AArch32
Registers

AArch64
Registers

AArch32
Instructions

AArch64
Instructions

Index by
Encoding

External
Registers

GCSPOPM, Guarded Control Stack Pop

The GCSPOPM characteristics are:

Purpose

Loads the 64-bit doubleword that is pointed to by the current Guarded control stack pointer, writes it to the destination register, and increments the current Guarded control stack pointer register by the size of a Guarded control stack procedure return record.

Configuration

This instruction is present only when FEAT_GCS is implemented. Otherwise, direct accesses to GCSPOPM are undefined.

Attributes

GCSPOPM is a 64-bit System instruction.

Field descriptions

63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32

| output for Guarded control stack procedure return record |
| output for Guarded control stack procedure return record |

31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Bits [63:0]

Output value for Guarded control stack procedure return record.

Executing GCSPOPM

Accesses to this instruction use the following encodings in the System instruction encoding space:

GCSPOPM <Xt>

op0	op1	CRn	CRm	op2
0b01	0b011	0b0111	0b0111	0b001

```
if PSTATE.EL == EL0 then
```

```
        X[t, 64] = GCSPOPM();
    elsif PSTATE.EL == EL1 then
        X[t, 64] = GCSPOPM();
    elsif PSTATE.EL == EL2 then
        X[t, 64] = GCSPOPM();
    elsif PSTATE.EL == EL3 then
        X[t, 64] = GCSPOPM();
```

28/03/2023 16:01; 72747e43966d6b97dcbd230a1b3f0421d1ea3d94