimtech | twitter.com/kudvenkat | 91 99456 99393

# In this session we will learn

- Difference between DateTime and DateTime2 in SQL Server

**Link to Dot Net Basics, ASP.NET, C#, ADO.NET and SQL Server video series**

<http://www.youtube.com/user/kudvenkat/playlists>

## **Suggested Videos**

**Part 126 - DATEFROMPARTS function in SQL Server**

**Part 127 - Difference between DateTime and SmallDateTime in SQL Server**

**Part 128 - DateTime2FromParts function in SQL Server 2012**

# DateTime v/s DateTime2

If you are in need of the DVD with all the videos and PPT's, please visit

<http://pragimtech.com/order.aspx>

## Differences between DateTime and DateTime2

Attribute	DateTime	DateTime2
Date Range	January 1, 1753, through December 31, 9999	January 1, 0001, through December 31, 9999
Time Range	00:00:00 through 23:59:59.997	00:00:00 through 23:59:59.9999999
Accuracy	3.33 Milli-seconds	100 nanoseconds
Size	8 Bytes	6 to 8 Bytes (Depends on the precision)
Default Value	1900-01-01 00:00:00	1900-01-01 00:00:00

**DATETIME2 has a bigger date range than DATETIME.** Also, DATETIME2 is more accurate than DATETIME

**So I would recommend** using DATETIME2 over DATETIME when possible

**I think the only reason** for using DATETIME over DATETIME2 is for backward compatibility

# DateTime v/s DateTime2

**DateTime2 Syntax:** DATETIME2 [ (fractional seconds precision) ]

## With DateTime2

- Optional fractional seconds precision can be specified
- The precision scale is from 0 to 7 digits
- The default precision is 7 digits
- For precision 0,1 and 2, storage size is 6 bytes
- For precision 3 and 4, storage size is 7 bytes
- For precision 5, 6 and 7, storage size is 8 bytes

**Notice as the precision increases the storage size also increases**

Precision	DateValue	StorageSize
Precision - 0	2015-10-20 15:09:12.0000000	6
Precision - 1	2015-10-20 15:09:12.1000000	6
Precision - 2	2015-10-20 15:09:12.1200000	6
Precision - 3	2015-10-20 15:09:12.1230000	7
Precision - 4	2015-10-20 15:09:12.1235000	7
Precision - 5	2015-10-20 15:09:12.1234600	8
Precision - 6	2015-10-20 15:09:12.1234570	8
Precision - 7	2015-10-20 15:09:12.1234567	8

# Additional Resources

## PRAGIM Home Page:

[www.PragimTech.com](http://www.PragimTech.com)

## Resources:

C#, ADO.NET, ASP.NET, SQL Server & MVC youtube Playlists

<http://www.youtube.com/user/kudvenkat/playlists>

Code samples and text version of all the videos on my blog

<http://www.csharp-video-tutorials.blogspot.com>

To receive email alerts when new videos are uploaded, please subscribe to my YOUTUBE channel

[www.YouTube.com/kudvenkat](http://www.YouTube.com/kudvenkat)

<https://twitter.com/kudvenkat>