SAP@Web Installation Guide

Release 3.0D to 4.5B

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51006024

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Typographic Conventions

This type style	represents
Interface Text	words or characters that appear on the screen. This includes system messages, field names, screen titles, pushbuttons, menu names, and menu options.
Document Title	cross-references to other documentation
`User Entry`	exact user entry. These are words and characters that you enter exactly as they appear in the documentation.
`<Variable User Entry>`	variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
NAME	names of elements in the R/3 System. These include report names, program names, transaction codes, table names, ABAP/4 language elements, file names, and directories.
KEY	keys on your keyboard. These include function keys (for example, **F2**) and the **ENTER** key, among others.

This icon	helps you identify
Note	a note. Notes contain important information like special considerations or exceptions.
Example	an example. Examples help clarify concepts or procedures.
Caution	a caution. Cautions help you avoid errors such as those that could lead to data loss.

Chapter 1: Planning the Installation

Overview

The SAP Internet Transaction Server (ITS) links the R/3 System to the Internet. The ITS enables Internet and intranet users to communicate directly with R/3 and run R/3 Internet Application Components (IACs), which are Internet-enabled R/3 transactions.

To run IACs, you need three main components:

- R/3 System (Release 3.0D or later)
- SAP Internet Transaction Server (Version 4.5B)
- SAP@Web Studio (Version 4.5B)

  The SAP@Web Studio is PC tool for developing and maintaining all the R/3-external files needed to implement ITS services, which provide the basis for running IACs.

This manual contains the complete procedure for installing the ITS and the SAP@Web Studio. You can install the above three components independently, but SAP recommends that you install them in the above sequence. This enables you to perform post-installation configuration tasks for each.

This chapter contains a brief overview of the ITS, and describes the installation options open to you. You do not have to perform any tasks at this stage.

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Introduction

Architecture of the ITS

The Internet Transaction Server (ITS) is a gateway between one or more Web servers and one or more R/3 application servers.

The ITS consists of two main components called WGate and AGate.

- **WGate**

  WGgate is the Web server gateway that links the ITS to the Web server.

  WGate receives requests from the Web browser via the Web server, and forwards them to AGate via a TCP/IP connection.

  WGate always resides on the same machine as the Web server.

  WGate is a Web server extension that shields AGate from differences in the various Web server APIs used. WGate supports the following Web servers:

  – Microsoft Information Server API (ISAPI)
  – Netscape Network Server API (NSAPI)

  All other Web server APIs are supported via the Common Gateway Interface (CGI).

  WGate connects a ‘stateless’ Web server that communicates with Web browsers via single request/response cycles to a ‘stateful’ R/3 System where business transactions depend on internal status. When an Internet user starts an R/3 transaction via the ITS, there must be a server process running throughout the lifetime of the user session (possibly longer) in order to maintain the user’s context in R/3. Since communication between the Web browser and the Web server is based on single request/response cycles, WGate must transfer the browser request to a permanently running server process. This is the role of AGate.

- **AGate**

  AGate is the application server gateway that links the ITS to the R/3 application server.

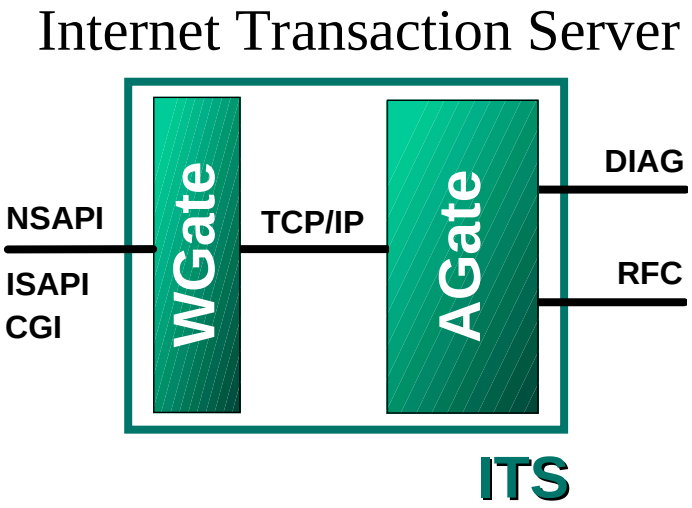
  AGate is the core processing component of the ITS.

  AGate receives Web browser requests from WGate and communicates with the R/3 application server via the DIAG protocol or the RFC protocol. AGate then processes the requests, and sends all relevant details (including logon information) to the R/3 System, which either starts the first dialog step of a new transaction or submits further data for the next dialog step of a transaction already started. When the dialog step has finished, AGate retrieves the result from R/3, processes it, and sends the response back to WGate. AGate is effectively responsible for managing all sessions, services, and users, and for generating the HTML documents that are sent back to the Web browser client.

AGate and WGate can be installed on separate hosts.

There can be more than one AGate, but all must reside on the same machine. AGate can handle concurrent requests for multiple sessions.

The following graphic shows the main ITS components, protocols, and interfaces:



Separation of WGate and Agate

Enabling Internet users to communicate directly with the R/3 System via the ITS has obvious advantages for business users, but it also raises a number of security issues. To minimize unwanted access by unauthorized users, it makes sense to separate R/3-related information (particularly passwords and connection information) from the Web server, and restrict generally available functionality to a bare minimum.

WGate is small and functionally simple. Its sole function is to pass requests back and forth between the Web server and ITS, so there are few possible targets of attack.

AGate, however, handles most of the processing required to run a transaction over the Internet, and is connected directly to R/3.

You can install both WGate and AGate on the same machine, but it is better to install them on separate hosts, especially if you are setting up production systems. You can then place a firewall between the two and increase the level of protection.

ITS Support for Virtual Instances

The ITS supports virtual instances. When you have run the setup program once to create one physical installation, you can create any number of additional virtual ITS instances by running the setup program again as many times as you like.

Each ITS instance should have a one-to-one relationship with an R/3 System, so that each ITS provides access to IACs for a specific R/3 release.

When you create an ITS instance, you specify a Web server, which must support multiple Web server instances. Each ITS instance should have its own dedicated Web server instance.

Note

When you create a new ITS instance, the installation procedure stops any other instances that are currently running. As a result, when the procedure is finished, only the new instance is running. This is also true when you deinstall.

Security Features

Windows NT Security Features

Some ITS information, such as passwords and files needed for ITS execution, must be safeguarded against unauthorized access. SAP recommends that you restrict access to this information as much as possible, using Windows NT Security.

The ITS setup dialogs (described in the chapter *Installing ITS on Windows NT Machines*) show you how to use Windows NT Security. For further information, see the section *Setting the Security Level of an ITS* in *Chapter 5: Maintaining ITS Instances*.

R/3 Security Features

The ITS needs an R/3 user account to access the R/3 System. To set this up, you can do any of the following:

- Create a global R/3 user account for all services
- Create a specific R/3 user account for each individual service
- Create no static R/3 user account

  In this case, the user is prompted for the user name and password in a logon procedure each time the service is started.

The ITS handles security very strictly. Static R/3 user names and passwords are stored in the service files, and all passwords are encrypted. If you use the secure installation option, all service files are also protected by Windows NT Security. Only the Windows NT user *ITSadm* and the Windows NT user group *ITSusers* can access these files.

Caution

Using one global R/3 user account with extensive authorizations can be a security risk. Although the setup program uses one global user account, SAP strongly recommends that you apply security settings for each service. Service-specific user accounts must be set up by your R/3 system administrator.

ITS Security Features

For a detailed discussion of ITS security features, refer to the *R/3 Security Guide* at **`http://www.sap.com/securityguide`**.

There, you can find information on ITS security in *Volume II: R/3 Security Services in Detail, Chapter 2-10: Special Topics*. Under *Protecting Internet Application Components (IACs)*, read the section *A Secure Network Infrastructure for the ITS*.

Installation Options

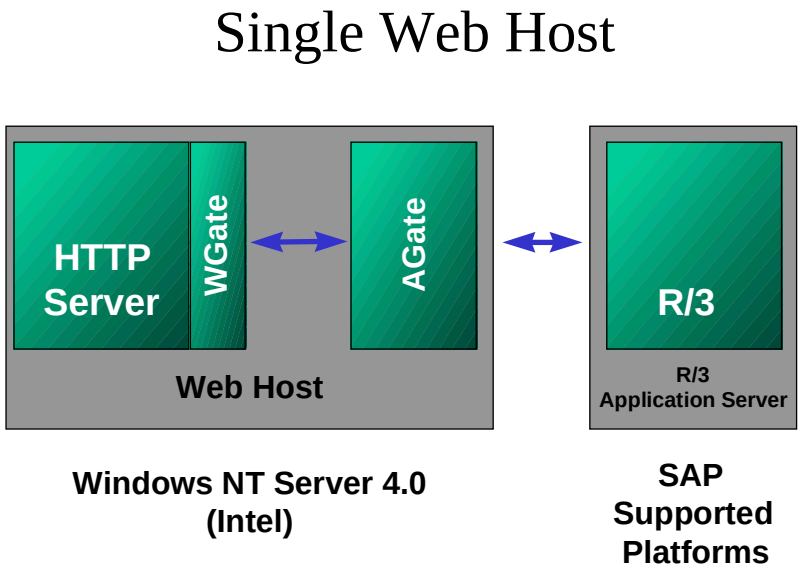
You have two main options when installing the ITS:

- Single host installation
- Dual host installation

Single Host Installation

This installation places the Web (HTTP) server, WGate, and AGate on the same host, as shown in the following graphic:

Single Host Installation

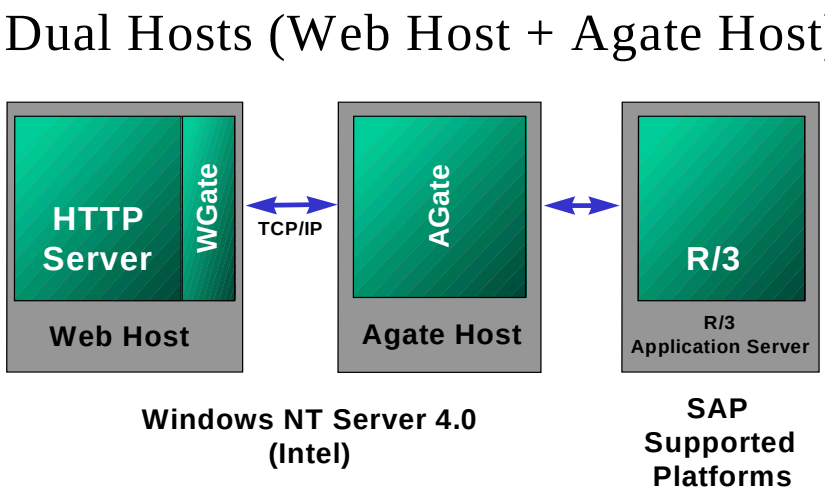


This installation type is appropriate for development and test installations where less security is required, since there is only one firewall protecting your ITS installation.

Dual Host Installation

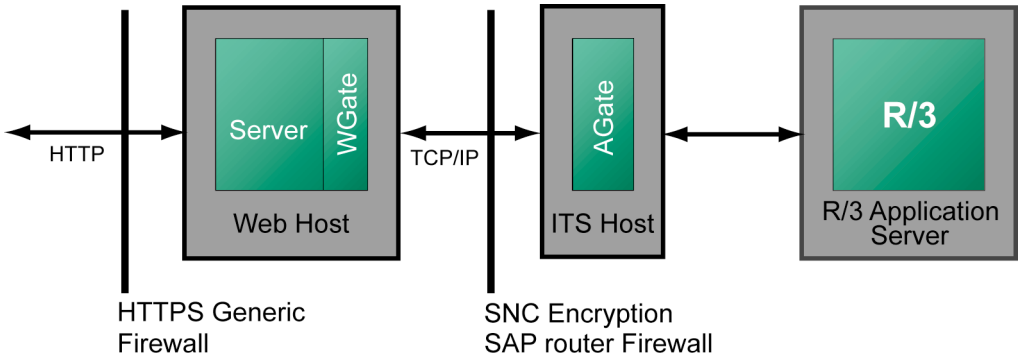
This installation places WGate and AGate on separate hosts - WGate on the Web (HTTP) server host, and AGate on another host, as shown in the following graphic:

Dual Host Installation



This installation type is appropriate for production sytems where additional security is desirable. In this case, you can install a second firewall between WGate and AGate, as shown below. For even greater security, you could also place a firewall between AGate and R/3.

Increased ITS Security



IAC Packages

Prior to ITS 2.1, the setup program came with a single set of ITS files specific to one R/3 release. If you wanted to run a newer version of the ITS, but use an older R/3 release, you had to:

1. Install an older version of the ITS, with files corresponding to your R/3 release.
2. Upgrade to the newer version of the ITS.

   When upgrading, you had to be careful not to overwrite the already installed files.

What is an IAC Package?

From ITS 2.1, all the ITS files needed to run IACs for a specific R/3 release are shipped separately from the ITS setup program in IAC packages. These files include:

- Service files
- HTML templates
- Language resource files
- Multipurpose Internet Mail Extension (MIME) files

  MIME files include graphics, sound, and video files. They are stored in the Web server's document directory.

How the Setup Program Handles IAC Packages

The setup program now includes a dialog step that allows you to select the IAC packages you want to install with a particular ITS instance. You can select more than one, and the setup program lists available packages from three sources:

- Packages stored included with the setup program itself

  Since the ITS is always shipped together with a particular R/3 release, the setup program always contains the IAC package for the corresponding R/3 release. This simplifies the installation.

