



on

**TOSHIBA**

# **OAISYS Net Server**

## **Operations Manual**

Version 3  
7/10/2002

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## Overview

*OAISYS Net Server* is the cornerstone of the innovative OAISYS Net Suite of products from **Computer Telephony Solutions, Inc.** The *OAISYS Net Server* supports remote clients over a TCP/IP LAN (and/or WAN). In addition to running the existing OAISYS applications, it can also support hundreds of simultaneous desktop applications.

## Net Server Components

*OAISYS Net Server* – This is the main program and it manages all of the service sub-components as well as all of the System-level and Desktop-level client applications. Please refer to the following diagram to see how all of the components interact.

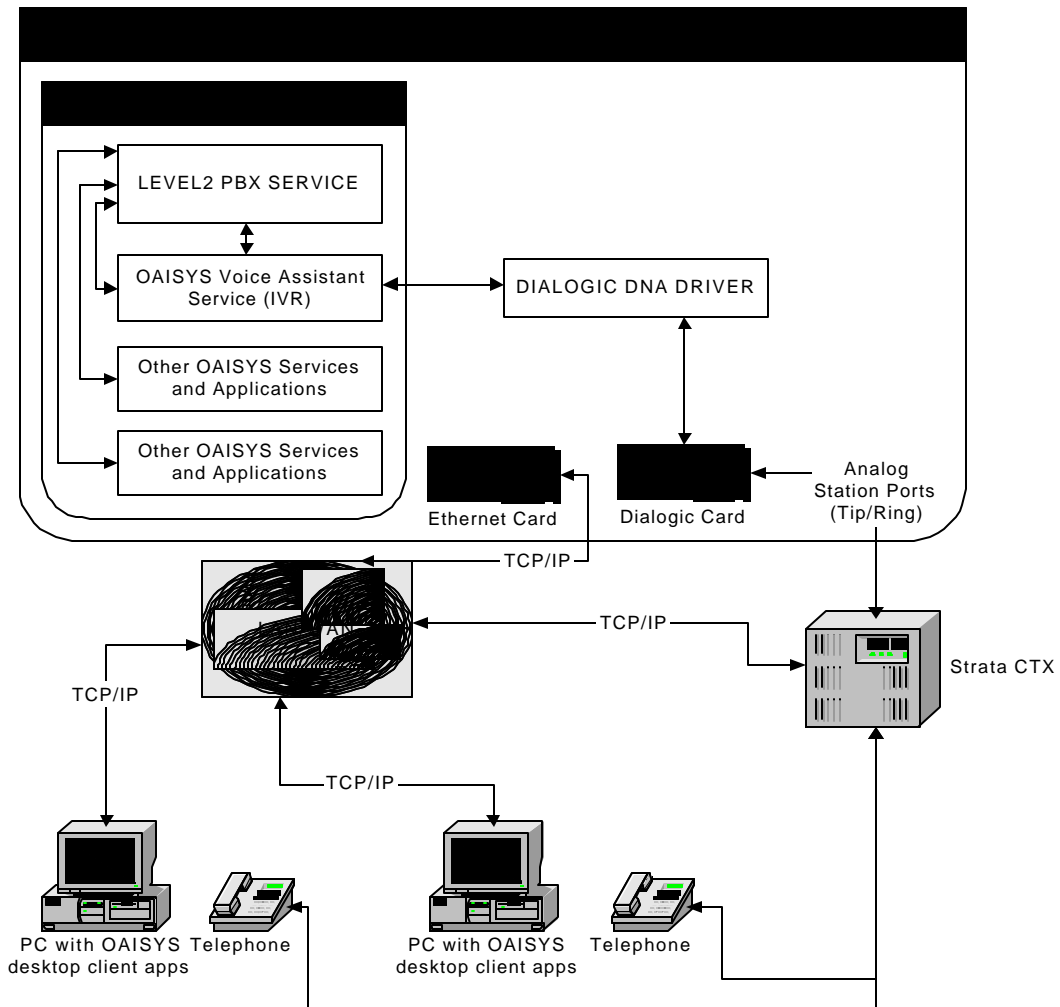


Figure 1 : Net Server Version 3 OAISYS System Diagram

## System Services

System Services run under the Net Server and provide core functional services to other OAISYS services, system-level client applications, and desktop-level client applications.

- ?? **Level2 PBX Service** – This is the service sub-component of the *Net Server* that actually connects to the PBX CSTA link to exercise call control on the PBX.
- ?? **OAISYS Call Router** – Provides intelligent call routing capability with advanced features that attach additional information to calls for “screen pop” of desktop client applications.
- ?? **OAISYS Voice Assistant** – Provides advanced Interactive Voice Response (IVR), voice announcement, and other universal voice port capabilities.
- ?? **MSG (Chat) Service** – This service sub-component of the *Net Server* allows clients equipped with OAISYS Chat to send and receive instant text messages in the form of “chat calls”.
- ?? **Text Reader Service** – Provides Text-to-Speech (TTS) services that can be accessed by OAISYS Voice Assistant IVR applications.
- ?? **Database Assistant Service** – Provides setup and management of ODBC connections to host databases and query services for Voice Assistant and other OAISYS applications.
- ?? **Copy Key Service** – Provides software license and maintenance validation for all OAISYS services and clients.
- ?? **Dial Plan Service** – Provides rules based “Number to dial” services for OAISYS services and clients.

## System-Level Client Applications

System-level applications are designed to run on a single server PC (usually the OAISYS Net Server PC). These system-level applications make use of the services of *OAISYS Net Server* to perform their functions and run on the Windows NT4 and 2000 operating systems.

- ?? **OAISYS Net Server Administrator** – This is the configuration program for the *Net Server*. Typically it runs on the same PC as the *Net Server*, but it can be used from another PC on the LAN to ‘remotely’ administer the *Net Server*.

## Desktop-Level Client Applications

Desktop-level applications are those that are designed to be run on multiple desktop PCs which are connected via LAN to the OAISYS Net Server PC. These desktop-level applications make use of the services of *OAISYS Net Server* remotely over the LAN. Following are examples of some of the existing applications available from **Computer Telephony Solutions, Inc.**

- ?? **OAISYS Net Phone** – This is a Windows PC Phone client that can be used to operate the telephone from the PC, retrieve call history, and provides a platform for screen-pop and database dialing to/from various 3<sup>rd</sup>-party applications (such as Microsoft Outlook, Act!, Goldmine).
- ?? **OAISYS Chat** – This is a text based instant messaging program that can be used to initiate and receive “chat calls” to and from other desktop PCs running OAISYS Chat. This program utilizes the MSG Service of *OAISYS Net Server*.

