

# Network Data Analytics Function (NWDAF) – 1 day

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## CONTENTS

This course presents the R17 3GPP NWDAF, as both a Service Consumer (for data collection) and a Service Producer (for Analytics provisioning) in the 5G Service Based Architecture environment. It explores what types of information and where from the NWDAF can collect, and what analytics it can provide as defined in the specifications. The signalling procedures used for communication by the NWDAF are presented, with the currently standardized parameters that can be exchanged with the various 5G network elements.

## PREREQUISITES

Technical knowledge of the 5G System architecture and functionalities is crucial. Overall signalling knowledge, especially on the SBA, will allow the participants to benefit fully from the course.

We recommend one of the Apis “5G Core Network Architecture” courses (1 day or 3 days) to provide the background knowledge.

Note: This course is not delivered with the FoldOut methodology.

## NWDAF-related Network Architecture

- NWDAF in the Service Based Architecture
- NWDAF Registration and Discovery, including Aggregation Function support
- Central/Distributed NWDAF deployment options
- Aggregation Function in Central NWDAF
- Functionalities for R17 Enhanced Data Collection: DCCF, ADRF, MFAF
- Functionalities for Machine Learning: ML, MTLF
- Reference Points defined for NWDAF communication: N23, N34

## NWDAF as a Service Consumer

- Sources of information the NWDAF can use: 5GC NFs (AMF, SMF, PCF, UDM, NRF, NSSF, BSF, NEF, AF, UE/Application, UPF, OAM, NWDAF)
- Determining the relevant Service Producer[s] for data collection
- Categories of data collection procedures: for one UE, a group of UEs, any UE, NF Instance
- Correlation Information for data collected from a number of sources
- Events exposed by the 5GC NFs and the UPFs to the NWDAF
- Measurement types provided by the OAM to the NWDAF

## NWDAF as a Service Producer

- NWDAF NF Services
- Communication Models: Request/Response, Subscribe/Notify
- Specified NWDAF Analytics and their respective Consumers
- Types of Analytics: statistical/predictive
- Parameters defined as content of the provided Analytics
- Examples of the usage of Analytics provided to the Consumers
- HTTP messages standardized for the NWDAF communication

## **R17 Enhanced Data and Analytics Collection and Storage**

- Enhanced Data Collection Architecture
- The role of the Data Collection Coordination Function, DCCF
- The role of the Analytics Data Repository Function, ADRF
- The role of the Messaging Framework Adaptor Function, MFAF