  Sometimes the setup program contains multiple packages. For example, ITS 2.1 runs with R/3 Releases 3.1I and 4.0B, and therefore contains packages for both.

  The setup program may also contain multiple packages for the same R/3 release. For example, these may be language-specific packages like an Asian package, or a West European package.

- Packages already installed on the same machine

  The setup program copies all packages installed on a particular machine to the ITS installation directory. These packages are presented to you each time you run the setup program on the same machine.
- Packages you select manually from any file system or network location

  The packages dialog has a *Browse* button that allows you to select additional packages using a file selector dialog box. This option is useful if you want to store several packages on a central file server and allow users to install these packages over the network.

  If you get a package from a location other than the installation CD, you can copy it to the ITS installation directory and start the setup program afterwards. During setup, you simply select the package as the one you want.

The packages you select for installation are copied to the ITS installation directory (usually **`c:\program files\sap\its\2.0\install\packages`**). You can use these packages to configure additional ITS instances (for example, by using the command line utilities, or by running the setup program again).

How Installed IAC Packages Interact

The ITS setup program always contains an IAC package for a specific R/3 release, but you can choose to install several packages at the same time.

All the packages you select are installed together for a particular ITS instance. This means that if you choose packages that contain different versions of the same IAC, one version overwrites the other. This could happen, for example, with the standard packages for R/3 Releases 3.1I and 4.0B, both of which contain the IAC WW20. Since the order of installation is random, you cannot know which version actually gets to the file system.

To avoid this problem, you can use the *Check release consistency* feature in the dialog box for selecting IAC packages when you run the setup program. If you select this option, the setup program checks that your packages are either all for the same R/3 release, or that they are release-independent.

The R/3 release for a package is determined by the package name:

- The file name prefix specifies the R/3 release

  For example, **`45a_all.car`** is a Release 4.5A package.
- Release-independent packages have the prefix **`zzz`** or **`all`**

  For example, **`zzz_Purchasing.car`** is a release-independent Purchasing package.

The file names are not case-sensitive, but if a package does not conform to the naming conventions, it is assumed to be incompatible with other releases (that is, you cannot install it with other packages that are release-specific).

Chapter 2: Installing ITS on Windows NT

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Introduction

This chapter describes how to install the Internet Transaction Server (ITS) on a Windows NT system.

You can choose from the following installation types:

- Single host installation

  In this case, both the WGate and AGate components are installed on the same host.

  For this installation, which is recommended for development/test environments, see *Defining the ITS* Administrator Account on page 2–7.
- Dual host installation

  In this case, the WGate and AGate components are installed on separate hosts.

  For this installation, which is recommended for live production environments, see *Defining the ITS* Administrator Account on page 2–7.

Note

Before you proceed with the installation, read the following notes in the Online Service System (OSS):

105055 *ITS, R/3 and Web Server Supported Releases*

113914 *SAP Internet Transaction Server Release 2.2 News*

These notes contain the latest installation and upgrade information.

ITS installation tools must be used in accordance with the instructions and for the purposes described in this documentation. Improper use can damage existing files and systems.

Installation Requirements

Hardware Requirements

The tables below specify the hardware needed to run the ITS. You should be aware that memory and disk space requirements can vary, depending on:

- The number of users concurrently accessing the system
- The number of ITS files stored on the host file system

Hardware Requirements for Single Host Installation

Component	Requirement
Hardware	Intel Pentium, PentiumPro, or Pentium II architecture
Backup (optional)	Either over network or tape drive (DAT 4mm or DLT; hardware compression recommended)
CD-ROM drive	ISO 9660 compatible
Memory	1 GB
RAM	64 MB

Hardware Requirements for Dual Host Installation

Component	Requirement
Hardware	Intel Pentium, PentiumPro, or Pentium II architecture
Backup (optional)	Either over network or tape drive (DAT 4mm or DLT; hardware compression recommended)
CD-ROM drive	ISO 9660 compatible
Memory	2 x 1 GB mirrored
RAM	2 x 128 MB

The number of processors required depends on the number of concurrent requests made to the R/3 System. In a production environment, a moderate load requires two processors, but a high load (more than 40 hits per second) requires four processors. For further information, consult your hardware vendor.

Software Requirements

For information about software requirements, including platforms, Web servers, and Web browsers, see the section *Internet Interfaces* in the document *SAP System Requirements for Networks, Frontends, Communication Interfaces* at http://www.sap.com/ssr

Checklists

The following tables are checklists indicating what information you need to install the ITS components. Make sure that you have the required information available before running the setup program.

AGate Configuration Parameters

Installation directory (used for AGate, WGate)	
Homepage (URL displayed when leaving a service)	

R/3 Parameters (Always Required)

R/3 System name	
R/3 client	
R/3 user (global user for all services)	
Password matching R/3 user and client	

R/3 Parameters (Load Balancing/Single Application Server

Option	Load Balancing	Single Application Server
R/3 message server name		Not applicable
Port number used by R/3 message server		Not applicable
Login group used by ITS		Not applicable
R/3 application server name	Not applicable	
R/3 System number	Not applicable	
SAProuter string		

Windows NT System Parameters

Options	Use NT Security	Set up Security Later
Name of NT user *ITSadm*		Not applicable
Password of NT user *ITSadm*		Not applicable
Name of NT group *ITSuser*		Not applicable

Information Checklist for Installing WGate

Options	WGate Installation on a Separate Host	Single Host Installation
Installation directory (used for AGate, WGate)		
Name or IP address of AGate host		Not applicable
Number of ports (**sapavw00_<virtual ITS>** and **sapavwmm_<virtual ITS>**) on AGate host		Not applicable

Upgrading from Previous Versions

The default ITS setup installs new versions of the files required to run Internet Application Components (IACs) in the directories specified in the following table:

ITS File	Directory
Services	`C:\Program Files\SAP\ITS\2.0\<virtual ITS>\Services`
HtML templates	`C:\Program Files\SAP\ITS\2.0\<virtual ITS>\Templates\99`
MIME files	`C:\Inetpub\wwwroot\SAP\ITS\MIMES\<service>\99`

Note

If you are using R/3 Release 3.1G or earlier, select the option **not** to install the ITS files. The new versions of the ITS files require R/3 Release 3.1H or later.

If you are using R/3 Release 3.1H or later, do the following before installing the ITS:

- Make a backup of your existing ITS files.
- Make sure that none of your modified ITS files reside in theme 99.
- Read the following OSS notes for important version and upgrade information:

  105055 *ITS, R/3 and Web Server Supported Releases*

  113914 *SAP Internet Transaction Server Release 2.2 News*

Preparing for Installation

Before installing the ITS, you should take the following steps:

1. Check the installation requirements.
   For details, see *Installation Requirements* on page 2–3.
2. Make sure that the Windows NT 4.0 server and the Web server software have been installed properly on the Web server host.
3. Make sure that you are using the Windows NT File System (NTFS) to store ITS files.
   NTFS fully supports Windows NT security and long file names.
   To check that you are using NTFS:
   - Select the hard drive icon in the Windows NT Explorer.
   - Press the right mouse button.
   - Choose *Properties*.
   - Choose the *General* tab.
   - Check that the specified file system is NTFS.
4. Define the ITS administrator account *ITSadm.*
   For details, user accounts, see *Defining the ITS Administrator Account* on page 2–7.
5. Define the ITS user group *itsusers*.
   For details, see *Defining the ITS User Group* on page 2–8.
6. Make sure that the `TEMP` directory is empty.

Defining the ITS Administrator Account

This document uses the ITS administrator account *ITSadm*, but you are free to choose a different name.

1. Log on to the Windows NT system with the ITS administrator account *ITSadm*.
2. On the Windows NT 4.0 desktop, choose *Start* → *Programs* → *Administrative Tools (Common)* → *User Manager for Domains*.
3. Choose *User* → *Select Domain*.
4. Enter a Windows NT domain name for the *ITSadm* account and choose *OK*.
5. Choose *User* → *New User*.
6. Enter the following values:

Username:	**`itsadm`**
Full Name:	**`SAP Internet Transaction Server Administrator`**
Description:	**`<your description>`**
Password:	**`<your password>`**
Confirm Password:	**`<your password>`**

7. Choose *Groups.*

8. Add the new user to the group *Domain Administrators* and choose *OK*.
9. Choose *Profile*.

   SAP recommends you to enter the following home directory in the *Local Path* field
   `c:\winnt\Profiles\ITSadm`

   Choose *OK*.
10. Choose *Add* to create the *ITSadm* account.
11. Choose *Close* to close the *New User* window.
12. Choose *User* → *Exit* to leave the *User Manager*.

Defining the ITS User Group

This document uses the ITS user group name *itsusers*, but you are free to choose a different name.

1. Log on to the Windows NT system with the ITS administrator account *ITSadm*.
2. On the Windows NT 4.0 desktop, choose *Start* → *Programs* → *Administrative Tools (Common)* → *User Manager for Domains*.
3. Choose *User* → *Select Domain*.
4. Enter a Windows NT domain name for the *ITSadm* account and choose *OK*.
5. Choose *User* → *New Global Group* or *New Local Group*.
6. Enter the following values:

   Group Name: `itsusers`

   Description: `<your description>`
7. Choose Add.

   You see a list of names in the Add Users and Groups dialog box.
8. Select group member(s):
9. Choose *Add.*

   The selected user(s) are added.

   You can always add other users to the group later.
10. Choose *OK*.
11. Choose *OK* to return.
12. Choose *User* → *Exit* to leave the *User Manager*.

Single Host Installation

This section describes how to install the ITS (WGate and AGate) on a single host - the Web host. Before starting the installation, make sure that all other applications are closed.

Note

If you are installing an Asian language version of the ITS, please read the section *Defining the ITS Administrator Account* on page 2–7 before you proceed.

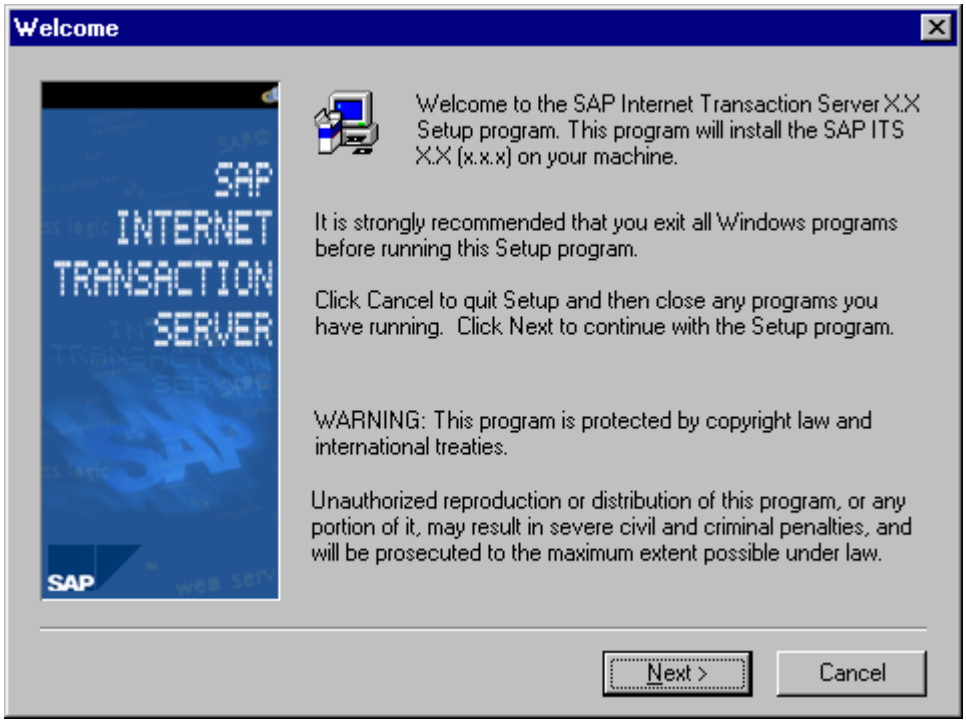
Installation Basics

To start the ITS single host installation:

1. Log on to the Windows NT 4.0 server with the ITS administrator account *ITSadm*.
2. Insert the presentation CD-ROM.
3. On the Windows NT 4.0 desktop, choose *Start* → *Run*.
4. Choose *Browse* and select the directory **`\its\nt\i386`** on the CD-ROM drive.
5. Double-click **`setupits.exe`** and choose *OK*.

   You see the *Welcome* screen.