## Requirements

### PC Requirements

The following table defines the PC requirements for running *OAISYS Net Server*, *System Services*, and *OAISYS System-Level Client* applications.

Voice Assistant Configuration	Windows NT4 or 2000 <sup>1</sup>	
	Minimum	Recommended
No VA Ports	AMD 300MHz 64M RAM	AMD 300MHz 128M RAM
12 VA ports or less	AMD 300MHz 96M RAM	Pentium 800MHz 128M RAM
Between 12 and 24 VA ports	Pentium 450MHz 128M RAM	Pentium 800MHz 128M RAM
Over 24 ports	Pentium 800MHz 256M RAM	Pentium 800MHz 256M RAM

1. NT4 *Server* or Win2000 *Server* is required for any PC also running TASKE and is recommended for any *OAISYS* configuration of 24 ports or more

### LAN Requirements

The *OAISYS Net Server* PC communicates with desktop clients on a Microsoft network over TCP/IP so this type of network must be installed and running. If a site already runs a different network protocol, such as Novell IPX/SPX, that site will need to run a dual stack configuration.

The *OAISYS Net Server* PC must be assigned a fixed IP address (not a dynamically assigned, DHCP IP address).

### Power-Up

The PC running the *OAISYS Net Server* software should be configured to automatically initiate the program if the power to the PC is disconnected and then reconnected or if the PC is reset. By default, the setup program will place the *Net Server* in the Windows Startup group.

## ***Installation***

### **PBX Hardware Requirements:**

Toshiba Strata CTX PBX.

### **PBX Programming Requirements:**

Refer to the Toshiba Strata CTX documentation for more information.

The Strata CTX CTI Link must be connected to a TCP/IP LAN and it's IP Address and Port must be configured properly.

### **OAISYS PC Requirements:**

Server: Windows NT4 SP6a or Windows 2000 SP2.  
PCI Ethernet Adaptor with TCP/IP protocol bound with fixed IP address.  
Dialogic PCI or ISA Analog POTS (*for OAISYS Voice Assistant*).  
OAISYS Net Suite Version 3.2 or later.

Clients: Windows 9x, NT4, 2000, or XP.

### **OAISYS PC Installation and Configuration:**

**Install MDAC 2.5** or later from oaisys\_CD\3rd\_party\Microsoft\mdac2.1\mdac\_typ.exe.

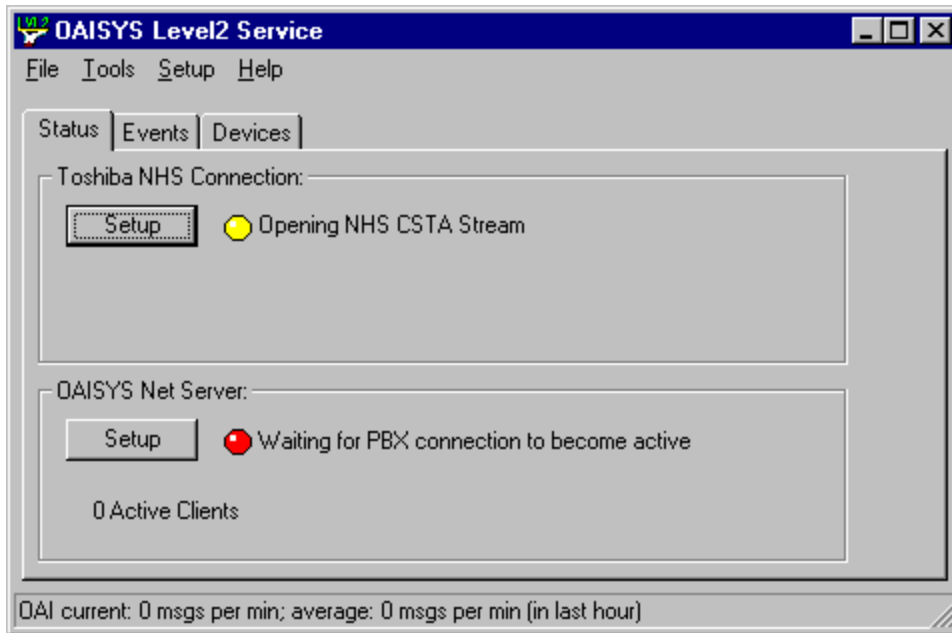
**Install NT SP6a** from oaisys\_CD\3rd\_party\Microsoft\NT-sp6\SP61281.EXE.

**Install IE 5.0** or later from oaisys\_CD\3rd\_party\Microsoft\IE5.0\ie5setup.exe.

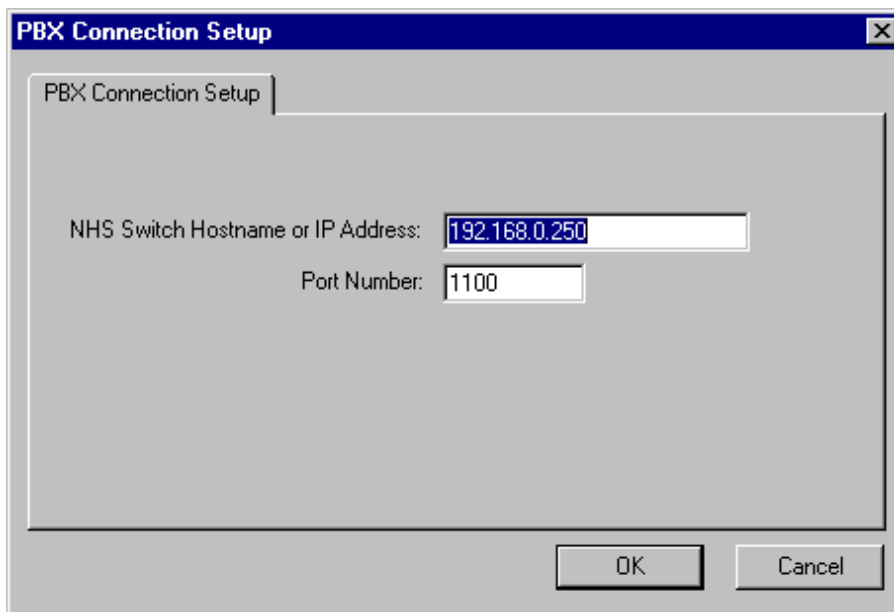
**Install Dialogic DNA 3.3 SP1** or later from oaisys\_CD\3rd\_party\Dialogic\NT-DNA-3.3\setup.exe.

