

Network Working Group  
Request for Comments: 2699  
Category: Informational

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ISI  
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## 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      Heenanen              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

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

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)

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

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]







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.

2637      Hamzeh              Jul 1999              Point-to-Point Tunneling  
   Protocol (PPTP)

This document specifies a protocol which allows the Point to Point Protocol (PPP) to be tunneled through an IP network. This memo provides information for the Internet community.

2636      Gellens              Jul 1999              Wireless Device Configuration  
   (OTASP/OTAPA) via ACAP

This paper describes a viable and attractive means to provide OTASP/OTAPA via IS-707, using the ACAP protocol. This memo provides information for the Internet community.

2635      Hambridge            Jun 1999              DON'T SPEW A Set of Guidelines  
   for Mass Unsolicited Mailings  
   and Postings

This document explains why mass unsolicited electronic mail messages are harmful in the Internetworking community. This memo provides information for the Internet community.

2634      Hoffman              Jun 1999              Enhanced Security Services for  
   S/MIME

This document describes four optional security service extensions for S/MIME. [STANDARDS-TRACK]

2633      Ramsdell              Jun 1999              S/MIME Version 3 Message  
   Specification

This document describes a protocol for adding cryptographic signature and encryption services to MIME data. [STANDARDS-TRACK]

2632	Ramsdell	Jun 1999	S/MIME Version 3 Certificate Handling
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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
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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
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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
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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)
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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 Server Discovery  
   for ATMARP

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

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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