Network Working Group Request for Comments: 758 IEN: 117

Obsoletes RFCs: 755, 750,739, 604, 503, 433, 349 Obsoletes IENs: 93

J. Postel USC-ISI August 1979

#### ASSIGNED NUMBERS

This Network Working Group Request for Comments documents the currently assigned values from several series of numbers used in network protocol implementations. This RFC will be updated periodically, and in any case current information can be obtained from Jon Postel. The assignment of numbers is also handled by Jon. If you are developing a protocol or application that will require the use of a link, socket, etc. please contact Jon to receive a number assignment.

vinU

~Jon Postel USC - Information Sciences Institute 4676 Admiralty Way Marina del Rey, California 90291

phone: (213) 822-1511

ARPANET mail: POSTEL@ISIB

Most of the protocols mentioned here are documented in the RFC series of notes. The more prominent and more generally used are documented in the Protocol Handbook [1] prepared by the Network Information Center (NIC). In the lists that follow a bracketed number, e.g. [1], off to the right of the page indicates a reference for the listed protocol.

Postel

[Page 1]

RFC 758 **IEN 117** Network Numbers

August 1979 Assigned Numbers

. Request for Commonte: 758

# ASSIGNED NETWORK NUMBERS

Obsoletes RFCa: 755, 750,739, 604, 503, 433 This list of network numbers is used in the internetwork, the field is 8 bits in size.

Assigned Network Numbers

Decimal	Octal	Name	Network	4	References
0	0		Reserved	•.	
1	1	BBN-PR	BBN Packet Radio	Network	
2	2	SF-PR-1	SF Bay Area Pack		Network (1)
3	3	BBN-RCC	BBN RCC Network	ee nuure	ACCHOIR (I)
4	4	SATNET	Atlantic Satelli	te Networ	k
5	5	SILL-PR	Ft. Sill Packet		
6	6	SF-PR-2	SF Bay Area Pack		
7	7	CHAOS	MIT CHAOS Networ	k	ACONOLY (L)
8	10	CLARKNET	SATNET subnet fo		urg
9	11	BRAGG-PR	Ft. Bragg Packet		
10	12	ARPANET	ARPANET		[1,2]
11	13	UCLNET	University Colle	ge Londor	Network
12	14	CYCLADES	CYCLADES .		
13	15	NPLNET	National Physica	1 Laborat	orv
14	16	TELENET	TELENET		
15	17	EPSS	British Post Off:	ice EPSS	
16	20	DATAPAC	DATAPAC		
17	21	TRANSPAC	TRANSPAC		
18	22	LCSNET	MIT LCS Network		[37,38]
19	23	TYMNET	TYMNET		
20	24	DC-PR	Washington D.C. 1	Packet Ra	dio Network
21	25	EDN	DCEC EDN		[ ] ] Jandhar H [ no
22	26	DIALNET	DIALNET		[47,48]
23	27	MITRE	MITRE Cablenet		[23]
24	30	BBN-LOCAL	BBN Local Network	ĸ	
25	31	RSRE-PPSN	RSRE / PPSN		
26	32	AUTODIN-II	AUTODIN II		
27	33	NOSC-LCCN	NOSC / LCCN		
28	34	WIDEBAND	Wide Band Satelli	te Netwo	rk
29	35	DCN-COMSAT			
30	36	DCN-UCL	UCL Distributed (	Computing	Network
31	37	BBN-SAT-TES	T BBN SATNET Test	Network	
32-254	40-376		Unassigned		
255	377		Reserved		

[Page 2]

۰.

RFC 758 IEN 117 Internet Protocol Versions

# August 1979 Assigned Numbers

ASSIGNED INTERNET PROTOCOL VERSIONS

In the Internet Protocol (IP) there is a field to identify the version of the internetwork general protocol. This field is 4 bits in size.

# Assigned Internet Protocol Versions

Decimal Octal		Version	. References	
0 1 2 3 4 5–14 15	0 1 2 3 4 5-16 17	March 1977 version January 1978 version February 1978 version A February 1978 version B August 1979 version 4 Unassigned Reserved	0	[35] [36] [42] [43] [44]
		9VH		
		Unanotened		
			. 55	

Postel

RFC 758 IEN 117 Internet Protocol Numbers

August 1979 Assigned Numbers

# ASSIGNED INTERNET PROTOCOL NUMBERS

In the Internet Protocol (IP) [44] there is a field to identify the the next level protocol. This field is 8 bits in size. This field is called Protocol in the IP header.