## A. Install OAISYS NetServer.

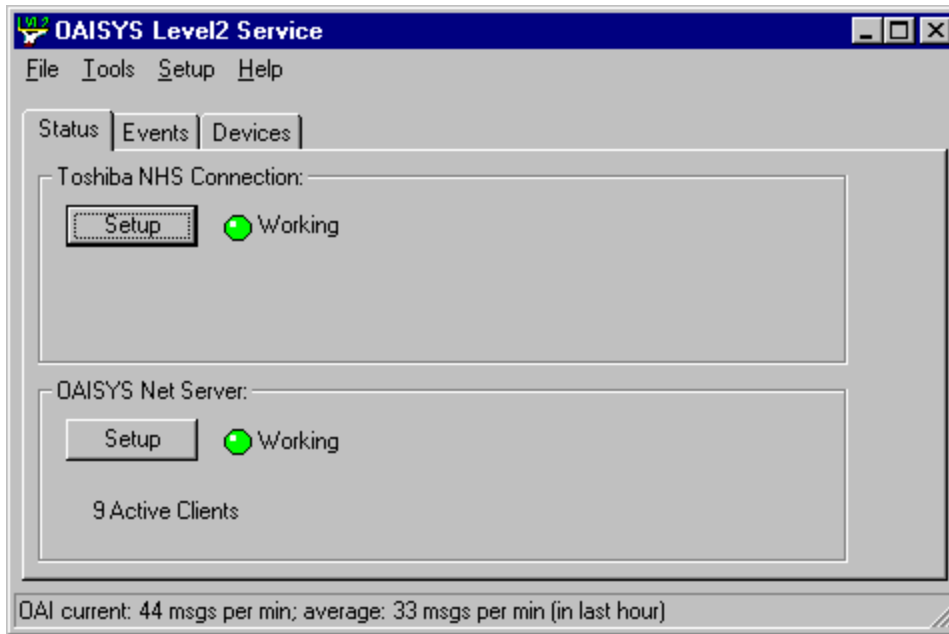
1. Run Oaisys\_CD:\OAISYS\Net\_Server\setup.EXE accepting all default values. NetServer will run automatically following a reboot. The OAISYS Level2OAI Service will launch either on the desktop or minimized. See below.



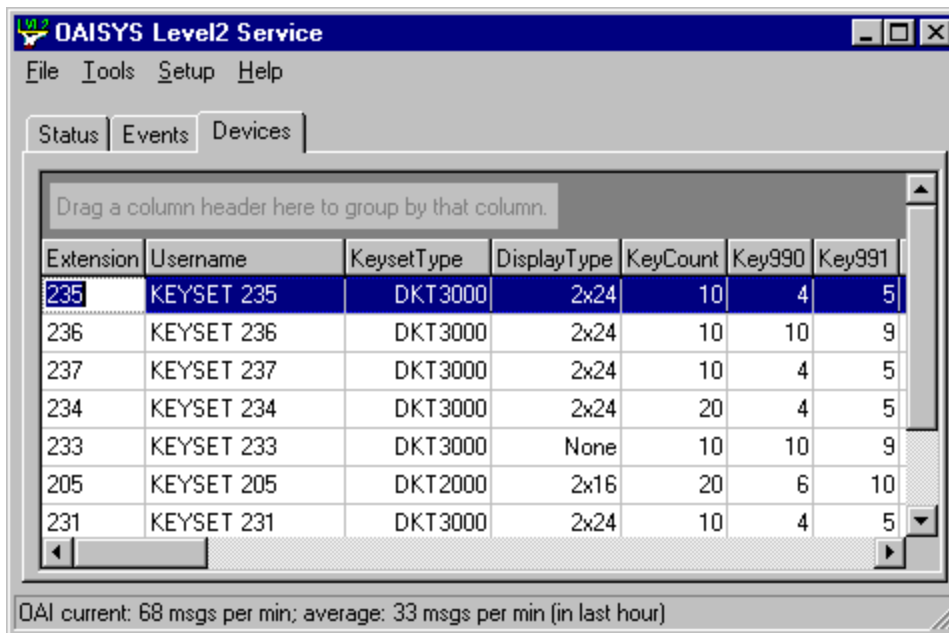
2. In the Toshiba NHS Connection frame, select Setup. The following dialog appears.



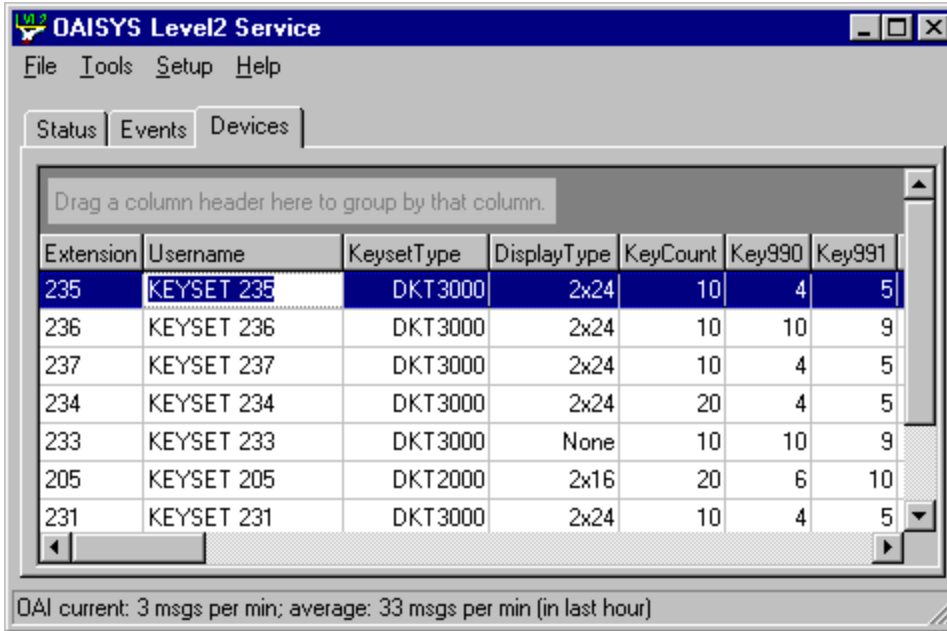
3. Input the Hostname or IP Address and the Port Number of the switch. Click OK.



