

Network Working Group  
Request for Comments: 2699  
Category: Informational

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ISI  
May 2000

## Request for Comments Summary

### RFC Numbers 2600-2699

#### Status of This Memo

This RFC is a slightly annotated list of the 100 RFCs from RFC 2600 through RFCs 2699. This is a status report on these RFCs. This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

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#### Note

Many RFCs, but not all, are Proposed Standards, Draft Standards, or Standards. Since the status of these RFCs may change during the standards processing, we note here only that they are on the standards track. Please see the latest edition of "Internet Official Protocol Standards" for the current state and status of these RFCs. In the following, RFCs on the standards track are marked [STANDARDS-TRACK].

RFC ---	Author -----	Date ----	Title -----
2699	Ginoza	Apr 2000	Request for Comments Summary

This memo.

2698	Heinanen	Sep 1999	A Two Rate Three Color Marker
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This document defines a Two Rate Three Color Marker (trTCM), which can be used as a component in a Diffserv traffic conditioner. This memo provides information for the Internet community.

2697      Heinanen                      Sep 1999                      A Single Rate Three Color Marker

This document defines a Single Rate Three Color Marker (srTCM), which can be used as component in a Diffserv traffic conditioner. This memo provides information for the Internet community.

2696      Weider                          Sep 1999                      LDAP Control Extension for  
Simple Paged Results  
Manipulation

This document describes an LDAPv3 control extension for simple paging of search results. This memo provides information for the Internet community.

2695      Chiu                              Sep 1999                      Authentication Mechanisms for  
ONC RPC

This document describes two authentication mechanisms created by Sun Microsystems that are commonly used in conjunction with the ONC Remote Procedure Call (ONC RPC Version 2) protocol. This memo provides information for the Internet community.

2694      Srisuresh                      Sep 1999                      DNS extensions to Network  
Address Translators (DNS\_ALG)

This document identifies the need for DNS extensions to NATs and outlines how a DNS Application Level Gateway (DNS\_ALG) can meet the need. This memo provides information for the Internet community.

2693      Ellison                              Sep 1999                      SPKI Certificate Theory

This document gives the theory behind SPKI certificates and ACLs without going into technical detail about those structures or their uses. This memo defines an Experimental Protocol for the Internet community.

2692      Ellison                              Sep 1999                      SPKI Requirements

The SPKI Working Group first established a list of things one might want to do with certificates (attached at the end of this document), and then summarized that list of desires into requirements. This document presents that summary of requirements. This memo defines an Experimental Protocol for the Internet community.

2691	Bradner	Sep 1999	A Memorandum of Understanding for an ICANN Protocol Support Organization
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This is the text of the Memorandum of Understanding (MoU) that was signed by ICANN, the IETF, the ITU-T, W3C and ETSI on July 14, 1999 in Oslo. This MoU creates the Protocol Support Organization (PSO) within the Internet Corporation for Assigned Names and Numbers (ICANN). This memo provides information for the Internet community.

2690	Bradner	Sep 1999	A Proposal for an MOU-Based ICANN Protocol Support Organization
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This is a copy of the proposal for an MOU-based Protocol Supporting Organization that was submitted to ICANN on April 23, 1999. This memo provides information for the Internet community.

2689	Bormann	Sep 1999	Providing Integrated Services over Low-bitrate Links
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This document describes an architecture for providing integrated services over low-bitrate links, such as modem lines, ISDN B-channels, and sub-T1 links. This memo provides information for the Internet community.

