

Preface

Contacts

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Network Data Management - Usage (ND)

Change History

1.0 WDA 12/14/1999 Working Draft Revision A - Circulated to Membership for Comment

1.0.

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1. Introduction

Network Data Management - Usage (NDM-U) for IP-Base

[27] Recommendation G.107: The E-Model, a computational model for use in transmission planning-5/00, ITU-T

[28] Recommendation G.1010: End-user multimedia QoS categories—11/01, ITU-T

[29] Recommendation J.143: User requirements for obj 0 D3j

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Other information about state transition or current state (Start Time)

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2.5 *NDM-U Model Usage Scenarios*

The focus for specifyin

2.5.2 SE Interfaced to BSS Via Mediation System



Network Data Management - Usage (NDM-U) for IP-BDM T2D(OTj

2.5.5 Service Provider also Provides an Application Service



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This metric relates to the question "How successful am I in reaching the called party or the requested session?"
For each call/session setup attempt, the completion code attribute in the IPDR represents the success/failure status of the setup attempt a

Fax transmission quality is important for business applications, especially in an international environment. Fax transmission quality is important for business applications, especially in an international environment. Fax transmission quality is important for business applications, especially in an international environment.

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```
<?xml version = "1.0" encoding = "UTF-8"?>  
<schema xmlns = " 233 0 TD(=)Tj 233 0 TD(")Tj 117 0 TD(U)Tj 117 0 TD(T)Tj 116 0 TD(F)Tj .
```


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Network Data Management - Usage (NDM-U) for IP-Ba

- Complexity should be minimized in order to spur adoption and inter-working systems, and aid in debugging.
- The format would ideally draw from existing standards work.
- The format should provide performance and size

The descriptor form D aio

* optional attributes.
*/

AttributeDescriptor attributes<>; /* Lists the attributes in the order they will appear
* in records in this document. A record which points
* to this descriptor's descriptorId, must exactly
* match the set of attributes identified in this list.
*/

};

/* IPDRRecordData
*
* An individual record is a packed set of attribute values
* determined by a recordDescriptor. The values are encoded
* into the octet array according to their primitive format
* and the XDR encoding rules. The overall length of the
* opaque array is specified using the indefinite form (a
* deviation from RFC 1832) in order to enable the output
* to be produced efficiently

* not used.
*/

h 300(r)Tj 86 0 TD(k)TjTjTjTjTjTjTjT 97 0 TD(c)Tj 86 0 TD(.)Tj 2241 0 TD(P)Tj 108 0 TD(a)Tj 86 0 TD(g)Tj 9


```
        * element.  
        */  
};
```

4.3.4 Compact Format Definition

The basic structure is shown below:

```
+-----+  
| Header |  
+-----+  
| Descriptor |  
+-----+  
| Usage Event0dTD(w)Tj 1
```

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- IPDR Record - a record consists of a reference to a descriptor followed by a .1

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4.4.2 Groups, Sequence Numbers, DocTD(u)Tj 155 0 TD(m)Tj 224 0 (0)Tj 97 0 TD(TD(c

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4.4.3 Protocol Primitives and Parame

4.4.3.4 ListGroupsReq

A request for the BSS to determine the available groups of an IT.

It has the following parameters:

- version - the version of the NDM-U protocol in use. (string, e.g. "3.0")
- requestorId - an identifier of the requestor. This is useful for log and audit purposes today and BASIC authorization. (string, URL identifying the requestor, e.g. "http://voip_bss.example.com:6615/bss1")

4.4.3.5 ListGroupsRsp+

Carries the response to the request.

It has the following parameters:

- groupInfoList - as to oo

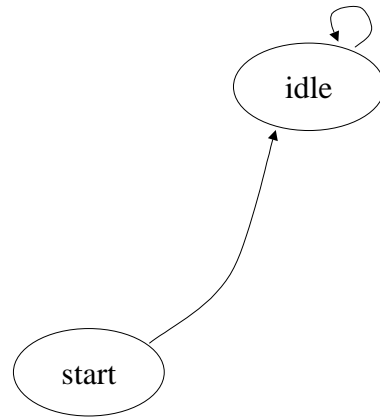
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- 6 - groupSeqNum aged off. The document in this group is no longer available to this transmitter.
- 7 - changeSeqNum. The receiver would like a different sequence number pushed.
- 8 - docId is not available. The requested document is not available in this group (either because the document Id was never available or because it has been aged off)
- 9 - already subscribed. A subscription request h

4.4.4 State Diagrams

The following state diagrams depict the states and transitions for the following scenarios:

BSS states (IT Push Scenario)



4.4.4.4 Pull Service (IT)

The pull service is effectively stateless from the IT's perspective. Documents are requested in the context of a group either by DocId or groupSeqNum. If available they are delivered, otherwise an error is sent.

4.4.4.5 Pull Service (BSS)

The BSS can continue to pull documents by incrementing the groupSeqNum parameter. When a response indicates the document is not available, the BSS will wait and then repoll for events. An alternative to timer based polling, demand polling may be used.

4.4.4.6 DemandPoll Service (BSS)

The BSS can maintain a subscription to a group, but chose to only receive the docId and groupSeqNum, not the document itself. These notifications can then replace the need for timers.

4.4.6 Stimulus and Respon

```
        <xsd:element ref = "extension"/>
    </xsd:sequence>
    <xsd:attribute name = "version" use = "required" type = "xsd:decimal"/>
    <xsd:attribute name = "protocolMapping" use = "required">
        <xsd:simpleType>
            <xsd:restriction base = "xsd:NMTOKEN">
                <xsd:enumeration value = "File"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:attribute>
    <xsd:attribute name = "encoding" use = "required">
        <xsd:simpleType>
            <xsd:restriction base = "xsd:NMTOKEN">
                <xsd:enumeration value = "XML"/>
                <xsd:enumeration value = "XDR"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:attribute>
</xsd:compl
```

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SubscribeRsp, UnsubscribeReq, UnsubscribeRsp, PushReq, or PushRsp primitives. The IPDR Consumer accomplishes a PullReq/PullRsp simply by copying the object.

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In addition to these basic types, IPDR defines the following type extensions. Any additional types must be defined by IPDR, and will be added to the IPDRTypes.xsd schema definition.

- ipdr:dateTimeMsec - this type is supports time resolution of 1 msec (0.001 seconds)

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If non-IPDR defined service definitions were used in the document, then the header would appear as:

```
<IPDRDoc xmlns="http://www.ipdr.org/namespaces/ipdr "
```

Appendix B SOAP Protocol Mappings

B.1 Overview

The

- The Envelope element will use the encoding Style attribute (see 4.1.1) defined by the URI:
"http://156.01152(I)Tj (-)Tj o

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