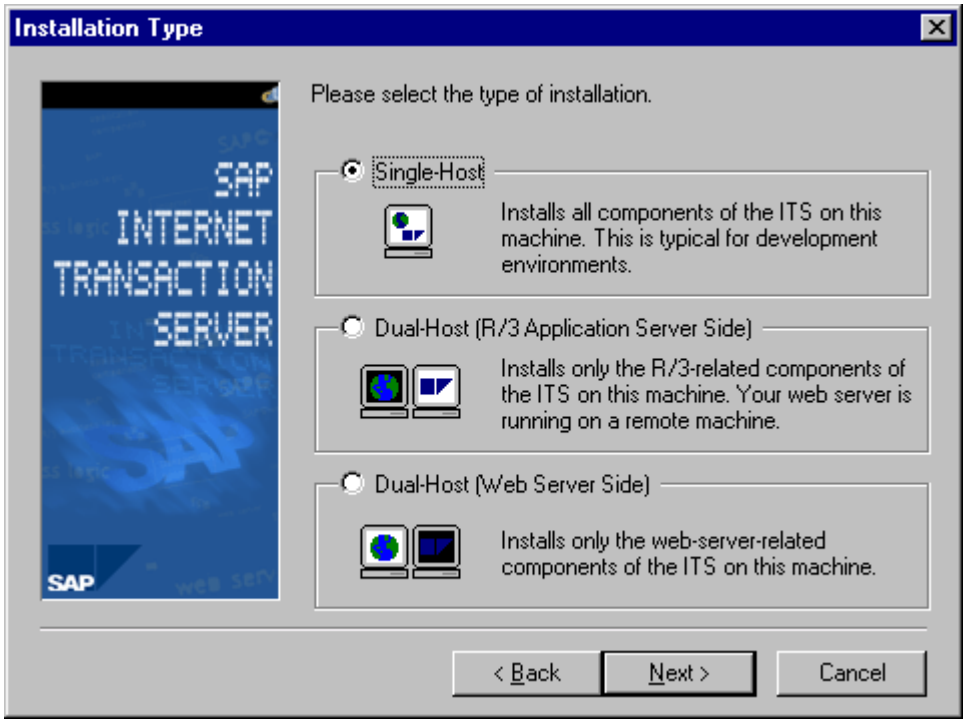
Setup Program Welcome



6. Choose *Next*.

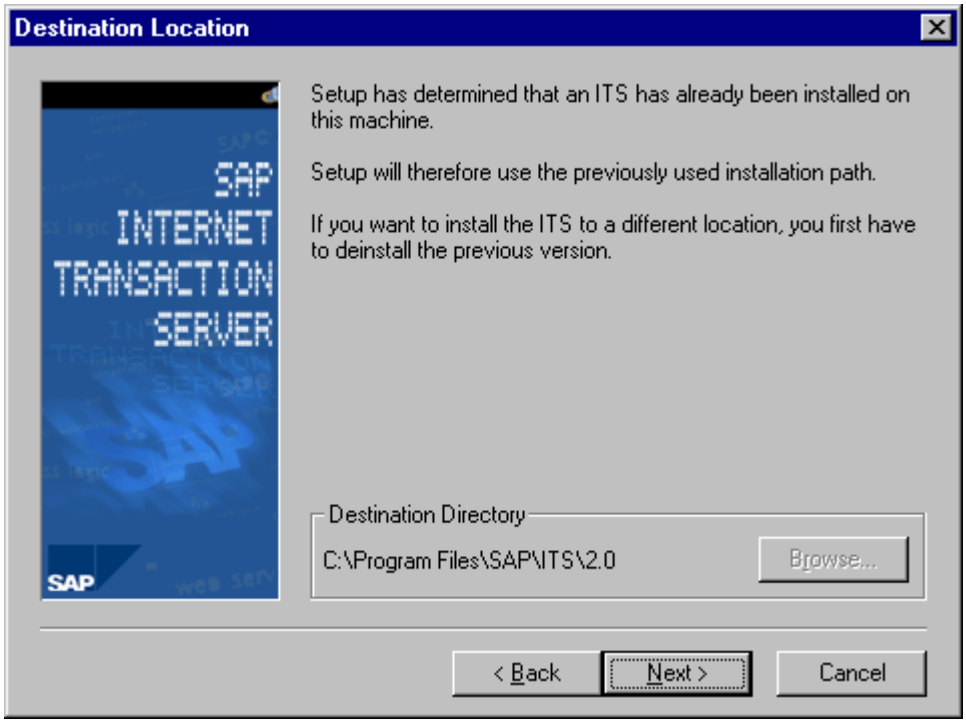
   You see the *Installation Type* screen.

Select Installation Type



7. Select *Single-Host* and choose *Next*.
   You see the *Destination Location* screen.

Select Destination Location



8. Choose *Next* to accept the default destination of the ITS main directory, or choose *Browse* to select a different destination.

   If there is already an ITS instance installed on this machine, the previous installation directory is used. In this case, the *Browse* option is not activated, and you cannot change the destination.

   When you choose *Next*, you see the *ITS Installation Type* screen.

Select ITS Installation Type

9. Select an installation type and choose *Next.*

   The setup program prompts you for an ITS instance name. If you select *Administration* as the installation type, the default name *ADM* appears.

Note

If you select *Administration*, the setup program installs an ITS instance that runs the ITS Administration Tool. Like any other ITS instance, the administration instance must run under its own dedicated ITS server.

If you already have ITS 1.1 on this host, do not install a separate administration instance, because it will deinstall your current ITS instance. If you need to run the ITS Administration Tool, you should:

i. Install an ITS of type *Typical*.

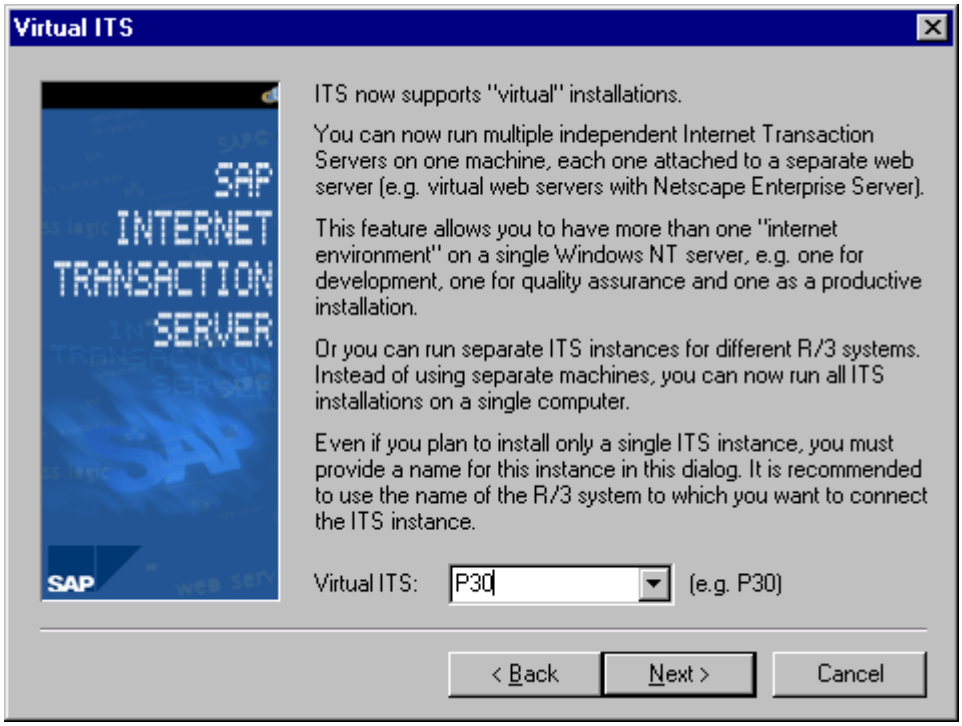
ii. Install another ITS of type *Administration* to run the ITS Administration Tool.

The setup program informs you of this in a special dialog box.

For further information about all aspects of ITS administration after installation, see the *ITS Administration Guide*. You can find the 4.5B version of this documentation in the R/3 library of any Release 4.5B R/3 System. Choose *Help* → *R/3 library* → *CA - Cross-Application Components* → *Web Basis* → *ITS Administration Guide*.

The setup program now prompts for an ITS instance name. If you chose *Administration* as the installation type, the name *ADM* is proposed.

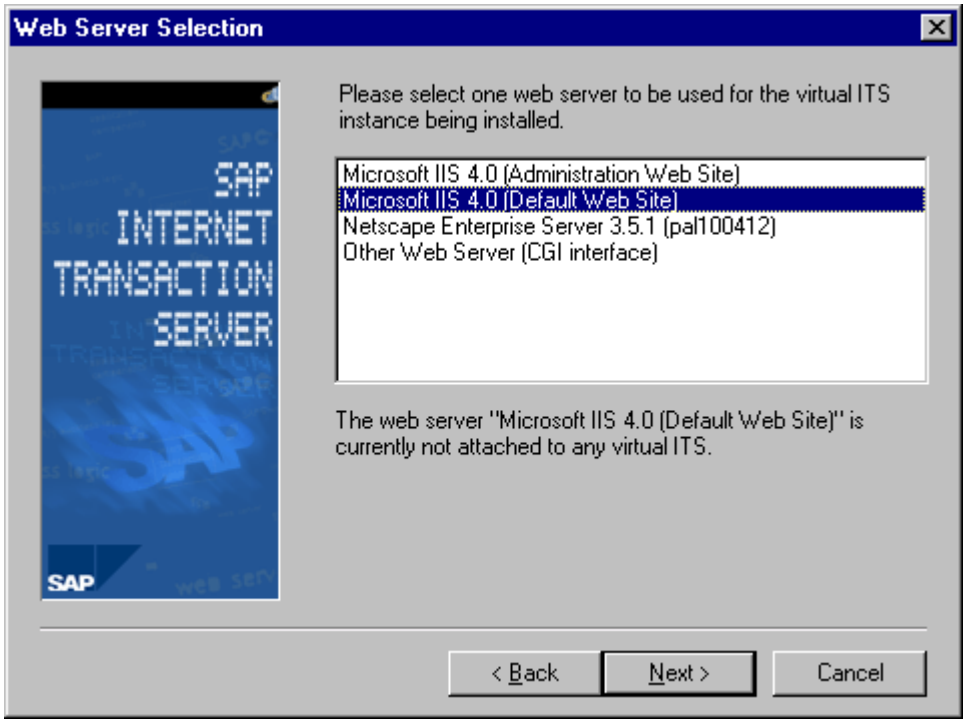
Specify Virtual ITS



10. Enter a virtual ITS instance name and choose *Next*.

    SAP recommends that you use the R/3 System name as the instance name. If there are virtual ITS instances already installed on this machine, you can display their names in the dropdown box.

Select a Web Server

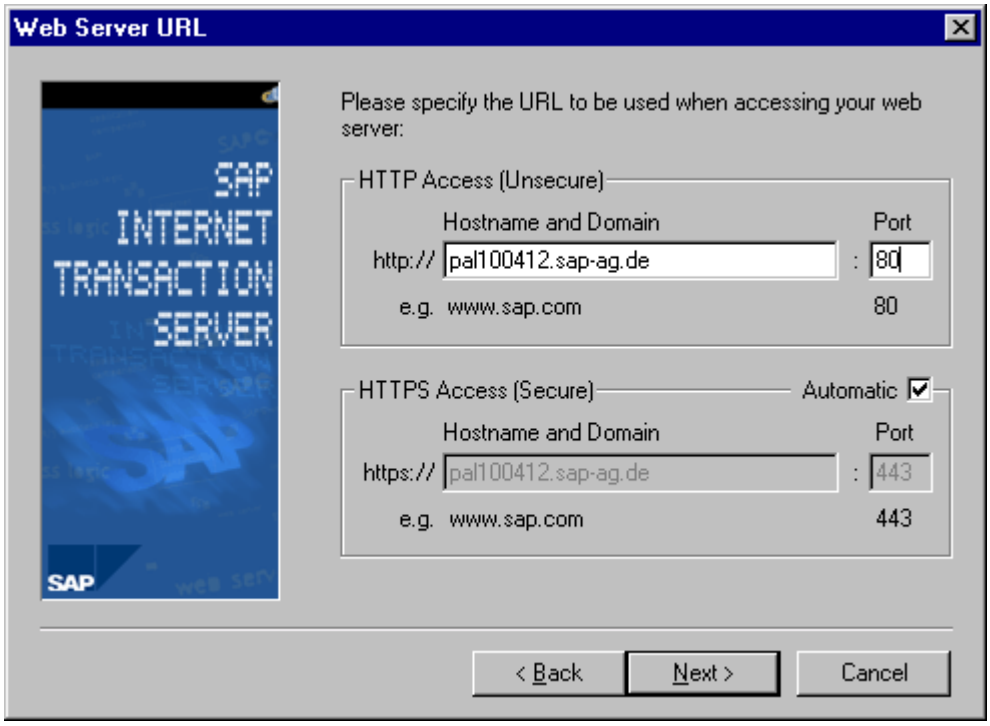


11. Select a Web server and choose *Next*.

    As shown above, the setup program states whether the server you select is already attached to a virtual ITS. You can only attach a Web server to one virtual ITS.

    If you choose *Other Web Server (CGI interface)*, the setup program prompts you for the *Documents* and *CGI Directories*. Otherwise, you go directly to the next step.

Specify the Web Server URL



12. Enter the URL for accessing the Web server and choose *Next*.

    Make sure that you enter the full URL name.

    You don't need to enter the *HTTPS Access(Secure)* information, because the setup program echoes this for you automatically. However, if you want to enter a different port (443 is the default), deselect *Automatic* to make the fields accept input.

