

NDN Packet Format Specification 0.3 documentation (index.html)

Note that this is the version of NDN packet specification in progress. Not all changes are finalized and supported by the existing NDN codebase

Name

An NDN Name is a hierarchical name for NDN content, which contains a sequence of name components.

NDN Name Format

We use a 2-level nested TLV to represent a name. The Type in the outer TLV indicates this is a Name. Inner TLVs should be one of **NameComponent** blocks, as defined in the following:

```
Name ::= NAME-TYPE TLV-LENGTH NameComponent*
```

```
NameComponent ::= GenericNameComponent |  
                  ImplicitSha256DigestComponent |  
                  OtherTypeComponent
```

```
GenericNameComponent ::= NAME-COMPONENT-TYPE TLV-LENGTH  
                        BYTE*
```

```
ImplicitSha256DigestComponent ::= IMPLICIT-SHA256-DIGEST-COMPONENT-TYPE TLV-LENGTH(-32)  
                                BYTE{32}
```

```
OtherTypeComponent ::= OTHER-TYPE-COMPONENT-TYPE TLV-LENGTH  
                   BYTE*
```

```
OTHER-TYPE-COMPONENT-TYPE ::= number in the range 2-65535 inclusive except 0
```

- **GenericNameComponent** is a generic name component, without any restrictions on the content of the value.
- **ImplicitSha256DigestComponent** is an implicit SHA256 digest component and it is required to contain a value of 32 octets.

In addition to two component types, **Name** can include other component types governed by Name Component Assignment policy (<https://redmine.named-data.net/projects/ndn-tlv/wiki/NameComponentType>).

TLV-TYPE of name component MUST be in the range **1-65535** (inclusive). **Name** element containing a sub-element out of this range is invalid and the packet SHOULD be dropped.

Name component with TLV-TYPE **0** (zero) is reserved to indicate an

TABLE OF CONTENTS

Introduction
(intro.html)

Type-Length-Value
(TLV) Encoding
(tlv.html)

Name

NDN Name
Format

NDN URI
Scheme

Implicit Digest
Component
Canonical Order

Interest Packet
(interest.html)

Data Packet
(data.html)

Signature
(signature.html)

Link Object
(link.html)

TLV-TYPE number
assignment
(types.html)

Changes
(changelog.html)

SEARCH