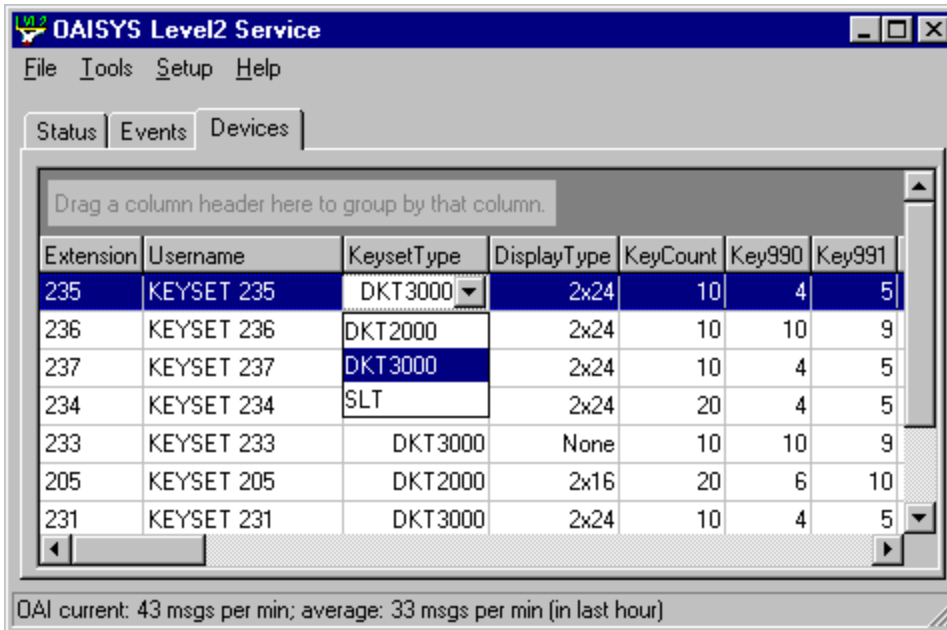
4. Both status indicators should turn green and the service dialog may hide itself. If hidden, go to the OAI SYS NetServer services tab, right click on the LVL2OAI service and select Show Service Window. When the Level2 Service is displayed, select the Devices tab.



5. Enter the Primary Device ID for each extension in the first column.



6. Enter the Username for each extension.



7. Select the proper keyset type for each extension.

OAISYS Level2 Service

File Tools Setup Help

Status Events Devices

Drag a column header here to group by that column.

Extension	Username	KeysetType	DisplayType	KeyCount	Key990	Key991
235	KEYSET 235	DKT3000	2x24	10	4	5
236	KEYSET 236	DKT3000	None	10	10	9
237	KEYSET 237	DKT3000	2x16	10	4	5
234	KEYSET 234	DKT3000	2x24	20	4	5
233	KEYSET 233	DKT3000	8x24	10	10	9
205	KEYSET 205	DKT2000	2x16	20	6	10
231	KEYSET 231	DKT3000	2x24	10	4	5

DAI current: 61 msgs per min; average: 33 msgs per min (in last hour)

8. Enter the Display Type for each keyset.

OAISYS Level2 Service

File Tools Setup Help

Status Events Devices

Drag a column header here to group by that column.

Extension	Username	KeysetType	DisplayType	KeyCount	Key990	Key991
235	KEYSET 235	DKT3000	2x24	10	4	5
236	KEYSET 236	DKT3000	2x24	10	10	9
237	KEYSET 237	DKT3000	2x24	20	4	5
234	KEYSET 234	DKT3000	2x24	30	4	5
233	KEYSET 233	DKT3000	None	40	10	9
205	KEYSET 205	DKT2000	2x16	50	6	10
231	KEYSET 231	DKT3000	2x24	60	4	5

DAI current: 56 msgs per min; average: 33 msgs per min (in last hour)

9. Enter the number of keys for each keyset.

The screenshot shows the 'OAISYS Level2 Service' application window. It has a menu bar with 'File', 'Tools', 'Setup', and 'Help'. Below the menu bar are three tabs: 'Status', 'Events', and 'Devices'. The 'Status' tab is active, displaying a table with the following data:

Extension	Username	KeypsetType	DisplayType	KeyCount	Key990	Key991
235	KEYSET 235	DKT3000	2x24	10	4	5
236	KEYSET 236	DKT3000	2x24	10	10	9
237	KEYSET 237	DKT3000	2x24	10	4	5
234	KEYSET 234	DKT3000	2x24	20	4	5
233	KEYSET 233	DKT3000	None	10	10	9
205	KEYSET 205	DKT2000	2x16	20	6	10
231	KEYSET 231	DKT3000	2x24	10	4	5

At the bottom of the window, a status bar reads: 'DAI current: 3 msgs per min; average: 33 msgs per min (in last hour)'.

10. Enter the key number where an application key is programmed. In this example, Application 990 resides on key number 4 for the DKT3000, which is extension 235. For DKT3014 phones, select 20 keys and they numbered 1 through 7 and 11 through 17. For the first Add-on Module use key numbers 61 through 80. For the second Add-on Module use key numbers 81 through 100.

