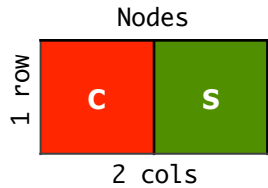
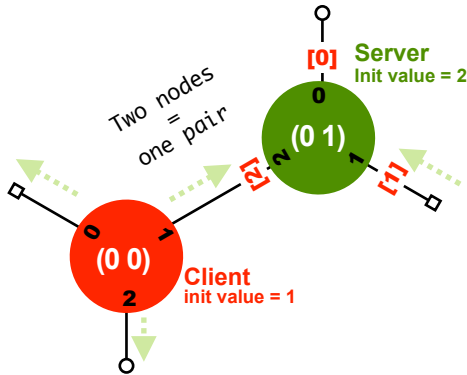


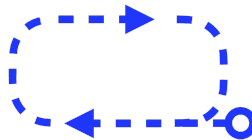
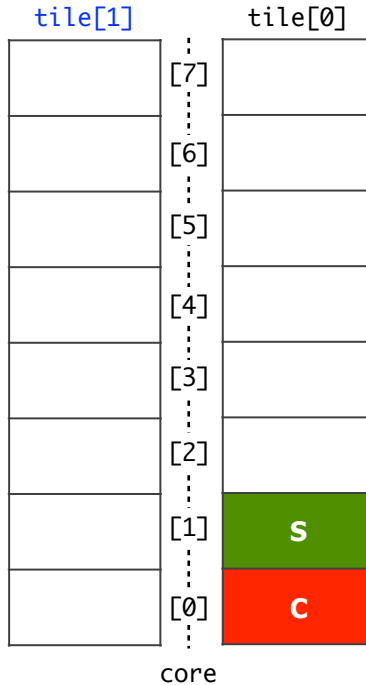
TOP_01_HAS_1_TILE_002_NODE_T0_2N_RUNS



```
typedef interface conn_if_t {
    {pos_t, unsigned} do_io_server
        (const unsigned value_to);
} conn_if_t;
```



TOP_01 RUNS

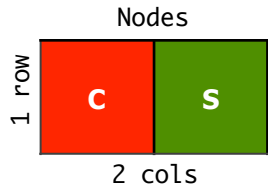


```
Console
<terminated> _xc_test_combinable.xc [xCORE Application] xrun (17:01 16)
(0 1):S[2]
(0 0):C[1] = 0.0.2 - 0.0.0 - 0.0.1 as Top_01 runs (_xc_test_
(0 1):s( 0) 2 5 with [ 1] [ 1] [ 1]
(0 0):c( 0) 1 7 with [ 2] [ 2] [ 2] from
(0 1):s( 1) 5 26 with [ 7] [ 7] [ 7]
(0 0):c( 1) 7 22 with [ 5] [ 5] [ 5] from
(0 1):s( 2) 26 92 with [ 22] [ 22] [ 22]
(0 0):c( 2) 22 100 with [ 26] [ 26] [ 26] from
(0 1):s( 3) 92 392 with [ 100] [ 100] [ 100]
(0 0):c( 3) 100 376 with [ 92] [ 92] [ 92] from
(0 1):s( 4) 392 1520 with [ 376] [ 376] [ 376]
(0 0):c( 4) 376 1552 with [ 392] [ 392] [ 392] from
(0 1):s( 5) 1520 6176 with [ 1552] [ 1552] [ 1552]
(0 0):c( 5) 1552 6112 with [ 1520] [ 1520] [ 1520] from
(0 1):s( 6) 6176 24512 with [ 6112] [ 6112] [ 6112] from
(0 0):c( 6) 24512 98144 with [ 24512] [ 24512] [ 24512] from
forever
```

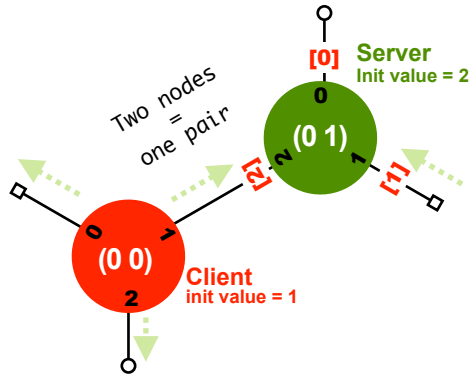
par
 Client core[0]
 Server core[1]

```
Constraint check for tile[0]:
Cores available:      8,    used:    2 OKAY
Timers available:    10,    used:    2 OKAY
Chanends available:  32,    used:    4 OKAY
Memory available:   262144, used: 2916 OKAY
(Stack: 616, Code: 2030, Data: 270)
Constraints checks PASSED.
```

