

Network Working Group  
Request for Comments: 1999  
Category: Informational

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ISI  
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## Request for Comments Summary

RFC Numbers 1900-1999

### Status of This Memo

This RFC is a slightly annotated list of the 100 RFCs from RFC 1900 through RFCs 1999. 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.

### 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                         |
|------|---------|--------|-------------------------------|
| ---  | -----   | ----   | -----                         |
| 1999 | Elliott | Jan 97 | Requests For Comments Summary |

This memo.

|      |      |        |   |
|------|------|--------|---|
| 1998 | Chen | Aug 96 | An Application of the BGP Community Attribute in Multi-home Routing |
|------|------|--------|---|

This document presents an application of the BGP community attribute [2] in simplifying the implementation and configuration of routing policies in the multi-provider Internet. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.





1986      Polites          Aug 96      Experiments with a Simple File Transfer  
   Protocol for Radio Links using Enhanced  
   Trivial File Transfer Protocol (ETFTP)

This document is a description of the Enhanced Trivial File Transfer Protocol (ETFTP). This protocol is an experimental implementation of the NETwork BLock Transfer Protocol (NETBLT), RFC 998 [1], as a file transfer application program. This memo defines an Experimental Protocol for the Internet community.

1985      De Winter        Aug 96      SMTP Service Extension  
   for Remote Message Queue Starting

This memo defines an extension to the SMTP service whereby an SMTP client and server may interact to give the server an opportunity to start the processing of its queues for messages to go to a given host. [STANDARDS-TRACK]

1984      I.A.B.                Aug 96      IAB and IESG Statement on Cryptographic  
   Technology and the Internet

The Internet Architecture Board (IAB) and the Internet Engineering Steering Group (IESG), the bodies which oversee architecture and standards for the Internet, are concerned by the need for increased protection of international commercial transactions on the Internet, and by the need to offer all Internet users an adequate degree of privacy. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1983      Malkin                Aug 96      Internet Users' Glossary

There are many networking glossaries in existence. This glossary concentrates on terms which are specific to the Internet. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1982      Elz                    Aug 96      Serial Number Arithmetic

The DNS has long relied upon serial number arithmetic, a concept which has never really been defined, certainly not in an IETF document, though which has been widely understood. This memo supplies the missing definition. It is intended to update RFC1034 and RFC1035. [STANDARDS-TRACK]

1981      McCann            Aug 96      Path MTU Discovery for IP version 6

This document describes Path MTU Discovery for IP version 6. It is largely derived from RFC 1191, which describes Path MTU Discovery for IP version 4. [STANDARDS-TRACK]

1980      Seidman            Aug 96      A Proposed Extension to HTML :  
                                 Client-Side Image Maps

This document specifies an extension to the HTML language, referred to as "Client-Side Image Maps," which resolves some limitations. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1979      Woods                Aug 96      PPP Deflate Protocol

This document describes the use of the PPP Deflate compression protocol for compressing PPP encapsulated packets. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1978      Rand                  Aug 96      PPP Predictor Compression Protocol

This document describes the use of the Predictor data compression algorithm for compressing PPP encapsulated packets. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1977      Schryver            Aug 96      PPP BSD Compression Protocol

This document describes the use of the Unix Compress compression protocol for compressing PPP encapsulated packets. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1976     Schneider     Aug 96     PPP for Data Compression in Data  
   Circuit-Terminating Equipment (DCE)

This document defines a specific set of parameters for these protocols and an LCP extension to define a standard way of using PPP for data compression of serial data in Data Circuit-Terminating Equipment (DCE). This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1975     Schremp       Aug 96     PPP Magnalink Variable Resource  
   Compression

The Magnalink Variable Resource Compression Algorithm (MVRCA) allows a wide range of interoperable compression implementations whose performance characteristics are a function of available CPU and memory resources. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1974     Friend         Aug 96     PPP Stac LZS Compression Protocol

This document describes the use of the Stac LZS data compression algorithm, with single or multiple compression histories, for compressing PPP encapsulated packets. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1973     Simpson       Jun 96     PPP in Frame Relay

