

# Installation Guide

iPlanet Calendar Server

Version 2.1

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This manual describes how to install iPlanet Calendar Server (iCS) version 2.1 and its accompanying software components. For the most recent information about known problems with this release, please see the iPlanet Calendar Server release notes listed online at:

<http://developer.netscape.com/docs/manuals/calendar.html>

## Who Should Read This Manual

You should read this manual if you are responsible for installing and deploying iCS 2.1 at your site. If you already have iCS version 2.0 or later installed on your system, you can either perform a totally new installation or upgrade the existing one.

## Conventions Used in This Manual

**Sidebar text** Sidebar text marks important information. Make sure you read the information before continuing with a task or step.

**Monospaced font** — This typeface is used for any text that appears on the computer screen or text that you should type. It is also used for filenames, distinguished names, functions, and examples.

**Italicized Monospaced font** — This typeface is used to represent text that you enter using information that is unique to your installation. It is used for server directory paths and names as well as account IDs. For example, throughout this document you will see directory path references in the form:

*server-root/cal/*

In these situations, *server-root* represents the directory location in which you installed the server. For example:

- Installations on Solaris use the path: `<installation directory>/SUNWicsrv` as the *server-root* for the server software files. If you chose the default installation directory (`/opt`), the *server-root* directory would be:  
`/opt/SUNWicsrv/`
- On HP-UX systems, the *server-root* would be:  
`<installation directory>/iPlanet/CalendarServer/`
- On Windows NT, the default installation location is:  
`c:\Program Files\iPlanet\CalendarServer`

**Note** In this guide, the conventions for installation on Solaris are used. If you are using iPlanet Calendar Server running on HP-UX or Windows NT, you should assume the file path equivalents of your operating system whenever Solaris file paths are shown.

## What is in This Guide

If you want to...	See...
Prepare for installing Calendar Server	“Preparing for Installation”
Install Calendar Server on Unix	Chapter 2, “Installing Calendar Server on Unix”
Install Calendar Server on Windows NT	Chapter 3, “Installing Calendar Server on Windows NT”
Find information in the guide	Index

# Preparing for Installation

This chapter contains the following sections to help you prepare for installation of iPlanet Calendar Server 2.1:

- Installation Overview
- System Requirements
- Installation Privileges
- Gathering Your Installation Information
- Installing and Configuring an LDAP Server
- Important Considerations

**Note** For the most recent information about known problems with this release, please see the iPlanet Calendar Server release notes online listed at the following site:

<http://developer.netscape.com/docs/manuals/calendar.html>

## Installation Overview

There are three basic steps involved in installing iCS:

1. “Gathering Your Installation Information” on page 10.
2. “Installing and Configuring an LDAP Server.”

3. Installing iPlanet Calendar Server. See “Installing Calendar Server on Unix” on page 15 or “Installing Calendar Server on Windows NT” on page 25.

On Unix:

- The installation program uses an X-Windows graphical user interface. It is recommended that you install iCS using a local terminal window.
- If you cannot use X-Windows remotely or if your machine does not have X-Windows installed, you must use the command line installation. The command line installation follows the same process as the graphical installation. The difference between the graphical and command line interfaces is in how you invoke the installation setup script.
- If you must run the installation program from a remote terminal, be sure to set your DISPLAY environment variable properly on the remote machine and be sure to allow X-Windows connections from the machine to appear on your terminal (for example, using the utility `xhost +`).

## System Requirements

Before you install iPlanet Calendar Server, you must make sure you have met the minimum hardware and operating system requirements.

## Supported Platforms

This release of iPlanet Calendar Server supports the following platforms:

- Solaris 2.6 with recommended patches
- Solaris 2.7 with recommended patches
- HP-UX 11.0 with recommended patches
- Windows NT 4.0 with Service Pack 5

## Hardware Requirements

The basic minimum hardware requirements for installing iCS 2.1 are as follows:

- roughly 100 MB of free disk space for the installation

- approximately 2 MB of disk space for each user
- at least 64 MB of RAM
- optionally, RAID disk storage for fast access

## Software Requirements

iCS 2.1 has the following software requirements:

- Solaris 2.6 / Solaris 2.7: with recommended patches. See:  
<http://sunsolve.sun.com/pubpatch>
- HP-UX 11.0: (PA-RISC1.1 or better) with recommended patches (PHKL\_18543 (mmapO patch), PHNE\_16017 (cumulative ARPA Transport patch). For more information about these recommended patches, see:  
<http://hp.com>

For information on kernel tuning your OS, see the iPlanet Calendar Server 2.1 release notes listed at:

<http://developer.netscape.com/docs/manuals/calendar.html>

**Note** A web browser, such as Netscape Communicator 4.61, is required to use the Calendar Express client bundled with the Calendar Server. An LDAP server, such as Netscape Directory Server 4.1, is required to store user authentication and user preference information. An SMTP server, such as Netscape Messaging Server 4.1, is required for mail notifications of calendar entries. On Unix systems, the installation package is a GNU-zipped tar file. To unzip it, you will need a copy of gunzip.