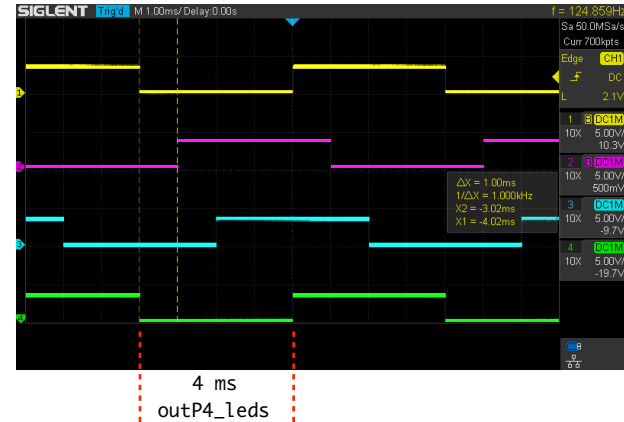
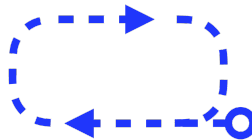
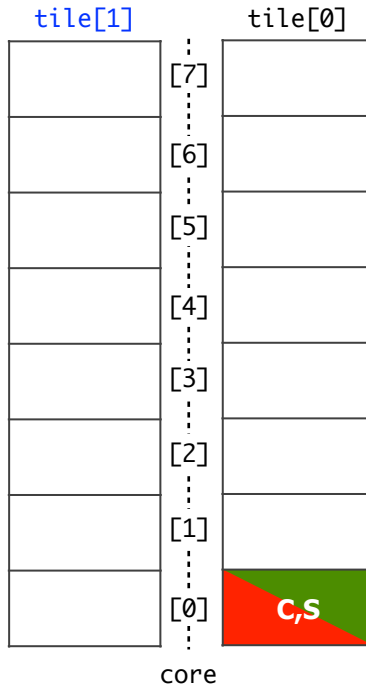
TOP_07_HAS_1_TILE_002_NODE_T0_2CN_RUNS



```
typedef interface conn_if_t {
    {pos_t, unsigned} do_io_server
    (const unsigned value_to);
} conn_if_t;
```



TOP_07 RUNS



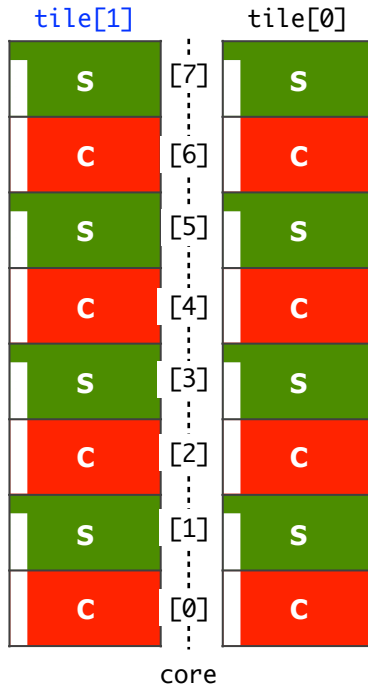
[[combine]]
par on core [0]
Client
Server

Constraint check for tile[0]:

Cores available:	8,	used:	1 OKAY
Timers available:	10,	used:	1 OKAY
Chanends available:	32,	used:	0 OKAY
Memory available:	262144,	used:	3180 OKAY
(Stack: 632, Code: 2246, Data: 302)			

Constraints checks PASSED.

TOP_02_HAS_2_TILE_016_NODE_T0_4P_T1_4P_RUNS

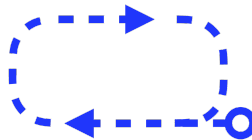


```

par
  on tile[0]:
    par
      Client+Server pair:
      par
        Client core[0]
        Server core[1]
      par (for 1 pair)
        Client+Server pair:
        par
          Client core[2]
          Server core[3]
        par (for 1 row)
          par (for 2 pairs)
            Client+Server pair:
            par
              Client core[4][6]
              Server core[5][7]
    on tile[1]:
      par (for 4 rows)
        par (for 2 pairs)
          Client+Server pair:
          par
            Client core[0][2][4][6]
            Server core[1][3][5][7]

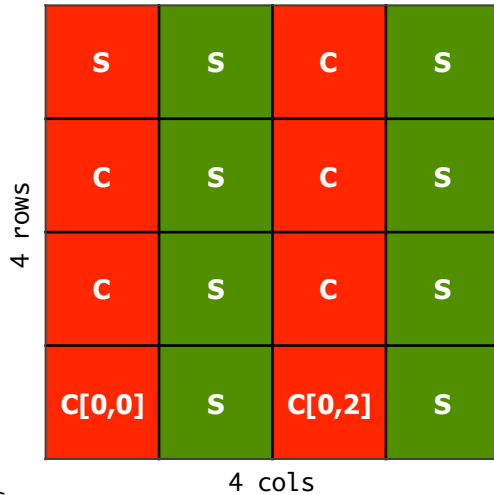
```

TOP_02 RUNS

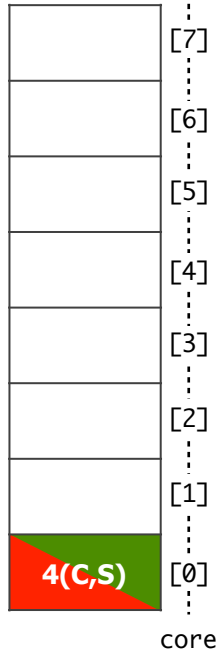


TOP_03_HAS_2_TILE_016_NODE_T0_2N_AS_CC_6CN_T1_8CN_RUNS

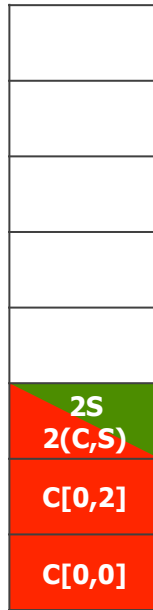
Nodes



tile[1]



tile[0]



par

on tile[0]:

par

Client core[0] (0 0)

