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Apple Remote Access: Underlying Technology (11/93)

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TOPIC -----------------------------------------------------------
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This article describes the underlying technology of Apple Remote Access for
Macintosh.

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DISCUSSION ------------------------------------------------------
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ARAP 2.0

The AppleTalk Remote Access Protocol (ARAP) provides efficient AppleTalk
services on a per client basis over slow links. It defines the login and
authentication sequences. The ARAP specification has been enhanced to
include the ability to change passwords, to allow password retries, to
authenticate a user using external third-party security devices, and to
send out-of-band messages such as alerts and greetings. In addition to the
above enhancements, ARAP Version 2.0 will now allow administrators of the
Apple Remote Access Server to set the specific zones each user can see.

Note: The protocol enhancements are what allow for the new functionality;
      therefore, the client side of Apple Remote Access is compatible with
      ARAP 1.0 based products, however, users will not be able to take
      advantage of the ARAP 2.0 features when connecting to ARA 1.0
      servers.

      Also the client side of ARA 1.0 is not compatible with the ARA 2.0
      servers.

Remote password change

Provides a method for a user to remotely change their password (without
having to use AppleShare as was necessary with 1.0). Allows the
administrator to set the number of retries allowed before user logon is
disabled. Also allows the administrator to force users to change their
passwords via the "New password required" dialog.

Roving access security

Dial-back is not satisfactory for everyone who wants both security and
mobility. We now add mobile security to our feature list by allowing for

the use of third-party "security cards". With some "security cards" the
user must type in a personal code and a requestor code into a credit card
size calculator like device. The device will then return the SecureID.
Other "security cards" are time based and constantly display current
SecureID information. When trying to make a connection to a secure server,
the user will see a dialog box requesting a SecureID. Without the SecureID
and the standard username and password the user will not be able to get in
to the network.

The ARAP 2.0 protocol was defined such that security extensions can be
added as drop-in modules. Several third party security vendors have agreed
to write the extensions that will allow their products to work with our
servers.

X.25 connectivity

The new server software contains extensions that allow a user to connect to
Remote Access through an X.25 network. This type of access is valuable in
situations where the cost of X.25 asynchronous dial-up service is less than
the cost of end-to-end service through the phone companies.

Remote administration

Since the initial release of ARA 1.0, large business users have requested
enhanced remote administration and management capability. Remote
administration allows for the servers to be locked up in a secure area and
still be managed from the administrators desk. Customers often have many
servers and would prefer to maintain only one database of registered users.
Remote administration addresses this need by providing for the remote
location of a shared user database. Integrated network management via SNMP
is now a part of the MultiPort servers as well.

DialAssistant

This is a client software feature that makes long distance, credit card,
international, and private PBX calling extremely easy for the user. The
software is preconfigured with all of the most common dialing codes so that
a user only has to select items from two pop-up menus.
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