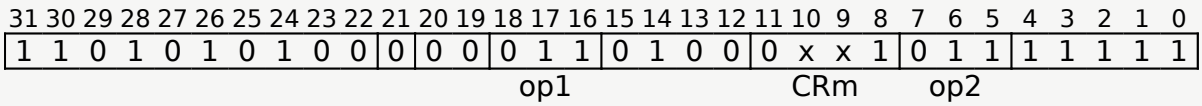
SMSTART

Enables access to Streaming SVE mode and SME architectural state.
SMSTART enters Streaming SVE mode, and enables the SME ZA storage.
SMSTART SM enters Streaming SVE mode, but does not enable the SME ZA storage.
SMSTART ZA enables the SME ZA storage, but does not cause an entry to Streaming SVE mode.

This is an alias of MSR (immediate). This means:

- The encodings in this description are named to match the encodings of MSR (immediate).
- The description of MSR (immediate) gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

System
(FEAT_SME)




```
SMSTART {<option>}
```

is equivalent to

```
MSR <pstatefield>, #1
```

and is always the preferred disassembly.

Assembler Symbols

<option>
Is an optional mode, encoded in “CRm<2:1>”:

CRm<2:1>	<option>
00	RESERVED
01	SM
10	ZA
11	[no specifier]

<pstatefield>

Is a PSTATE field name. For the MSR instruction, this is encoded in “op1:op2:CRm”:

op1	op2	CRm	<pstatefield>	Architectural Feature
000	00x	xxxx	SEE_PSTATE	–
000	010	xxxx	SEE_PSTATE	–
000	011	xxxx	UAO	FEAT_UAO
000	100	xxxx	PAN	FEAT_PAN
000	101	xxxx	SPSel	–
000	11x	xxxx	RESERVED	–
001	000	000x	ALLINT	FEAT_NMI
001	000	001x	PM	FEAT_EBEP
001	000	01xx	RESERVED	–
001	000	1xxx	RESERVED	–
001	001	xxxx	RESERVED	–
001	01x	xxxx	RESERVED	–
001	1xx	xxxx	RESERVED	–
010	xxx	xxxx	RESERVED	–
011	000	xxxx	RESERVED	–
011	001	xxxx	SSBS	FEAT_SSBS
011	010	xxxx	DIT	FEAT_DIT
011	011	000x	RESERVED	–
011	011	001x	SVCRSM	FEAT_SME
011	011	010x	SVCRZA	FEAT_SME
011	011	011x	SVCRSMZA	FEAT_SME
011	011	1xxx	RESERVED	–
011	100	xxxx	TCO	FEAT_MTE
011	101	xxxx	RESERVED	–
011	110	xxxx	DAIFSet	–
011	111	xxxx	DAIFClr	–
1xx	xxx	xxxx	RESERVED	–

For the SMSTART and SMSTOP aliases, this is encoded in "CRm<2:1>", where 0b01 specifies SVCRSM, 0b10 specifies SVCRZA, and 0b11 specifies SVCRSMZA.

Operation

The description of MSR (immediate) gives the operational pseudocode for this instruction.

Internal version only: isa v33.64, AdvSIMD v29.12, pseudocode no_diffs_2023_09_RC2, sve v2023-06_rel ; Build timestamp: 2023-09-18T17:56