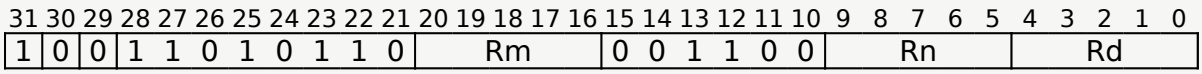
PACGA

Pointer Authentication Code, using Generic key. This instruction computes the pointer authentication code for a 64-bit value in the first source register, using a modifier in the second source register, and the Generic key. The computed pointer authentication code is written to the most significant 32 bits of the destination register, and the least significant 32 bits of the destination register are set to zero.

Integer
(FEAT_PAuth)



PACGA <Xd>, <Xn>, <Xm|SP>

```
boolean source_is_sp = FALSE;
integer d = UInt(Rd);
integer n = UInt(Rn);
integer m = UInt(Rm);

if !IsFeatureImplemented(FEAT_PAuth) then
    UNDEFINED;

if m == 31 then source_is_sp = TRUE;
```

Assembler Symbols

<Xd>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Xn>	Is the 64-bit name of the first general-purpose source register, encoded in the "Rn" field.
<Xm|SP>	Is the 64-bit name of the second general-purpose source register or stack pointer, encoded in the "Rm" field.

Operation

```
if source_is_sp then
    X[d, 64] = AddPACGA(X[n, 64], SP[]);
else
    X[d, 64] = AddPACGA(X[n, 64], X[m, 64]);
```


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