

## Current Worker-Admin Scheme

| Worker  |       |      |       | Worker Actions                               | Administrator Actions                             | Administrator          |       |      |       |         |       |       |
|---------|-------|------|-------|--|---|------------------------|-------|------|-------|---------|-------|-------|
| Alloc'd | Map'd | Full | A+M+F |  |   | Alloc'd                | Map'd | Full | Empty | Level 3 | A+M+F | Total |
| 0       | 16    | 16   | 32    | Processing event                             | read empty buffer                                 | 0                      | 16    | 16   | 32    | 0       | 32    | 64    |
| 0       | 16    | 16   | 32    | -----> Send                                  | results ----->                                    | 0                      | 16    | 16   | 32    | 0       | 32    | 64    |
| 0       | 16    | 16   | 32    | <b>What happens if<br/>an event arrives?</b> | Send results to HWFW                              | 0                      | 16    | 16   | 32    | 0       | 32    | 64    |
| 0       | 16    | 16   | 32    |  | Pop full & push L3                                | 0                      | 16    | 15   | 32    | 1       | 31    | 64    |
| 0       | 16    | 16   | 32    |  | Get HWFW decision                                 | 0                      | 16    | 15   | 32    | 1       | 31    | 64    |
| 0       | 16    | 16   | 32    |  | <----- Order "allocate this buffer and go" <----- | 0                      | 16    | 15   | 32    | 1       | 31    | 64    |
| 1       | 16    | 15   | 32    |  | Pop full & push alloc                             | Pop empty & push alloc | 1     | 16   | 15    | 31      | 1     | 32    |
| 1       | 16    | 15   | 32    | Process next event                           | Start event checks                                | 1                      | 16    | 15   | 31    | 1       | 32    | 64    |

## Proposed Worker-Admin Scheme

| Worker  |       |      |       | Worker Actions                                    | Administrator Actions  | Administrator |       |      |       |         |       |       |
|---------|-------|------|-------|---|------------------------|---------------|-------|------|-------|---------|-------|-------|
| Alloc'd | Map'd | Full | A+M+F |   |                        | Alloc'd       | Map'd | Full | Empty | Level 3 | A+M+F | Total |
| 0       | 16    | 16   | 32    | Processing event                                  | read empty buffer      | 0             | 16    | 16   | 32    | 0       | 32    | 64    |
| 0       | 16    | 16   | 32    | -----> Send                                       | results ----->         | 0             | 16    | 16   | 32    | 0       | 32    | 64    |
| 0       | 16    | 16   | 32    | <----- Order "allocate this buffer and go" <----- | 0                      | 16            | 16    | 32   | 0     | 32      | 64    |       |
| 1       | 16    | 15   | 32    | Pop full & push alloc                             | Pop empty & push alloc | 1             | 16    | 16   | 31    | 0       | 33    | 64    |
| 1       | 16    | 15   | 32    | Process next event                                | Pop full & push L3     | 1             | 16    | 15   | 31    | 1       | 32    | 64    |
| 1       | 16    | 15   | 32    |   | Send results to HWFW   | 1             | 16    | 15   | 31    | 1       | 32    | 64    |

Could also add extra allocated buffers so total A+M+F is 17+