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DC

Data Cache operation. For more information, see op0==0b01, cache maintenance, TLB maintenance, and address translation instructions.

This is an alias of **SYS**. This means:

- The encodings in this description are named to match the encodings of <u>SYS</u>.
- The description of <u>SYS</u> gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

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
1	1	0	1	0	1	0	1	0	0	0	0	1	op1	0	1	1	1	CRm			op2	2			Rt		
	CPn																										

```
DC <dc_op>, <Xt>
is equivalent to
    SYS #<op1>, C7, <Cm>, #<op2>, <Xt>
and is the preferred disassembly when
SysOp(op1,'0111',CRm,op2) == Sys_DC.
```

Assembler Symbols

<dc op>

Is a DC instruction name, as listed for the DC system instruction group, encoded in "op1:CRm:op2":

	CDm	on?	<dc op=""></dc>	Architectural
op1	CRm	- - -		Feature
000	0110	001	IVAC	-
000	0110	010	ISW	-
000	0110	011	IGVAC	FEAT_MTE2
000	0110	100	IGSW	FEAT_MTE2
000	0110	101	IGDVAC	FEAT_MTE2
000	0110	110	IGDSW	FEAT_MTE2
000	1010	010	CSW	_
000	1010	100	CGSW	FEAT_MTE2
000	1010	110	CGDSW	FEAT_MTE2
000	1110	010	CISW	_
000	1110	100	CIGSW	FEAT_MTE2
000	1110	110	CIGDSW	FEAT_MTE2
011	0100	001	ZVA	_
011	0100	011	GVA	FEAT_MTE
011	0100	100	GZVA	FEAT_MTE
011	1010	001	CVAC	_
011	1010	011	CGVAC	FEAT_MTE
011	1010	101	CGDVAC	FEAT_MTE
011	1011	001	CVAU	_
011	1100	001	CVAP	FEAT_DPB
011	1100	011	CGVAP	FEAT_MTE
011	1100	101	CGDVAP	FEAT_MTE
011	1101	001	CVADP	FEAT_DPB2
011	1101	011	CGVADP	FEAT_MTE
011	1101	101	CGDVADP	FEAT_MTE
011	1110	001	CIVAC	-
011	1110	011	CIGVAC	FEAT_MTE
011	1110	101	CIGDVAC	FEAT_MTE
100	1110	000	CIPAE	FEAT_MEC
100	1110	111	CIGDPAE	FEAT_MEC
110	1110	001	CIPAPA	FEAT_RME
110	1110	101	CIGDPAPA	FEAT_RME

<op1>

Is a 3-bit unsigned immediate, in the range 0 to 7, encoded in the "op1" field.

<cm></cm>	Is a name 'Cm', with 'm' in the range 0 to 15, encoded in the "CRm" field.
<op2></op2>	Is a 3-bit unsigned immediate, in the range 0 to 7, encoded in the "op2" field.
<xt></xt>	Is the 64-bit name of the general-purpose source register, encoded in the "Rt" field.

Operation

The description of $\underline{\text{SYS}}$ gives the operational pseudocode for this instruction.

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

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