## Installation Privileges

It is recommended that you install iPlanet Calendar Server logged in as root (Unix) or administrator (Windows NT). Superuser privileges (root or administrator) are required for Calendar Server 2.1 installations.

# Gathering Your Installation Information

Before beginning the installation process, it is helpful to gather the installation and configuration information you will need. The information will differ according to the type of installation you select. The two installation types are:

**Typical Installation.** This is the simplest type of installation. Most options are automatically configured with default values, but some require that you choose and enter the value you wish to use. This type of installation is recommended for most administrators or for any installation that does not require a custom configuration. For checklist information on completing this type of installation, see Typical Installation Checklist.

**Custom Installation.** This is a more complex installation than the typical installation. You must choose and enter all configuration values. This type of installation is recommended for advanced administrators only. For checklist information on completing this type of installation, see the Custom Installation Checklist.

## Typical Installation Checklist

You need the following information to complete the installation procedure for a Typical Installation.

### Component Selection

Choose one or more of the following:

- Calendar Server
- Calendar Server API (CSAPI)

### Installation Directory

Determine the name and path of the directory in which you want the server to be installed. For example, `/opt`. If the installation is for a large deployment, ensure that it is installed on a machine with a storage device large enough to handle the load, such as a high capacity hard drive with adequate free space, or a Redundant Array of Inexpensive Disks (RAID).

## Service Ports

The TCP ports that you want Calendar Server services to listen on:

- Web Port (default is 80) is the port number used by the Calendar Server to provide web (HTTP) access to users.
- Admin Port (default is randomly selected at installation time) is the port number used by Calendar Server to provide web (HTTP) access to administer the server, such as commands to stop the server or list all logged-in users.

## Server User and Group Account (Unix only)

These accounts are the Unix user and group identity under which server will run. It is recommended to use the defaults `icsuser` and `icsgroup`. These accounts will be created automatically by the installation program if they do not already exist.

## Calendar Server Administrator

This is the LDAP user account that can manage your iPlanet Calendar Server. This user account must be a userid that already exists in your user authentication LDAP directory. This user account will be used by the administration utilities to authenticate to the Calendar Server for commands to perform actions such as stopping the Calendar Server or listing all the logged-in users. No verification is done to check if this userid exists in the directory.

## Email and Email Alarms Address

Identify the following:

- Calendar Server Administrator email address. This address uses the syntax: `userid@hostname.domainname`. For example, `calmaster@airius.com`
- SMTP server host name. This is the fully qualified host name of the SMTP server that the Calendar Server will use to send email messages. For example:

```
calhome.airius.com
```

where `calhome` is the machine's host name and `airius.com` is the domain name on which the SMTP server is running.

## LDAP Server Information

Identify the following LDAP server information for user authentication and preferences:

- **Host:** The host name of the machine where the LDAP server is installed. The default is the host name of the machine on which you are running the installation program.
- **Port:** The service port for the LDAP server. The default is 389.
- **Base DN:** The Base DN (distinguished name) is the entry in your LDAP directory used as the starting point from which searches will occur. For example, if you specify a base DN of `ou=people, o=airius.com`, all LDAP search operations executed by Calendar Server will examine only the `ou=people` subtree in the `o=airius.com` directory tree.
- **Administrator Bind DN:** The DN of the account that has privileges to manage the attributes of any calendar user in the LDAP directory that stores user preferences. The default is:  

```
uid=admin,ou=Administrators,ou=TopologyManagement,o=NetscapeRoot
```

The default bind DN will work with any 4.x version of the Netscape/iPlanet LDAP directory. On a Netscape/iPlanet Directory Server 4.x server, you can verify that this DN exists by using the directory server `ldapsearch` utility, for example:  

```
./ldapsearch -b o=NetscapeRoot uid=admin
```
- **Administrator Password:** The password for the user account of the Administrator Bind DN described above.

## Custom Installation Checklist

In addition to the information in the Typical Checklist, you will need the following information to complete the Custom Installation procedure:

### System Resources

Select desired values for the following system resources:

- Maximum sessions (default is 5000)
- Maximum threads (default is 1000)

- Number of server processes (default is 1)

## Calendar Database Directory

Specify the directory to place the server database.

