Application (process)
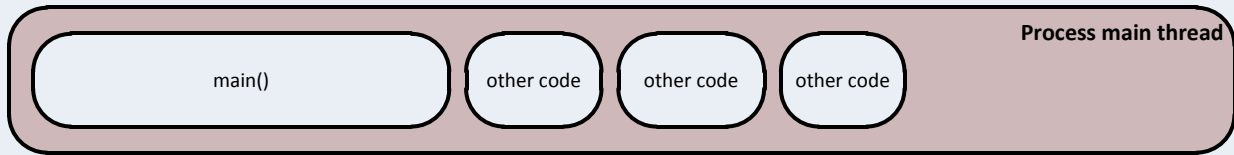
OS-related layer (GUI layer, NT service layer, etc.)

Process main thread

| main() | other code | other code | other code |

Application management layer

io_service_1 + work threads (thread_pool_1[0..M])

| active_object_1_1 | active_object_1_2 | other code | other code |

Business logic layer

io_service_2 + work threads (thread_pool_2[0..N])

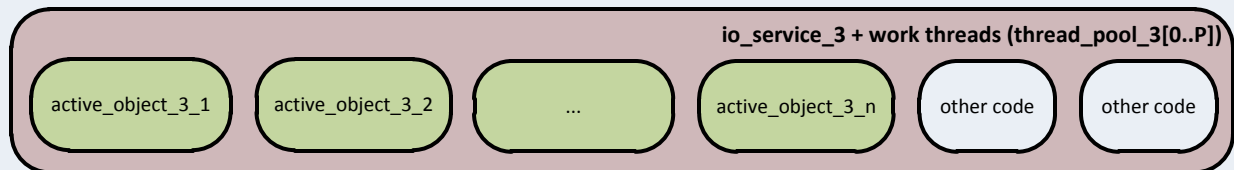| active_object_2_1 | active_object_2_2 | active_object_2_3 | active_object_2_4 | other code |
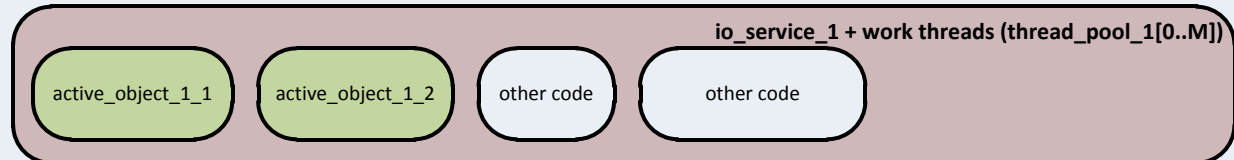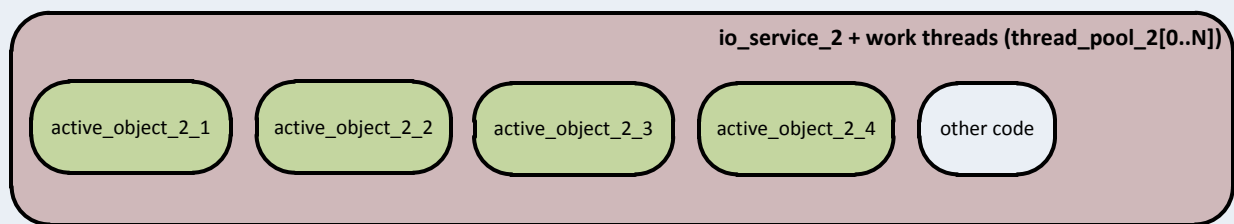
Communication session management layer

io_service_3 + work threads (thread_pool_3[0..P])

| active_object_3_1 | active_object_3_2 | ... | active_object_3_n | other code | other code |

Message parsing/serializing layer

io_service_4 + work threads (thread_pool_4[0..R])

| active_object_4_1 | active_object_4_2 | ... | active_object_4_n | other code |

IO layer

| active_object_5_1 | active_object_5_2 | ... | active_object_5_n | other code |

some thread

some code

async method
call (really it is
a task, queued
into the
active_object_
1 call queue)

operation parameters and callback (completion handler)

callback execution with completion parameters

the callback is
executed in
the
thread_pool

io_service + work threads (thread_pool[0..M])

active_object_1

Internal
activities

active_object_2

Internal
activities