**NOTE: To have any changes to take effect, please go to TKI and select "Test->Net Server or Service Down".**

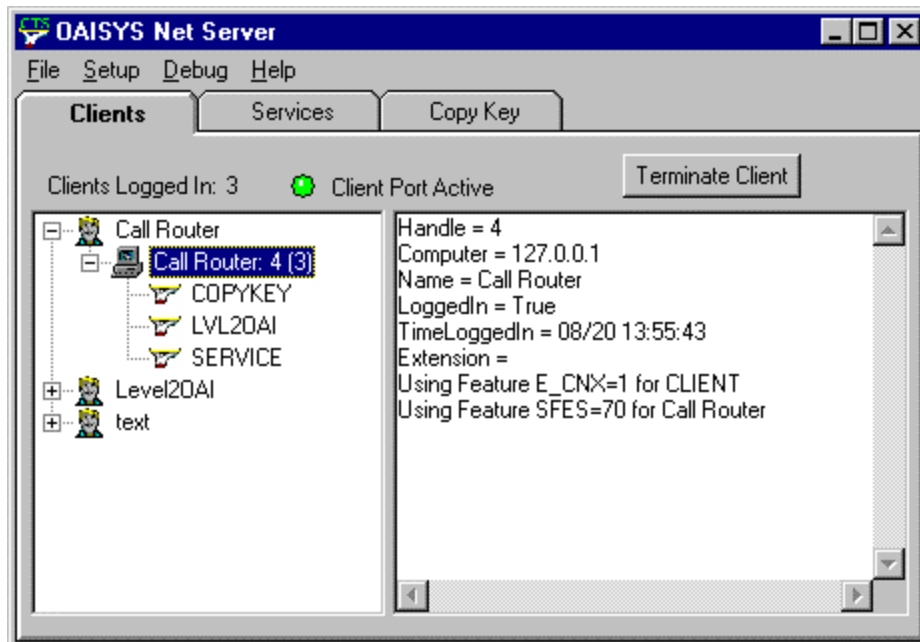
**B. System configuration complete.**

1. Install OAISYS NetPhone and test system functionality.

## OAISYS Net Server

### Clients

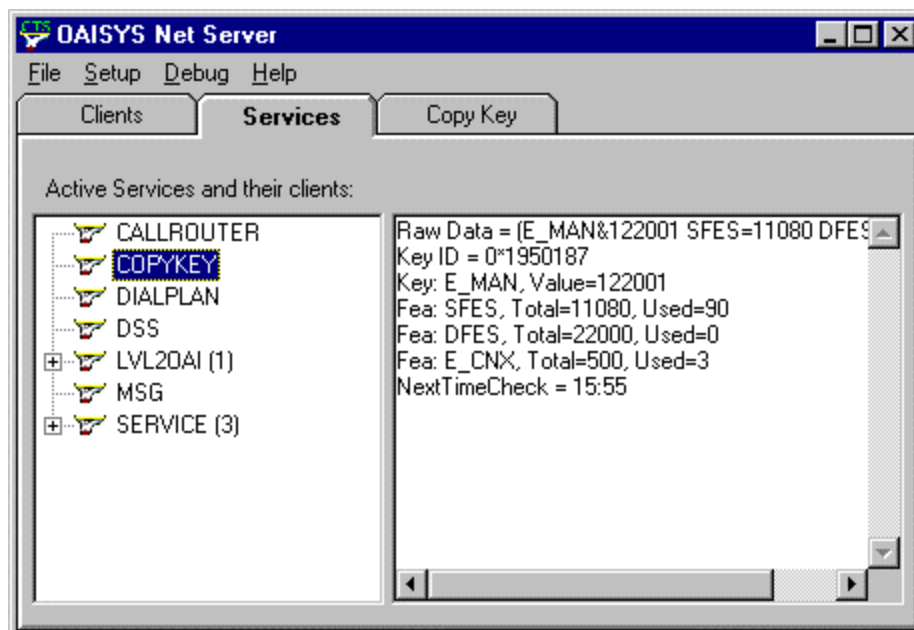
This tab-view shows the services and applications that presently have client connections logged into the server. This view is intended for use by engineering and technical support personnel to monitor program activity and generally does not contain information useful to the end-user.



## Services

This tab-view shows which OAISYS services are presently operating with the server. Some services (like COPYKEY, MSG, and SERVICE) run as components of the Net Server and should always be present when the server is functioning properly. Other OAISYS services will appear in this list when they have properly initialized. For example, the Level 2 PBX Service (LVL2OAI) and CALLROUTER will appear when they have launched and have initialized correctly. By highlighting a service and right clicking on the service, you can bring up a menu that gives you the option to **Show Service Window**, **Hide Service Window**, or **Shutdown Service**. If you select **Show Service Window**, and there is a window for the selected service, the window for that service will be displayed. If you select **Hide Service Window**, the service window will disappear. There will no longer be an icon on the taskbar; however, the service will still be running. If you select **Shutdown Service**, the service will be shut down.

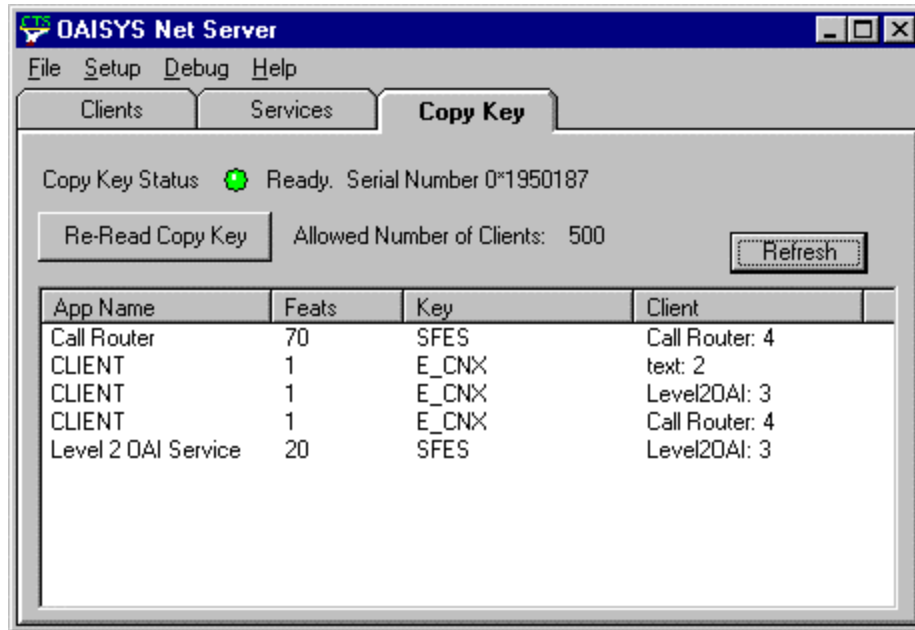
Engineering and technical support personnel use this view to monitor program activity. End users can use this view to determine if their Call Router service, for example, is currently running.



## Copy Key

If **Copy Key Status** doesn't display a green light with a *Ready* status, then the copy key is not properly installed and operational (refer to the *Errors & Troubleshooting* section).

The information displayed in this area will show which applications are presently using the various feature units from the copy key. This information can be useful for troubleshooting license related issues.



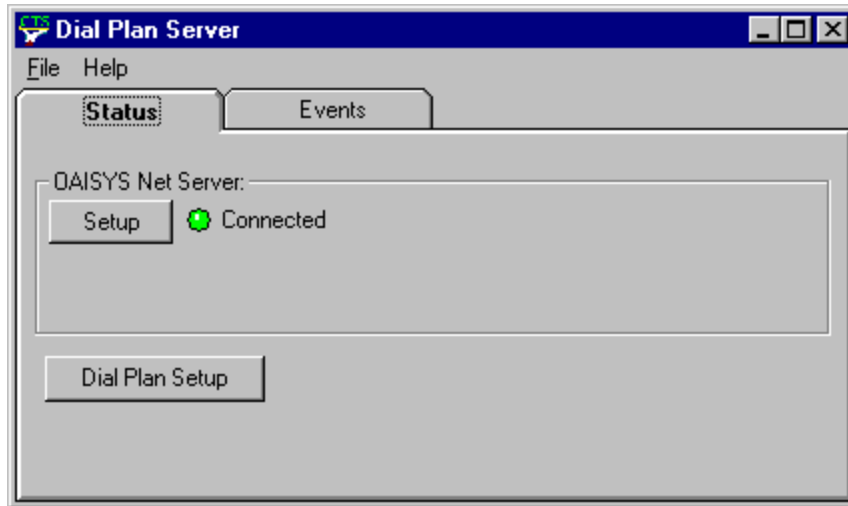
## ***Errors & Troubleshooting***

***Symptom:*** *Copy Key Status displays “No Button Found”*

- ?? **Copy Key Not Installed Properly** -- The copy key must be installed on the parallel printer port (LPT1) of the Net Server PC. The LPT port must be configured as an SPP or “Compatible” port at I/O address 378h and IRQ 7. See your PC documentation for instructions on changing the system BIOS.
- ?? **Copy Key Not Functional** – If the copy key is not functioning correctly it may need to be replaced. To test the copy key, install it on a different PC, preferably from a different PC manufacturer. Install the *OAISYS Net Server* (without the *Level 2 PBX Service*). Run *Net Server*, and check the copy key status. Most key problems are due to configuration problems with the physical LPT port.