Client core[1] (0 2)

[[combine]]

par core [2]

Server (0 1)

Server (0 3)

Client (1 0)

Server (1 1)

Client (1 2)

Server (1 3)

on tile[1]:

[[combine]]

par 8CN core[0]

Client (2 0)

Server (2 1)

Client (2 2)

Server (2 3)

Client (3 0)

Server (3 1)

Client (3 2)

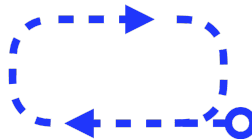
Server (3 3)

For logging:

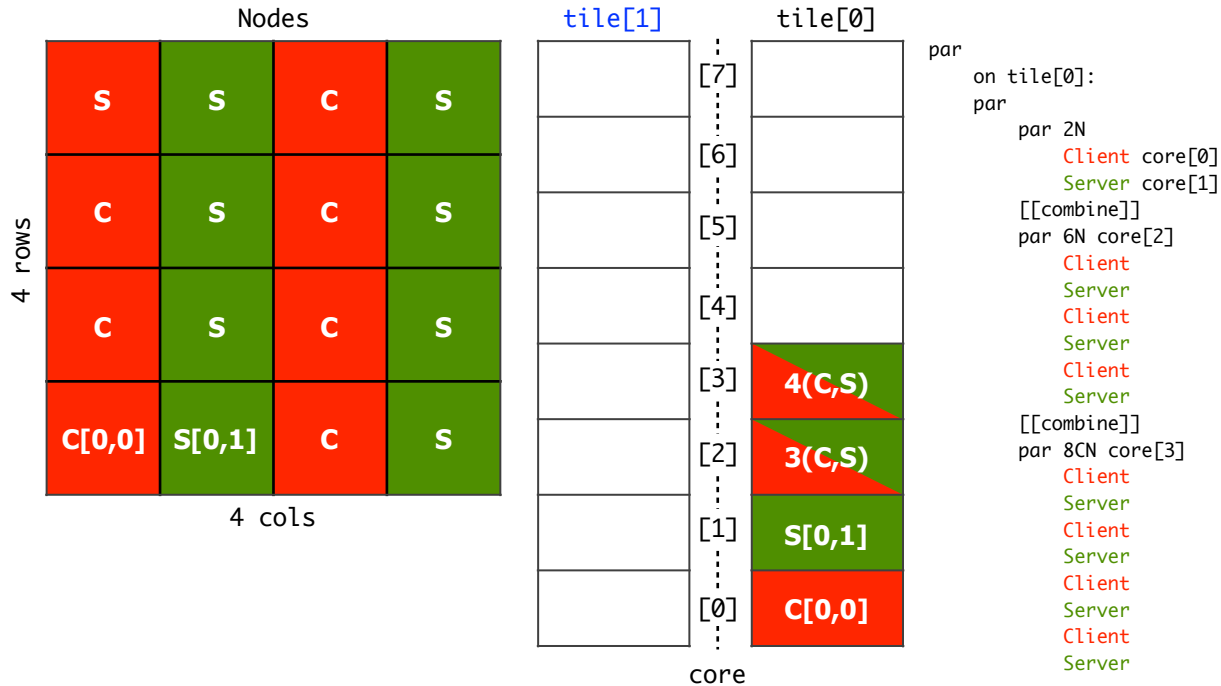
```
typedef interface conn_if_t {
    {pos_t, unsigned} do_io_server (
        const unsigned value_to,
        const pos_t pos,
        const unsigned call_cnt);
} conn_if_t;
```

