             Username/Password Authentication for SOCKS V5

Status of this Memo

   This document specifies an Internet standards track protocol for the
   Internet community, and requests discussion and suggestions for
   improvements. Please refer to the current edition of the "Internet
   Official Protocol Standards" (STD 1) for the standardization state
   and status of this protocol. Distribution of this memo is unlimited.

1. Introduction

   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".

Note:

   Unless otherwise noted, the decimal numbers appearing in packet-
   format diagrams represent the length of the corresponding field, in
   octets. Where a given octet must take on a specific value, the
   syntax X'hh' is used to denote the value of the single octet in that
   field. When the word 'Variable' is used, it indicates that the
   corresponding field has a variable length defined either by an
   associated (one or two octet) length field, or by a data type field.

2. Initial negotiation

   Once the SOCKS V5 server has started, and the client has selected the
   Username/Password Authentication protocol, the Username/Password
   subnegotiation begins. This begins with the client producing a
   Username/Password request:

```
        +----+------+----------+------+----------+
        |VER | ULEN |  UNAME   | PLEN |  PASSWD  |
        +----+------+----------+------+----------+
        | 1  |  1   | 1 to 255 |  1   | 1 to 255 |
        +----+------+----------+------+----------+
```

The VER field contains the current version of the subnegotiation,
which is X'01'. The ULEN field contains the length of the UNAME field
that follows. The UNAME field contains the username as known to the
source operating system. The PLEN field contains the length of the
PASSWD field that follows. The PASSWD field contains the password
association with the given UNAME.

The server verifies the supplied UNAME and PASSWD, and sends the
following response:

```
                     +----+--------+
                     |VER | STATUS |
                     +----+--------+
                     | 1  |   1    |
                     +----+--------+
```

A STATUS field of X'00' indicates success. If the server returns a
'failure' (STATUS value other than X'00') status, it MUST close the
connection.

3. Security Considerations

This document describes a subnegotiation that provides authentication
services to the SOCKS protocol. Since the request carries the
password in cleartext, this subnegotiation is not recommended for
environments where "sniffing" is possible and practical.

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