# Workshop: Writing Python xApps for OSC's Platform

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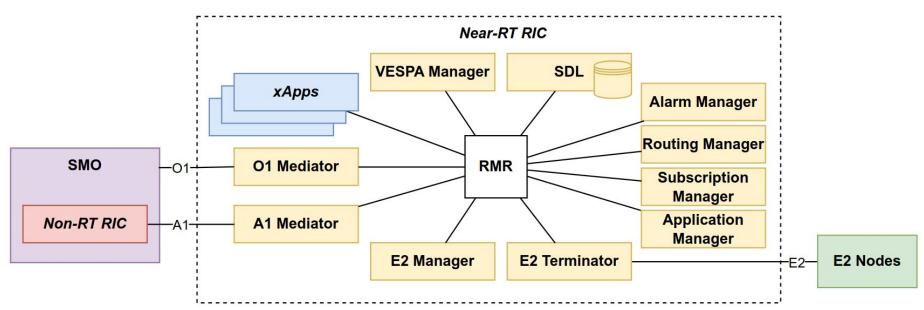




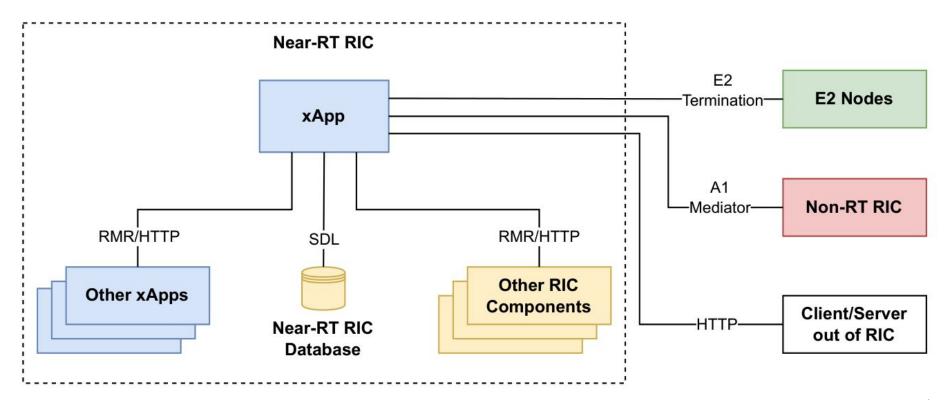
#### Agenda

- Class 1: Managing, checking, and configuring xApps
- Class 2: xApp overview, logging, SDL, and REST
- Class 3: RMR communication and E2 Nodes subscription
  - OSC's Near-RT RIC architecture
  - Common xApp endpoints
  - Flow comparison: Xapp vs RMRXapp
  - Class 3 xApps RMR communication
  - Subscription request
  - Subscription deletion request
  - Class 3 xApps E2 Node subscription