2688	Jackowski	Sep 1999	Integrated Services Mappings for Low Speed Networks
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This document defines the service mappings of the IETF Integrated Services for low-bitrate links, specifically the controlled load and guaranteed services. [STANDARDS-TRACK]

2687	Bormann	Sep 1999	PPP in a Real-time Oriented HDLC-like Framing
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This document proposes the suspend/resume-oriented solution for the real-time encapsulation format part of the architecture. [STANDARDS-TRACK]

2686      Bormann                      Sep 1999                      The Multi-Class Extension to  
Multi-Link PPP

This document proposes the fragment-oriented solution for the real-time encapsulation format part of the architecture. [STANDARDS-TRACK]

2685      Fox                              Sep 1999                      Virtual Private Networks  
Identifier

This document proposes a format for a globally unique VPN identifier. [STANDARDS-TRACK]

2684      Grossman                      Sep 1999                      Multiprotocol Encapsulation  
over ATM Adaptation Layer 5

This memo replaces RFC 1483. It describes two encapsulations methods for carrying network interconnect traffic over AAL type 5 over ATM. [STANDARDS-TRACK]

2683      Leiba                              Sep 1999                      IMAP4 Implementation  
Recommendations

The IMAP4 specification describes a rich protocol for use in building clients and servers for storage, retrieval, and manipulation of electronic mail. Because the protocol is so rich and has so many implementation choices, there are often trade-offs that must be made and issues that must be considered when designing such clients and servers. This document attempts to outline these issues and to make recommendations in order to make the end products as interoperable as possible. This memo provides information for the Internet community.

2682      Widjaja                      Sep 1999                      Performance Issues in VC-Merge  
Capable ATM LSRs

This document investigates the impact of VC merging on the additional buffer required for the reassembly buffers and other buffers. This memo provides information for the Internet community.

2681 Almes Sep 1999 A Round-trip Delay Metric for IPP

This memo defines a metric for round-trip delay of packets across Internet paths. [STANDARDS-TRACK]

2680 Almes Sep 1999 A One-way Packet Loss Metric for IPPM

This memo defines a metric for one-way packet loss across Internet paths. [STANDARDS-TRACK]

2679 Almes Sep 1999 A One-way Delay Metric for IPPM

This memo defines a metric for one-way delay of packets across Internet paths. [STANDARDS-TRACK]

2678 Mahdavi Sep 1999 IPPM Metrics for Measuring Connectivity

This memo defines a series of metrics for connectivity between a pair of Internet hosts. [STANDARDS-TRACK]

2677 Greene Sep 1999 Definitions of Managed Objects for the NBMA Next Hop Resolution Protocol (NHRP)

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. [STANDARDS-TRACK]

2676 Apostolopoulos Aug 1999 QoS Routing Mechanisms and OSPF Extensions

This memo describes extensions to the OSPF protocol to support QoS routes. The focus of this document is on the algorithms used to compute QoS routes and on the necessary modifications to OSPF to support this function, e.g., the information needed, its format, how it is distributed, and how it is used by the QoS path selection process. This memo defines an Experimental Protocol for the Internet community.

2675      Borman                      Aug 1999                      IPv6 Jumbograms

This document describes the IPv6 Jumbo Payload option, which provides the means of specifying such large payload lengths. It also describes the changes needed to TCP and UDP to make use of jumbograms.  
[STANDARDS-TRACK]

2674      Bell                              Sep 1999                      Definitions of Managed Objects  
   for Bridges with Traffic  
   Classes, Multicast Filtering  
   and Virtual LAN Extensions

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP based internets.  
[STANDARDS-TRACK]

2673      Crawford                      Aug 1999                      Binary Labels in the  
   Domain Name System

This document defines a "Bit-String Label" which may appear within domain names. This new label type compactly represents a sequence of "One-Bit Labels" and enables resource records to be stored at any bit-boundary in a binary-named section of the domain name tree.  
[STANDARDS-TRACK]

2672      Crawford                      Aug 1999                      Non-Terminal DNS Name  
   Redirection

This document defines a new DNS Resource Record called "DNAME", which provides the capability to map an entire subtree of the DNS name space to another domain. [STANDARDS-TRACK]

2671      Vixie                              Aug 1999                      Extension Mechanisms  
   for DNS (EDNS0)

The Domain Name System's wire protocol includes a number of fixed fields whose range has been or soon will be exhausted and does not allow clients to advertise their capabilities to servers. This document describes backward compatible mechanisms for allowing the protocol to grow. [STANDARDS-TRACK]