- On Unix, the default is:  
`/var/opt/SUNWicsrv/csdb`
- On Windows NT, the default is:  
`c:\Program Files\iPlanet\CalendarServer\var\csdb`

# Installing and Configuring an LDAP Server

For information on how to install and configure the Netscape Directory Server 4.1, go to:

<http://home.netscape.com/eng/server/directory/4.1/install/contents.htm>

**Note** If you are using Netscape Directory Server version 4.1, it has the iPlanet Calendar Server schema already configured into the default schema and requires no additional preparation.

If you, however, you are using Netscape Directory Server version 4.0:

1. Install iPlanet Calendar Server 2.1.
2. Copy the `ns-wcal-schema.conf` file from the `server-root/SUNWicsrv/cal/bin/config` directory into the Directory Server 4.0 `server-root/slapd-machinehostname/config` directory.
3. Edit the `ns-schema.conf` file (in the same directory that you copied the `ns-wcal-schema.conf` file to) so that it includes the file `ns-wcal-schema.conf`.
4. Stop the Calendar Server if it is running.
5. Stop and restart the Directory Server.
6. Start the Calendar Server.

# Important Considerations

Note the following considerations before installing iPlanet Calendar Server:

- On Unix systems, the installation program uses the command `/usr/bin/domainname` to identify the associated domain name of your system. To verify that this setting is correct, at the command prompt, type:

```
domainname
```

The above command should return the domain name of your system correctly. If this is not the case, set the domain name by typing:

```
domainname <your system domain name>
```

- To customize the bundled Calendar Express to use your company logo, your company name, etc., use the Perl script provided in the `uicust` directory. You must have Perl5.004 or later to use this script.
- Some Unix Systems have been encountered where the value returned by `hostname` could not be used in the IP addresses associated with that system. For example, the machine name is `x.example.com`, but TCP/IP applications must use `y.example.com` to connect to it. It is believe that this is a badly configured machine. If you install iPlanet Calendar Server on such a machine, entries in the `server.conf` file may have incorrect values. Ideally, the machine should be reconfigured. If you cannot change the configuration of the machine, you will have to edit the `server.conf` file explicitly using a text editor to correct the host name values. Additionally, there are several properties with property names containing the strings "host" and "hostname" that have null values. A null value signals the server to use the value returned by `gethostname(3C)`. You will have to manually add the host name recognized by the TCP/IP subsystem as a value for these properties.

# Installing Calendar Server on Unix

This chapter describes the steps to follow to install iPlanet Calendar Server (iCS) on a Unix platform. You can run the setup program by either:

- Using the Graphical Interface Installation on Unix
- Using the Command Line Installation on Unix

## Using the Graphical Interface Installation on Unix

The following steps describe how to use the graphical user interface installation program to install Calendar Server.

1. Login as or `setuid` to `root`. You must have superuser privileges (that is, be logged in as `root`) to run the installation program.
2. If you are installing the product from the CD, go to the directory on the CD specific to your platform (such as `./solaris/calendar` or `./hpux/calendar`) and type: `./setup`. Then proceed to Step 5 below.

If you are downloading the product from the iPlanet web site, create a directory (such as `/tmp/calsvr`) on the machine that will host the iPlanet Calendar Server and download (or copy) the Calendar Server archive file to that directory. Make sure that the download directory has adequate disk space to store the extracted files.

3. Change to the directory where you copied the archive file and to extract the contents, type:

```
gunzip -c archive.tar.gz | /usr/bin/tar xvf -
```

where *archive* identifies the name of the platform archive file you downloaded or copied.

**Note:** You must use `/usr/bin/tar`. This program should be the tar utility that is distributed with your operating system and not a third party tar utility, such as `gnu`.

4. In the installation directory in which you untarred the Calendar Server archive file, type: `./setup`

The installation program displays a Welcome Message.

5. Click Next to continue. The license agreement displays.
6. Read the license agreement and click Yes (Accept License) to accept it and continue. (If you click NO, the installation program will end without installing Calendar Server.)
7. On most systems, the installation program will automatically detect the host name and domain name of the system on which you are installing the server and you can skip this step.

If the installation program cannot detect the host name or domain name, it will display the “Unable to make network connection” screen. Please be sure that the host name and domain name specified are correct, then click Next to continue the installation. The installation program will then try to establish a network connection using these values.

**Note:** If the Host Name or Domain Name field is blank, it is because the installation program was unable to detect its value. In this case, you must enter a valid host name or domain name, or both.