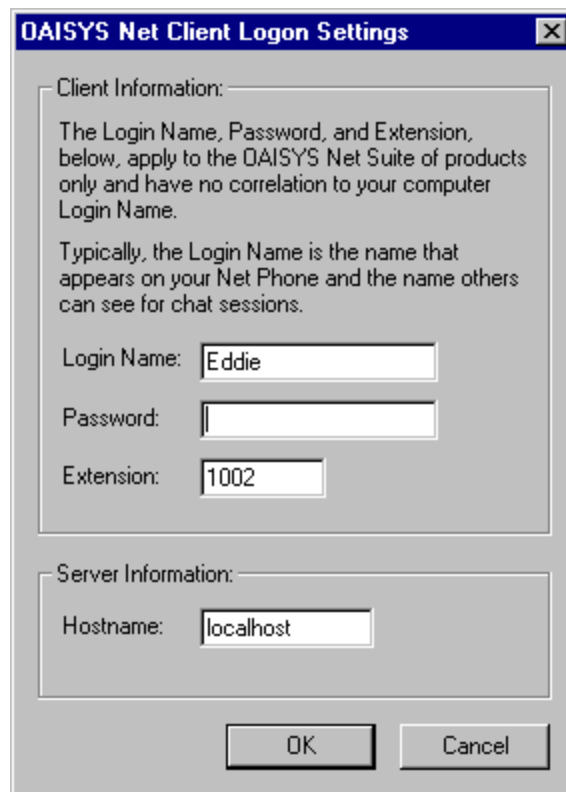
## Dial Plan Server

The *Dial Plan Server* program is automatically launched when *Net Server* is opened. The **Connected** status will display a green light if *Net Server* is running properly. *Dial Plan Server* allows a centralized dialing plan to be created and maintained on the server, and to be used by many desktop clients, like *OAISYS Net Phone*, and system-level services/applications like *OAISYS Voice Assistant*.



## Status Tab

### Setup



**Client Information**

**LoginName:** Enter a unique Login Name for the PC user.

**Password:** Enter the password for the PC user (optional).

**Extension:** (optional)

**Server Information**

**Hostname:** Enter the OAISYS Net Server PC name or IP address.

*Dial Plan Setup*

**Calling Within My Home Area Code:**

**My Home Area Code is:** Enter your local area code.

**Local Calls**

**All Calls in my Area Code:** Select this option if all calls in this area code are local calls.

**Calls to These Office Codes:** Select this option if all calls to the home area code are not local calls and you wish to set up specific Office Codes for the local area code.

**Dial Area Code on All Local Calls:** Enter a checkmark in this box if you wish to dial the local area code before all local calls.

**Long Distance Calls**

**For Long Distance Calls add + 1:** Enter a checkmark in this box to dial a 1 in front of all local calls (calls within the Home Area Code) that are considered long distance.

**Calling Outside the Home Area Code:****Local Calls**

**None:** Select this option if there are no local calls outside of your area code.

**Only Calls to These Area+Office Codes:** Select this option if there are area codes in addition to your home area code that are not long distance calls. For example, Phoenix, AZ has three area codes. Any call to one of the three area codes is considered a local call. After selecting this option, click on the C to change the Local Area + Office Codes.

**Long Distance Calls**

**For Long Distance Calls add + 1:** Enter a checkmark in this box to dial a 1 in front of all long distance calls.

**Test a Phone Number**

Enter a test number, then press **Check**. This displays the number dialed and what type of call it is.

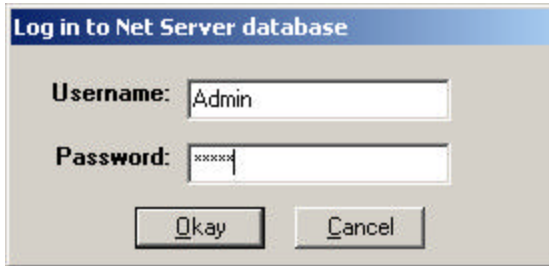
**Events Tab**

This tab-view can be used to capture events. Typically this is only used for troubleshooting.

## OAISYS Net Server Administrator

This program is used to setup and control which client programs have access to *Net Server*. It is installed with the Net Server.

To access the database containing the settings you must first open the database (by pressing the **Open** button) and then log on with a valid username and password.



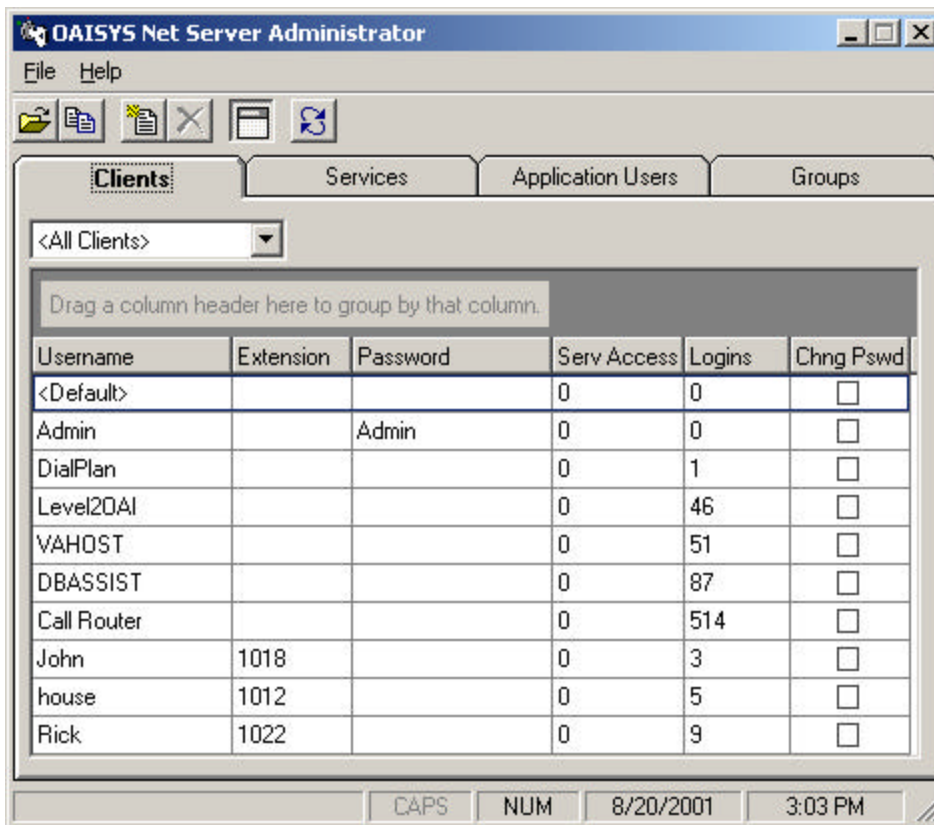
A dialog box titled "Log in to Net Server database" with a blue header. It contains two text input fields: "Username:" with the text "Admin" and "Password:" with masked characters "xxxxx". Below the fields are two buttons: "Okay" and "Cancel".