Assigned Internet Protocol Numbers

Decima	l Octa	Protocol Numbers	References
0	0	Reserved	0 0
101		raw internet datagrams	[44]
2		TCP-3	[36]
3	3	Gateway-to-Gateway	[49]
4	4	Gateway Monitoring Message	[41]
5	5	TCP-3.1	[45]
6	6	TCP-4	[46]
7	7	UCL	
8		DSP	[37,38]
9		Secure	
10	12	TCP-2	[35]
11	13	NVP	[39]
12	14	Unassigned	
13	15	Pluribus	
14	16	Telenet	
15	17	XNET	
16	20	Chaos	
17	21	User Datagram	[50]
18		Multiplexing	[51]
19-63	23-77	Unassigned	
64		EXPAK cumstats	
65		EXPAK PC messages	
66	102	Unassigned	
67	103	Gateway Monitoring	
68	104	Unassigned	
69		SIMP monitoring	
70	106	SIMP polling	
71	107	SIMP packet core/U	
72-76	110-114	Unassigned	
77	115	backroom SIMP polling	
78	116	backroom SIMP monitoring	
79	117	SIMP message generators	
	120-376	Unassigned	
255	377	Reserved	

Postel

[Page 4]

RFC 758 IEN 117 Port or Socket Numbers August 1979 Assigned Numbers

### ASSIGNED PORT or SOCKET NUMBERS

Ports are used in the TCP [46] and sockets are used in the AHHP [1,3] to name the ends of logical connections which carry long term conversations. For the purpose of providing services to unknown callers a service contact socket is defined. This list specifies the port or socket used by the server process as its contact socket. In the AHHP an Initial Connection Procedure ICP [1,34] is used between the user process and the server process to make the initial contact and establish the long term connections leaving the contact socket free to handle other callers. In the TCP no ICP is necessary since a port may engage in many simultaneous connections.

Who is up or NETSTAT

Socket Assignments:

General Assignments:

Decimal	Octal	Description
0-63	0-77	Network Wide Standard Function
64-127	100-177	Hosts Specific Functions
128-223	200-337	Reserved for Future Use
224-255	340-377	Any Experimental Function

[Page 5]

August 1979 Assigned Numbers

Specific Assignments:

Network Standard Functions

Decimal	Octal	Description	References
1.1	org Josdo	Old Telnet	[6]
3	3	Old File Transfer	[7,8,9]
5	5	Remote Job Entry	[1,10]
7	7	Echo	[11]
9	11	Discard	[12]
11	13	Who is on or SYSTAT	
13	15	Date and Time	
15	17	Who is up or NETSTAT .	
17	21	Short Text Message	
19	23	Character generator or TTYTST	[13]
21	25	New File Transfer	[1,14,15]
23	27	New Telnet	[1,16,17]
25	31	Distributed Programming System	[18,19]
27	33	NSW User System w/COMPASS FE	[20]
29	35	MSG-3 ICP	[21]
31	37	MSG-3 Authentication	[21]
33	41	DPS ICP	[18,19]
35	43	IO Station Spooler	L10,191
37	45	Time Server	[1 22]
39	47	NSW User System w/SRI FE	[1,22]
41	51	Graphics	[20]
42	52	Name Server	[1,26]
43	53	WhoIs	[52]
45 47-63	55 57-77	Internet Message Processing Module unassigned	e [53]

Postel

RFC 758 IEN 117 Port or Socket Numbers

•• ...

BFC 758 August 1979 Assigned Numbers

Host Specific Functions

Decimal	Octal	Description	References
65	101	unassigned	11 bas bastlab
67	103	Datacomputer at CCA	[24]
69	105	CPYNET	refers to the b
71	107	NETRJS (EBCDIC) at UCLA-CCN.	[1,25]
73	111	NETRJS (ASCII-68) at UCLA-CCN	[1,25]
75	113	NETRJS (ASCII-63) at UCLA-CCN	[1,25]
77	115	any private RJE server	
79	117	Name or Finger	[1,40]
81	121	Network BSYS	
83	123	MIT ML Device	
85	125	MIT ML Device	
86-94	126-136	unassigned	
95	137	SUPDUP	[33]
97	141	Datacomputer Status	r221
98-127	142-136	unassigned	
Reserved Decimal	for Future Octal	e Use	De Gammana
Deetmar	octar	Description	References
128-223	200-337	reserved	159-191 831-27
Experimen	ntal Functi	ions	
Decimal	Octal	Description	References
224-231 232-237 239	340-347 350-355 357	unassigned Authorized Mailer at BBN unassigned	
241	361	NCP Measurement	[27,28]
243	363	Survey Measurement	[28,29,30]
245 247	365	LINK	[31]
249-255	367 371–377	TIPSRV RSEXEC	[31,32]