    Note on installing an administration ITS:

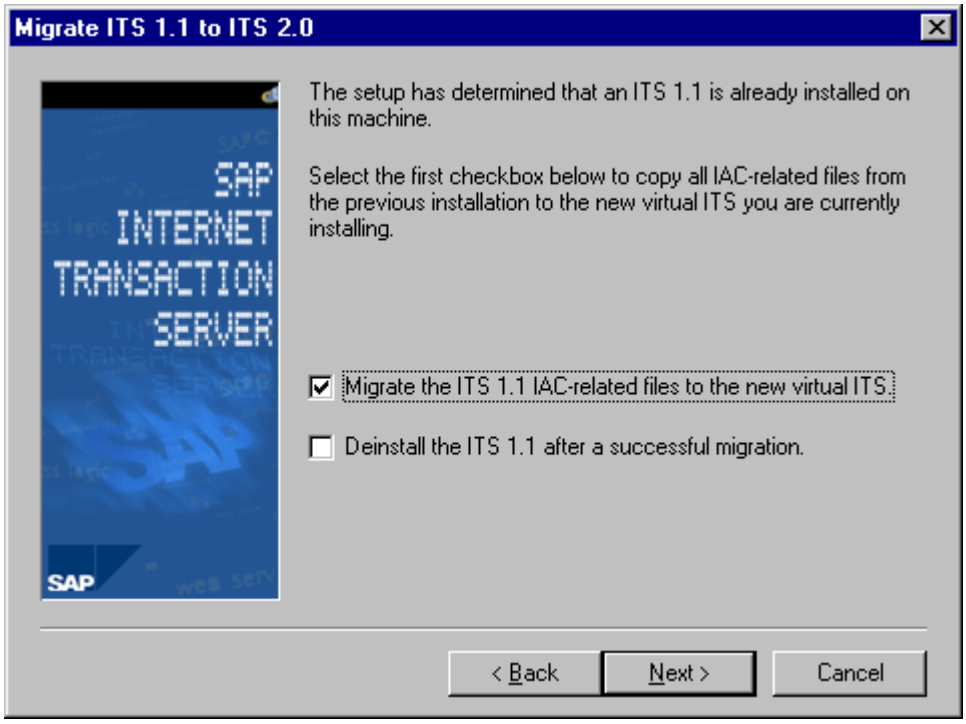
    If you chose *Administration* as the installation type, the setup program omits the next dialogs on upgrading and installing, so you can skip to *Specifying System Information*.

Upgrading or Installing

When you choose *Next*, the system tells you whether an older version of the ITS exists on this host. Your next few steps depend on whether you have an older ITS already installed, and which one.

- If you have ITS 1.1:
  Continue with the *Migrate ITS 1.1 Files* step described here.
- If you have ITS 2.0/2.1, or no ITS at all:
  You don't see the upgrade-related dialogs described here, so you can skip to *Select Installation Packages*.

Migrate ITS 1.1 Files

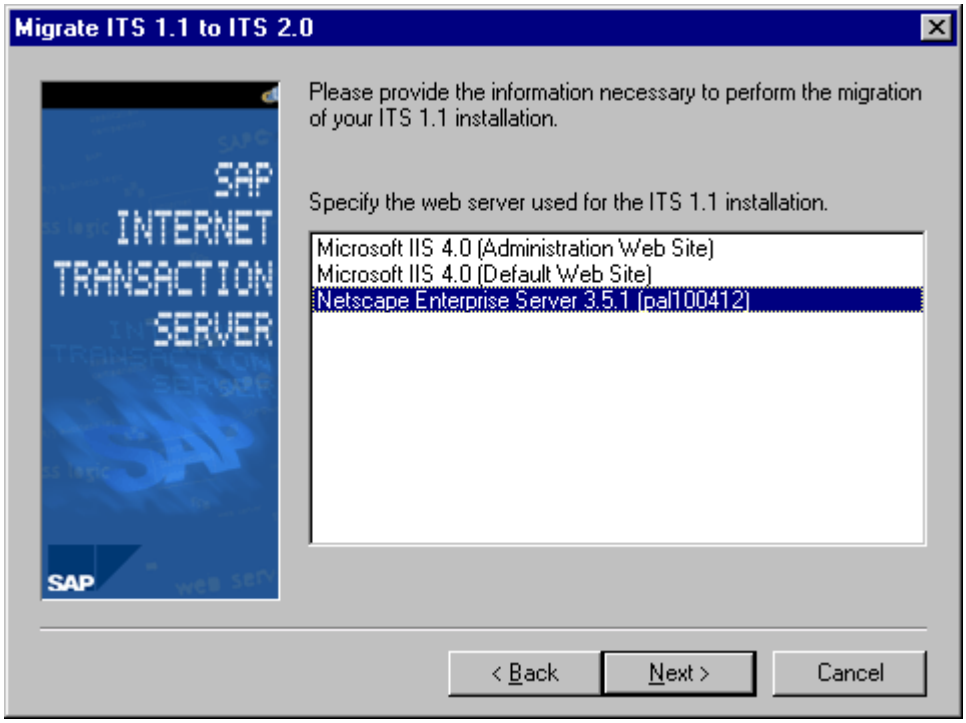


13. Specify how you want the older ITS installation handled and choose *Next*.
    - To keep the existing files for the new ITS version, select *Migrate the ITS 1.1 IAC related files to the new virtual ITS*
    - To delete the older ITS installation, select *Deinstall the ITS 1.1 after a successful migration*

    If you choose not to migrate, you do not see the next migration-related dialog, so you can skip to *Select Installation Packages*.

Specify Migration Information

If the Web server part (WGate) of an ITS 1.1 installation has to be migrated, you must provide the name of the Web server used.



14. Select the desired Web server and choose *Next*.

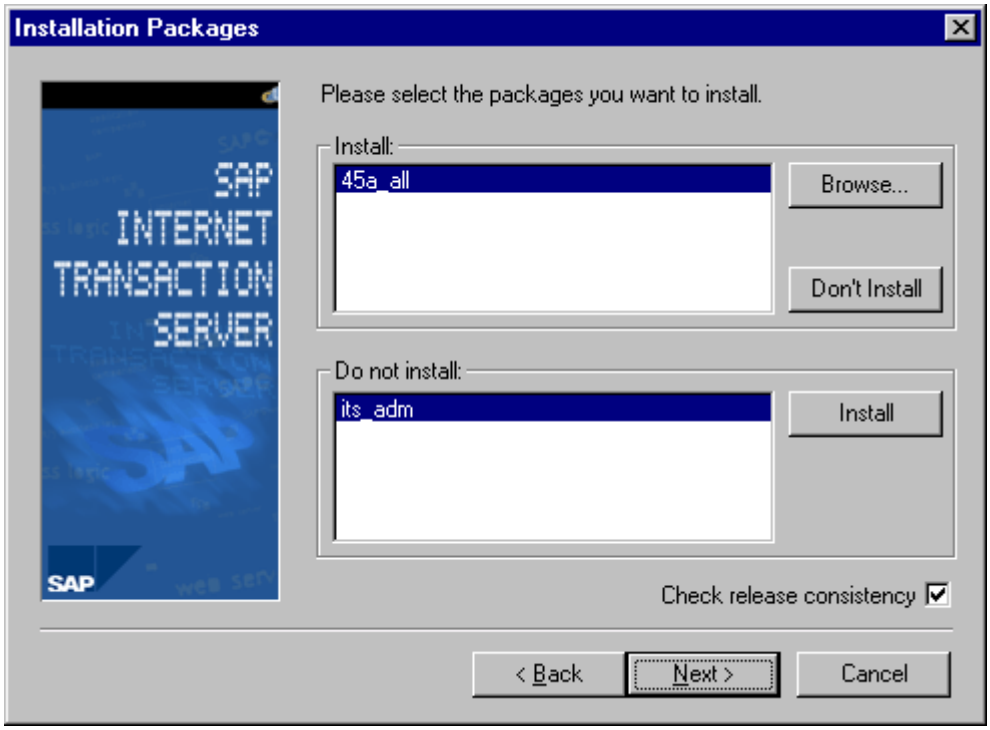
Select Installation Packages

The setup program asks you to choose the IAC package(s) you want to install. These packages contain the IAC-related files to be used for your installation.

- If you have ITS 2.0/2.1:

  Do **not** select any packages. If the dialog below contains package names in the *Install* box, make sure that you select each one and choose *Don't Install*. Then, choose *Next* and skip to *Specifying System Information*.
- If you have no ITS version at all (that is, you are installing ITS for the first time):

  Continue with the steps below.



15. Select the package you want to install and choose *Install*.

    If you are installing an Asian language version, choose *Browse* to locate the correct package.

    You can install more than one package. If you do this, make sure that *Check release consistency* is selected.

Note

You cannot add packages to an existing ITS later by running the setup program again, so make sure that you choose all the packages you need. For information on using IAC packages, see *Chapter 1: Planning the Installation*.

The installation CD contains Retail packages with names like **`45a_reta.car`**. You can install Retail packages separately by browsing to them in the **`packages`** directory, but they are also included in the **`xxx_all.car`** file.

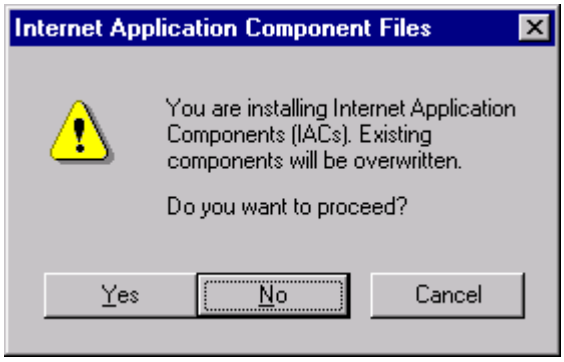
– If you want to install a full set of IACs (that is, both Retail and other types), install the **`xxx_all.car`** package alone.

– If you want to install Retail IACs only, select the Retail package for installation.

The reason is that the Retail package replaces all the standard IAC homepages with the specific logon page for the Retail IACs.

When you have selected all the packages you want, choose *Next*.

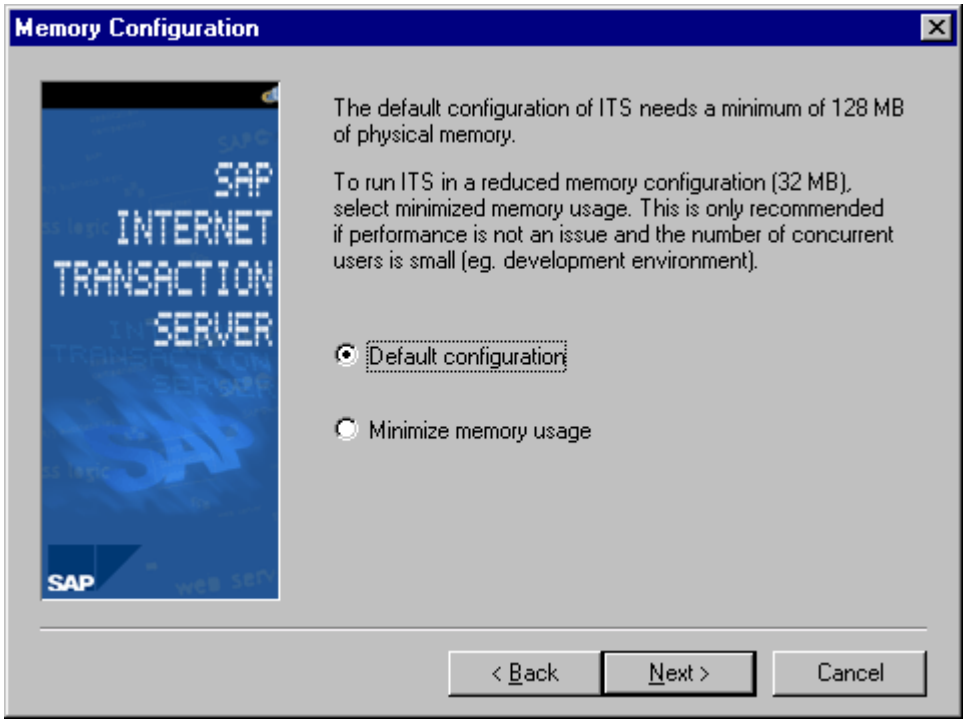
Confirm Setup



16. To confirm that you want to proceed, choose *Yes*.

Specifying System Information

Select Configuration Type



18. Select the configuration type and choose *Next*.

    The default ITS configuration is optimized for performance with many concurrent users. It is sized for a server with a minimum of 128 MB of physical memory.

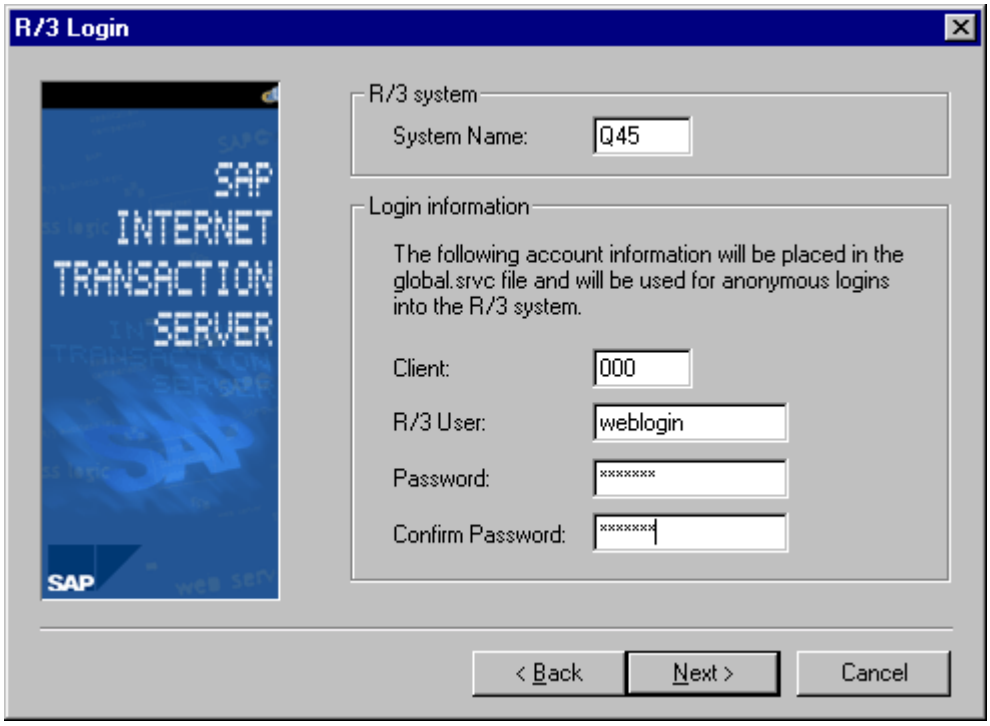
    SAP recommends the default configuration for production systems.

