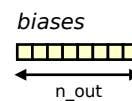
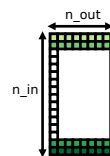
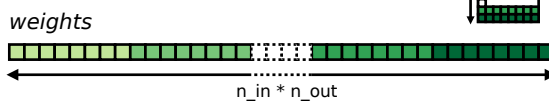
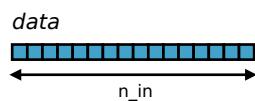


$n_{in} = 16$
 $n_{out} = 8$



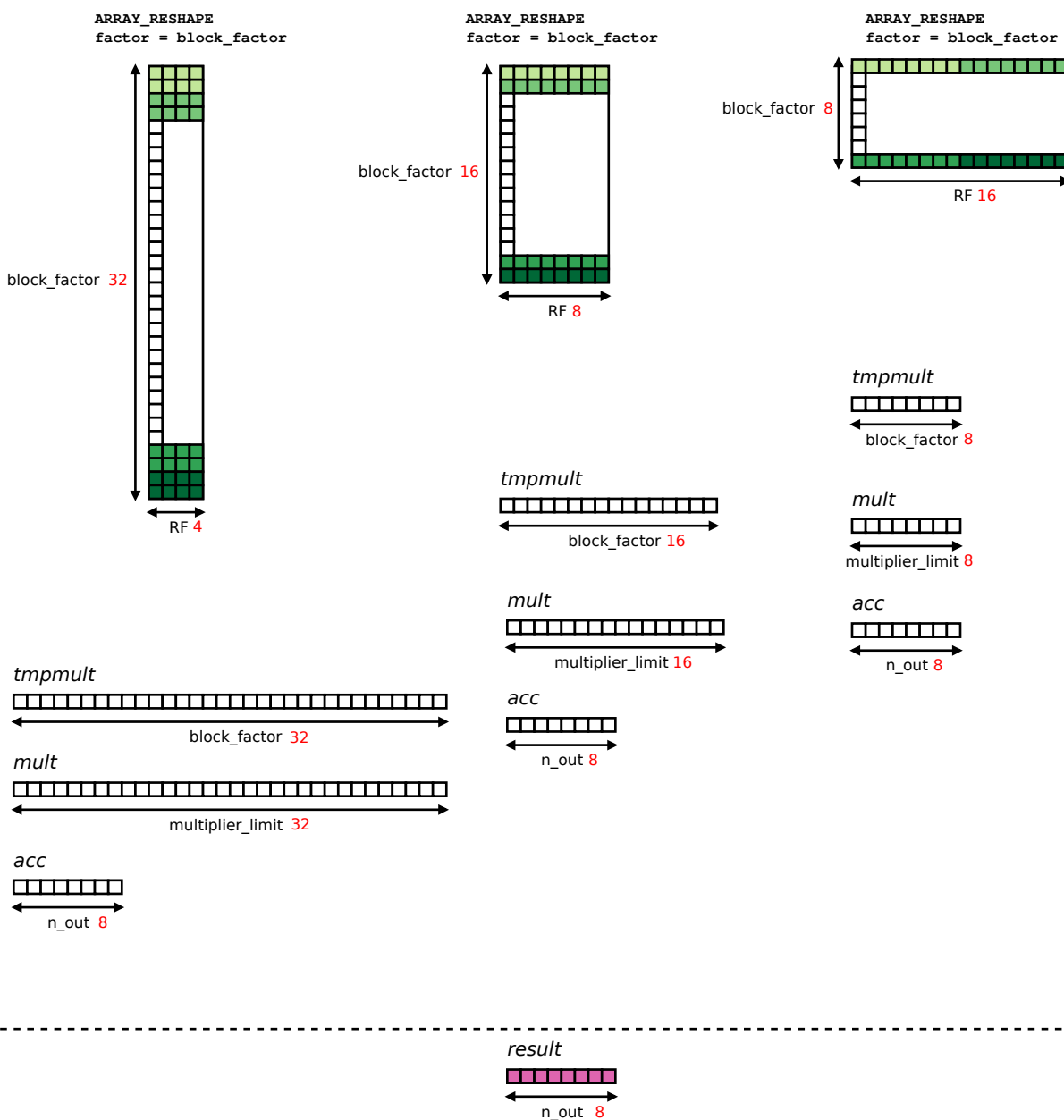
$$block_factor = \left\lceil \frac{n_{in} * n_{out}}{RF} \right\rceil$$

$$multiplier_limit = \left\lceil \frac{n_{in} * n_{out}}{\min(n_{in}, RF)} \right\rceil$$

