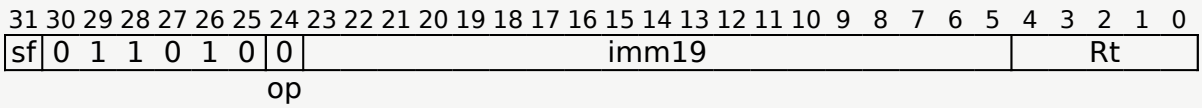
CBZ

Compare and Branch on Zero compares the value in a register with zero, and conditionally branches to a label at a PC-relative offset if the comparison is equal. It provides a hint that this is not a subroutine call or return. This instruction does not affect condition flags.



32-bit (sf == 0)

```
CBZ <Wt>, <label>
```

64-bit (sf == 1)

```
CBZ <Xt>, <label>
```

```
integer t = UInt(Rt);
constant integer datasize = 32 << UInt(sf);
bits(64) offset = SignExtend(imm19:'00', 64);
```

Assembler Symbols

<Wt>	Is the 32-bit name of the general-purpose register to be tested, encoded in the "Rt" field.
<Xt>	Is the 64-bit name of the general-purpose register to be tested, encoded in the "Rt" field.
<label>	Is the program label to be conditionally branched to. Its offset from the address of this instruction, in the range +/-1MB, is encoded as "imm19" times 4.

Operation

```
bits(datasize) operand1 = X[t, datasize];
if IsZero(operand1) == TRUE then
    BranchTo(PC64 + offset, BranchType_DIR, TRUE);
else
    BranchNotTaken(BranchType_DIR, TRUE);
```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