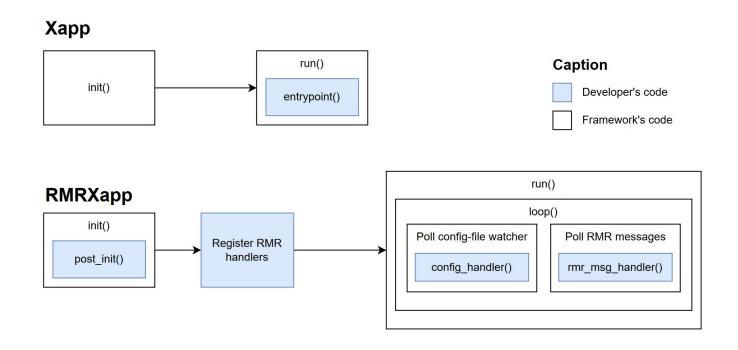
#### OSC's Near-RT RIC architecture



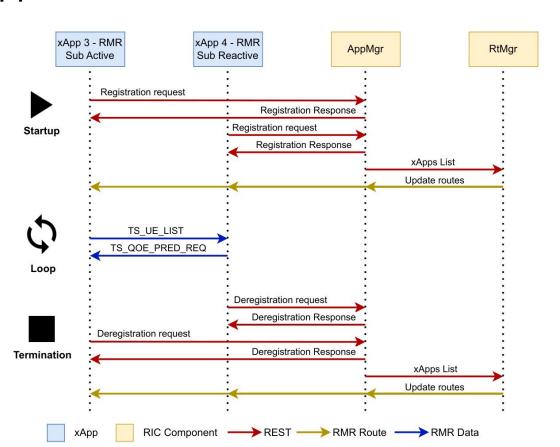
## Common xApp endpoints



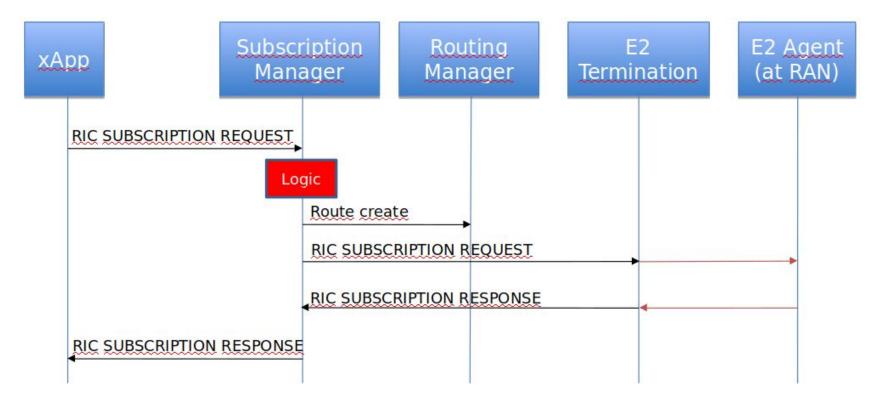
# Flow comparison: Xapp vs RMRXapp



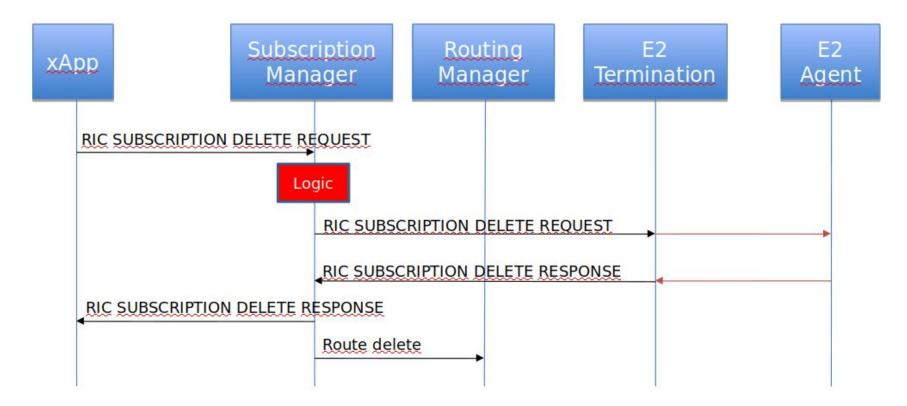
## Class 3 xApps - RMR communication



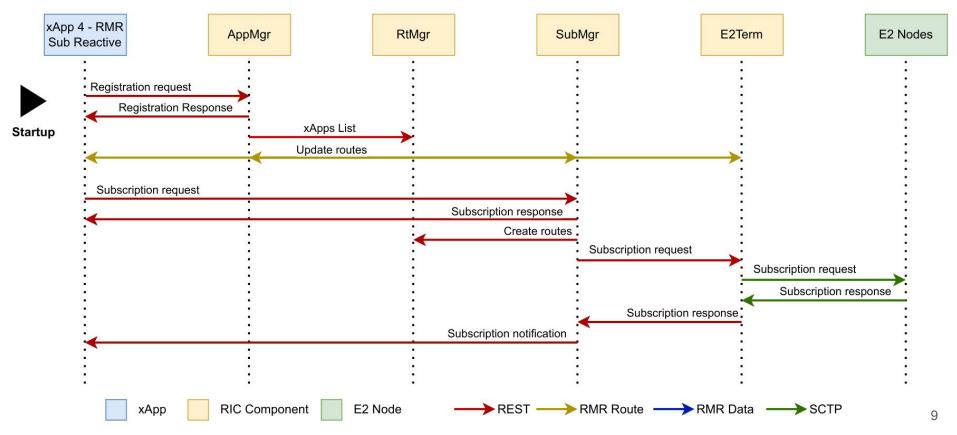
#### Subscription request



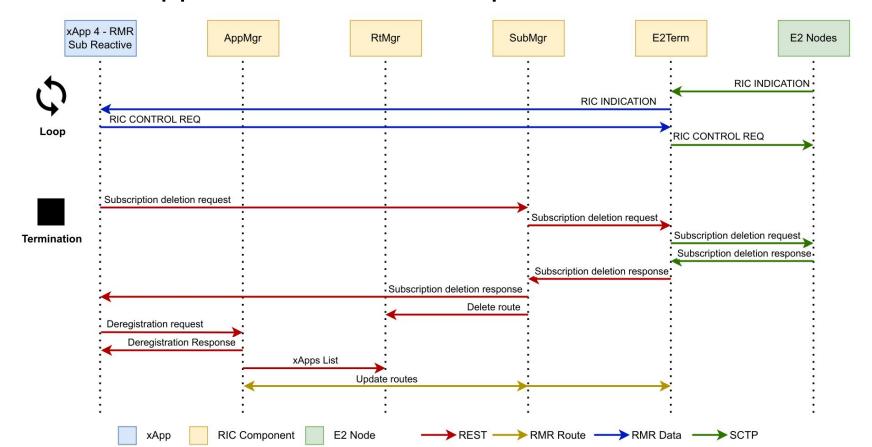
## Subscription deletion request



## Class 3 xApps - E2 Node subscription



## Class 3 xApps - E2 Node subscription



#### References

#### OSC's xApp writer's guide v2:

https://wiki.o-ran-sc.org/download/attachments/17269011/xApp\_Writer\_s\_Guide\_v2.pdf?version=4&modificationDate=1625642899082&api=v2

OSC's Python xApp Framework: <a href="https://pypi.org/project/ricxappframe/">https://pypi.org/project/ricxappframe/</a>

#### **OSC's Subscription Manager Documentation**:

https://docs.o-ran-sc.org/projects/o-ran-sc-ric-plt-submgr/en/latest/

Polese, Michele, et al. "Understanding O-RAN: Architecture, interfaces, algorithms, security, and research challenges." IEEE Communications Surveys & Tutorials 25.2 (2023): 1376-1411.