Not fair

TOP_03 RUNS

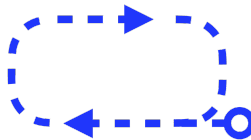


TOP_04_HAS_1_TILE_016_NODE_T0_2N_AS_CS_6CN_8CN_RUNS

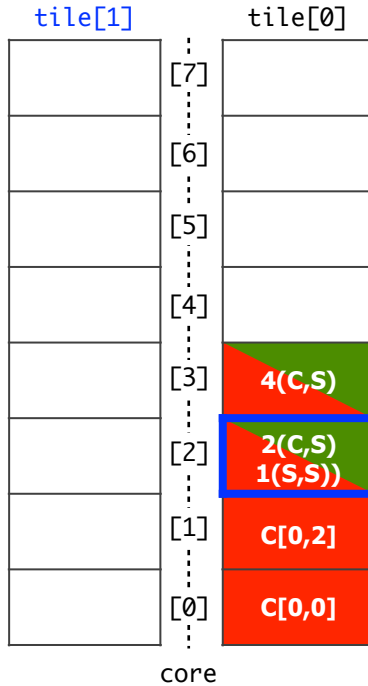
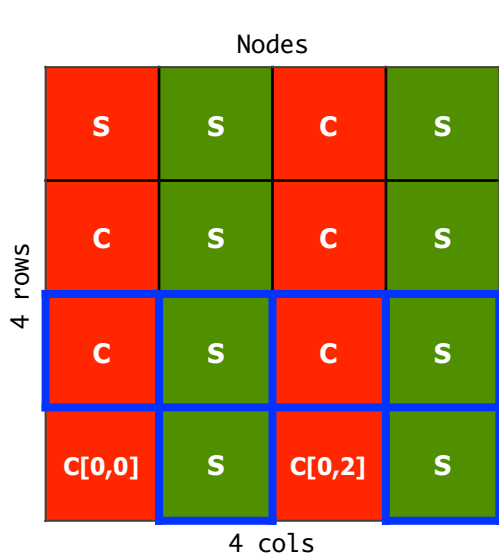


Not fair at start

TOP_04 RUNS



TOP_08_HAS_1_TILE_016_NODE_T0_2N_AS_CC_6CN_8CN_RUNS



```

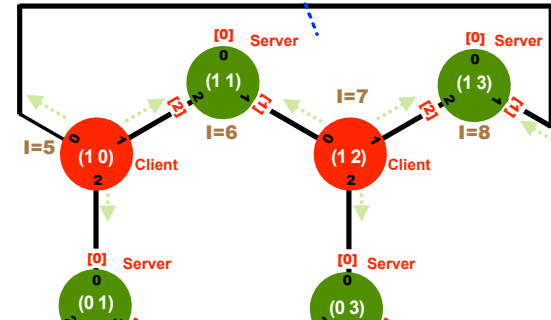
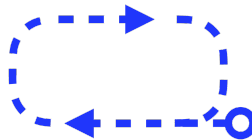
par
  on tile[0]:
    par
      par 2N
        Client(0 0) core[0]
        Client(0 2) core[1]
      [[combine]]
      par 6N core[2]
        Server(0 1)
        Server(0 3)
        Client(1 0)
        Server(1 1)
        Client(1 2)
        Server(1 3)
      [[combine]]
      par 8CN core[3]
        Client(2 0)
        Server(2 1)
        Client(2 2)
        Server(2 3)
        Client(3 0)
        Server(3 1)
        Client(3 2)
        Server(3 3)
    
```

#define DELTA_TIME_US 0

Only these scheduled

Very NotFair (delay = 0 ms)

TOP_08 RUNS



TOP_05_HAS_1_TILE_016_NODE_T0_2N_14CN_RUNS

Nodes

4 rows

S	S	C	S
C	S	C	S
C	S	C	S
C[0,0]	S[0,1]	C	S

4 cols

tile[1]

	[7]
	[6]
	[5]
	[4]
	[3]
	[2]
	[1]
	[0]

core

tile[0]

7(C,S)
S[0,1]
C[0,0]

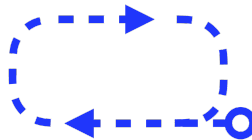
par

```

on tile[0]:
  par 2N
    Client core[0]
    Server core[1]
  [[combine]]
  on tile[0]:
    par 14CN core[2]
      Client
      Server
      Client
      Server
      Client
      Server
      Client
      Server
      Client
      Server
      Client
      Server

```

TOP_05 RUNS

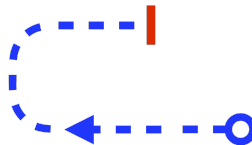


TOP_06_HAS_1_TILE_032_NODE_T0_2N_30CN_RUNS

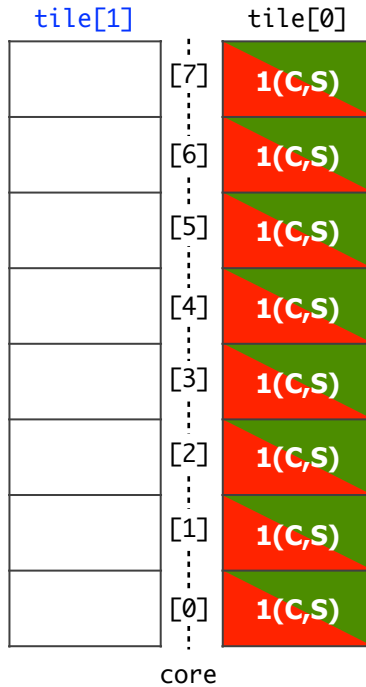
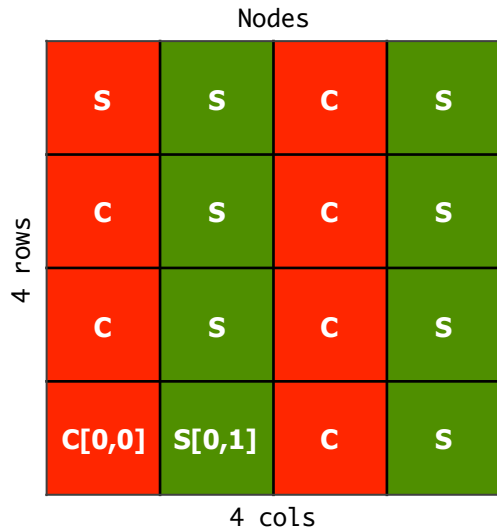



```
Console [x]
_xc_test_combinable.xc [xCORE Application] xrun (16:46 16.02.21)
(0 1):S[2]
(0 2):C[3] = 0.0.1 - 0.1.2 - 3.1.0
(0 0):C[1] = 0.1.1 - 0.0.2 - 3.0.0 as Top_11 stops (_xc_test_combinable.xc compiled on Feb 16 2021 16:46:12)
(3 2):C[15] = 3.0.1 - 3.1.2 - 2.1.0
(1 0):C[5] = 1.1.1 - 1.0.2 - 0.0.0
(1 2):C[7] = 1.0.1 - 1.1.2 - 0.1.0
(2 0):C[9] = 2.1.1 - 2.0.2 - 1.0.0
(2 2):C[11] = 2.0.1 - 2.1.2 - 1.1.0
(3 0):C[13] = 3.1.1 - 3.0.2 - 2.0.0
(0 3):S[4]
(3 3):S[16]
(1 1):S[6]
(1 3):S[8]
(2 1):S[10]
(2 3):S[12]
(3 1):S[14]
```