    However, you can opt to install the ITS with minimized memory usage. This configuration runs with 32 MB of physical memory. Select this option only when performance considerations do not apply and the number of concurrent users is small. This is to meet the needs of developers installing a personal ITS on their local development platforms.

    Note on installing an Administration ITS:

    If you chose *Administration* as the installation type, the setup program omits the next two dialogs, so you can skip to *Specify Security Access*.

Enter R/3 Logon Data



19. Specify logon information for the R/3 System:
    - *System Name*

      The 3-character name of the primary R/3 System with which the ITS will be communicating.

      The R/3 System must be Release 3.0D or later.

    - *Client*

      The global client the ITS will use to log on to the R/3 System.

    - *R/3 User*

      The global user the ITS will use to log on to the R/3 System.

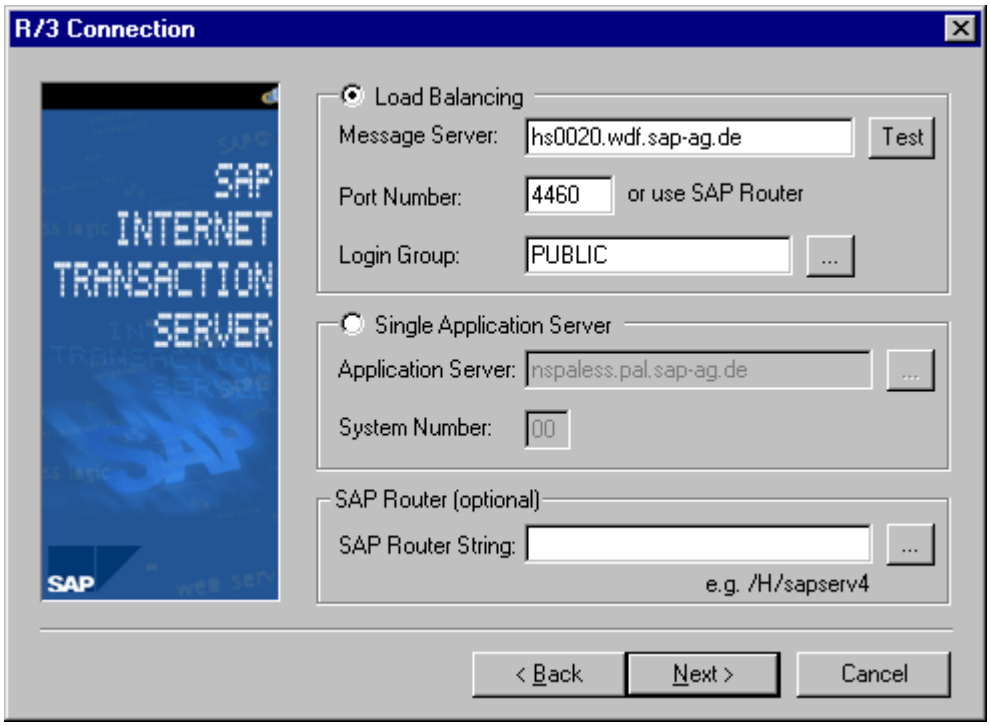
    - *Password*

      The matching password for the R/3 user.

    - *Confirm Password*

      Enter the password again.

Enter R/3 Connection Information



20. Enter the message server information and choose *Next*.

    To ensure a balanced load on all R/3 Systems, the ITS uses the R/3 message server to distribute accesses to multiple application servers. This option should be the default setting for every production system.

    For a development system where performance considerations may not apply, you can choose to connect to a single application server.

    You need to provide the following information depending on your choice:

    - If you choose **load balancing:**

      Specify the information required to connect to the R/3 Message Server. You can test this information by choosing *Test.*

      – *Message Server*

        The host name of the R/3 message server as it is known either by the domain name server (DNS) or the SAProuter.

      – *Port Number*

        The port number the message server is listening on. This value is needed only if no SAProuter is specified.

      – *Login Group*

        The login group used for the load balancing.

If you have specified a valid message server and either a valid port number or SAProuter, the "..." button appears next to the *Login group* field. Choose this button to retrieve a list of possible login groups from the message server.

– *SAP Router String*

This field identifies one or more SAProuter hosts and ports which are used to establish a connection to the R/3 System.

The syntax used is **`/H/`*`router`*`/S/`*`service`**, where ***`router`*** is the host name of an SAProuter and ***`service`*** is either the service name or the port number of the SAProuter service. If **`/S/`*`service`*** is missing, **`sapdp99`** will be used as the default service name. To define more than one SAProuter, you can concatenate the strings in the same order the routers connect the AGate host to the R/3 System.

If no SAProuter is used to connect to the R/3 system, leave this field blank.

If a valid **saproute.ini** file can be found in the Windows directory, the "..." button appears next to the *SAP Router String* field. Choose this button to get a list of SAProuters known to this machine.

- If you choose a **single application server**, specify:
  – *Application Server*

    The name of the application server.

    If you specify a valid message server and either a valid port number or SAProuter, the "..." button appears next to the *Application server* field. Choose this button to retrieve a list of possible login groups from the message server.

  – *System Number*

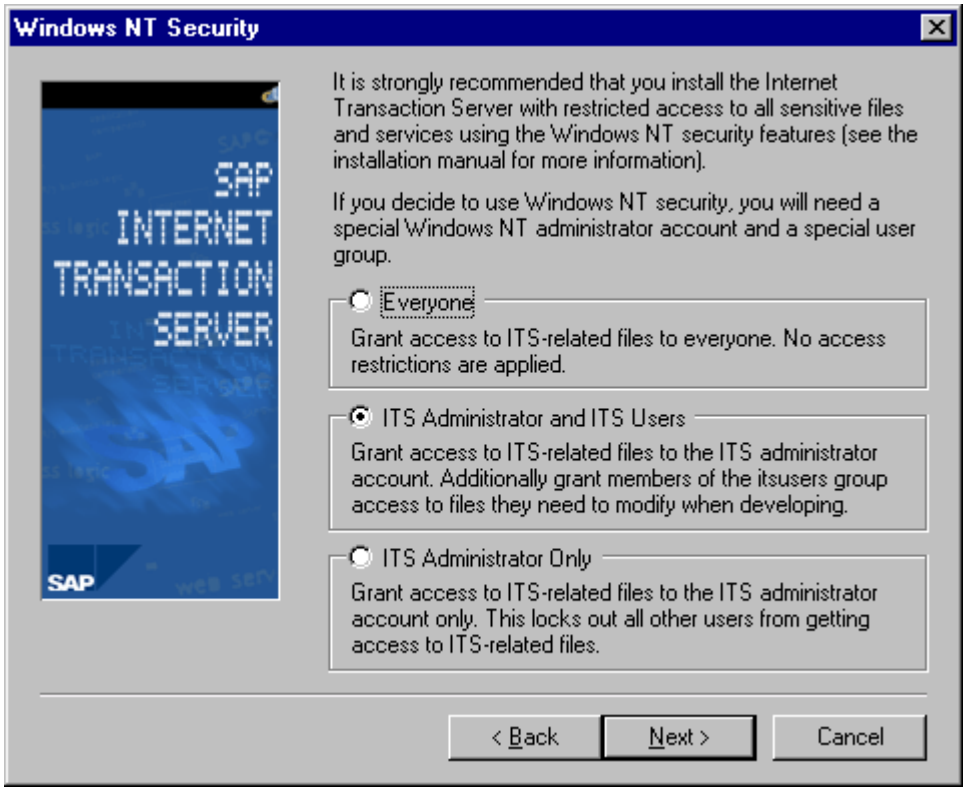
    The system number for the application server.

  – *SAP Router String*

    See the information in the previous list item.

When you choose *Next*, the setup program asks about security.

Specify Security Access



21. Select a security access level.

    The setup program can configure the Windows NT Security in a way that provides optimal security for your system.

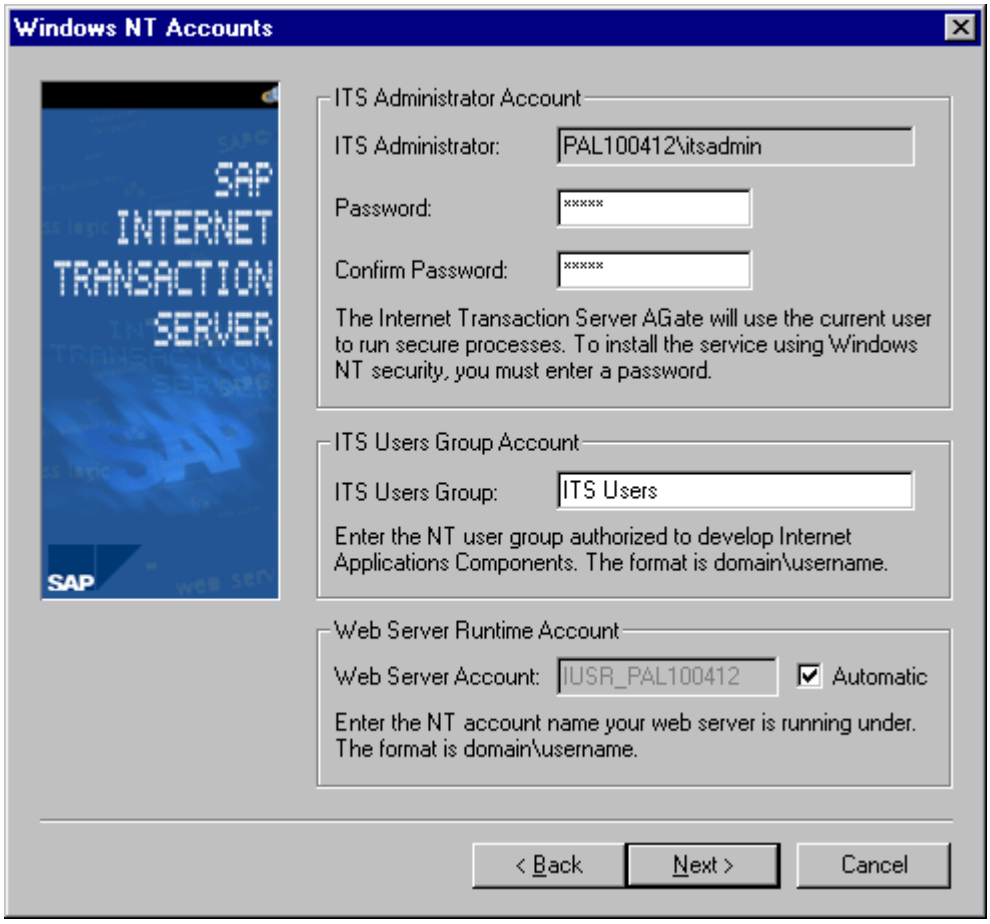
    If you select *ITS Administrator and ITS Users*, you restrict access to AGate, and to the service files, HTML templates, and graphics, all of which may contain sensitive information. In this case, the ITS administrator has full control of all files, while the ITS user group has the access rights required for development purposes.

    During development, however, access restrictions may be undesirable. You should analyze your needs and decide whether to use the security restrictions provided by the setup program, or whether to use some other security procedure.

Note

SAP strongly recommends that you install the ITS with restricted access to all sensitive files and services using the Windows NT Security features.

Specify Security Accounts



22. If you have chosen to use Windows NT Security, enter the following information to set up restricted access:
    - *ITS Administrator*

      The user running the setup program must be the ITS Administrator, so this name is displayed here. You cannot choose a different user as the ITS administrator.
    - *Password*

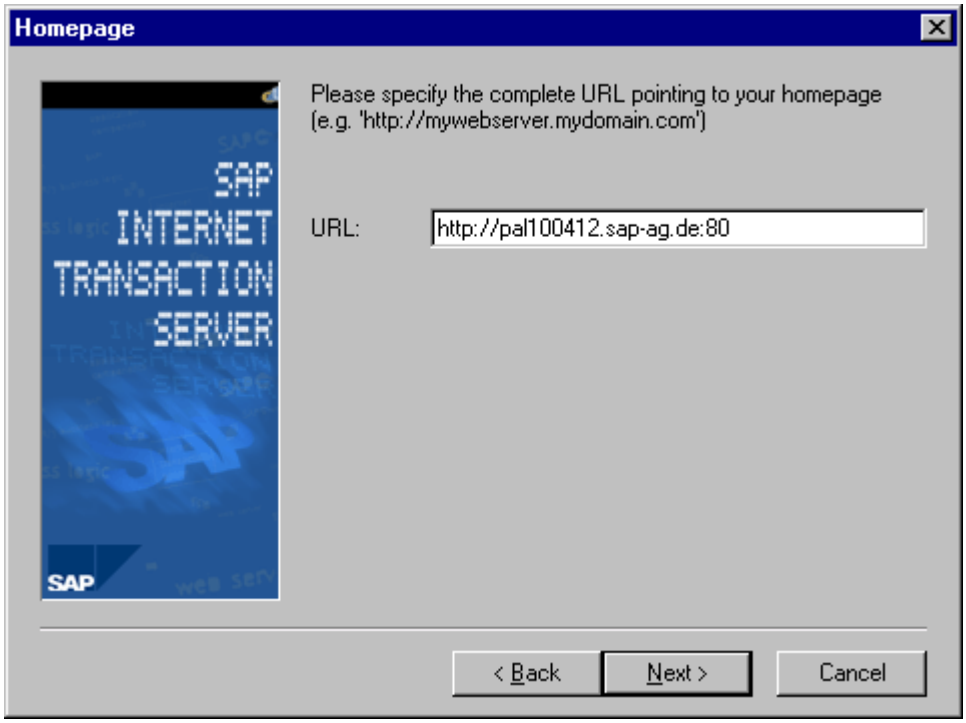
      The password for the ITS administrator.
    - *Confirm Password*

      Enter the password again.
    - *ITS Users Group*

      The name you have chosen for the ITS user group.
    - *Web Server Account*

      The user account under which the Web server is running.

