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| Chapter 7.3.5 NDS-specific attributes | | | |
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# Abstract

This document proposes a revision to the chapter 7.2.5

* Alignment of content with chapter 8.1.1

# Functional Decomposition and Design

## Access network discovery and selection (NDS)

### NDS-specific attributes

#### Service selection

The access network discovery and selection process results in the selection of a particular NA to connect to, together with the chosen service provider and the related IP provider. The following tuple of identifiers are discovered and selected:

* {1} ServiceProvider-ID: FQDN
* {1} IPProvider-ID: FQDN
* {1} NA-ID: Node of attachment identifier
* {1} AN-ID: Access network identifier
* {1} SS-ID: Subscription service identifier
* {1} AR-ID: Access router identifier

#### Subscription

A subscription denotes the unique relationship between a terminal and a subscription service. A common method to identify a subscription is the Network Access Identifier [RFC4282]. In particular when multiple subscriptions exist at a Terminal, each subscription may be attributed by:

* {1} Subscription-ID: NAI
* {1} ServiceProvider-ID: FQDN
* {1+} IPProvider-ID:FQDN
* {0+} AccessPolicy:  
  Access policies consist of a list of weighted NA-IDs and AN-IDs, which is evaluated for the detected AN-IDs and NA-IDs. The highest weighted NA-ID, or the best NA of the highest weighted AN-ID, is chosen for the connection establishment.

#### TE

* {1+} TECapabilities: Terminal capabilities

#### NA

* {1} AN-ID: Access network identifier to which NA belongs to
* {1} ANInfo: AN short information
* {1} ANCapabilities: AN complete capabilities
  + An access network will have relation with at least one subscription service entity and may be able to handle multiple subscription services. For each supported subscription service there may be additional information such as
    - Cost information: Cost information describes the cost of using that subscription service. It may be a single value or a complex record of multiple cost issues.
    - Supported roaming partners: A subscription service may act as agent for other subscription services. For appropriate routing of
  + An access network has at least one set of attributes describing its capabilities. Multiple set of attributes may exist when different portions of an access network are built differently.
    - Link layer capabilities: Link layer capabilities are described by attributes like MTU, encryption capabilities, and others more.
    - Link layer performance: Link layer performance can be described by attributes like throughput up/down, delay, jitter, residual error rates, either as list of parameters or by records representing different service classes.
  + An access network has connectivity to at least one access router for providing higher layer network functionality.
    - Network layer capability of the access router. It has at least one set (but can have multiple sets) of network layer capabilities like IP address, size of IP network, IP version, IP configuration support, and service discovery capabilities.
    - Network interface performance of the access router connected with a single link to the access network. It has a single set of parameters describing the performance of the network interface, e.g., supported service classes (throughput up/down, delay, jitter).
    - Offered application services. The connected access router may provide additional information about the application services reachable by its interfaces.
* {1} BeaconPeriod: Timer value for triggering the broadcast of the AN short information

### NDS-specific basic functions