TOP_10.. STOP



TOP_10_HAS_1_TILE_016_NODE_T0_16CN_STOPS

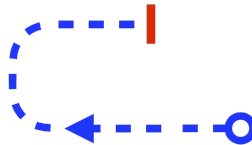


```

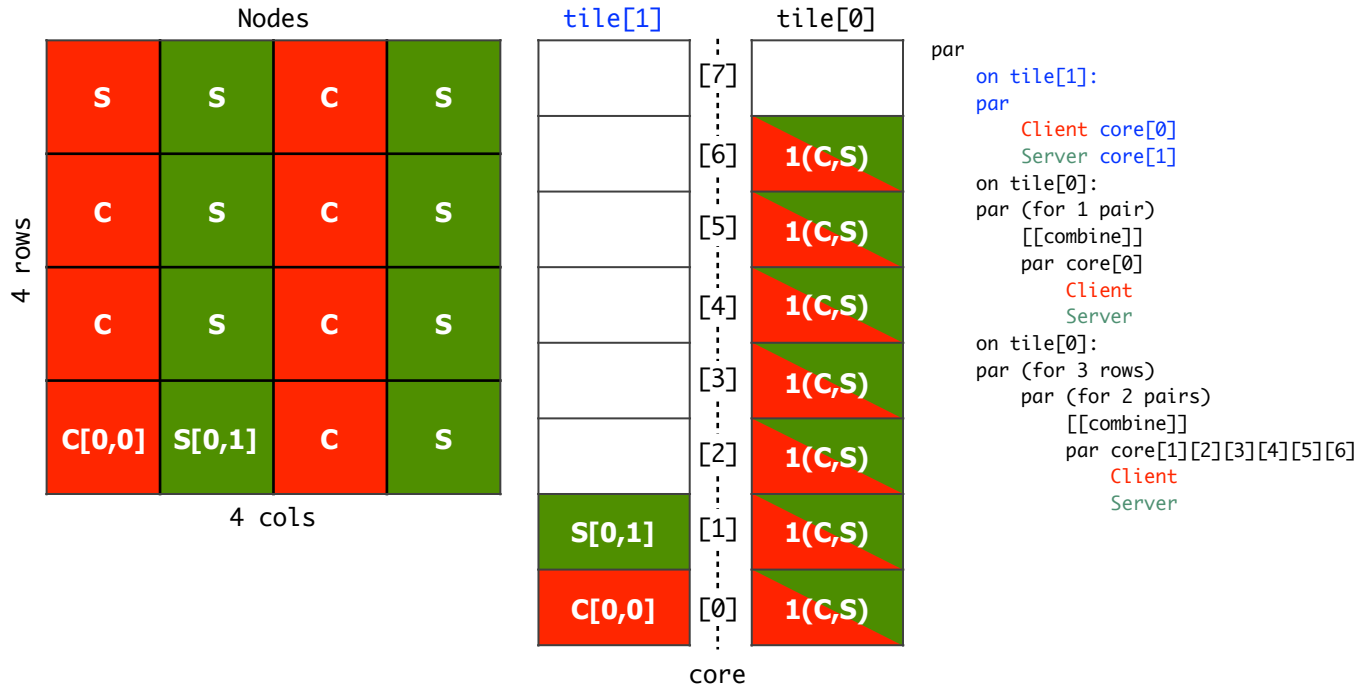
par
  on tile[0]:
    [[combine]]
    par 2CN core[0]
      Client
      Server
    [[combine]]
    par 2CN core[1]
      Client
      Server
    par (for 3 rows)
      par (for 2 pairs)
        [[combine]]
        par core[2][3][4][5][6][7]
          Client
          Server