This document describes the use of Frame Relay for framing PPP encapsulated packets. [STANDARDS-TRACK]

1972     Crawford       Aug 96     A Method for the Transmission of IPv6  
   Packets over Ethernet Networks

This memo specifies the frame format for transmission of IPv6 [IPV6] packets and the method of forming IPv6 link-local addresses on Ethernet networks. [STANDARDS-TRACK]

1971     Thomson         Aug 96     IPv6 Stateless Address Autoconfiguration

This document specifies the steps a host takes in deciding how to autoconfigure its interfaces in IP version 6. [STANDARDS-TRACK]

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|------|--------|--------|---|
| 1970 | Narten | Aug 96 | Neighbor Discovery for IP Version 6<br>(IPv6) |
|------|--------|--------|---|

This document specifies the Neighbor Discovery protocol for IP Version 6. [STANDARDS-TRACK]

|      |         |        |  |
|------|---------|--------|--|
| 1969 | Sklower | Jun 96 | The PPP DES Encryption Protocol (DESE) |
|------|---------|--------|--|

This document provides specific details for the use of the DES standard [5, 6] for encrypting PPP encapsulated packets. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

|      |       |        |   |
|------|-------|--------|---|
| 1968 | Meyer | Jun 96 | The PPP Encryption Control Protocol (ECP) |
|------|-------|--------|---|

This document defines a method for negotiating data encryption over PPP links. [STANDARDS-TRACK]

|      |           |        |   |
|------|-----------|--------|---|
| 1967 | Schneider | Aug 96 | PPP LZS-DCP Compression Protocol<br>(LZS-DCP) |
|------|-----------|--------|---|

This document describes the use of the Stac LZS data compression algorithm for compressing PPP encapsulated packets, using a DCP header [6]. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

|      |       |        |  |
|------|-------|--------|--|
| 1966 | Bates | Jun 96 | BGP Route Reflection<br>An alternative to full mesh IBGP |
|------|-------|--------|--|

This document describes the use and design of a method known as "Route Reflection" to alleviate the the need for "full mesh" IBGP. This memo defines an Experimental Protocol for the Internet community.

|      |        |        |  |
|------|--------|--------|--|
| 1965 | Traina | Jun 96 | Autonomous System Confederations for BGP |
|------|--------|--------|--|

This document describes an extension to BGP which may be used to create a confederation of autonomous systems which is represented as one single autonomous system to BGP peers external to the confederation. This memo defines an Experimental Protocol for the Internet community.

|      |      |        |  |
|------|------|--------|--|
| 1964 | Linn | Jun 96 | The Kerberos Version 5 GSS-API Mechanism |
|------|------|--------|--|

This specification defines protocols, procedures, and conventions to be employed by peers implementing the Generic Security Service Application Program Interface (as specified in RFCs 1508 and 1509) when using Kerberos Version 5 technology (as specified in RFC 1510). [STANDARDS-TRACK]

|      |           |        |  |
|------|-----------|--------|--|
| 1963 | Schneider | Aug 96 | PPP Serial Data Transport Protocol<br>(SDTP) |
|------|-----------|--------|--|

This document describes a new Network level protocol (from the PPP point of view), PPP Serial Data Transport Protocol, that provides encapsulation and an associated control protocol for transporting serial data streams over a PPP link. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

|      |      |        |  |
|------|------|--------|--|
| 1962 | Rand | Jun 96 | The PPP Compression Control Protocol (CCP) |
|------|------|--------|--|

This document defines a method for negotiating data compression over PPP links. [STANDARDS-TRACK]

|      |         |        |  |
|------|---------|--------|--|
| 1961 | McMahon | Jun 96 | GSS-API Authentication Method for SOCKS<br>Version 5 |
|------|---------|--------|--|

This document provides the specification for the SOCKS V5 GSS-API authentication protocol, and defines a GSS-API-based encapsulation for provision of integrity, authentication and optional confidentiality.

[STANDARDS-TRACK]

|      |       |        |  |
|------|-------|--------|--|
| 1960 | Howes | Jun 96 | A String Representation of LDAP Search Filters |
|------|-------|--------|--|

The Lightweight Directory Access Protocol (LDAP) [1] defines a network representation of a search filter transmitted to an LDAP server. Some applications may find it useful to have a common way of representing these search filters in a human-readable form. This document defines a human-readable string format for representing LDAP search filters.