Postel

RFC 758 IEN 117 Link Numbers

### ASSIGNED LINK NUMBERS

The word "link" here refers to a field in the original ARPANET Host/IMP interface leader. The link was originally defined as an 8 bit field. Some time after the ARPANET Host-to-Host (AHHP) protocol was defined and, by now, some time ago the definition of this field was changed to "Message-ID" and the length to 12 bits. The name link now refers to the high order 8 bits of this 12 bit message-id field. The low order 4 bits of the message-id field are to be zero unless specifically specified otherwise for the particular protocol used on that link. The Host/IMP interface is defined in BBN report 1822 [2].

#### Link Assignments:

1313

Decimal	Octal	Description	References
0	0	AHHP Control Messages Reserved	[1,3]
2-71	2-107	AHHP Regular Messages	[1,3]
72-151 152 153	110-227 230 231	Reserved PARC Universal Protocol TIP Status Reporting	
154 155–158	232 233-236	TIP Accounting Internet Protocol	5 mm 7
159-191	237-277	Measurements	[44] [28]
192-195 196-255	300-303 304-377	Message Switching Protocol Experimental Protocols	[4,5]
224-255	340-377	NVP	[1,39]

August 1979 Assigned Numbers

s. fars A. . . . .

## REFERENCES

- [1] Feinler, E. and J. Postel, eds., "ARPANET Protocol Handbook," NIC 7104, for the Defense Communications Agency by SRI International, Menlo Park, California, Revised January 1978.
- [2] BBN, "Specifications for the Interconnection of a Host and an IMP," Report 1822, Bolt Beranek and Newman, Cambridge, Massachusetts, January 1976.
- [3] McKenzie, A. "Host/Host Protocol for the ARPA Network," NIC 8246, January 1972. Also in [1].
- [4] Walden, D. " A System for Interprocess Communication in a Resource Sharing Network," RFC 62, NIC 4962, 3 August 1970. Also published in Communications of the ACM, volume 15, number 4, April 1972.
- [5] Bressler, B. "A Proposed Experiment with a Message Switching Protocol," RFC 333, NIC 9926, 15 May 72.
- [6] Postel, J. "Telnet Protocol," RFC 318, NIC 9348, 3 April 1972.
- [7] McKenzie, A. "File Transfer Protocol," RFC 454, NIC 14333, 16 February 1973.
- [8] Clements, R. "FTPSRV Extensions for Tenex Paged Files," RFC 683, NIC 32251, 3 April 1975. Also in [1].
- [9] Harvey, B. "One More Try on the FTP," RFC 691, NIC 32700, 6 June 1975.
- [10] Bressler, B. "Remote Job Entry Protocol," RFC 407, NIC 12112, 16 October 72. Also in [1].
- [11] Postel, J. "Echo Process," RFC 347, NIC 10426, 30 May 1972.
- [12] Postel, J. "Discard Process," RFC 348, NIC 10427, 30 May 1972.
- [13] Postel, J. "Character Generator Process," RFC 429, NIC 13281, 12 December 1972.
- [14] Neigus, N. "File Transfer Protocol," RFC 542, NIC 17759, 12 July 1973. Also in [1].

Postel

[Page 9]

August 1979 Assigned Numbers

- [15] Postel, J. "Revised FTP Reply Codes," RFC 640, NIC 30843, 5 June 1974. Also in [1].
- [16] McKenzie, A. "Telnet Protocol Specification," NIC 18639, August 1973. Also in [1].
- [17] McKenzie, A. "Telnet Option Specification," NIC 18640, August 1973. Also in [1].
- [18] White, J. "A High Level Framework for Network-Based Resource Sharing," RFC 707, NIC 34263, 14 January 1976. Also in NCC Proceedings, AFIPS, June 1976.
- [19] White, J. "Elements of a Distributed Programming System," RFC 708, NIC 34353, 28 January 1976.
- [20] COMPASS. "Semi-Annual Technical Report," CADD-7603-0411, Massachusetts Computer Associates, 4 March 1976. Also as, "National Software Works, Status Report No. 1," RADC-TR-76-276, Volume 1, September 1976. And COMPASS. "Second Semi-Annual Report," CADD-7608-1611, Massachusetts Computer Associates, 16 August 1976.
- [21] NSW Protocol Committee, "MSG: The Interprocess Communication Facility for the National Software Works," CADD-7612-2411, Massachusetts Computer Associates, BBN 3237, Bolt Beranek and Newman, Revised 24 December 1976.
- [22] Harrenstien, K. "Time Server," RFC 738, NIC 42218, 31 October 1977. Also in [1].
- [23] Skelton, A., S. Holmgren, and D. Wood, "The MITRE Cablenet Project," IEN 96, April 1979.
- [24] CCA, "Datacomputer Version 1 User Manual," Computer Corporation of America, August 1975.
- [25] Braden, R. "NETRJS Protocol," RFC 740, NIC 42423, 22 November 1977. Also in [1].
- [26] Sproull, R, and E. Thomas. "A Networks Graphics Protocol," NIC 24308, 16 August 1974. Also in [1].
- [27] Cerf, V., "NCP Statistics," RFC 388, NIC 11360, 23 August 1972.