Enter the Home URL



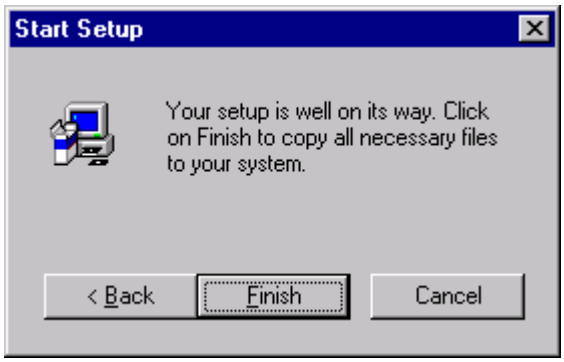
23. Enter the homepage URL information.

    The URL you enter can be for your homepage or any other page that you would like to present after an Internet Application Component terminates.

    For example: **`http://myserver.mydomain.com`**

    The page must be accessible by the client. You can modify this setting in the **`global.srvc`** file any time after the installation.

Completing the Installation



24. Choose *Finish* to install the software with the settings you have specified.

    If you want to modify any of your settings, choose *Back* and proceed backwards through the installation procedure.

    When you choose *Finish*, the setup program completes the installation. A dialog asks if you want to read the Release Notes for the release.

25. Choose *Yes*.

    Read the Release Notes to check for release changes. When you close the Release Notes, the *Setup is complete* dialog appears.

26. Confirm with *OK*.

Your ITS installation is now complete. Continue with *Checking the Installation* on page 2–67.

Dual Host Installation

This section describes how to install the ITS on two separate hosts, that is, the WGate on the web host and the AGate on the AGate host.

Before starting the installation, make sure that:

- the AGate host has Windows NT 4.0 Server installed.
- the web server software is installed and operational on the web host.
- both computers are on the LAN and can ping each other.

  To test this, log on to the web host and enter the command **`ping <AGate host>`** from the *cmd.exe* window. Use the equivalent ping command on the AGate host.
- all other applications are closed

Note

If you are installing an Asian language version of the ITS, please read the section *Defining the ITS Administrator Account* on page 2–7 before you proceed.

Installing AGate on the AGate Host

To install AGate, proceed as follows:

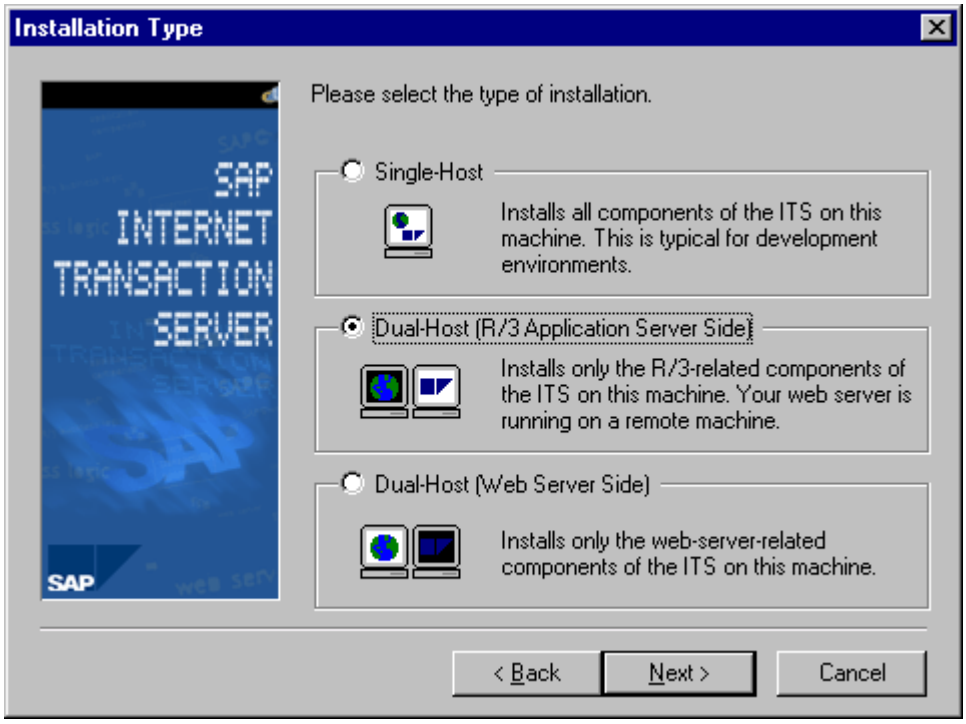
1. Log on to the AGate host with the ITS administrator account *ITSadm*.
2. Insert the presentation CD-ROM.
3. On the Windows NT 4.0 desktop, choose *Start* → *Run*.
4. Choose *Browse* and select the directory **`\its\nt\i386`** on the CD-ROM drive.
5. Double-click **`setupits.exe`** and choose *OK*.
   You see the *Welcome* screen.

Setup Program Welcome

6. Choose *Next*

You see the *Installation Type* screen.

Select Installation Type

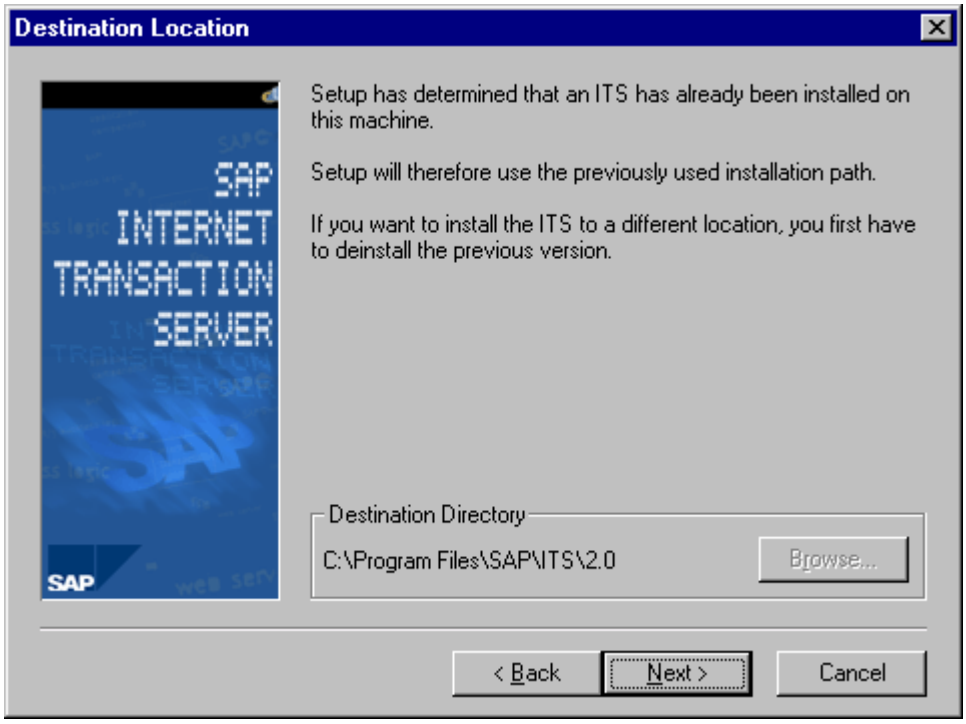


7. Select *Dual-Host (R/3 Application Server Side)* and choose *Next*.

   SAP recommends that you always install the AGate (application server side) before the WGate (Web server side).

   You see the *Destination Location* screen.

Select Destination Location



8. Choose *Next* to accept the default destination of the ITS main directory, or choose *Browse* to change it.

   If there is already an ITS instance installed on this machine, the previous installation directory is used. In this case, the *Browse* option is not aactivated, and you cannot change the destination.

   When you choose *Next*, you see the *ITS Installation Type* screen.

Select ITS Installation Type

9. Select an installation type and choose *Next*.

Note

If you select *Administration*, the setup program installs an ITS instance that runs the ITS Administration Tool. Like any other ITS instance, the administration instance must run under its own dedicated ITS server. You can install the administration instance on a single host, but it must reside on the same machine as Agate.

If you already have ITS 1.1 on this host, do not install a separate administration instance, because it will deinstall your current ITS instance. If you need to run the ITS Administration Tool, you should:

i. Install an ITS of type *Typical*.

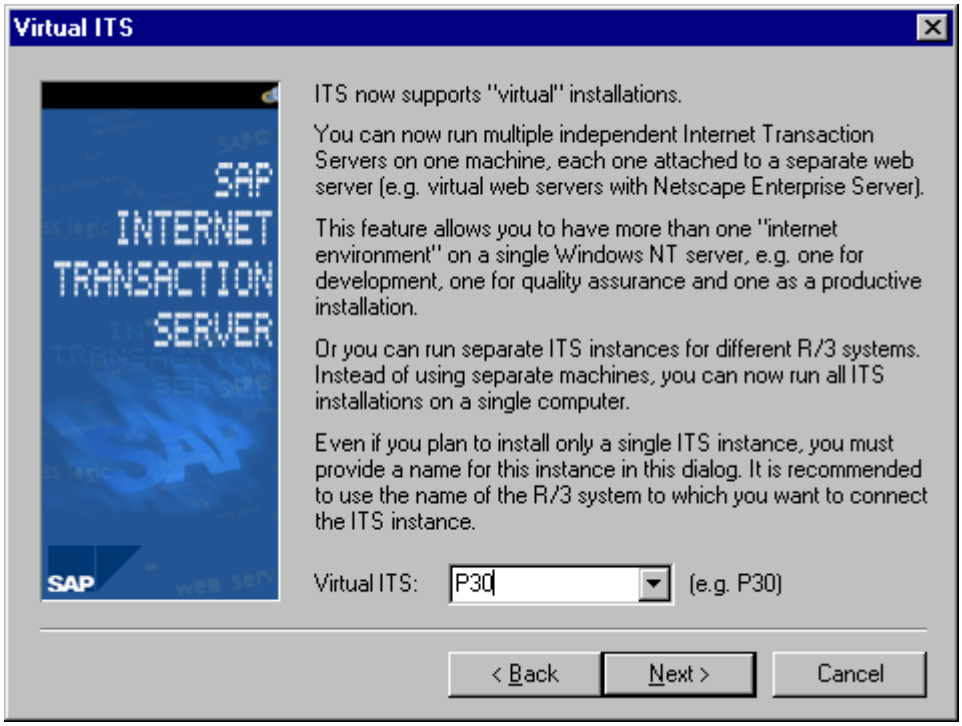
ii. Install another ITS of type *Administration* to run the ITS Administration Tool.

The setup program informs you of this in a special dialog box.

For further information about all aspects of ITS administration after installation, see the *ITS Administration Guide*. You can find the 4.5B version of this documentation in the R/3 library of any Release 4.5B R/3 System. Choose *Help* → *R/3 library* → *CA - Cross-Application Components* → *Web Basis* → *ITS Administration Guide*.

The setup program now prompts for an ITS instance name. If you chose *Administration* as the installation type, the name *ADM* is proposed.

Specify Virtual ITS



10. Enter a virtual ITS instance name and choose *Next*.

    SAP recommends that you use the R/3 System name as the instance name. If there are virtual ITS instances already installed on this machine, you can display their names in the dropdown box.

Note

If you chose *Administration* as the installation type, the setup program omits the next dialogs on upgrading and installing, so you can skip to *Specifying System Information* on page 2–42.

Upgrading or Installing

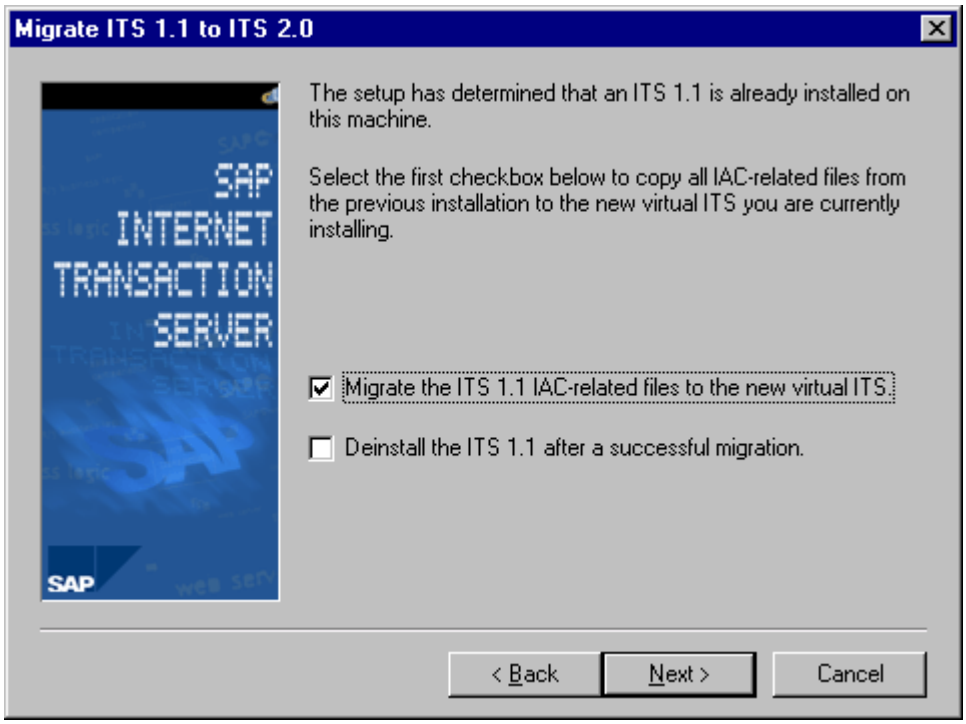
When you choose *Next*, the system tells you whether an older version of the ITS exists on this host. Your next few steps depend on whether you have an older ITS installed, and which one.

