



Constellation Updates

EDDA Meeting

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Constellation Development Updates

- Improved logging in Python ([MR!872](#))
- CDTP2 almost ready for merging ([MR!659](#), [MR!760](#))
 - Few test cases still missing
 - Some functions might be renamed, but implementation is final
- Template repositories for satellites now available on [GitHub](#)
- Documentation updates for creating new satellites

Constellation Development Updates

Before:

```
stephan@slthinkpad: ~/Projects/constellation
2025-09-01 16:02:07 slthinkpad LINK[9605] INFO Setting up heartbeater on port 34233
2025-09-01 16:02:07 slthinkpad LINK[9605] INFO Using interfaces addresses ['127.0.0.1', '192.168.178.111']
2025-09-01 16:02:07 slthinkpad CTRL[9605] INFO Satellite listening on command port 39199
2025-09-01 16:02:07 slthinkpad MARINER[9605] DEBUG Satellite Base class add thread called
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG Heartbeat receiver thread prepared and added to the pool.
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG Heartbeat sender thread prepared and added to the pool.
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG CHIRP manager thread prepared and added to the pool.
2025-09-01 16:02:07 slthinkpad CTRL[9605] DEBUG Command receiver thread prepared and added to the pool.
2025-09-01 16:02:07 slthinkpad MNTR[9605] DEBUG Metric sender thread prepared and added to the pool.
2025-09-01 16:02:07 slthinkpad MARINER[9605] DEBUG Starting thread for heartbeatrcv communication
2025-09-01 16:02:07 slthinkpad LINK[9605] INFO Starting heartbeat check thread
2025-09-01 16:02:07 slthinkpad MARINER[9605] INFO Starting thread for heartbeat communication
2025-09-01 16:02:07 slthinkpad LINK[9605] INFO Starting heartbeat sender thread
2025-09-01 16:02:07 slthinkpad MARINER[9605] DEBUG Starting thread for chirp_manager communication
2025-09-01 16:02:07 slthinkpad MARINER[9605] DEBUG Starting thread for cmd_receiver communication
2025-09-01 16:02:07 slthinkpad MARINER[9605] DEBUG Starting thread for metric_sender communication
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG Sending service OFFER: 39199 for CHIRPServiceIdentifier.CONTROL
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG Sending service OFFER: 34233 for CHIRPServiceIdentifier.HEARTBEAT
2025-09-01 16:02:07 slthinkpad LINK[9605] DEBUG Sending service OFFER: 37037 for CHIRPServiceIdentifier.MONITORING
2025-09-01 16:02:07 slthinkpad CTRL[9605] INFO Satellite Mariner.slthinkpad, version 0.5.1 ready to launch!
```

After:

```
stephan@slthinkpad: ~/Projects/constellation
[2025-09-01 16:02:53] INFO [LINK] Setting up heartbeater on port 46089
[2025-09-01 16:02:53] INFO [LINK] Using interfaces addresses ['127.0.0.1', '192.168.178.111']
[2025-09-01 16:02:53] INFO [CTRL] Satellite listening on command port 35129
[2025-09-01 16:02:53] DEBUG [MARINER] Satellite Base class add thread called
[2025-09-01 16:02:53] DEBUG [LINK] Heartbeat receiver thread prepared and added to the pool.
[2025-09-01 16:02:53] DEBUG [LINK] Heartbeat sender thread prepared and added to the pool.
[2025-09-01 16:02:53] DEBUG [LINK] CHIRP manager thread prepared and added to the pool.
[2025-09-01 16:02:53] DEBUG [CTRL] Command receiver thread prepared and added to the pool.
[2025-09-01 16:02:53] DEBUG [MNTR] Metric sender thread prepared and added to the pool.
[2025-09-01 16:02:53] DEBUG [MARINER] Starting thread for heartbeatrcv communication
[2025-09-01 16:02:53] INFO [LINK] Starting heartbeat check thread
[2025-09-01 16:02:53] INFO [MARINER] Starting thread for heartbeat communication
[2025-09-01 16:02:53] INFO [LINK] Starting heartbeat sender thread
[2025-09-01 16:02:53] DEBUG [MARINER] Starting thread for chirp_manager communication
[2025-09-01 16:02:53] DEBUG [MARINER] Starting thread for cmd_receiver communication
[2025-09-01 16:02:53] DEBUG [MARINER] Starting thread for metric_sender communication
[2025-09-01 16:02:53] DEBUG [LINK] Sending service OFFER: 35129 for CHIRPServiceIdentifier.CONTROL
[2025-09-01 16:02:53] DEBUG [LINK] Sending service OFFER: 46089 for CHIRPServiceIdentifier.HEARTBEAT
[2025-09-01 16:02:53] DEBUG [LINK] Sending service OFFER: 39801 for CHIRPServiceIdentifier.MONITORING
[2025-09-01 16:02:53] INFO [CTRL] Satellite Mariner.slthinkpad, version 0.5.1 ready to launch!
```

- Improved colors
- Proper indentation
- Logging style now also applied to loggers from other Python modules
- Syntax highlighting for tracebacks and in the IPython Controller

Constellation Paper Updates

- Final screenshots, version number removed
- Application sections almost filled (MADMAX still missing but draft already received)
- Paper now describes version 1.0 (Corona Australis)
- Almost ready for publication