2670	St. Johns	Aug 1999	Radio Frequency (RF) Interface Management Information Base for MCNS/DOCSIS compliant RF interfaces
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This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines a basic set of managed objects for SNMP-based management of MCNS/DOCSIS compliant Radio Frequency (RF) interfaces. [STANDARDS-TRACK]

2669	St. Johns	Aug 1999	DOCSIS Cable Device MIB Cable Device Management Information Base for DOCSIS compliant Cable Modems and Cable Modem Termination Systems
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This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines a basic set of managed objects for SNMP-based management of DOCSIS 1.0 compliant Cable Modems and Cable Modem Termination Systems. [STANDARDS-TRACK]

2668	Smith	Sep 1999	Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)
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This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. [STANDARDS-TRACK]

2667	Thaler	Aug 1999	IP Tunnel MIB
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This memo defines a Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes managed objects used for managing tunnels of any type over IPv4 networks. [STANDARDS-TRACK]

2666      Flick                      Sep 1999                      Definitions of Object  
Identifiers for Identifying  
Ethernet Chip Sets

This memo defines OBJECT IDENTIFIER values for use with network management protocols in the Internet community. This memo provides information for the Internet community.

2665      Flick                      Sep 1999                      Definitions of Managed Objects  
for the Ethernet-like  
Interface Types

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community.  
[STANDARDS-TRACK]

2664      Plzak                      Aug 1999                      FYI on Questions and Answers  
Answers to Commonly Asked "New  
Internet User" Questions

This memo provides an overview to the new Internet User. The intended audience is the common Internet user of today, thus it attempts to provide a more consumer oriented approach to the Internet rather than going into any depth about a topic. This memo provides information for the Internet community.

2663      Srisuresh                      Aug 1999                      IP Network Address Translator  
(NAT) Terminology and  
Considerations

This document attempts to describe the operation of NAT devices and the associated considerations in general, and to define the terminology used to identify various flavors of NAT. This memo provides information for the Internet community.

2662      Bathrick                      Aug 1999                      Definitions of Managed Objects  
for the ADSL Lines

This document defines a standard SNMP MIB for ADSL lines based on the ADSL Forum standard data model. [STANDARDS-TRACK]



2661      Townsley              Aug 1999              Layer Two Tunneling Protocol  
   "L2TP"

This document describes the Layer Two Tunneling Protocol (L2TP).  
[STANDARDS-TRACK]

2660      Rescorla              Aug 1999              The Secure HyperText Transfer  
   Protocol

This memo describes a syntax for securing messages sent using the Hypertext Transfer Protocol (HTTP), which forms the basis for the World Wide Web. This memo defines an Experimental Protocol for the Internet community.

2659      Rescorla              Aug 1999              Security Extensions For HTML

This memo describes a syntax for embedding S-HTTP negotiation parameters in HTML documents. This memo defines an Experimental Protocol for the Internet community.

2658      McKay                      Aug 1999              RTP Payload Format for  
   PureVoice(tm) Audio

This document describes the RTP payload format for PureVoice(tm) Audio.  
[STANDARDS-TRACK]

2657      Hedberg              Aug 1999              LDAPv2 Client vs. the Index Mesh

LDAPv2 clients as implemented according to RFC 1777 have no notion on referral. The integration between such a client and an Index Mesh, as defined by the Common Indexing Protocol, heavily depends on referrals and therefore needs to be handled in a special way. This document defines one possible way of doing this. This memo defines an Experimental Protocol for the Internet community.

2656      Hardie                      Aug 1999                      Registration Procedures for  
SOIF Template Type

The registration procedure described in this document is specific to SOIF template types. This memo defines an Experimental Protocol for the Internet community.

2655      Hardie                      Aug 1999                      CIP Index Object Format for  
SOIF Objects

This document describes SOIF, the Summary Object Interchange Format, as an index object type in the context of the CIP framework. This memo defines an Experimental Protocol for the Internet community.

