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Apple Remote Access: Underlying Technology (11/93)

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Security: Everyone

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TOPIC -----

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

DISCUSSION -----

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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