If a network connection cannot be made using the new values, you will be asked again to supply a valid host name and domain name. At this point you can:

- Click Accept if you want to continue with the installation anyway using these values. If you accept these values, you will not be able to run the server until you supply a valid host name and domain name. In this case, you can edit the `server.conf` file after you complete the installation and supply a valid host name and domain name. The `server.conf` file is located in the `server-root/bin/cal/config` directory (for example, `/opt/SUNWicsrv/cal/bin/config`).
  - Click Choose New to enter another host name or domain name, or both.
8. Select the type of installation you wish to use: Typical or Custom. The same software is installed with each type of installation. The only difference between the types of installation is the number of choices you have to make during the installation process. Typical Installation is recommended for most users. Custom Installation requires you to specify all available configuration options and is recommended only for advanced users or for installations that require customized configuration options not provided in the Typical Installation. When you have finished making your selections, click Next to continue.

**Note:** If you choose Typical Installation, the installation program will skip some of the following questions because they are configured for you. Questions that apply only to a Custom Installation are so indicated and you can proceed to the next step.

9. Select the software components that you want to install (default is all):
- Calendar Server Product - the software used to run the server.
  - Calendar Server API (CSAPI) - an application programming interface that enables third party application developers to add functionality to iCS or change how the server performs certain operations.

When you have finished making your selections, click Next to continue.

10. This step applies only if you have a previous version of Calendar Server installed on this system. The installation program automatically detects an existing installation and displays a window that lets you can choose to upgrade or reinstall the existing components.

By default, the installation program upgrades all installed components. This procedure preserves all existing database and configuration information, such as user calendar data and user preferences.

**Remove and Reinstall Existing Components.** Click this box only if you want to completely remove the existing installation and reinstall it from scratch. Otherwise, leave this box unchecked (the default) and click Next to upgrade only the software components and keep all existing database and configuration information.

If you choose to reinstall Calendar Server, you are asked to confirm that you want to continue with the remove and reinstall operation. If you click Continue Remove/Reinstall, all existing database and configuration information on the system will be destroyed. Both the software components you selected and all database and configuration information will be installed as new. It is highly recommended that you backup any existing data bases before selecting this option - once the actual installation process is started, it cannot be undone. If you want to upgrade instead, click Choose New.

If you choose to upgrade a previous Calendar Server installation, the installation program verifies if there is adequate disk space and then displays the Ready to Install window. To complete the installation, click Install Now.

**Note:** The following steps do not apply if you are upgrading an existing Calendar Server installation.

Specify the directory where you want to install the Calendar Server software. The default is /opt.

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selection, click Next to continue.

If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

11. Specify the port numbers that you want the Calendar Server to listen on:

- **Web Port.** (Default is 80.) The port number used by the Calendar Server to provide Web (HTTP) access to users. It is highly recommended that you choose the default Web port number suggested by the installation program because it is the default port used by all Web browsers. If you

specify a Web port other than 80, calendar users will need to explicitly include this port number in the URL they enter to access this Calendar Server.

**Note:** The installation program will warn you if port 80 is already being used by another service on this system. If port 80 is already in use, you can still specify that Calendar Server listen on port 80 and then free port 80 on the other service. Otherwise, select a Web port number for Calendar Server other than 80.

- **Listen on Admin Port.** By default, the installation program enables the Admin port services. If you want to disable the Admin port, uncheck this checkbox. If you leave Listen on Admin Port checked (enabled), it is recommended that you choose the default port number suggested by the installation program which, for security reasons, is selected randomly at installation time.
- **Admin Port.** (Randomly selected at installation time.) The port number used by Calendar Server to provide web (HTTP) access to administer the server, such as commands to stop the server or list all logged-in users.

When you have finished making your selections, click Next to continue.

12. Enter the Unix user and group identity that the Calendar Server will run as. It is recommended that you use the default accounts `icsuser` and `icsgroup`. These accounts will be created automatically by the installation program if they do not already exist.

**Note:** Do not specify `root` for either the user or the group account.

When you have finished making your selection, click Next to continue.

13. Specify the Calendar Server Administrator. This is the user account that has privileges to use the Calendar Server administration utilities: `csstop` to stop the server, `csstats` to display server statistics, and `csstool` to list all logged-in users. The default is `calmaster`. When you have finished making your selection, click Next to continue.
14. Supply the following email and email alarm information:

**Calendar Administrator email address.** Enter the full email address (userID and domain name) of the person to whom you want Calendar Server to send messages in case of server problems, for example, `calmaster@airius.com`.

**SMTP Server Host Name.** Enter the host name of the machine running the SMTP server that Calendar Server is to use to send messages.

**Enable email alarms.** By default, email alarms for the Calendar Server are enabled. If you do not want Calendar Server to send email alarms, uncheck this checkbox.