2654      Hedberg                      Aug 1999                      A Tagged Index Object for use  
in the Common Indexing  
Protocol

This document defines a mechanism by which information servers can exchange indices of information from their databases by making use of the Common Indexing Protocol (CIP). This document defines the structure of the index information being exchanged, as well as the appropriate meanings for the headers that are defined in the Common Indexing Protocol. This memo defines an Experimental Protocol for the Internet community.

2653      Allen                              Aug 1999                      CIP Transport Protocols

This document specifies three protocols for transporting CIP requests, responses and index objects, utilizing TCP, mail, and HTTP.  
[STANDARDS-TRACK]

2652      Allen                              Aug 1999                      MIME Object Definitions for  
the Common Indexing Protocol  
(CIP)

This document describes the definitions of those objects as well as the methods and requirements needed to define a new index type.  
[STANDARDS-TRACK]

2651      Allen                      Aug 1999                      The Architecture of the Common Indexing Protocol (CIP)

This document describes the CIP framework, including its architecture and the protocol specifics of exchanging indices. [STANDARDS-TRACK]

2650      Meyer                      Aug 1999                      Using RPSL in Practice

This document is a tutorial on using the Routing Policy Specification Language (RPSL) to describe routing policies in the Internet Routing Registry (IRR). This memo provides information for the Internet community.

2649      Greenblatt                  Aug 1999                      An LDAP Control and Schema for Holding Operation Signatures

This document describes an LDAP message control which allows for the retrieval of digitally signed information. This document defines an LDAP v3 based mechanism for signing directory operations in order to create a secure journal of changes that have been made to each directory entry. This memo defines an Experimental Protocol for the Internet community.

2648      Moats                          Aug 1999                      A URN Namespace for IETF Documents

This document proposes the "ietf" namespace, which consists of the RFC family of documents (RFCs, STDs, FYIs, and BCPs) developed by the IETF and published by the RFC Editor and the minutes of working groups (WG) and birds of a feather (BOF) meetings that occur during IETF conferences. [STANDARDS-TRACK]

2647      Newman                      Aug 1999                      Benchmarking Terminology for Firewall Performance

This document defines terms used in measuring the performance of firewalls. It extends the terminology already used for benchmarking routers and switches with definitions specific to firewalls. [STANDARDS-TRACK]

2646      Gellens                      Aug 1999                      The Text/Plain Format Parameter

This memo proposes a new parameter to be used with Text/Plain, and, in the presence of this parameter, the use of trailing whitespace to indicate flowed lines. This results in an encoding which appears as normal Text/Plain in older implementations, since it is in fact normal Text/Plain. [STANDARDS-TRACK]

2645      Gellens                      Aug 1999                      ON-DEMAND MAIL RELAY (ODMR)  
SMTP with Dynamic IP Addresses

This memo proposes a new service, On-Demand Mail Relay (ODMR), which is a profile of SMTP, providing for a secure, extensible, easy to implement approach to the problem. [STANDARDS-TRACK]

2644      Bradner                      Aug 1999                      Benchmarking Methodology for  
Network Interconnect Devices

This document discusses and defines a number of tests that may be used to describe the performance characteristics of a network interconnecting device. In addition to defining the tests this document also describes specific formats for reporting the results of the tests. This memo provides information for the Internet community.

2643      Ruffen                          Aug 1999                      Cabletron's SecureFast VLAN  
Operational Model

Cabletron's SecureFast VLAN (SFVLAN) product implements a distributed connection-oriented switching protocol that provides fast forwarding of data packets at the MAC layer. The product uses the concept of virtual LANs (VLANs) to determine the validity of call connection requests and to scope the broadcast of certain flooded messages. This memo provides information for the Internet community.

2642      Kane                              Aug 1999                      Cabletron's VLS Protocol  
Specification

VLSP provides support for equal-cost multipath routing, and recalculates routes quickly in the face of topological changes, utilizing a minimum of routing protocol traffic. This memo provides information for the Internet community.