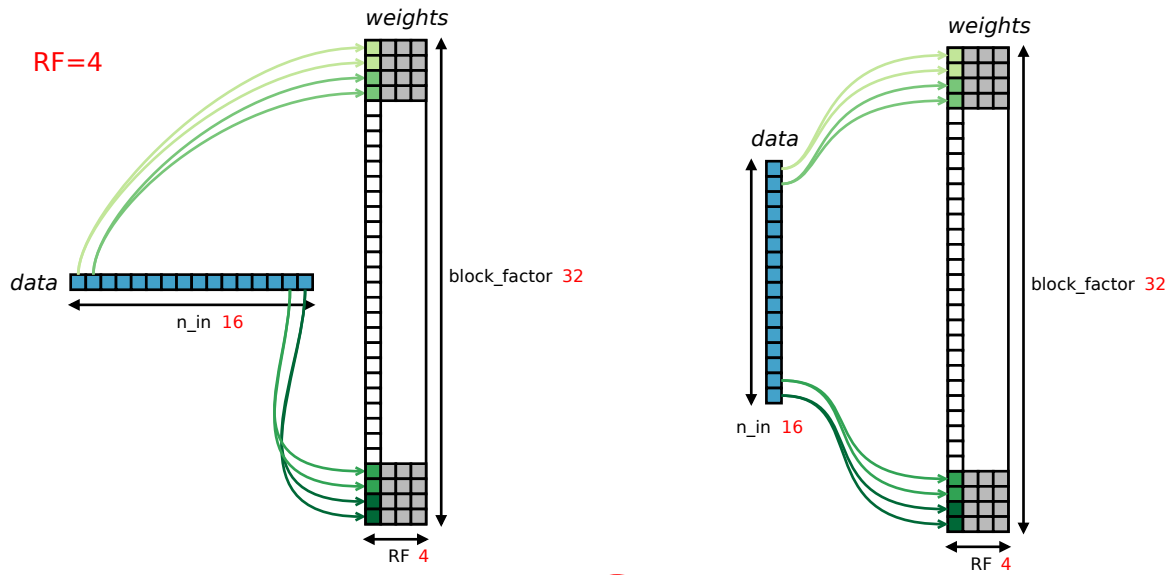
RF=4

RF=8