**Note:** If the Calendar Server cannot connect to the SMTP server you entered, a message box will display stating that the Calendar Server will not run if an SMTP server is not available. If this is acceptable at this point, click Accept. Otherwise, click Choose New and enter the host name of another SMTP server.

When you have finished making your selections, click Next to continue.

15. Specify the directory in which to store the Calendar Server database files. The default is:

```
/var/opt/SUNWicsrv/csdb
```

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selections, click Next to continue.

**Note:** If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

16. Specify the directory in which to store the Calendar Server temporary files (Custom installation only).

The default is:

```
/var/opt/SUNWicsrv/tmp
```

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selections, click Next to continue.

**Note:** If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

17. Enter the following LDAP server information for user authentication (Custom Installation only):

- **Host.** Host name of the machine on which the LDAP Server is running.
- **Port.** Port number that the LDAP server listens to. The default is 389.
- **Base DN.** Base DN (distinguished name) is the entry in your LDAP directory used as the starting point from which searches will occur. For example, if you specify a base DN of `ou=people, o=airius.com`, LDAP search operations executed by Calendar Server will examine only the `ou=people` subtree in the `o=airius.com` directory tree. The installation program does not attempt to verify your entry.

When you have finished making your selections, click Next to continue.

18. Enter the following LDAP server information (in a Typical Installation these settings apply to both user authentication and user preferences; in a Custom Installation these settings apply only to user preferences):

- **Host.** Host name of the machine on which the LDAP Server is running.
- **Port.** Port number that the LDAP server listens to. The default is 389.
- **Base DN.** Base DN (distinguished name) is the entry in your LDAP directory used as the starting point from which searches will occur. For example, if you specify a base DN of `ou=people, o=airius.com`, LDAP search operations executed by Calendar Server will examine only the `ou=people` subtree in the `o=airius.com` directory tree. The installation program does not attempt to verify your entry.
- **Administrator Bind DN.** The DN of the account that has privileges to manage the attributes of any calendar user in the LDAP directory that stores user preferences. The installation program does not attempt to verify your entry. The default is:

```
uid=admin,ou=Administrators,ou=TopologyManagement,o=NetscapeRoot
```

The default bind DN will work with any 4.x version of the Netscape/iPlanet LDAP directory. You can verify that this DN exists by using the directory server `ldapsearch` utility, for example:

```
./ldapsearch -b o=NetscapeRoot uid=admin
```

- **Administrator Password.** The password for the user account of the Administrator Bind DN described above. The installation program does not attempt to verify your entry.

When you have finished making your selections, click Next to continue.

**Note:** If the installation program does not detect an LDAP server running on the specified port, a message box will appear stating that the Calendar Server will not run if an LDAP server is not available. If this is acceptable at this point, click Accept. Otherwise, click Choose New and re-enter the LDAP configuration parameters.

19. Select the desired values for the following system resources (Custom Installation only.):
  - Maximum sessions (default is 5000)
  - Maximum threads (default is 1000)
  - Number of server processes (default is the number of CPUs on the machine on which you are installing Calendar Server)
20. Select the options for automatically starting Calendar Server. You can choose to start the server after successful installation and, optionally, to start the server automatically at system startup. If you do not wish to start the server after the installation or upon server startup, uncheck the applicable box or boxes. When you have finished making your selections, click Next to continue.
21. The installation program verifies if there is adequate disk space and then displays the Ready to Install window. To complete the installation, click Install Now.
22. When the installation procedure has completed, a summary window displays. Click Details if you want to review summary information about the installation. When you are finished, Click dismiss to close the Summary information window, then click Done to exit the installation program.

# Using the Command Line Installation on Unix

iPlanet Calendar Server provides you the option of running the installation script without using the graphical interface. To run the command line installation program, use the following steps:

1. Login as or `setuid` to `root`. You must have superuser privileges (that is, be logged in as `root`) to run the installation program.
2. If you are installing the product from the CD, go to the directory on the CD specific to your platform (such as `./solaris/calendar` or `./hpux/calendar0`), then type: `./setup -nodisplay` and skip Steps 2 through 4 below.

If you are downloading the product from the iPlanet web site, create a directory (such as `/tmp/calsvr`) on the machine that will host the iPlanet Calendar Server and download (or copy) the Calendar Server archive file to that directory. Make sure that the download directory has adequate disk space to store the extracted files.

3. Change to the directory where you copied the archive file and to extract the contents, type:

```
gunzip -c archive.tar.gz | /usr/bin/tar xvf -
```

where *archive* identifies the name of the platform archive file you downloaded or copied.

**Note:** You must use `/usr/bin/tar`. This program should be the tar utility that is distributed with your operating system and not a third party tar utility, such as `gnu`.