2641      Hamilton              Aug 1999              Cabletron's VlanHello Protocol Specification

The VlanHello protocol is part of the InterSwitch Message Protocol (ISMP) which provides interswitch communication between switches running Cabletron's SecureFast VLAN (SFVLAN) product. Switches use the VlanHello protocol to discover their neighboring switches and establish the topology of the switch fabric. This memo provides information for the Internet community.

2640      Curtin                  Jul 1999              Internationalization of the File transfer Protocol

This document addresses the internationalization (I18n) of FTP, which includes supporting the multiple character sets and languages found throughout the Internet community. This is achieved by extending the FTP specification and giving recommendations for proper internationalization support. [STANDARDS-TRACK]

2639      Hastings                Jul 1999              Internet Printing Protocol/1.0: Implementer's Guide

This document contains information that supplements the IPP Model and Semantics and the IPP Transport and Encoding documents. It is intended to help implementers understand IPP/1.0 and some of the considerations that may assist them in the design of their client and/or IPP object implementations. This memo provides information for the Internet community.

2638      Nichols                    Jul 1999              A Two-bit Differentiated Services Architecture for the Internet

This document presents a differentiated services architecture for the internet. This memo provides information for the Internet community.



2632      Ramsdell              Jun 1999              S/MIME Version 3 Certificate Handling

S/MIME (Secure/Multipurpose Internet Mail Extensions), provides a method to send and receive secure MIME messages. Before using a public key to provide security services, the S/MIME agent MUST certify that the public key is valid. S/MIME agents MUST use PKIX certificates to validate public keys as described in the Internet X.509 Public Key Infrastructure (PKIX) Certificate and CRL Profile. [STANDARDS-TRACK]

2631      Rescorla              Jun 1999              Diffie-Hellman Key Agreement Method

This document standardizes one particular Diffie-Hellman variant, based on the ANSI X9.42 draft, developed by the ANSI X9F1 working group. [STANDARDS-TRACK]

2630      Housley              Jun 1999              Cryptographic Message Syntax

This document describes the Cryptographic Message Syntax. This syntax is used to digitally sign, digest, authenticate, or encrypt arbitrary messages. [STANDARDS-TRACK]

2629      Rose              Jun 1999              Writing I-Ds and RFCs using XML

This memo presents a technique for using XML (Extensible Markup Language) as a source format for documents in the Internet-Drafts (I-Ds) and Request for Comments (RFC) series. This memo provides information for the Internet community.

2628      Smyslov              Jun 1999              Simple Cryptographic Program Interface (Crypto API)

This document describes a simple Application Program Interface to cryptographic functions. This memo provides information for the Internet community.

2627      Wallner                      Jun 1999                      Key Management for Multicast:  
Issues and Architectures

This report contains a discussion of the difficult problem of key management for multicast communication sessions. It focuses on two main areas of concern with respect to key management, which are, initializing the multicast group with a common net key and rekeying the multicast group. This memo provides information for the Internet community.

2626      Nesser II                      Jun 1999                      The Internet and the  
Millennium Problem (Year 2000)

The Year 2000 Working Group (WG) has conducted an investigation into the millennium problem as it regards Internet related protocols. This investigation only targeted the protocols as documented in the Request For Comments Series (RFCs). This investigation discovered little reason for concern with regards to the functionality of the protocols. A few minor cases of older implementations still using two digit years (ala RFC 850) were discovered, but almost all Internet protocols were given a clean bill of health. Several cases of "period" problems were discovered, where a time field would "roll over" as the size of field was reached. In particular, there are several protocols, which have 32 bit, signed integer representations of the number of seconds since January 1, 1970 which will turn negative at Tue Jan 19 03:14:07 GMT 2038. Areas whose protocols will be effected by such problems have been notified so that new revisions will remove this limitation. This memo provides information for the Internet community.

2625      Rajagopal                      Jun 1999                      IP and ARP over Fibre Channel

The purpose of this document is to specify a way of encapsulating IP and Address Resolution Protocol(ARP) over Fibre Channel and also to describe a mechanism(s) for IP address resolution. [STANDARDS-TRACK]

2624      Shepler                              Jun 1999                      NFS Version 4 Design  
Considerations

This design considerations document is meant to present more detail than the working group charter. Specifically, it presents the areas that the working group will investigate and consider while developing a protocol specification for NFS version 4. This memo provides information for the Internet community.