- If you have ITS 1.1:

  Continue with the section *Migrate ITS 1.1 Files* described here.
- If you have ITS 2.0/2.1 or no ITS version at all

  You don't see the upgrade-related dialogs described here, so you can skip to *Select Installation Packages* on page 2–39.

Migrate ITS 1.1 Files

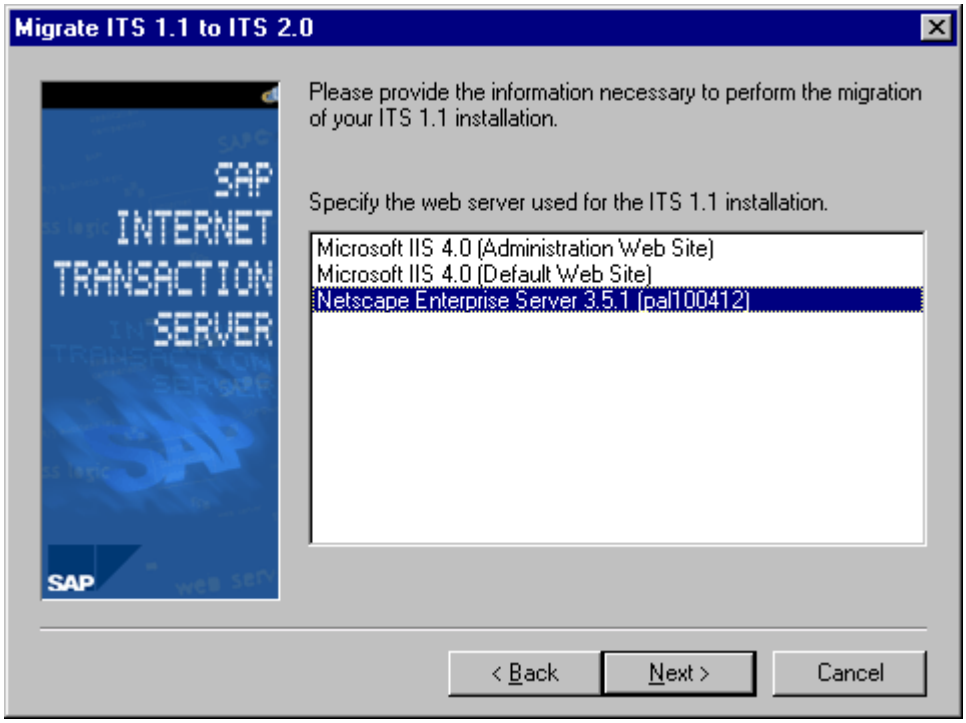


11. Specify how you want the older ITS installation handled and choose *Next*.
    - Select *Migrate the ITS 1.1 IAC-related files to the new virtual ITS* to preserve the existing files for the new ITS version.
    - Select *Deinstall the ITS 1.1 after a successful migration* to remove the older ITS installation.

If you choose not to migrate, you do not see the next migrate-dialog, so you can skip to *Specifying System Information*.

Provide Migration Information

If the Web server part (WGate) of an ITS 1.1 installation has to be migrated, you must provide the name of the Web server used.



12. Select the desired Web server and choose *Next*.

Select Installation Packages

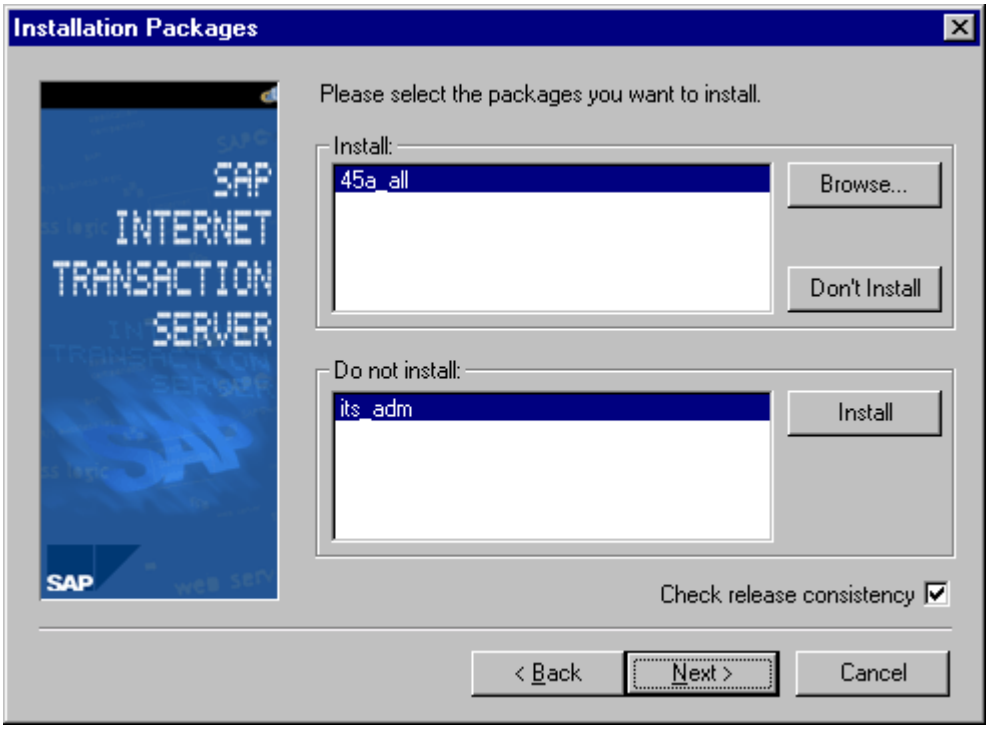
The setup program asks you to choose the IAC package(s) you want to install. These packages contain the IAC-related files to be used for your installation.

- If you have ITS 2.0/2.1:

  Do **not** select any packages. If the dialog below contains package names in the *Install* box, make sure that you select each one and choose *Don't Install*. Then, choose *Next* and skip to *Specifying System Information*.

- If you have no ITS at all (that is, you are installing ITS for the first time):

  Continue with the steps below.



13. Select the package you want to install and choose *Install*.

    If you are installing an Asian language version, choose *Browse* to locate the correct package.

    You can install more than one package. If you do this, make sure that *Check release consistency* is selected.

Note

You cannot add packages to an existing ITS later by running the setup program again, so make sure that you choose all the packages you need. For information on using IAC packages, see *Chapter 1: Planning the Installation*.

The installation CD contains Retail packages with names like **`45a_reta.car`**. You can install Retail packages separately by browsing to them in the **`packages`** directory, but they are also included in the **`xxx_all.car`** file.

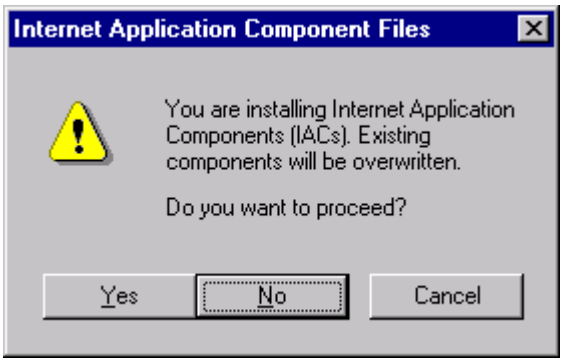
– If you want to install a full set of IACs (that is, both Retail and other types), install the **`xxx_all.car`** package alone.

– If you want to install Retail IACs only, select the Retail package for installation.

The reason is that the Retail package replaces all the standard IAC homepages with the specific logon page for the Retail IACs.

When you have selected all the packages you want, choose *Next*.

Confirm Setup

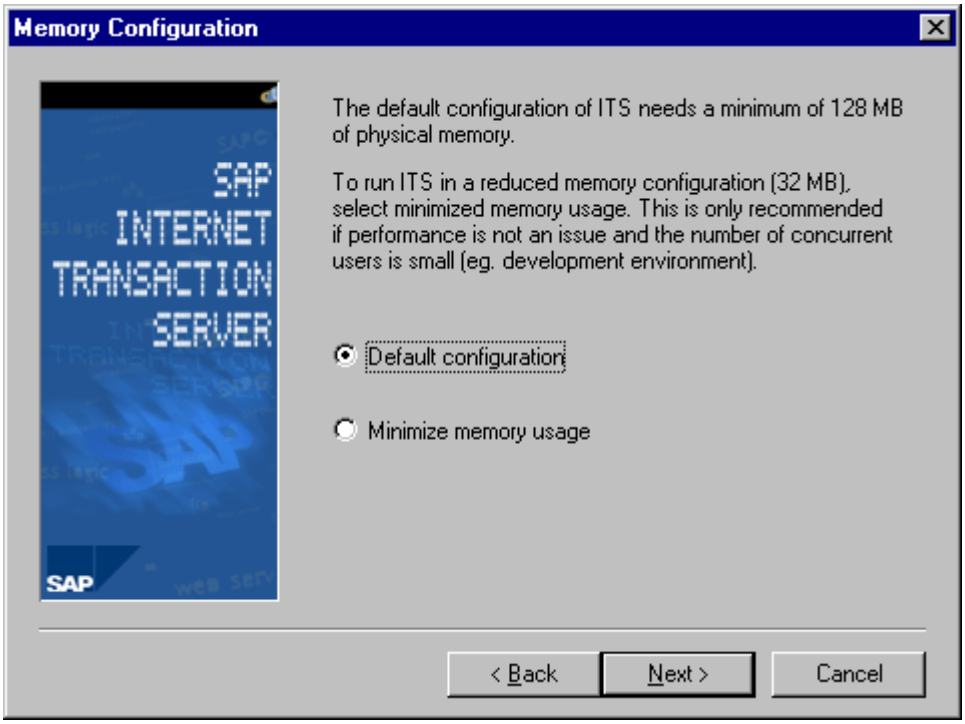


14. To confirm that you want to proceed, choose *Yes*.

Specifying System Information

The setup program now asks you to specify system information.

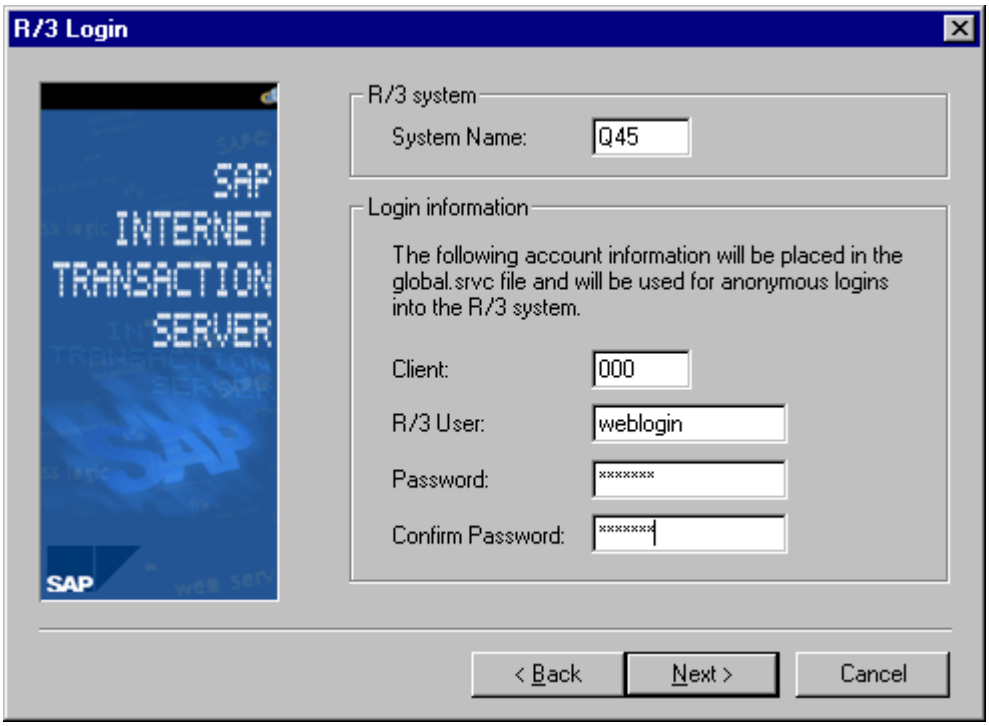
Choose Configuration Type



14. Select a configuration type and choose *Next*.
    - If you select *Default configuration*, the ITS is optimized for performance with a large number of concurrent users, and sized for a server with a minimum of 128 MB of physical memory. This configuration is suitable for production systems.
    - If you select *Minimize memory usage*, the ITS is optimized for performance with a small number of concurrent users and sized for a server with 32 MB of physical memory. This configuration is suitable only if performance considerations do not apply. It is primarily intended to meet the needs of developers installing a personal ITS on their local machines.

    If you are installing an administration instance of the ITS, the setup program omits the next two dialogs, so you can skip to *Specify Security Access*.