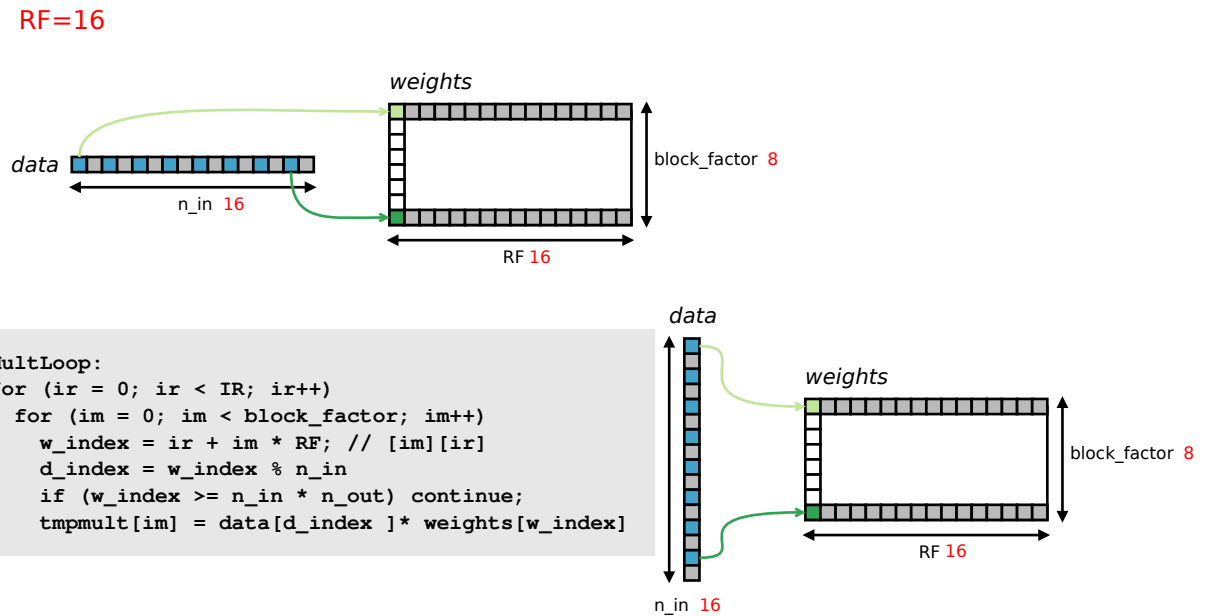
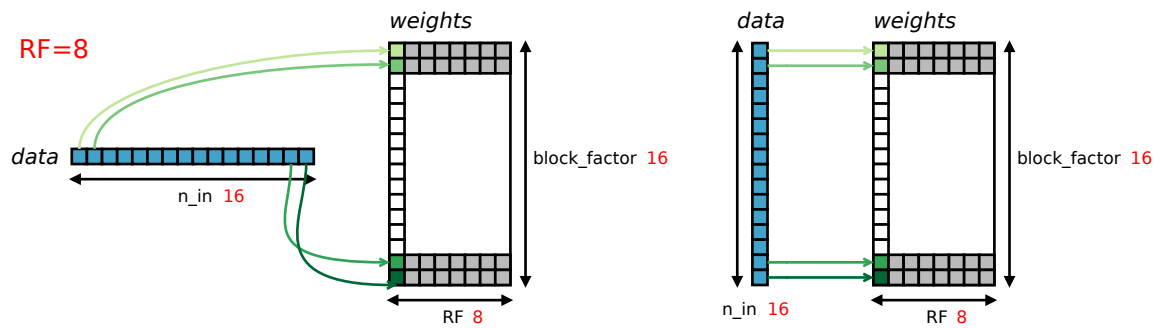
RF=16



