                 TCP Port Service Multiplexer (TCPMUX)

Status of this Memo

   This RFC proposes an Internet standard which can be used by future
   TCP services instead of using 'well-known ports'. Distribution of
   this memo is unlimited.

Overview

   Ports are used in the TCP to name the ends of logical connections
   which carry long term conversations. For the purpose of providing
   services to unknown callers, a service contact port is defined. The
   contact port is sometimes called the "well-known port". Standard TCP
   services are assigned unique well-known port numbers in the range of
   0-255. These ports are of limited number and are typically only
   assigned to official Internet protocols.

   This RFC defines a protocol to contact multiple services on a single
   well-known TCP port using a service name instead of a well-known
   number. In addition, private protocols can make use of the service
   without needing an official TCP port assignment.

The Protocol

   A TCP client connects to a foreign host on TCP port 1. It sends the
   service name followed by a carriage-return line-feed <CRLF>. The
   service name is never case sensitive. The server replies with a
   single character indicating positive ("+") or negative ("-")
   acknowledgment, immediately followed by an optional message of
   explanation, terminated with a <CRLF>. If the reply was positive,
   the selected protocol begins; otherwise the connection is closed.

Service Names

   The name "HELP" is reserved. If received, the server will output a
   multi-line message and then close the connection. The reply to the
   name "HELP" must be a list of the service names of the supported
   services, one name per line.

   The names listed in the "Protocol and Service Names" section of the
   current edition of "Assigned Numbers" (RFC-1010 at this time) are
   reserved to have exactly the definitions specified there. Services

with distinct assigned ports must be available on those ports and may
optionally be available via this port service multiplexer on port 1.

Private protocols should use a service name that has a high chance of
being unique. A good practice is to prefix the protocol name with
the name of your organization.

Multiple versions of a protocol can suffix the service name with a
protocol version number.

Implementation Notes

A negative reply will typically be returned by the port-multiplexing
process when it can't find the requested service. A positive reply
will typically be returned by the process invoked by the port
multiplexer for the requested service.