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## GCSPOPX, Guarded Control Stack Pop exception return record

The GCSPOPX characteristics are:

### Purpose

Loads an exception return record from the location indicated by the current Guarded control stack pointer register, checks that the record is a Guarded control stack exception return record, and increments the current Guarded control stack pointer register by the size of a Guarded control stack exception return record.

### Configuration

This instruction is present only when FEAT\_GCS is implemented. Otherwise, direct accesses to GCSPOPX are undefined.

### Attributes

GCSPOPX is a 64-bit System instruction.

### Field descriptions

This instruction has no applicable fields.

The value in the register specified by <Xt> is ignored.

### Executing GCSPOPX

Rt should be encoded as 0b11111. If the Rt field is not set to 0b11111, it is constrained unpredictable whether:

- The instruction is undefined.
- The instruction behaves as if the Rt field is set to 0b11111.

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

# GCSPOPX

op0	op1	CRn	CRm	op2
0b01	0b000	0b0111	0b0111	0b110

```
if PSTATE.EL == EL0 then
    UNDEFINED;
elsif PSTATE.EL == EL1 then
    GCSPOPX();
elsif PSTATE.EL == EL2 then
    GCSPOPX();
elsif PSTATE.EL == EL3 then
    GCSPOPX();
```

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