4. In the installation directory in which you untarred the Calendar Server archive file, type: `./setup -nodisplay`

The installation program will run in the current window and ask the same configuration questions as described above in steps 5-21 in “Using the Graphical Interface Installation on Unix.”

# Uninstalling the Calendar Server on Unix

To uninstall iPlanet Calendar Server, use the following steps:

1. Change to the installation *server-root* directory (such as /opt) and then change to the directory: `SUNWicsrv/cal`.
2. At the command line, type: `./uninst`  
(If you want to run the uninstall program as a command line script, type: `./uninst -nodisplay`).
3. The program displays instructions on how to disable client access control. Press Enter to continue.
4. The uninstall window appears (graphical interface only). Click Next to continue.
5. Choose either a Full or a Partial uninstall. The Full uninstall removes both components (Calendar Server and Calendar Server API). The Partial uninstall lets you choose to uninstall either or both of these components.
6. Click Uninstall Now (or press Enter if you are using the command line interface) to proceed with the uninstallation.

# Installing Calendar Server on Windows NT

This chapter describes the steps to follow to install iPlanet Calendar Server (iCS) on Windows NT. You can run the setup program by either:

- Using the Graphical Interface Installation on Windows NT
- Using the Command Line Installation on Windows NT

## Using the Graphical Interface Installation on Windows NT

The following steps describe how to use the graphical user interface installation program to install Calendar Server.

1. Login as Administrator. You must have superuser privileges (that is, be logged in with full administration rights to the system) to run the installation program.
2. If you are installing the product from the CD, go to the `ntx86` folder on the CD and run `setup`. Then proceed to Step 4 below.

If you are downloading the product from the iPlanet web site, create a directory (such as `c:\tmp\calsvr`) on the machine that will host the iPlanet Calendar Server and download (or copy) the Calendar Server the

self-extracting archive file (such as `ics2.1 -export-en.x86-windows-nt4.0.exe`) to that directory. Make sure that the download directory has adequate disk space to store the extracted files.

3. In the directory where you placed the archive file, double-click the self-extracting iPlanet Calendar Server archive file.
4. A message box displays and asks if you want to install iPlanet Calendar Server. Click Yes to continue.
5. The installation program displays a Welcome Message. Click Next to continue.
6. The license agreement displays. Read the license agreement and click Yes (Accept License) to accept it and continue. (If you click NO, the installation program will end without installing Calendar Server.)
7. On most systems, the installation program will automatically detect the host name and domain name of the system on which you are installing the server and you can skip this step.

If the installation program cannot detect the host name or domain name, it will display the “Unable to make network connection” screen. Please be sure that the host name and domain name specified are correct, then click Next to continue the installation. The installation program will then try to establish a network connection using these values.

**Note:** If the Host Name or Domain Name field is blank, it is because the installation program was unable to detect its value. In this case, you must enter a valid host name or domain name, or both.

If a network connection cannot be made using the new values, you will be asked again to supply a valid host name and domain name. At this point you can:

- Click Accept if you want to continue with the installation anyway using these values. If you accept these values, you will not be able to run the server until you supply a valid host name and domain name. In this case, you can edit the `server.conf` file after you complete the installation and supply a valid host name and domain name. The `server.conf` file is located in the `server-root/bin/cal/config` directory (for example, `/Program Files/iPlanet/CalendarServer/cal/bin/config`).

- Click Choose New to enter another host name or domain name, or both.
8. Select the type of installation you wish to use: Typical or Custom. The same software is installed with each type of installation. The only difference between the types of installation is the number of choices you have to make during the installation process. Typical Installation is recommended for most users. Custom Installation requires you to specify all available configuration options and is recommended only for advanced users or for installations that require customized configuration options not provided in the Typical Installation. When you have finished making your selections, click Next to continue.

**Note:** If you choose Typical Installation, the installation program will skip some of the following questions because they are configured for you. Questions that apply only to a Custom Installation are so indicated and you can proceed to the next step.

9. Select the software components that you want to install (default is all):
- Calendar Server Product - the software used to run the server.
  - Calendar Server API (CSAPI) - an application programming interface that enables third party application developers to add functionality to iCS or change how the server performs certain operations.

When you have finished making your selections, click Next to continue.

10. This step applies only if you have a previous version of Calendar Server installed on this system. The installation program automatically detects an existing installation and displays a window that lets you can choose to upgrade or reinstall the existing components.

By default, the installation program upgrades all installed components. This procedure preserves all existing database and configuration information, such as user calendar data and user preferences.

