

**NAME**

**set\_constraint\_handler\_s**, **abort\_handler\_s**, **ignore\_handler\_s** - runtime-constraint violation handling

**LIBRARY**

Standard C Library (libc, -lc)

**SYNOPSIS**

```
#define __STDC_WANT_LIB_EXT1__ 1
```

```
#include <stdlib.h>
```

```
constraint_handler_t
```

```
set_constraint_handler_s(constraint_handler_t handler);
```

**Handler Prototype**

```
typedef void
```

```
(*constraint_handler_t)(const char * restrict msg, void * restrict ptr, errno_t error);
```

**Predefined Handlers**

```
void
```

```
abort_handler_s(const char * restrict msg, void * restrict ptr, errno_t error);
```

```
void
```

```
ignore_handler_s(const char * restrict msg, void * restrict ptr, errno_t error);
```

**DESCRIPTION**

The **set\_constraint\_handler\_s**(*s*) function sets the runtime-constraint violation handler to be *handler*.

The runtime-constraint handler is the callback function invoked when a library function detects a runtime-constraint violation.

The arguments are as follows:

*msg* A pointer to a character string describing the runtime-constraint violation.

*ptr* A NULL pointer.

*error* If the function calling the handler has a return type declared as *errno\_t*, the return value of the function is passed. Otherwise, a positive value of type *errno\_t* is passed.

Only the most recent handler registered with **set\_constraint\_handler\_s()** is called when a runtime-constraint violation occurs.

The implementation has a default constraint handler that is used if no calls to the **set\_constraint\_handler\_s()** function have been made. If the *handler* argument to **set\_constraint\_handler\_s()** is a NULL pointer, the default handler becomes the current constraint handler.

The **abort\_handler\_s()** and **ignore\_handler\_s()** are the standard-defined runtime-constraint handlers provided by the C library.

The **abort\_handler\_s()** function writes the error message including the *msg* to stderr and calls the abort(3) function. The **abort\_handler\_s()** is currently the default runtime-constraint handler.

The **ignore\_handler\_s()** simply returns to its caller.

## RETURN VALUES

The **set\_constraint\_handler\_s()** function returns a pointer to the previously registered handler, or NULL if none was previously registered.

The **abort\_handler\_s()** function does not return to its caller.

The **ignore\_handler\_s()** function returns no value.

## STANDARDS

The **set\_constraint\_handler\_s()** function conforms to ISO/IEC 9899:2011 ("ISO C11") K.3.6.1.1.

## AUTHORS

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