NAME
     s390_sthyi − emulate STHYI instruction

SYNOPSIS
     #include <asm/unistd.h>

     int s390_sthyi(unsigned long *function_code***, void ****resp_buffer***,**
          uint64_t **return_code***, unsigned long** *flags***);**

DESCRIPTION
     The **s390_sthyi**() system call emulates the STHYI (Store Hypervisor Information) instruction. It provides
     hardware resource information for the machine and its virtualization levels. This includes CPU type and
     capacity, as well as the machine model and other metrics.

     The *function_code* argument indicates which function to perform. The following code(s) are supported:

     0   Return CP (Central Processor) and IFL (Integrated Facility for Linux) capacity information.

     The *resp_buffer* argument specifies the address of a response buffer. When the *function_code* is 0, the buf-
     fer must be one page (4K) in size. If the system call returns 0, the response buffer will be filled with CPU
     capacity information. Otherwise, the response buffer's content is unchanged.

     The *return_code* argument stores the return code of the STHYI instruction, using one of the following val-
     ues:

     0   Success.

     4   Unsupported function code.

     For further details about *return_code*, *function_code*, and *resp_buffer*, see the reference given in NOTES.

     The *flags* argument is provided to allow for future extensions and currently must be set to 0.

RETURN VALUE
     On success (that is: emulation succeeded), the return value of **s390_sthyi**() matches the condition code of
     the STHYI instructions, which is a value in the range [0..3]. A return value of 0 indicates that CPU capac-
     ity information is stored in *resp_buffer. A return value of 3 indicates "unsupported function code" and the
     content of *resp_buffer is unchanged. The return values 1 and 2 are reserved.

     On error, −1 is returned, and *errno* is set appropriately.

ERRORS
     EFAULT
          The value specified in *resp_buffer* or *return_code* is not a valid address.

     EINVAL
          The value specified in *flags* is nonzero.

     ENOMEM
          Allocating memory for handling the CPU capacity information failed.

     EOPNOTSUPP
          The value specified in *function_code* is not valid.

VERSIONS
     This system call is available since Linux 4.15.

CONFORMING TO
     This Linux-specific system call is available only on the s390 architecture.

NOTES
     Glibc does not provide a wrapper for this system call, use **syscall**(2) to call it.

     For details of the STHYI instruction, see the documentation page ⟨https://www.ibm.com/support
     /knowledgecenter/SSB27U_6.3.0/com.ibm.zvm.v630.hcpb4/hcpb4sth.htm⟩.

     When the system call interface is used, the response buffer doesn't have to fulfill alignment requirements
     described in the STHYI instruction definition.

The kernel caches the response (for up to one second, as of Linux 4.16). Subsequent system call invocations may return the cached response.

SEE ALSO

    syscall(2)

COLOPHON

    This page is part of release 5.05 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at https://www.kernel.org/doc/man−pages/.