**Remove and Reinstall Existing Components.** Click this box only if you want to completely remove the existing installation and reinstall it from scratch. Otherwise, leave this box unchecked (the default) and click Next to upgrade only the software components and keep all existing database and configuration information.

If you choose to reinstall Calendar Server, you are asked to confirm that you want to continue with the remove and reinstall operation. If you click Continue Remove/Reinstall, all existing database and configuration

information on the system will be destroyed. Both the software components you selected and all database and configuration information will be installed as new. It is highly recommended that you backup any existing data bases before selecting this option - once the actual installation process is started, it cannot be undone. If you want to upgrade instead, click Choose New.

If you choose to upgrade and exiting Calendar Server installation, the installation program verifies if there is adequate disk space and then displays the Ready to Install window. To complete the installation, click Install Now.

**Note:** The following steps do not apply if you are upgrading an existing Calendar Server installation.

11. Specify the directory where you want to install the Calendar Server software. The default is `c:\Program Files\iPlanet`.

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selection, click Next to continue.

If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

12. Specify the port numbers that you want the Calendar Server to listen on:

- **Web Port.** (Default is 80.) The port number used by the Calendar Server to provide Web (HTTP) access to users. It is highly recommended that you choose the default Web port number suggested by the installation program because it is the default port used by all Web browsers. If you specify a Web port other than 80, calendar users will need to explicitly include this port number in the URL they enter to access this Calendar Server.

The installation program will warn you if port 80 is already being used by another service on this system. If port 80 is already in use, you can still specify that Calendar Server listen on port 80 and then free port 80 on the other service. Otherwise, select a Web port number for Calendar Server other than 80.

- **Listen on Admin Port.** By default, the installation program enables the Admin port services. If you want to disable the Admin port, uncheck this checkbox. If you leave Listen on Admin Port checked (enabled), it is recommended that you choose the default port number suggested by the installation program which, for security reasons, is randomly selected at installation time.

**Admin Port.** (Randomly selected at installation time.) The port number used by Calendar Server to provide web (HTTP) access to administer the server, such as commands to stop the server or list all logged-in users.

When you have finished making your selections, click Next to continue.

If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
  - Click Choose New to return to the Select Install Directory window where you can select another installation directory.
13. Enter the identity that the Calendar Server will run as. You can run Calendar Server logged in as any valid user. Usually, however, you will want to run the server under the default `system` account (logged in as administrator) to ensure that you have all account privileges required to manage the server. If you log in as a user other than administrator, you may not have the privileges you need to manage the servers.

**Note:** If the system account does not have an associated password, you can leave the User Password and Confirm Password options blank.

14. Specify the Calendar Server Administrator. This is the user account that has privileges to use the Calendar Server administration utilities: `csstop` to stop the server, `cstats` to display server statistics, and `cstool` to list all logged-in users. The default is `calmaster`. When you have finished making your selection, click Next to continue.

15. Supply the following email and email alarm information:

**Calendar Administrator email address.** Enter the full email address (userID and domain name) of the person to whom you want Calendar Server to send messages in case of server problems, for example `calmaster@airius.com`.

**SMTP Server Host Name.** Enter the host name of the machine running the SMTP server that Calendar Server is to use to send messages.

**Enable email alarms.** By default, email alarms for the Calendar Server are enabled. If you do not want Calendar Server to send email alarms, uncheck this checkbox.

**Note:** If the Calendar Server cannot connect to the SMTP server you entered, a message box will display stating that the Calendar Server will not run if an SMTP server is not available. If this is acceptable at this point, click Accept. Otherwise, click Choose New and enter the host name of another SMTP server.

When you have finished making your selections, click Next to continue.

16. Specify the directory in which to store the Calendar Server database. The default is:

`c:\Program Files\iPlanet\CalendarServer\var\csdb`

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selections, click Next to continue.

**Note:** If the directory you selected does not exist, a message box displays and where you can:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation, or
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

**Note:** The installation program displays a warning message if you selected a directory located on a drive partition that is not formatted as NTFS (NT File System). It is recommended that, for improved performance, you choose an NTFS-formatted drive in which to install Calendar Server database files.

17. Specify the directory in which to store the Calendar Server temporary files (Custom installation only). The default is:

`c:\Program Files\iPlanet\CalendarServer\var\tmp`

If you want to select another directory, click Browse, then select a directory and click OK.

When you have finished making your selections, click Next to continue.

**Note:** If the directory you selected does not exist, a message box displays and you can either:

- Click Create Directory to install Calendar Server in the specified directory and continue the installation.
- Click Choose New to return to the Select Install Directory window where you can select another installation directory.

