

Value Types

Value types

Mathematical apparatus implemented in the calculation process [D2000 Calc](#) (eval tags) and in process [D2000 Event Handler](#) (events) operates with these basic value types:

- **Boolean** - logical type
- **Integer** - integer (cardinal) type
- **Real** - real type
- **Absolute time**
- **Time interval (relative time)**
- **Text**
- **HBJ** - reference to object

Boolean type

Values of Boolean type are labelled by the predefined identifiers **@TRUE** and **@FALSE**.

Integer type

Value range of Integer type is -2147483648 .. 2147483647.

Real type

Value range of Real type is $2.3 \times 10^{308} \leq |x| \leq 1.7 \times 10^{308}$ and zero value (0).

Absolute time type

The forms of values of Absolute time type are **hh:mm:ss DD-MM-YYYY** or **hh:mm:ss DD-MM-YY**

- **hh** - hour,
- **mm** - minute,
- **ss** - second,
- **DD** - day,
- **MM** - month,
- **YYYY** or **YY** - year

Time interval (relative time) type

The form of values of Relative time type is **DDD hh:mm:ss**

- **DDD** - number of days,
- **hh** - hours,
- **mm** - minute
- **ss** - second.

Time interval may be also expressed by a real number as number of seconds.

Text type

Value of Text type represents a sequence of characters with the maximal length of 2500 symbols enclosed in the quotes (e.g. "text" or 'text'). To display the characters " or ' in a value of Text type, use the character twice (e.g. "text: ""hallo"""" or 'text: "hallo"'). In case, that a text value exceeds this limit, the system "trims" it automatically to 2500 characters and assigns the attribute [s_val_Weak](#) (Weak) to the value.

HBJ type

Value containing an internal identifier of D2000 system, that uniquely determines an object. It is used in some special cases. It is compatible with Integer type.