```

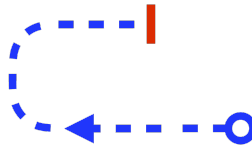
TOP_10 STOPS



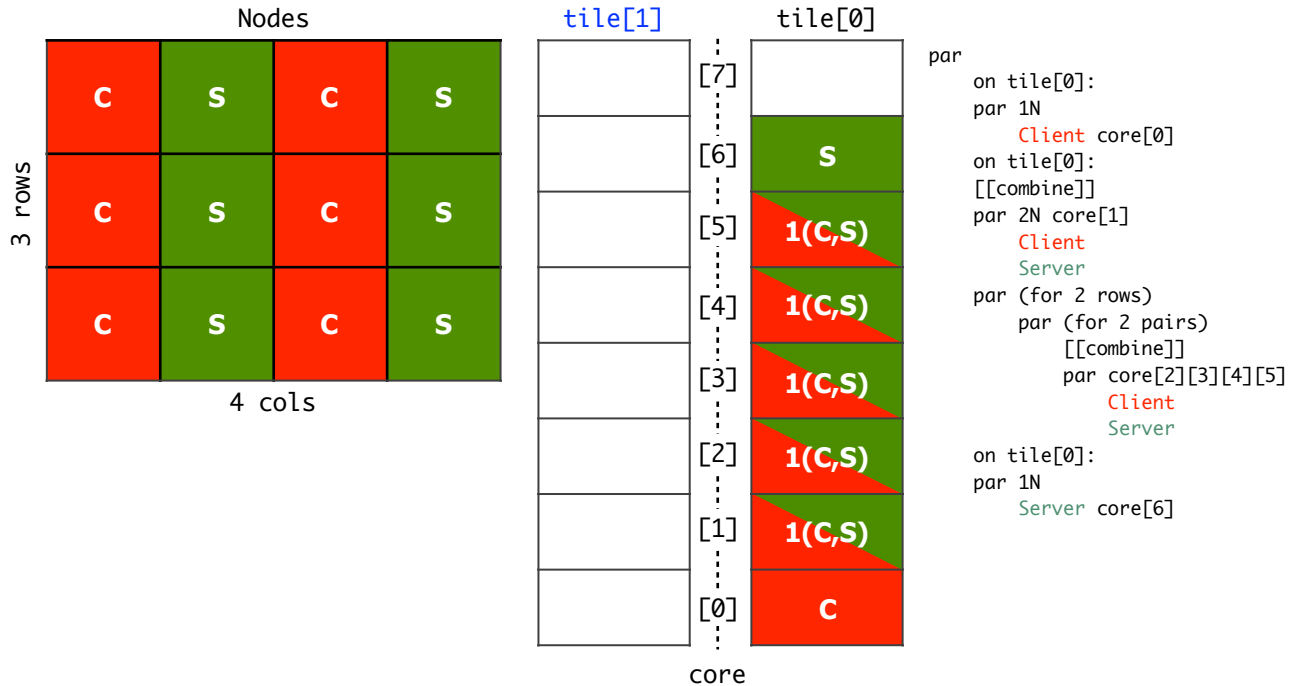
TOP_11_HAS_2_TILE_016_NODE_T0_2CN_12CN_T1_2N_STOPS



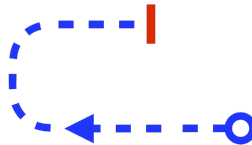
TOP_11 STOPS



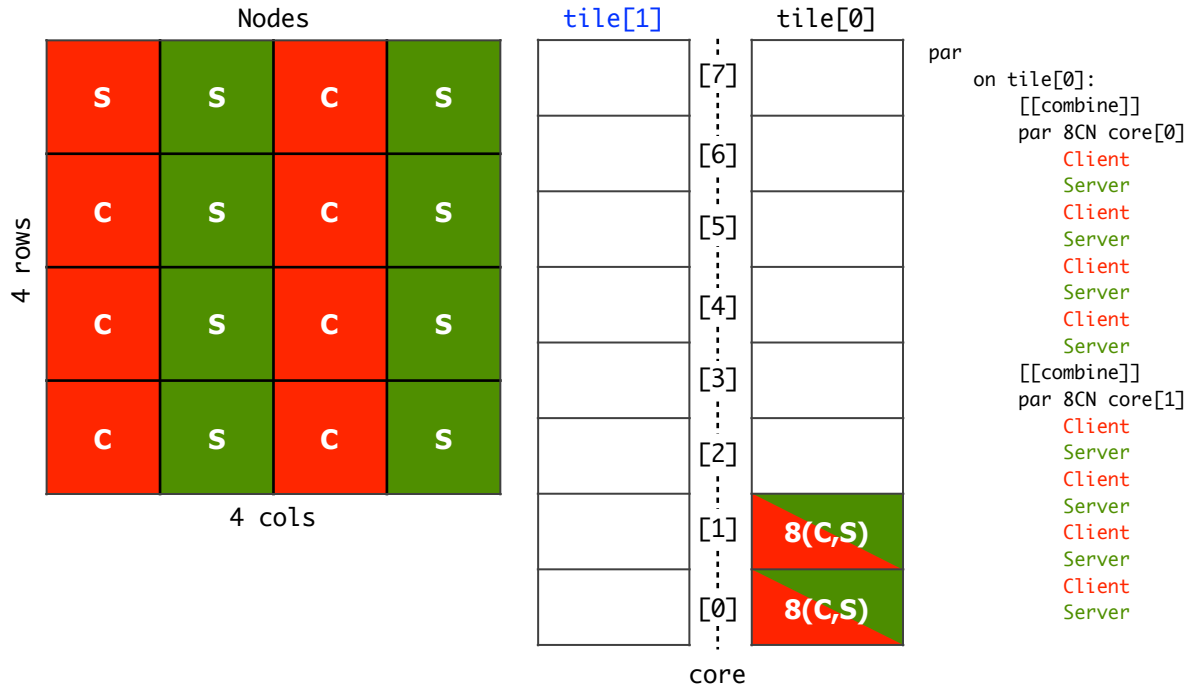
TOP_12_HAS_1_TILE_012_NODE_T0_1N_2CN_8CN_1N_STOPS