[STANDARDS-TRACK]



1959      Howes              Jun 96      An LDAP URL Format

This document describes a format for an LDAP Uniform Resource Locator which will allow Internet clients to have direct access to the LDAP protocol. [STANDARDS-TRACK]

1958      Carpenter        Jun 96      Architectural Principles of the Internet

The Internet and its architecture have grown in evolutionary fashion from modest beginnings, rather than from a Grand Plan. While this process of evolution is one of the main reasons for the technology's success, it nevertheless seems useful to record a snapshot of the current principles of the Internet architecture. This is intended for general guidance and general interest, and is in no way intended to be a formal or invariant reference model. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1957      Nelson              Jun 96      Some Observations on Implementations  
   of the Post Office Protocol (POP3)

This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1956      Engebretson        Jun 96      Registration in the MIL Domain

This RFC describes the policy for the registration of second level domains under the ".MIL" domain. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1955      Hinden              Jun 96      New Scheme for Internet Routing and  
   Addressing (ENCAPS) for IPNG

This paper proposes a new scheme which I believe is a good medium term solution to the routing and address problems of the internet. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.



1949     Ballarde     May 96     Scalable Multicast Key Distribution

This memo provides a scalable solution to the multicast key distribution problem. This memo defines an Experimental Protocol for the Internet community.

1948     Bellovin     May 96     Defending Against Sequence Number  
   Attacks

IP spoofing attacks based on sequence number spoofing have become a serious threat on the Internet (CERT Advisory CA-95:01). While ubiquitous cryptographic authentication is the right answer, we propose a simple modification to TCP implementations that should be a very substantial block to the current wave of attacks. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1947     Spinellis     May 96     Greek Character Encoding for Electronic  
   Mail Messages

This document describes a standard encoding for electronic mail [RFC822] containing Greek text and provides implementation guide-lines. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1946     Jackowski     May 96     Native ATM Support for ST2+

This memo describes a working implementation which enables applications to directly invoke ATM services in the following environments: ATM to internet, internet to ATM, and internet to internet across ATM. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1945     Berners-Lee   May 96     Hypertext Transfer Protocol -- HTTP/1.0

The Hypertext Transfer Protocol (HTTP) is an application-level protocol with the lightness and speed necessary for distributed, collaborative, hypermedia information systems. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1944 Bradner May 96 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. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1943 Jennings May 96 Building an X.500 Directory Service  
in the US

This document provides definition and recommends considerations that must be undertaken to operate a X.500 Directory Service in the United States. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1942 Raggett May 96 HTML Tables

This specification extends HTML to support a wide variety of tables. This memo defines an Experimental Protocol for the Internet community.

1941 Sellers May 96 Frequently Asked Questions for Schools

The goal of this FYI document, produced by the Internet School Networking (ISN) group in the User Services Area of the Internet Engineering Task Force (IETF), is to act as an introduction to the Internet for faculty, administration, and other school personnel in primary and secondary schools. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1940 Estrin May 96 Source Demand Routing: Packet Format and  
Forwarding Specification (Version 1).

The purpose of SDRP is to support source-initiated selection of routes to complement the route selection provided by existing routing protocols for both inter-domain and intra-domain routes. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1939     Myers            May 96     Post Office Protocol - Version 3

The Post Office Protocol - Version 3 (POP3) is intended to permit a workstation to dynamically access a maildrop on a server host in a useful fashion. [STANDARDS-TRACK]

1938     Haller           May 96     A One-Time Password System

This document describes a one-time password authentication system (OTP). [STANDARDS-TRACK]

1937     Rekhter          May 96     "Local/Remote" Forwarding Decision in  
Switched Data Link Subnetworks

This document describes extensions to the IP architecture that relaxes these constraints, thus enabling the full utilization of the services provided by SVC-based Data Link subnetworks. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1936     Touch            Apr 96     Implementing the Internet Checksum in  
Hardware

This memo presents a techniques for efficiently implementing the Internet Checksum in hardware. It includes PLD code for programming a single, low cost part to perform checksumming at 1.26 Gbps. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1935     Quarterman        Apr 96     What is the Internet, Anyway?

