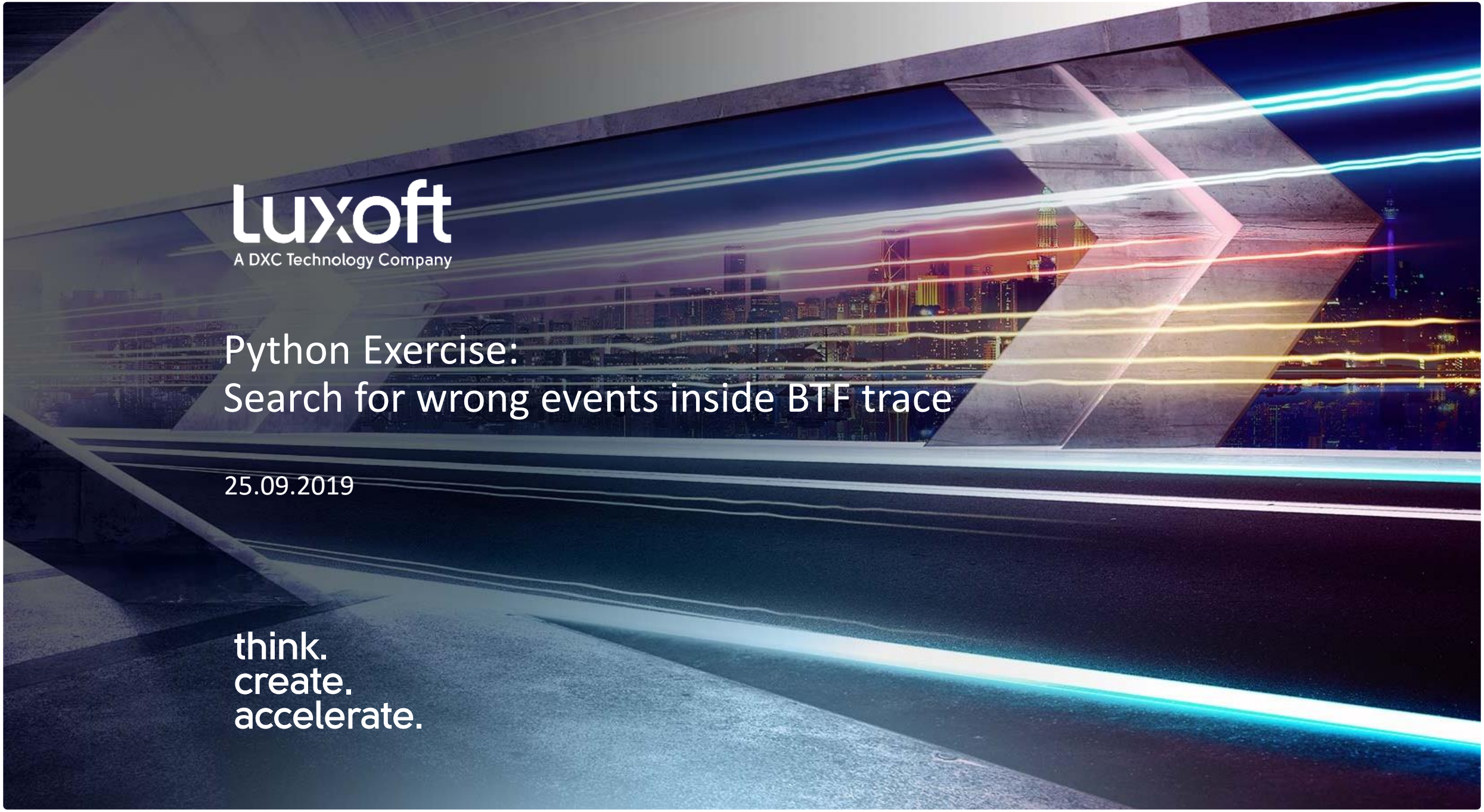
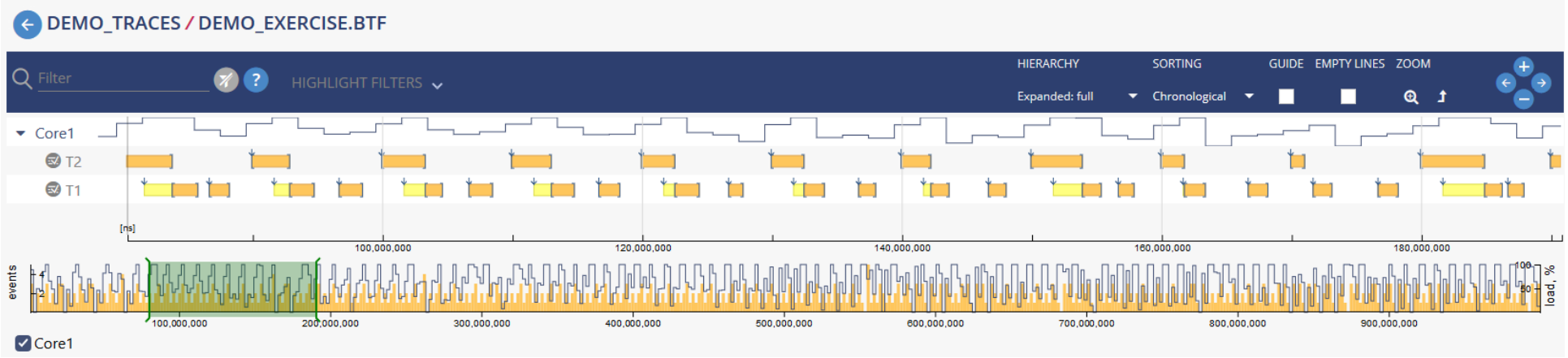