The default access username and password is:

Username: **Admin**

Password: **admin**

Once you've successfully logged on, you should see a screen similar to the one shown below:



The main window of the "OAISYS Net Server Administrator" application. It features a menu bar with "File" and "Help", a toolbar with icons for file operations, and a tabbed interface with "Clients", "Services", "Application Users", and "Groups". The "Clients" tab is active, showing a dropdown menu set to "<All Clients>". Below this is a table with columns: Username, Extension, Password, Serv Access, Logins, and Chng Pswd. The table contains several rows of client data. At the bottom, there are status indicators for "CAPS", "NUM", the date "8/20/2001", and the time "3:03 PM".

Username	Extension	Password	Serv Access	Logins	Chng Pswd
<Default>			0	0	<input type="checkbox"/>
Admin		Admin	0	0	<input type="checkbox"/>
DialPlan			0	1	<input type="checkbox"/>
Level2DAI			0	46	<input type="checkbox"/>
VAHOST			0	51	<input type="checkbox"/>
DBASSIST			0	87	<input type="checkbox"/>
Call Router			0	514	<input type="checkbox"/>
John	1018		0	3	<input type="checkbox"/>
house	1012		0	5	<input type="checkbox"/>
Rick	1022		0	9	<input type="checkbox"/>

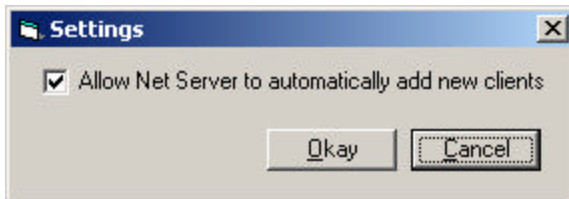
## Clients

The clients section defines which clients will have access to the server and what server services they can reach. A client actually defines a user and each program must log in to *Net Server* using one of these user accounts.

**Note:** It is typical that multiple programs can login using the same user account.

- ?? **Username** -- User's login name. This must be unique.
- ?? **Extension** --(Optional) This is the PBX extension number for this client. It must be provided if the client is allowed to control a phone extension. No two clients can have the same extension number (unless the extension field is blank).
- ?? **Password** -- (Optional) This is the password the client will use to log in. It protects against unauthorized use of this client account. Though it is possible to use no password (leaving this field blank), it is highly recommended that this be set to some value (characters and/or numbers).
- ?? **Serv Access** -- This is a number that determines which services the client has access to. Each service has a Service Level number, and a client will have access to all services whose Service Level is less than or equal to the client's service level access number.
- ?? **Logins** -- This is simply a count of the number of successful logins that have occurred by this client.
- ?? **Chng Pswd** -- This field is reserved for future use, but is intended to grant/deny a user permission to change their password.

To allow Net Server to automatically add new clients when at logon, go to File... Settings... the following dialog will appear.



Make the appropriate setting and click Okay.

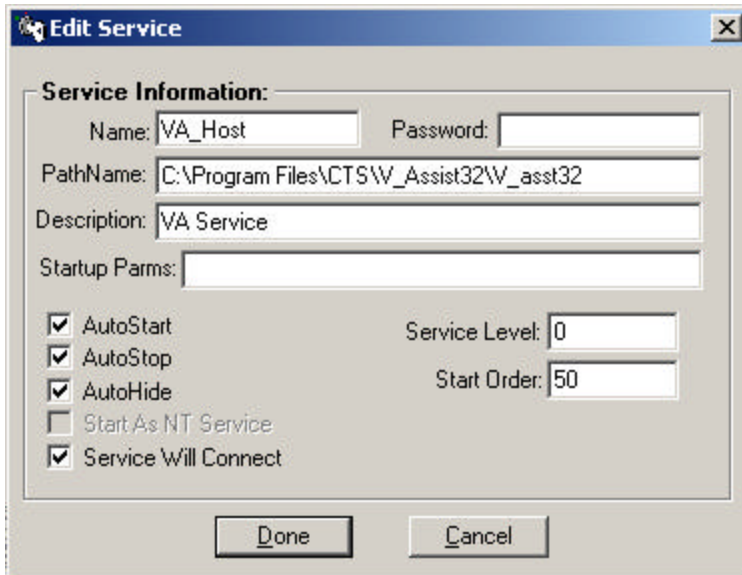
Serv. Level	Name	Password	AutoStart	AutoHide	PathName	Description	StartupParms	AutoStop	StartAsService	Start Order	Connects?
0	CALLROUTER		<input type="checkbox"/>	<input checked="" type="checkbox"/>	C:\Progr...	Call Router		<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	COPYKEY		<input type="checkbox"/>	<input checked="" type="checkbox"/>		Copy Key Service		<input type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	DBASSIST		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C:\Progr...	DB Assist Service		<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	DIALPLAN		<input type="checkbox"/>	<input type="checkbox"/>	C:\Progr...	Dial Plan Service		<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	DSS		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		DSS Service		<input type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	LVL2DAI		<input checked="" type="checkbox"/>	<input type="checkbox"/>	C:\Progr...	Level2DAI Servi...		<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>
0	MSG		<input type="checkbox"/>	<input checked="" type="checkbox"/>		Silent Message ...		<input type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	SERVICE		<input type="checkbox"/>	<input checked="" type="checkbox"/>		External-Service...		<input type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>
0	VA_Host		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C:\Progr...	VA Service		<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	<input checked="" type="checkbox"/>

## Services

The services section defines which services are on the server and what clients can use them. Services are typically created automatically when they are installed so this is mainly used for viewing the configuration of services.