Two different visualizations of MultLoop



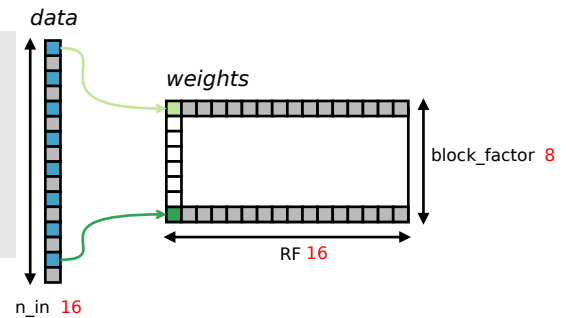
DEPRECATED



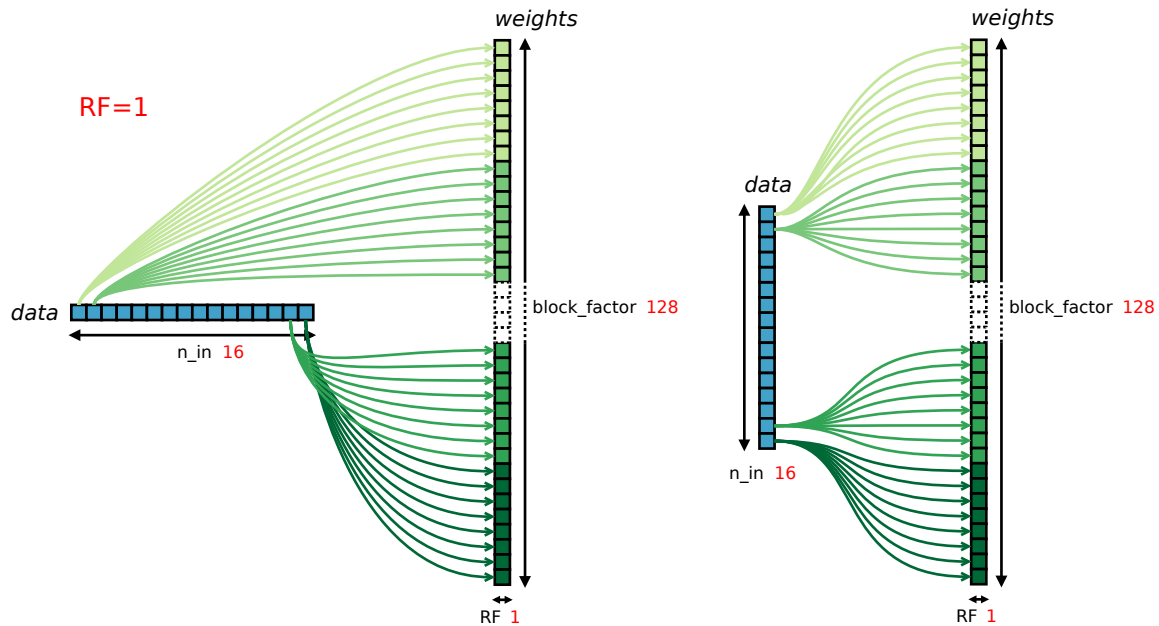
```

MultLoop:
for (ir = 0; ir < IR; ir++)
  for (im = 0; im < block_factor; im++)
    w_index = ir + im * RF; // [im][ir]
    d_index = w_index % n_in
    if (w_index >= n_in * n_out) continue;
    tmpmult[im] = data[d_index] * weights[w_index]

```



Two extreme situations: (RF = 1, block_factor = 128) and (RF = 128, block_factor = 1)