2623      Eisler                      Jun 1999                      NFS Version 2 and Version 3  
Security Issues and the NFS  
Protocol's Use of RPCSEC\_GSS  
and Kerberos V5

This memorandum clarifies various security issues involving the NFS protocol (Version 2 and Version 3 only) and then describes how the Version 2 and Version 3 of the NFS protocol use the RPCSEC\_GSS security flavor protocol and Kerberos V5. [STANDARDS-TRACK]

2622      Alaettinoglu              Jun 1999                      Routing Policy Specification  
Language (RPSL)

RPSL allows a network operator to be able to specify routing policies at various levels in the Internet hierarchy; for example at the Autonomous System (AS) level. At the same time, policies can be specified with sufficient detail in RPSL so that low level router configurations can be generated from them. RPSL is extensible; new routing protocols and new protocol features can be introduced at any time. [STANDARDS-TRACK]

2621      Zorn                              Jun 1999                      RADIUS Accounting Server MIB

This memo defines a set of extensions which instrument RADIUS accounting server functions. This memo provides information for the Internet community.

2620      Aboba                              Jun 1999                      RADIUS Accounting Client MIB

This memo defines a set of extensions which instrument RADIUS accounting client functions. This memo provides information for the Internet community.

2619      Zorn                              Jun 1999                      RADIUS Authentication Server MIB

This memo defines a set of extensions which instrument RADIUS authentication server functions. [STANDARDS-TRACK]

2618      Aboba                              Jun 1999                      RADIUS Authentication Client MIB

This memo defines a set of extensions which instrument RADIUS authentication client functions. [STANDARDS-TRACK]

2617      Franks                      Jun 1999                      HTTP Authentication: Basic and Digest Access Authentication

This document provides the specification for HTTP's authentication framework, the original Basic authentication scheme and a scheme based on cryptographic hashes, referred to as "Digest Access Authentication". [STANDARDS-TRACK]

2616      Fielding                      Jun 1999                      Hypertext Transfer Protocol -- HTTP/1.1

HTTP has been in use by the World-Wide Web global information initiative since 1990. This specification defines the protocol referred to as "HTTP/1.1", and is an update to RFC 2068. [STANDARDS-TRACK]

2615      Malis                              Jun 1999                      PPP over SONET/SDH

This document describes the use of PPP over Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH) circuits. [STANDARDS-TRACK]

2614      Kempf                              Jun 1999                      An API for Service Location

This document describes standardized APIs for SLP in C and Java. This memo provides information for the Internet community.

2613      Waterman                      Jun 1999                      Remote Network Monitoring MIB Extensions for Switched Networks Version 1.0

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP-based internets. In particular, it defines objects for managing remote network monitoring devices in switched networks environments. [STANDARDS-TRACK]

2612      Adams                              Jun 1999                      The CAST-256 Encryption Algorithm

This document describes an existing algorithm that can be used to satisfy this requirement. Included are a description of the cipher and the key scheduling algorithm, the s-boxes, and a set of test vectors (Appendix A). This memo provides information for the Internet community.





2601	Davison	Jun 1999	ILMI-Based for ATMARP	Server Discovery
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**This memo defines how ILMI-based Server Discovery, which provides a method for ATM-attached hosts and routers to dynamically determine the ATM addresses of servers, shall be used to locate ATMARP servers.**  
**[STANDARDS-TRACK]**

2600	Reynolds	Mar 2000	Internet Official Protocol Standards
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This memo is published by the RFC Editor in accordance with Section 2.1 of "The Internet Standards Process -- Revision 3", RFC 2026, which specifies the rules and procedures by which all Internet standards are set. This memo is prepared by the RFC Editor for the IESG and IAB. Please see <http://www.rfc-editor.org> for later updates to this document.

[STANDARDS-TRACK]

## Security Considerations

**Security issues are not discussed in this memo.**

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