This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1934     Smith              Apr 96     Ascend's Multilink Protocol Plus (MP+)

This document proposes an extension to the PPP Multilink Protocol (MP) [1]. Multilink Protocol Plus (MP+) is a new control protocol for managing multiple data links that are bundled by MP. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1933 Gilligan Apr 96 Transition Mechanisms for IPv6 Hosts  
and Routers

This document specifies IPv4 compatibility mechanisms that can be implemented by IPv6 hosts and routers. [STANDARDS-TRACK]

1932 Cole Apr 96 IP over ATM: A Framework Document

It is hoped that this document, in classifying ATM approaches and issues will help to focus the IP over ATM working group's direction. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1931 Brownell Apr 96 Dynamic RARP Extensions for  
Automatic Network Address Acquisition

This memo describes extensions to the Reverse Address Resolution Protocol (RARP [2]) and called Dynamic RARP (DRARP, pronounced D-RARP). This memo provides information for the Internet community. This memo does not define an Internet standard of any kind.

1930 Hawkinson Mar 96 Guidelines for creation, selection, and  
registration of an Autonomous System (AS)

This memo discusses when it is appropriate to register and utilize an Autonomous System (AS), and lists criteria for such. This document specifies an Internet Best Current Practices for the Internet Community, and requests discussion and suggestions for improvements.

1929 Leech Mar 96 Username/Password Authentication for  
SOCKS V5

The protocol specification for SOCKS Version 5 specifies a generalized framework for the use of arbitrary authentication protocols in the initial socks connection setup. This document describes one of those protocols, as it fits into the SOCKS Version 5 authentication "subnegotiation". [STANDARDS-TRACK]

1928     Leech            Mar 96     SOCKS Protocol Version 5

This memo describes a protocol that is an evolution of the previous version of the protocol, version 4 [1]. This new protocol stems from active discussions and prototype implementations. [STANDARDS-TRACK]

1927     Rogers           Apr 96     Suggested Additional MIME Types for  
                         Associating Documents

Seven new types of MIME types are suggested in this document. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1926     Eriksson        Apr 96     An Experimental Encapsulation of IP  
                         Datagrams on Top of ATM

This RFC describes a method of encapsulating IP datagrams on top of Acoustical Transmission Media (ATM). This is a non-recommended standard. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1925     Callon           Apr 96     The Twelve Networking Truths

This memo documents the fundamental truths of networking for the Internet community. This memo does not specify a standard, except in the sense that all standards must implicitly follow the fundamental truths. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1924     Elz              Apr 96     A Compact Representation of IPv6 Addresses

This document specifies a more compact representation of IPv6 addresses, which permits encoding in a mere 20 bytes. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1923      Halpern            Mar 96      RIPv1 Applicability Statement for  
   Historic Status

RIP Version 1 [RFC-1058] has been declared an historic document. This Applicability statement provides the supporting motivation for that declaration. The primary reason, as described below, is the Classful nature of RIPv1. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1922      Zhu                Mar 96      Chinese Character Encoding for Internet  
   Messages

This memo describes methods of transporting Chinese characters in Internet services which transport text, such as electronic mail [RFC-822], network news [RFC-1036], telnet [RFC-854] and the World Wide Web [RFC-1866]. This memo provides information for the Internet community. It does not specify an Internet standard.

1921      Dujonc                Mar 96      TNVIP Protocol

The goal of this document specifies a Telnet profile to support VIP terminal emulation allowing the access to the BULL hosts applications through a TCP/IP network. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1920      I.A.B.                Mar 96      INTERNET OFFICIAL PROTOCOL STANDARDS

This memo describes the state of standardization of protocols used in the Internet as determined by the Internet Architecture Board (IAB). [STANDARDS-TRACK]

1919      Chatel                Mar 96      Classical versus Transparent IP Proxies

This document explains "classical" and "transparent" proxy techniques and attempts to provide rules to help determine when each proxy system may be used without causing problems. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.



