

## OSLAR\_EL1, OS Lock Access Register

The OSLAR\_EL1 characteristics are:

### Purpose

Used to lock or unlock the OS Lock.

### Configuration

AArch64 System register OSLAR\_EL1 bits [31:0] are architecturally mapped to External register [OSLAR\\_EL1\[31:0\]](#).

The OS Lock can also be locked or unlocked using [DBGOSLAR](#).

### Attributes

OSLAR\_EL1 is a 64-bit register.

### 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
RES0																															
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
RES0																															OSLK

#### Bits [63:1]

Reserved, res0.

#### OSLK, bit [0]

On writes to OSLAR\_EL1, bit[0] is copied to the OS Lock.

Use [OSLSR\\_EL1](#).OSLK to check the current status of the lock.

### Accessing OSLAR\_EL1

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

## MSR OSLAR\_EL1, <Xt>

op0	op1	CRn	CRm	op2
0b10	0b000	0b0001	0b0000	0b100

```
if PSTATE.EL == EL0 then
    UNDEFINED;
elsif PSTATE.EL == EL1 then
    if Halted() && HaveEL(EL3) && EDSCR.SDD == '1'
    && boolean IMPLEMENTATION_DEFINED "EL3 trap priority
    when SDD == '1'" && MDCR_EL3.TDOSA == '1' then
        UNDEFINED;
    elsif EL2Enabled() &&
    IsFeatureImplemented(FEAT_FGT) && (!HaveEL(EL3) ||
    SCR_EL3.FGTEn == '1') && HDFGWTR_EL2.OSLAR_EL1 ==
    '1' then
        AArch64.SystemAccessTrap(EL2, 0x18);
    elsif EL2Enabled() && MDCR_EL2.<TDE,TDOSA> !=
    '00' then
        AArch64.SystemAccessTrap(EL2, 0x18);
    elsif HaveEL(EL3) && MDCR_EL3.TDOSA == '1' then
        if Halted() && EDSCR.SDD == '1' then
            UNDEFINED;
        else
            AArch64.SystemAccessTrap(EL3, 0x18);
        else
            OSLAR_EL1 = X[t, 64];
    elsif PSTATE.EL == EL2 then
        if Halted() && HaveEL(EL3) && EDSCR.SDD == '1'
        && boolean IMPLEMENTATION_DEFINED "EL3 trap priority
        when SDD == '1'" && MDCR_EL3.TDOSA == '1' then
            UNDEFINED;
        elsif HaveEL(EL3) && MDCR_EL3.TDOSA == '1' then
            if Halted() && EDSCR.SDD == '1' then
                UNDEFINED;
            else
                AArch64.SystemAccessTrap(EL3, 0x18);
            else
                OSLAR_EL1 = X[t, 64];
    elsif PSTATE.EL == EL3 then
        OSLAR_EL1 = X[t, 64];
```

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