Postel

[Page 10]

----

August 1979 Assigned Numbers

[28]	Cerf, V., "Formation of a Network Measurement Group (NMG)," RFC 323, NIC 9630, 23 March 1972.	
[29]	Bhushan, A., "A Report on the Survey Project," RFC 530, NIC 17375, 22 June 1973.	
[30]	Cantor, D., "Storing Network Survey Data at the Datacomputer," RFC 565, NIC 18777, 28 August 1973.	
[31]	Bressler, R., "Inter-Entity Communication An Experiment," RFC 441, NIC 13773, 19 January 1973.	
[32]	Thomas, R. "A Resource Sharing Executive for the ARPANET," AFIPS Conference Proceedings, 42:155-163, NCC, 1973.	
[33]	Crispin, M. "SUPDUP Protocol," RFC 734, NIC 41953, 7 October 1977. Also in [1].	
[34]	Postel, J. "Official Initial Connection Protocol," NIC 7101, 11 June 1971. Also in [1].	
[35]	Cerf, V. "Specification of Internet Transmission Control Program TCP (version 2)," March 1977.	
[36]	Cerf, V. and J. Postel, "Specification of Internetwork Transmission Control Program TCP Version 3," USC/Information Sciences Institute, January 1978.	
[37]	Reed, D. "Protocols for the LCS Network," Local Network Note 3, Laboratory for Computer Science, MIT, 29 November 1976.	
[38]	Clark, D. "Revision of DSP Specification," Local Network Note 9, Laboratory for Computer Science, MIT, 17 June 1977.	588
[39]	Cohen, D. "Specifications for the Network Voice Protocol (NVP)," NSC Note 68, 29 January 1976. Also as USC/Information Sciences Institute RR-75-39, March 1976, and as RFC 741, NIC 42444, 22 November 1977. Also in [1].	
[40]	Harrenstien, K. "Name/Finger," RFC 742, NIC 42758, 30 December 1977. Also in [1].	
[41]	Cole, J. "Gateway Monitoring Messages," BBN, 1 February 1978.	
[42]	Postel, J. "Draft Internetwork Protocol Specification Version 2," USC/Information Sciences Institute, February 1978.	

Postel

[Page 11]

August 1979 Assigned Numbers

- [43] Cerf, V. "A Proposed New Internet Header Format," Advanced Research Projects Agency, IEN 26, 14 February 1978.
- [44] Postel, J. "Internet Protocol," IEN-111, USC/Information Sciences Institute, August 1979.
- [45] Cerf, V. "A Proposal for TCP Version 3.1 Header Format," Advanced Research Projects Agency, IEN 26, 14 February 1978.
- [46] Postel, J., "Transmission Control Protocol," IEN-112, USC/Information Sciences Institute, August 1979.
- [47] McCarthy, J. and L. Earnest, "DIALNET," Stanford University Artificial Intelligence Laboratory, Undated.
- [48] Crispin, M. and I. Zabala, "DIALNET Protocols," Stanford University Artificial Intelligence Laboratory, July 1978.
- [49] Strazisar, V, and R. Perlman, "Gateway Routing, An Implementation Specification," IEN-30, Bolt Berenak and Newman, April 1978.
- [50] Postel, J., "User Datagram Protocol;" IEN-88, USC/Information Sciences Institute, May 1979.
- [51] Cohen, D. and J. Postel, "Multiplexing Protocol," IEN-90, USC/Information Sciences Institute, May 1979.
- [52] Postel, J., "Name Server," IEN-116, USC/Information Sciences Institute, August 1979.
- [53] Postel, J., "Internet Message Protocol," RFC-759, IEN-113, USC/Information Sciences Institute, August 1979.

Postal, J. "Braft Internationsk Protocol Specification .---

Postel

[Page 12]