1918      Rekhter          Feb 96      Address Allocation for Private Internets

This document describes address allocation for private internets. This document specifies an Internet Best Current Practices for the Internet Community, and requests discussion and suggestions for improvements.

1917      Nesser              Feb 96      An Appeal to the Internet Community to  
Return Unused IP Networks (Prefixes)  
to the IANA

This document is an appeal to the Internet community to return unused address space, i.e. any block of consecutive IP prefixes, to the Internet Assigned Numbers Authority (IANA) or any of the delegated registries, for reapportionment. This document specifies an Internet Best Current Practices for the Internet Community, and requests discussion and suggestions for improvements.

1916      Berkowitz          Feb 96      Enterprise Renumbering: Experience and  
Information Solicitation

Because of the urgent need for, and substantial difficulty in, renumbering IP networks, the PIER working group is compiling a series of documents to assist sites in their renumbering efforts. The intent of these documents is to provide both educational and practical information to the Internet community. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1915      Kastenholz          Feb 96      Variance for The PPP Connection Control  
Protocol and The PPP Encryption Control  
Protocol

The PPP Working group has developed two protocols, one to control compression on PPP links; the Compression Control Protocol (CCP), documented in draft-ietf-pppext-compression-04.txt. The second is the Encryption Control Protocol (ECP), used to control encryption on serial links, documented in draft-ietf-pppext-encryption-03.txt. This document specifies an Internet Best Current Practices for the Internet Community, and requests discussion and suggestions for improvements.

1914     Faltstrom     Feb 96     How to Interact with a Whois++ Mesh

In the Whois++ architecture [Deutsch94],[Weider94], mesh traversal is done by the client, since each server 'refers' the client to the next appropriate server(s). [STANDARDS-TRACK]

1913     Weider             Feb 96     Architecture of the Whois++ Index Service

The authors describe an architecture for indexing in distributed databases, and apply this to the WHOIS++ protocol. [STANDARDS-TRACK]

1912     Barr                 Feb 96     Common DNS Operational and Configuration Errors

This memo describes errors often found in both the operation of Domain Name System (DNS) servers, and in the data that these DNS servers contain. This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

1911     Vaudreuil     Feb 96     Voice Profile of Internet Mail

The following document is a profile of the Internet standard MIME and ESMTP protocols for use as a digital voice networking protocol. This memo defines an Experimental Protocol for the Internet community.

1910     Waters             Feb 96     User-based Security Model for SNMPv2

In this administrative framework, a security model defines the mechanisms used to achieve an administratively-defined level of security for protocol interactions. Although many such security models might be defined, it is the purpose of this document, User-based Security Model for SNMPv2, to define the first, and, as of this writing, only, security model for this administrative framework. This memo defines an Experimental Protocol for the Internet community.

1909     McClogherie   Feb 96     An Administrative Infrastructure for SNMPv2

It is the purpose of this document, An Administrative Infrastructure for SNMPv2, to define an administrative framework which realizes effective management in a variety of configurations and environments. This memo defines an Experimental Protocol for the Internet community.



1903      Case              Jan 96      Textual Conventions for Version 2 of the  
Simple Network Management Protocol (SNMPv2)

It is the purpose of this document to define the initial set of textual conventions available to all MIB modules. [STANDARDS-TRACK]

1902      Case              Jan 96      Structure of Management Information for  
Version 2 of the Simple Network  
Management Protocol (SNMPv2)

It is the purpose of this document, the Structure of Management Information (SMI), to define that adapted subset, and to assign a set of associated administrative values. [STANDARDS-TRACK]

1901      Case              Jan 96      Introduction to Community-based SNMPv2

The purpose of this document is to define the Community-based Administrative Framework for the SNMP version 2 framework (SNMPv2). This document specifies an Experimental protocol for the Internet community.

1900      Carpenter          Feb 96      Renumbering Needs Work

Hosts in an IP network are identified by IP addresses, and the IP address prefixes of subnets are advertised by routing protocols. A change in such IP addressing information associated with a host or subnet is known as "renumbering". This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind.

#### Security Considerations

Security issues are not discussed in this memo.

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