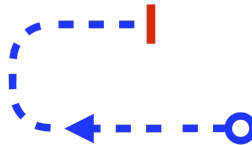
TOP_12 STOPS



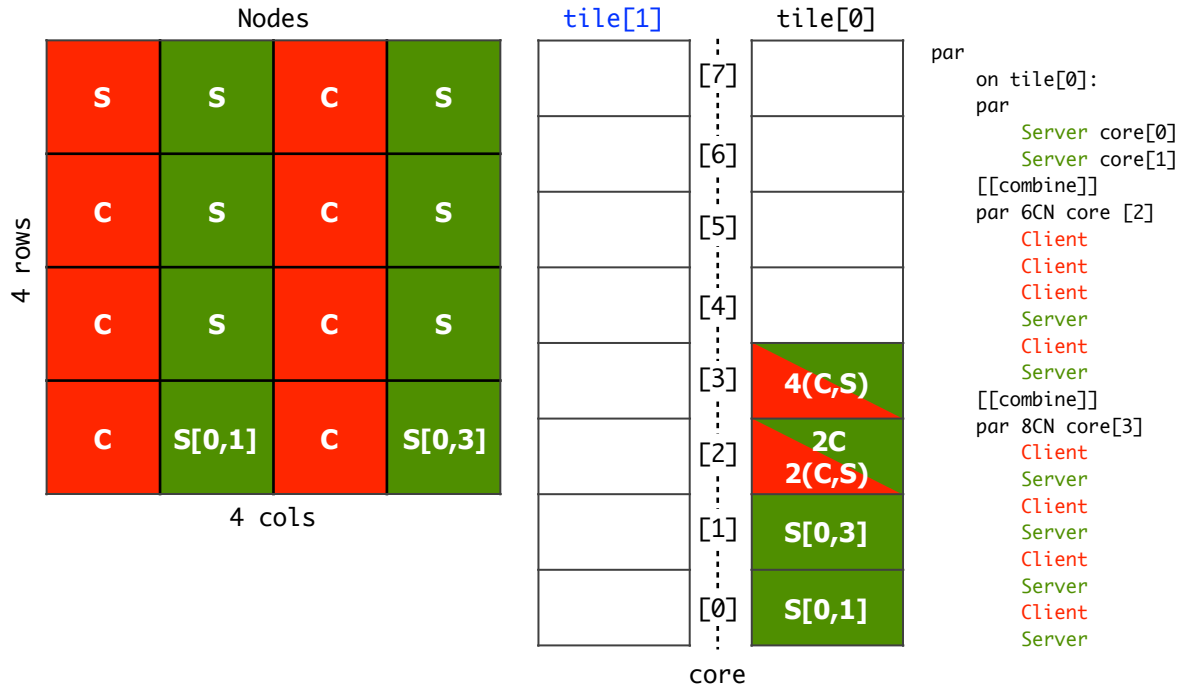
TOP_13_HAS_1_TILE_016_NODE_T0_8CN_8CN_STOPS



