**bigint**

Integer (whole number) data from -2^63 (-9,223,372,036,854,775,808) through 2^63-1 (9,223,372,036,854,775,807). Storage size is 8 bytes.

**int**

Integer (whole number) data from -2^31 (-2,147,483,648) through 2^31 - 1 (2,147,483,647). Storage size is 4 bytes. The SQL-92 synonym for **int**is **integer**.

**smallint**

Integer data from -2^15 (-32,768) through 2^15 - 1 (32,767). Storage size is 2 bytes.

**tinyint**

Integer data from 0 through 255. Storage size is 1 byte.

Remarks

The **bigint** data type is supported where integer values are supported. However, **bigint** is intended for special cases where the integer values may exceed the range supported by the **int** data type. The **int** data type remains the primary integer data type in SQL Server.

**bigint** fits between **smallmoney** and **int** in the data type precedence chart.

Functions will return **bigint** only if the parameter expression is a **bigint** data type. SQL Server will not automatically promote other integer data types (**tinyint**, **smallint**, and **int**) to**bigint**.

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**You get this range with bigint:**

-2^63 to 2^63-1

also known as roughly:

-9.2 x 10^18 to 9.2 x 10^18

**You get this range with decimal(18,0)**:

-10^18 to 10^18

**Decimal: Storage Bytes per Precision**

Precision Storage Bytes

1-9: 5

10-19: 9

20-28: 13

29-38: 17

**Integer Types and Storage Bytes**

integer type Storage Bytes

bigint 8

int 4

smallint 2

tinyint 1