**18.** Enter the following LDAP server information for user authentication (Custom Installation only):

- **Host.** Host name of the machine on which the LDAP Server is running.
- **Port.** Port number that the LDAP server listens to. The default is 389.
- **Base DN.** Base DN (distinguished name) is the entry in your LDAP directory used as the starting point from which searches will occur. For example, if you specify a base DN of `ou=people, o=airius.com`, LDAP search operations executed by Calendar Server will examine only the `ou=people` subtree in the `o=airius.com` directory tree. The installation program does not attempt to verify your entry.

When you have finished making your selections, click Next to continue.

**19.** Enter the following LDAP server information (in a Typical Installation these settings apply to both user authentication and user preferences; in a Custom Installation these settings apply only to user preferences):

- **Host.** Host name of the machine on which the LDAP Server is running.
- **Port.** Port number that the LDAP server listens to. The default is 389.
- **Base DN.** Base DN (distinguished name) is the entry in your LDAP directory used as the starting point from which searches will occur. For example, if you specify a base DN of `ou=people, o=airius.com`, LDAP search operations executed by Calendar Server will examine only the `ou=people` subtree in the `o=airius.com` directory tree. The installation program does not attempt to verify your entry.
- **Administrator Bind DN.** The DN of the account that has privileges to manage the attributes of any calendar user in the LDAP directory that stores user preferences. The installation program does not attempt to verify your entry. The default is:

```
uid=admin,ou=Administrators,ou=TopologyManagement,o=NetscapeRoot
```

The default bind DN will work with any 4.x version of the Netscape/iPlanet LDAP directory. You can verify that this DN exists by using the directory server `ldapsearch` utility, for example:

```
./ldapsearch -b o=NetscapeRoot uid=admin
```

- **Administrator Password.** The password for the user account of the Administrator Bind DN described above. The installation program does not attempt to verify your selection.

When you have finished making your selections, click Next to continue.

**Note:** If the installation program does not detect an LDAP server running on the specified port, a message box will display stating that the Calendar Server will not run if an LDAP server is not available. If this is acceptable at this point, click Accept. Otherwise, click Choose New and re-enter the LDAP configuration parameters.

20. Select the desired values for the following system resources (Custom Installation only):
  - Maximum sessions (default is 5000)
  - Maximum threads (default is 250)
  - Number of server processes (default is the number of CPUs on the machine on which you are installing Calendar Server)
21. Select the options for automatically starting Calendar Server. You can choose to start the server after successful installation and, optionally, to start the server automatically at system startup. If you do not wish to start the server after the installation or upon server startup, uncheck the applicable box or boxes. When you have finished making your selections, click Next to continue.
22. The installation program verifies if there is adequate disk space and then displays the Ready to Install window. To complete the installation, click Install Now.
23. When the installation procedure has completed, a summary window displays. Click Details if you want to review summary information about the installation. When you are finished, click Dismiss to close the Summary information window, then click Done to exit the installation program.

# Using the Command Line Installation on Windows NT

iPlanet Calendar Server provides you the option of running the installation script without using the graphical interface. To run the command line installation program, use the following steps:

1. Login as Administrator. You must have superuser privileges (that is, be logged in with full administration rights to the system) to run the installation program.

2. If you are installing the product from the CD, go to the `ntx86` folder on the CD and type: `setup -nodisplay` and skip Steps 2 through 5 below.

If you are downloading the product from the iPlanet web site, create a directory (such as `/tmp/calsvr`) on the machine that will host the iPlanet Calendar Server and download (or copy) the Calendar Server archive file to that directory. Make sure that the download directory has adequate disk space to store the extracted files.

3. Open a command prompt and change to the directory in which you placed the Calendar Server archive file. For example:

```
cd \tmp\calsvr
```

4. Type the name of the Calendar Server archive file followed by the argument `-nodisplay`. For example:

```
ics2.1 -export-en.x86-windows-nt4.0.exe -nodisplay
```

5. After the installation program extracts the compressed installation files, read the instructions and then press Enter to continue.

The installation program then asks the same configuration questions as described above in steps 5-22 in “Using the Graphical Interface Installation on Windows NT.”

# Uninstalling the Calendar Server on Windows NT

To uninstall iPlanet Calendar Server, use the following steps:

1. From the Start menu, choose Settings and then Control Panel.
2. Choose Add Remove Programs.
3. From the list of products, select iPlanet Calendar Server and click Add/Remove.
4. Click Yes if you want to uninstall the product at this time.
5. Choose either a Full or a Partial uninstall. The Full uninstall removes both components (Calendar Server and Calendar Server API). The Partial uninstall lets you choose to uninstall either or both of these components.
6. Click Uninstall Now to proceed with the uninstallation.

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