- ?? **Serv. Level** -- This is a number that determines which clients can access this service. Each client has a service level access number, and a client will have access to all services whose Service Level is less than or equal to the client's service level access number.
- ?? **Name** -- Service name. This must be unique.
- ?? **Password** -- This is the password the service will use to login. This should typically never be changed.
- ?? **PathName** -- This is the path and filename for the service. This should typically never be changed.
- ?? **Description** -- This is the description of the service. This should typically never be changed.
- ?? **StartupParms** -- This field contains startup parameters that will be passed to the service upon starting it up (if AutoStart is enabled). This should typically never be changed.
- ?? **AutoStart** -- This determines whether the service will be automatically started whenever *Net Server* starts.
- ?? **AutoHide** -- This determines whether the icon and window for the service will automatically be hidden after *Net Server* starts it.
- ?? **AutoStop** -- This determines whether the service will be automatically stopped when the Net Server shuts down.
- ?? **StartAsService** -- This field is reserved for future use, but is intended to be used so that OAISYS services may be started/stopped as an NT service.

To Add or Edit a service, click on the **Add** or **Edit** button and the following screen will appear:

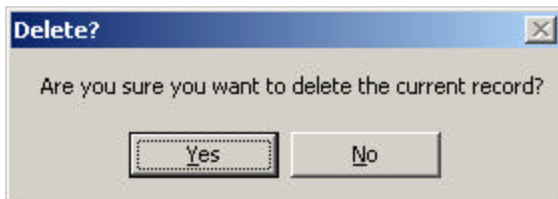


The 'Edit Service' dialog box contains the following fields and options:

- Service Information:**
  - Name: VA\_Host
  - Password: [Empty]
  - PathName: C:\Program Files\CTS\W\_Assist32\W\_asst32
  - Description: VA Service
  - Startup Params: [Empty]
- AutoStart:
- AutoStop:
- AutoHide:
- Start As NT Service:
- Service Will Connect:
- Service Level: 0
- Start Order: 50

Buttons: Done, Cancel

To delete a service, highlight the service in the main services window and click on the **Delete** button. A confirmation box will appear, asking you if you want to delete the service.



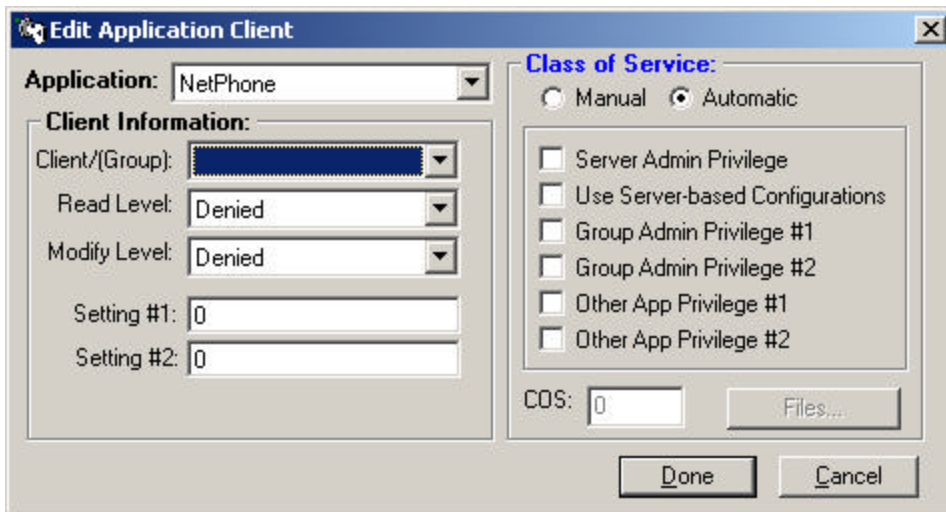
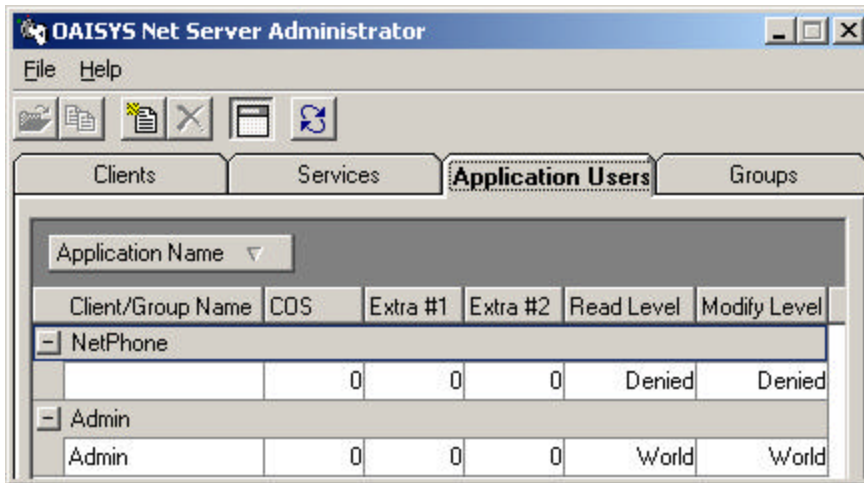
The 'Delete?' dialog box contains the following text and buttons:

Are you sure you want to delete the current record?

Buttons: Yes, No

## Application Users

The Application Users section allows you to define users for various applications. Some applications, such as *OAISYS Net Phone*, can make use of group policies so you can define a User Group and various Privileges for each user of an application. Please refer to the individual client documentation for specific information on group policies.



- ?? **Application** -- This is the name of the Application for which the User is defined.
- ?? **Client/(Group)** -- This is the client name of the user (see Clients). However by setting this to <Default> (or leaving it blank) you will define the settings for the Default User. This is very useful because you can set the behavior for all typical users by creating a Default User, and then you only need to add any additional clients that need settings other than those of the Default User. Each user can be assigned to a group by setting this number (application may use this to standardize settings/features for each group)
- ?? **Read Level/Modify Level** – These settings relate to a clients access privileges. Refer to the individual client applications documentation for more information.

- ?? **Class of Service:** -- These options are used to control the user access privileges.  
**Note:** Each application may (or may not) use these settings so you must refer to the individual client applications for information on if and how they use these settings.
- ?? **Server Admin Privilege** -- Enables the user to do administration of server configuration files
- ?? **Use Server-Based Configurations** -- When enabled this user will get his/her program configuration settings from the server in this application's folder (see below). If this is disabled, the user will get configuration settings from his/her local PC.
- ?? **Group Admin Privileges** -- Determines if this user can perform functions for the group (unique to each application).
- ?? **Other App Privileges** -- Determines if this user can perform other functions (unique to each application)
- ?? **Setting #1** -- Reserved for future use.
- ?? **Setting #2** -- Reserved for future use.
- ?? **COS/Files** -- The server keeps each application's configuration files in a separate folder on the server. The folder is named the same as the application (i.e. *NetPhone*).

## Groups

This view is used for creating and deleting groups when group policies are used.