Luxoft
A DXC Technology Company
Python Exercise:
Search for wrong events inside BTF trace
25.09.2019
think.
create.
accelerate.

Definition of Done

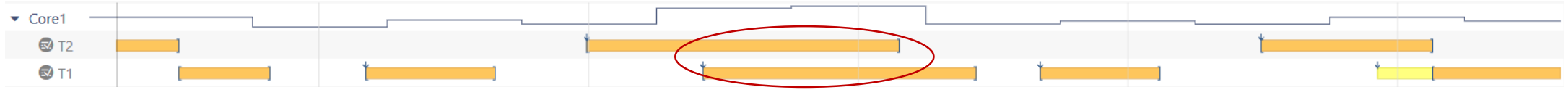
- Done using Python 3.7
- Implement a function to parse BTF Trace (Information about BTF on Slide 4). Please refer to PEP8 for code style. Test your code
- Search for wrong events described below:
    - Order of events
        - All tasks of should have following order:
            - activate, start, terminate
            - Or
            - activate, start, preempt, resume, terminate
    - Parallel active task on a Single Core Trace
        - Following order should not appear in the trace: (No start of the second task if another task is already in status start)
            - Task_1, activate
            - Task_1, start
            - Task_2, activate
            - Task_2, start
- Wrong events that are found in the trace it should be written down into a text file with the following information : Timestamp, Line number in BTF trace and what was wrong
- Provide the resulting text file and source code

Examples

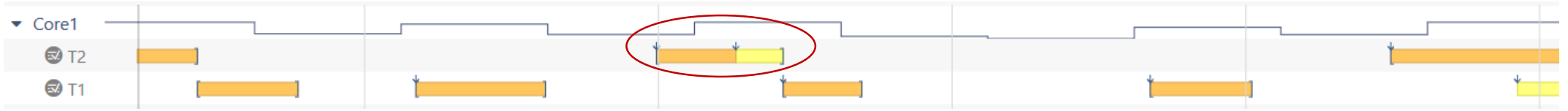
- Example Gantt without wrong Events:



- Example Gantt with wrong Events:
  - Two task active at same time range



- Example Gantt with wrong Events:
  - wrong order of events from same task

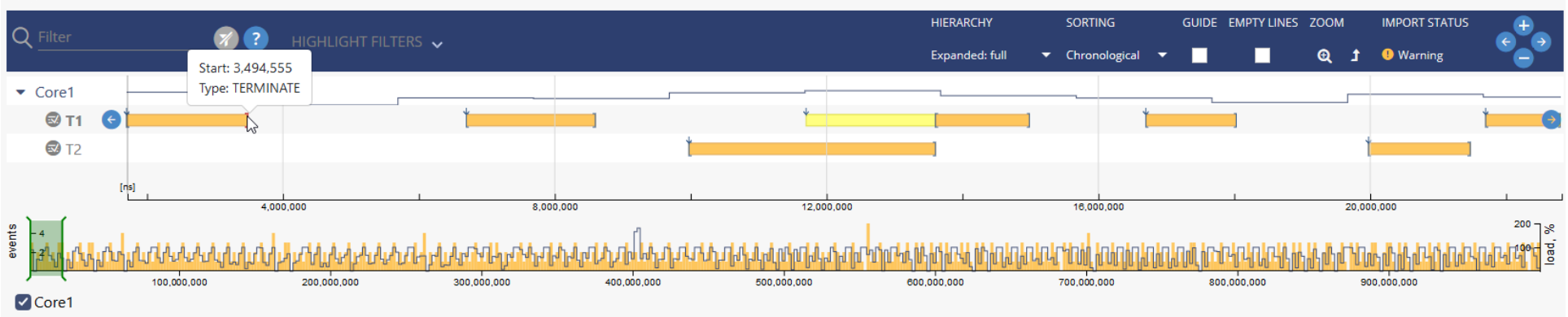


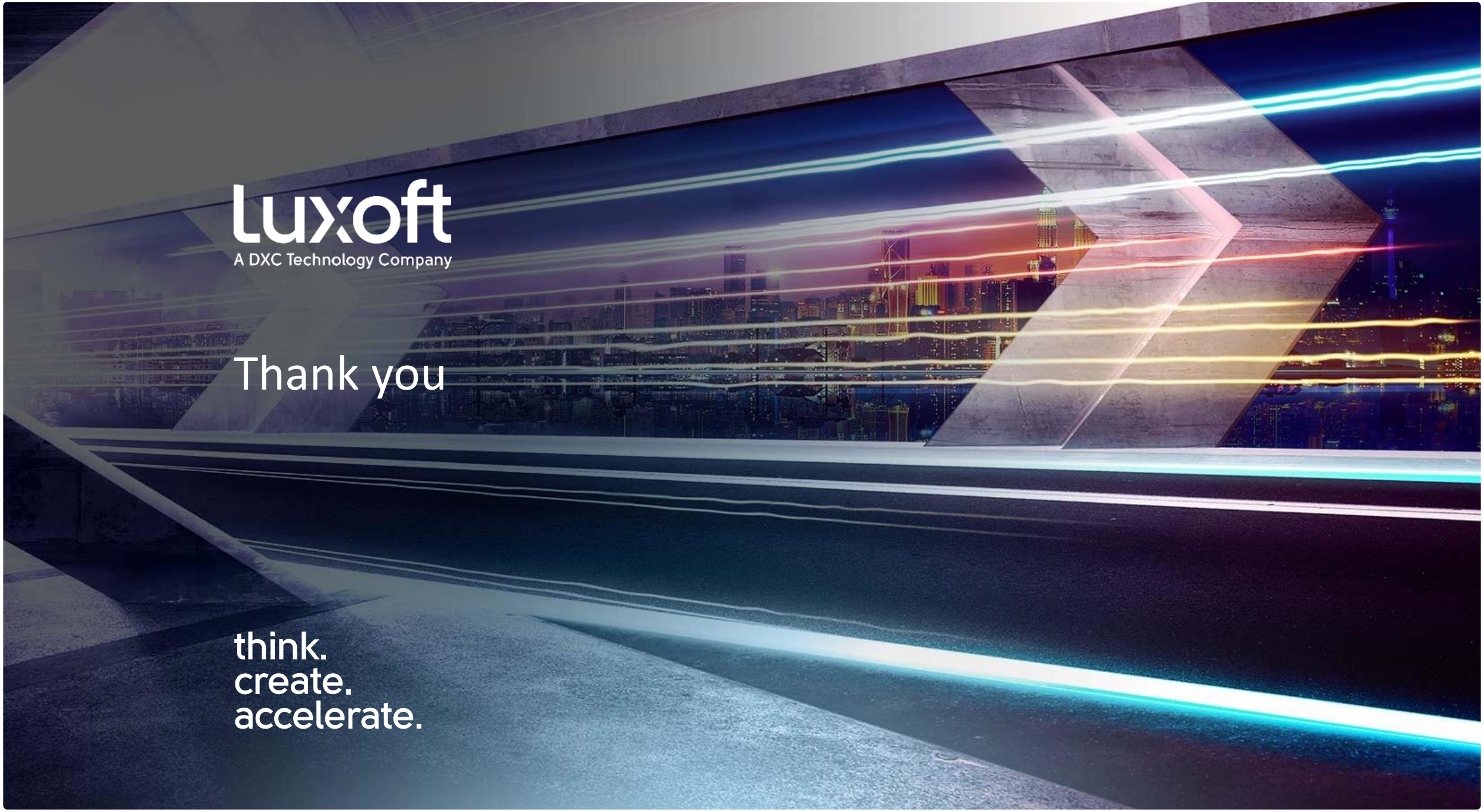
BTF (Best Trace Format) Information

- textfile
- Find documentation here: https://wiki.eclipse.org/images/e/e6/TA_BTF_Specification_2.1.3_Eclipse_Auto_IWG.pdf

- Timestamp in ns
- Parent Element
- SourceInstance number
- Type (Task, ECU, Runnable etc.)
- Element
- TargetInstance number
- Event

```
#timeScale ns
1712855,Core1,0,T,T1,272,activate
1712855,Core1,0,T,T1,272,start
3494555,Core1,0,T,T1,272,terminate
6712855,Core1,0,T,T1,273,activate
6712855,Core1,0,T,T1,273,start
8611305,Core1,0,T,T1,273,terminate
9988816,Core1,0,T,T2,274,activate
9988816,Core1,0,T,T2,274,start
11712855,Core1,0,T,T1,275,activate
13616176,Core1,0,T,T2,274,terminate
13616176,Core1,0,T,T1,275,start
14998566,Core1,0,T,T1,275,terminate
16712855,Core1,0,T,T1,276,activate
16712855,Core1,0,T,T1,276,start
18042795,Core1,0,T,T1,276,terminate
19988816,Core1,0,T,T2,277,activate
19988816,Core1,0,T,T2,277,start
```

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Thank you
think.
create.
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