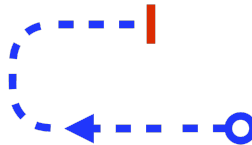
TOP_13 STOPS



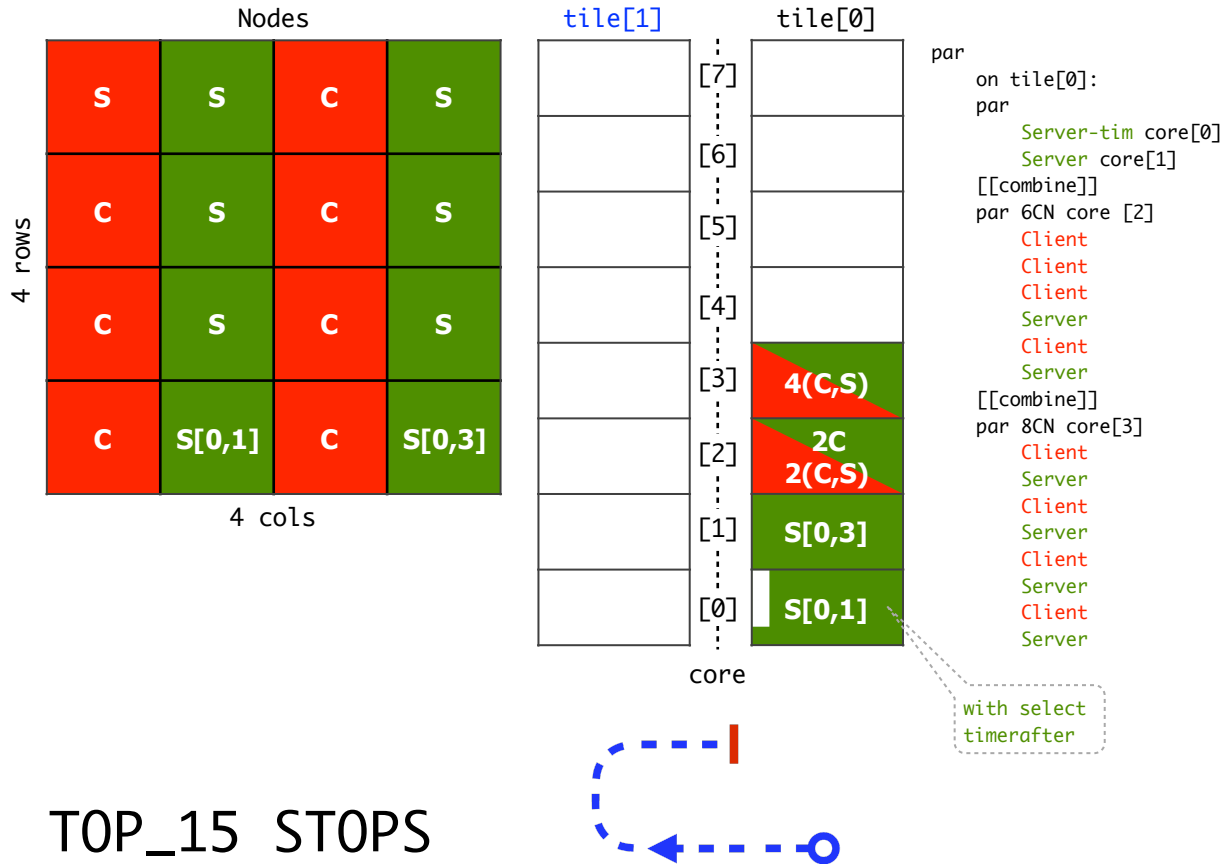
TOP_14_HAS_1_TILE_016_NODE_T0_2N_AS_SS_6CN_8CN_STOPS



TOP_14 STOPS



TOP_15_HAS_1_TILE_016_NODE_T0_2N_AS_SS_6CN_8CN_STOPS

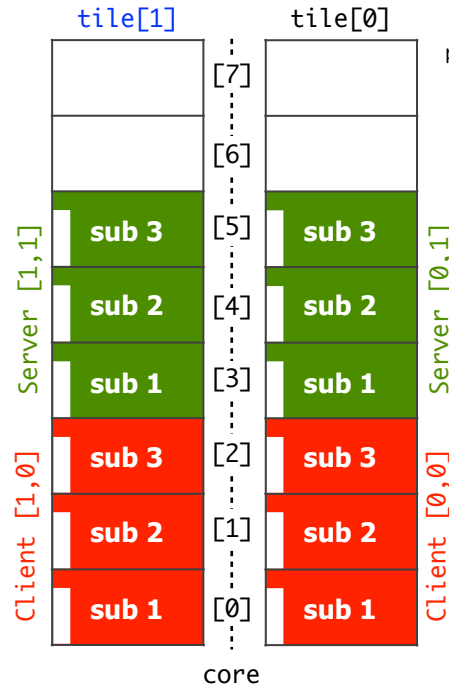
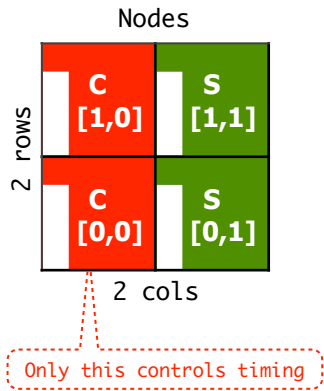


TOP_15 STOPS

Aside:
leaving the problem of `[[combinable]]` run vs. stop

Fair and in
synchrony
runs

TOP_20_OCCAM_LIKE_IS_FAIR



```

par
  on tile[0]:
    par
      Client [0,0]
      par
        subtask 1 on core[0]
        subtask 2 on core[1]
        subtask 1 on core[2]
      Server [0,1]
    par
      subtask 1 on core[3]
      subtask 2 on core[4]
      subtask 1 on core[5]
  on tile[1]:
    par
      Client [1,0]
      par
        subtask 1 on core[0]
        subtask 2 on core[1]
        subtask 1 on core[2]
      Server [1,1]
    par
      subtask 1 on core[3]
      subtask 2 on core[4]
      subtask 1 on core[5]
  
```

TOP_20 IS FAIR

& runs

All act in fair synchrony

Assembled and drawn by
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Trondheim, Norway
4Mar2021 for
"My XC combined combinable notes"

@
<https://www.teigfam.net/oyvind/home/technology/217-my-xc-combined-combinable-notes/>

Coded on XMOS xTIMEcomposer 14.4.1