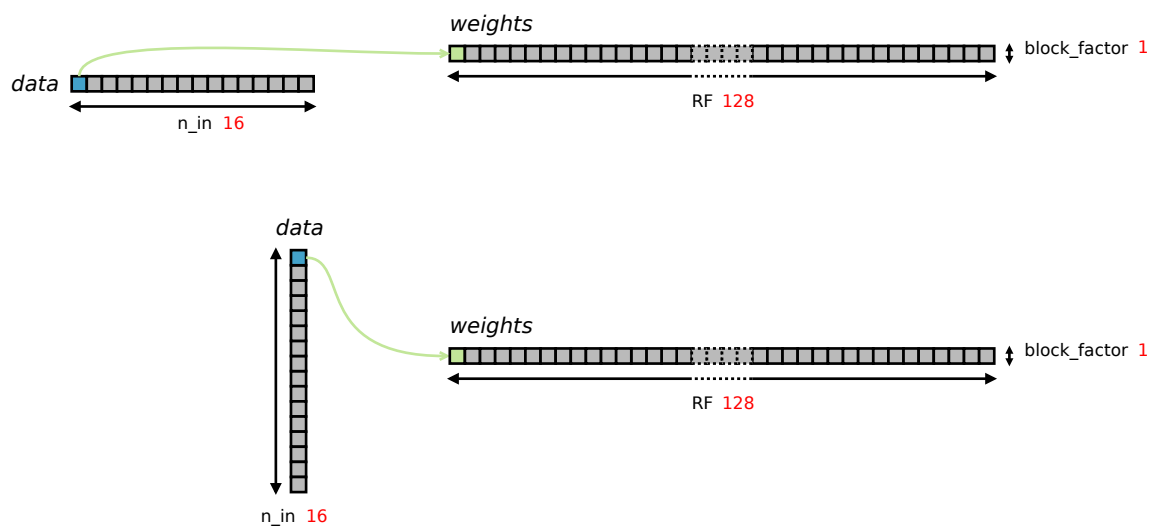


DEPRECATED

```

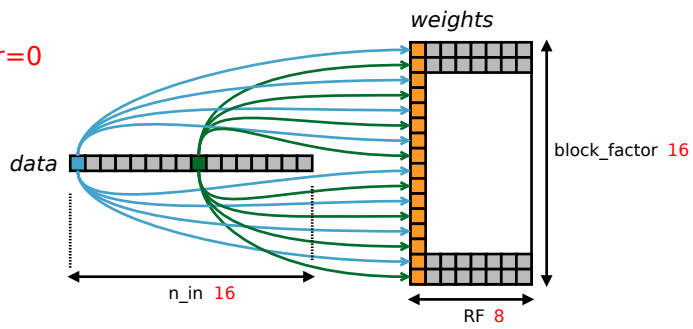
MultLoop:
for (ir = 0; ir < IR; ir++)
  for (im = 0; im < block_factor; im++)
    w_index = ir + im * RF; // [im][ir]
    d_index = w_index % n_in
    if (w_index >= n_in * n_out) continue;
    tmpmult[im] = data[d_index] * weights[w_index]
  
```

RF=128

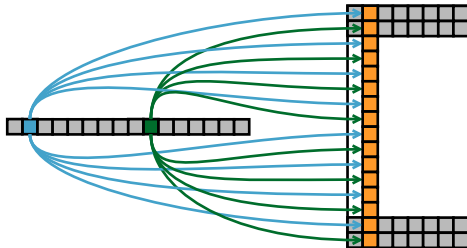


RF=8

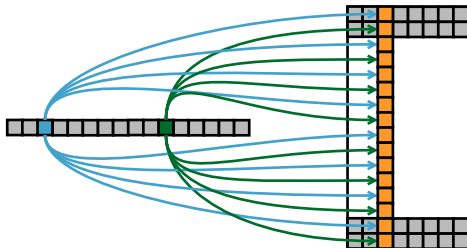
ir=0



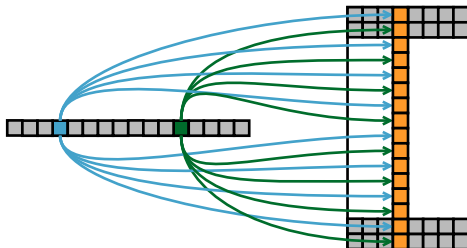
ir=1



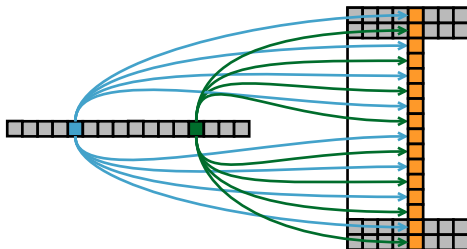
ir=2



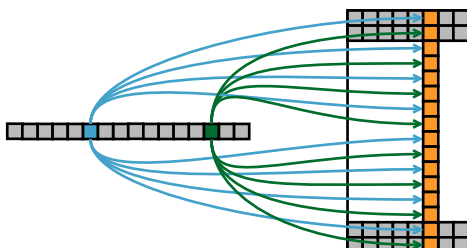
ir=3



ir=4

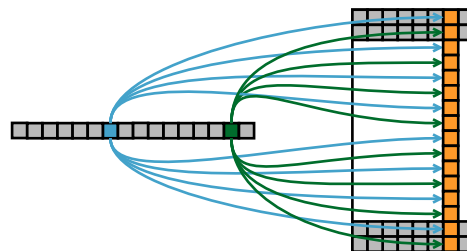


ir=5



```
MultiLoop:
for (ir = 0; ir < IR; ir++)
  for (im = 0; im < block_factor; im++)
    w_index = ir + im * RF;
    d_index = w_index % n_in;
    if (w_index >= n_in * n_out) continue;
    tmpmult[im] = data[d_index] * weights[w_index]
```

ir=6



ir=7

