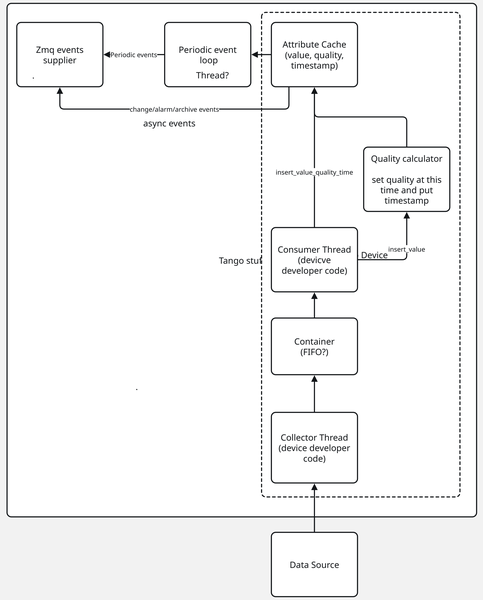
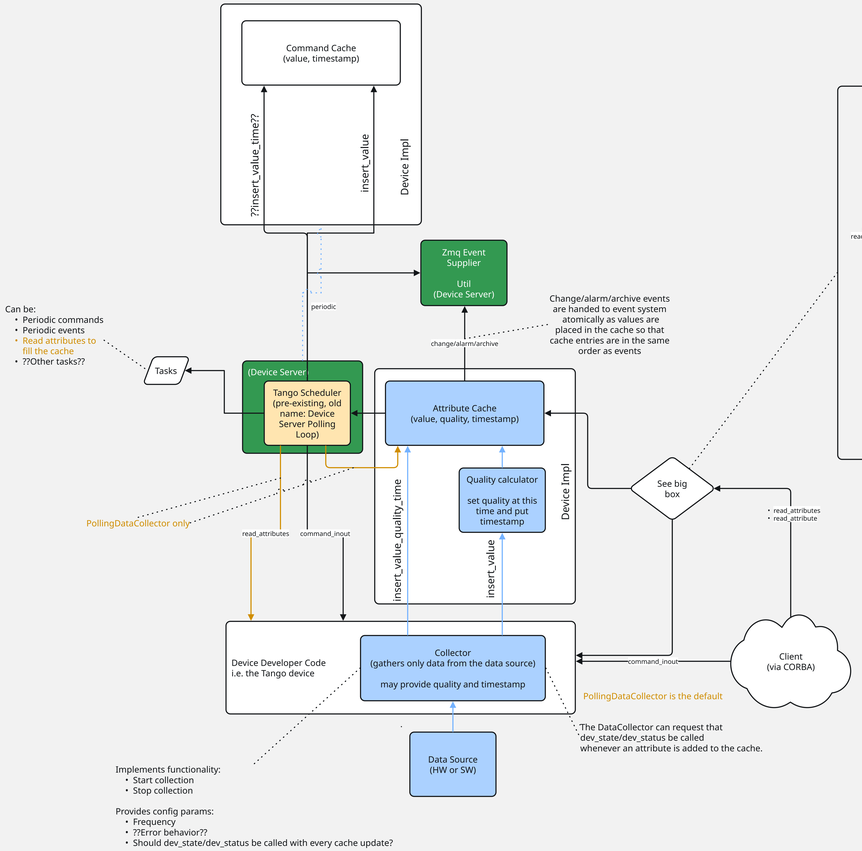
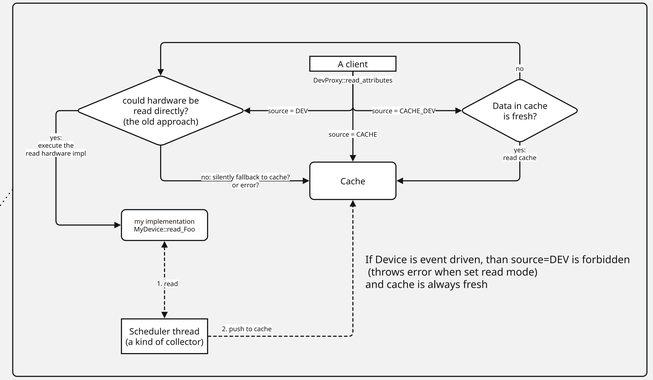

Zmq events supplier
Periodic event
Periodic event loop
Thread?
Attribute Cache (value, quality, timestamp)
change/alarm/archive events
async events
Quality calculator
set quality at this time and put timestamp
insert_value_quality_time
Tango stuf
Consumer Thread (devicve developer code)
Device
insert_value
Container (FIFO?)
Collector Thread (device developer code)
Data Source


Command Cache (value, timestamp)
??insert_value_time??
insert_value
Device Impl
Zmq Event Supplier
Util (Device Server)
periodic
Can be:
• Periodic commands
• Periodic events
• Read attributes to fill the cache
• ??Other tasks??
Tasks
(Device Server)
Tango Scheduler (pre-existing, old name: Device Server Polling Loop)
change/alarm/archive
Change/alarm/archive events are handed to event system atomically as values are placed in the cache so that cache entries are in the same order as events
Attribute Cache (value, quality, timestamp)
Quality calculator
set quality at this time and put timestamp
insert_value_quality_time
insert_value
Device Impl
See big box
PollingDataCollector only
read_attributes
command_inout
• read_attributes
• read_attribute
Device Developer Code i.e. the Tango device
Collector (gathers only data from the data source)
may provide quality and timestamp
command_inout
Client (via CORBA)
PollingDataCollector is the default
The DataCollector can request that dev_state/dev_status be called whenever an attribute is added to the cache.
Data Source (HW or SW)
Implements functionality:
• Start collection
• Stop collection
Provides config params:
• Frequency
• ??Error behavior??
• Should dev_state/dev_status be called with every cache update?


A client
DevProxy::read_attributes
could hardware be read directly? (the old approach)
source = DEV
source = CACHE_DEV
Data in cache is fresh?
no
source = CACHE
yes: execute the read hardware impl
yes: read cache
no: silently fallback to cache? or error?
Cache
my implementation MyDevice::read_Foo
1. read
Scheduler thread (a kind of collector)
2. push to cache
If Device is event driven, than source=DEV is forbidden (throws error when set read mode) and cache is always fresh