Enter R/3 Logon Information



15. Enter the following logon information, and then choose *Next*.
    - *System Name*

      Enter the name of the primary R/3 System with which the ITS is meant to communicate. This R/3 System must be Release 3.0D or higher. The name consists of three alphanumeric letters.
    - *Client*

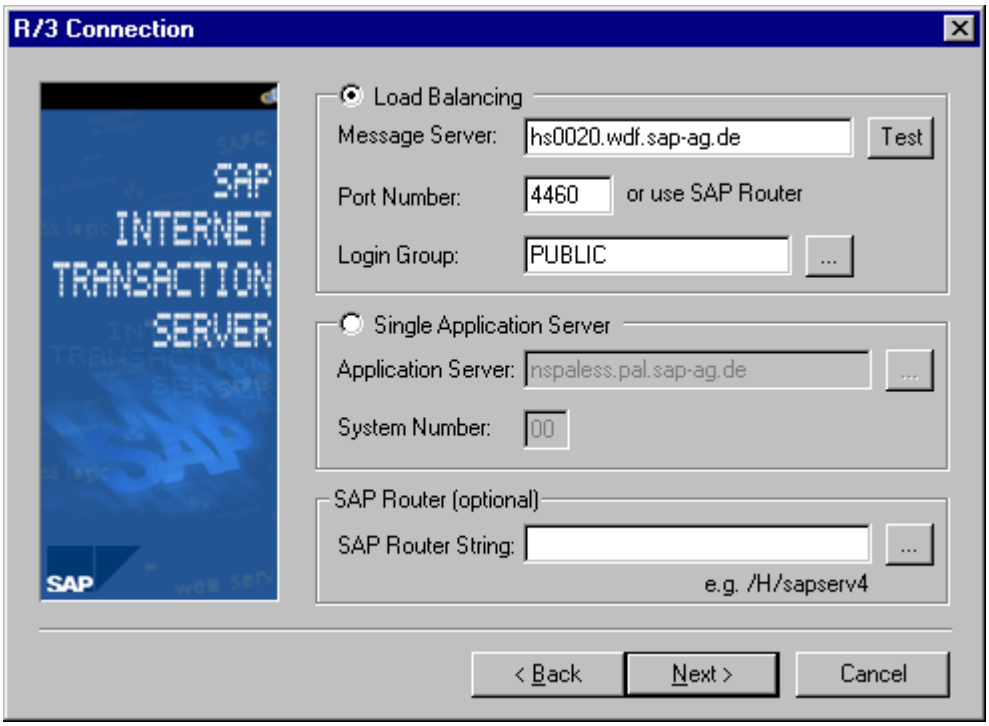
      Enter the global client used by the ITS to log on to the R/3 System.
    - *R/3 User*

      Enter the global user used by the ITS to log on to the R/3 System.
    - *Password*

      Enter a password for the R/3 user.
    - *Confirm Password*

      Enter the password again.

Enter R/3 Connection Information



16. Enter the message server information, and then choose *Next*.

    To guarantee a balanced load on all R/3 Systems, the ITS uses the R/3 message server to distribute access to multiple application servers. This option is the default setting for all production systems.

    For a development system where performance considerations are less important, you can choose to connect to a single application server.

    - If you select *Load Balancing*:

      Enter the information required to connect to the R/3 message server. You can test this information by choosing *Test.*

      – *Message Server*

        This is the host name of the R/3 message server as it is known either by the domain name server (DNS) or the SAProuter.

      – *Port Number*

        This is the port number the message server is listening on. You need this value only if no SAProuter is specified (see below).

      – *Login Group*

        This is used for load balancing.

        If you have entered a valid message server and either a valid port number or SAProuter, you can choose the button next to the *Login Group* field to get a list of possible groups from the message server.

– *SAP Router String*

This field identifies one or more SAProuter hosts and ports that are used to establish a connection to the R/3 System.

The syntax used is **`/H/<router>/S/<service>`**, where **`<router>`** is the host name of an SAProuter, and **`<service>`** is either the service name or the port number of the SAProuter service.
If **`/S/<service>`** is missing, **`sapdp99`** is the default service name. To define more than one SAProuter, you can concatenate the strings in the same order the routers connect the AGate host to the R/3 System.

If no SAProuter is used to connect to the R/3 system, leave this field blank.

If there is a valid **saproute.ini** file in the Windows directory, you can choose the button next to the *SAP Router String* field to get a list of SAProuters known to this machine.

- If you select *Single Application Server*, enter the following information:
  – *Application Server*

  This is the name of the application server.

  If you specify a valid message server, and either a valid port number or SAProuter, you can choose the button appears next to the *Application Server* field to get a list of possible groups from the message server.

  – *System Number*

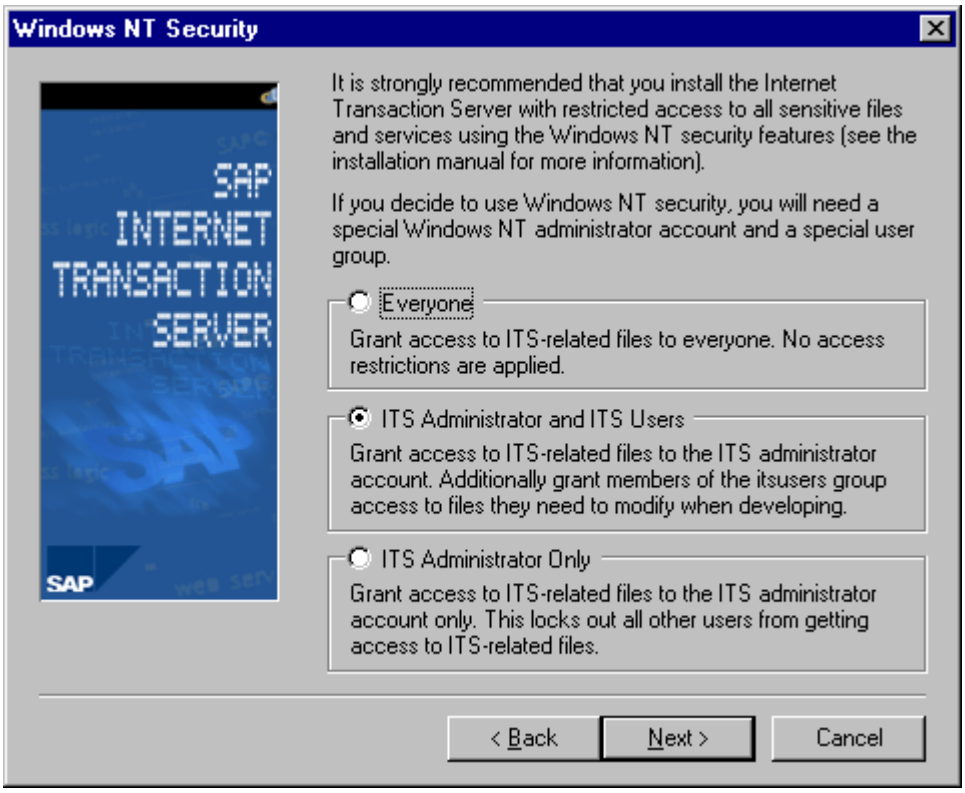
  This is the system number for the application server.

  – *SAP Router String*

  See information under *SAP Router String* above.

When you choose *Next*, the setup program asks about security.

Specify Security Access



17. Select a security access level.

    The setup program can configure the Windows NT Security in a way that provides optimal security for your system.

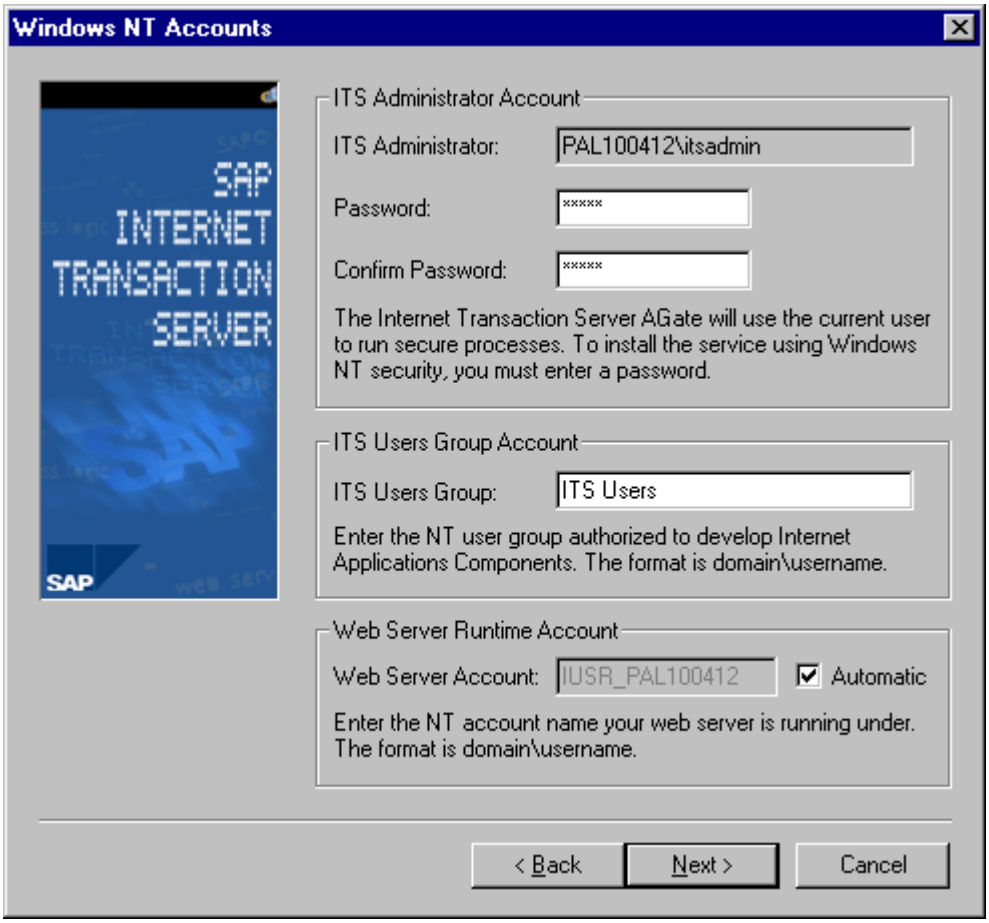
    If you select *ITS Administrator and ITS Users*, you restrict access to AGate, and to the service files, HTML templates, and graphics, all of which may contain sensitive information. In this case, the ITS administrator has full control of all files, while the ITS user group has the access rights required for development purposes.

    During development, however, access restrictions may be undesirable. You should analyze your needs and decide whether to use the security restrictions provided by the setup program, or whether to use some other security procedure.

Note

SAP strongly recommends that you install the ITS with restricted access to all sensitive files and services using the Windows NT Security features.

Set Up Security Accounts



18. If you have chosen to use Windows NT Security, enter the following information to set up restricted access:
    - *ITS Administrator*

      The user running the setup program must be the ITS Administrator, so this name is displayed here. You cannot choose a different user as the ITS administrator.
    - *Password*

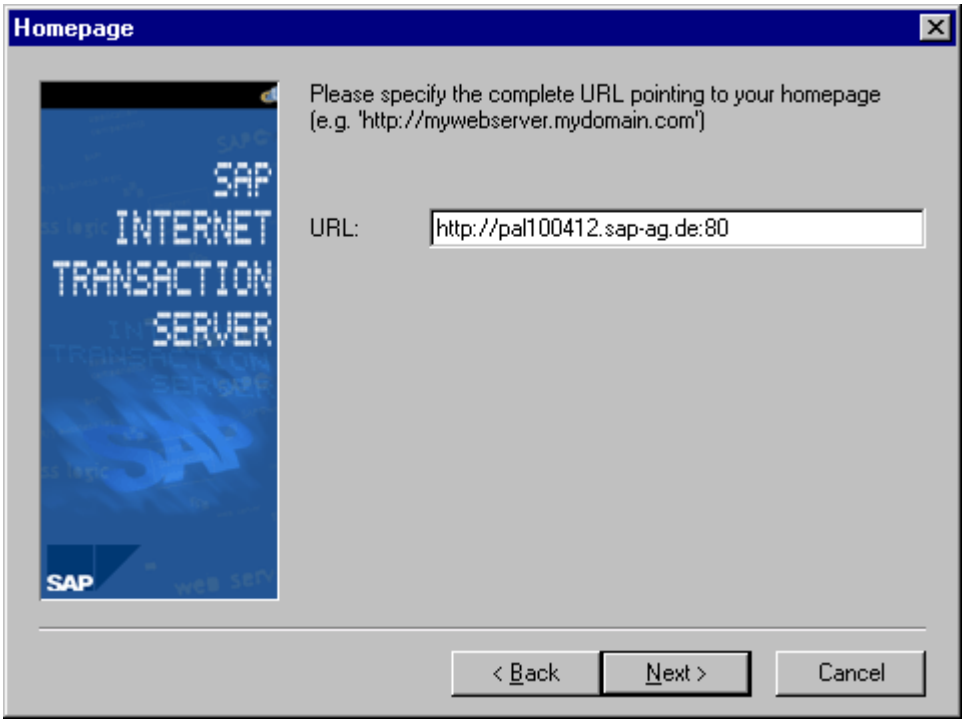
      The password for the ITS administrator.
    - *Confirm Password*

      Enter the password again.
    - *ITS Users Group*

      The name you have chosen for the ITS user group.
    - *Web Server Account*

      The user account under which the Web server is running.

Enter the Home URL

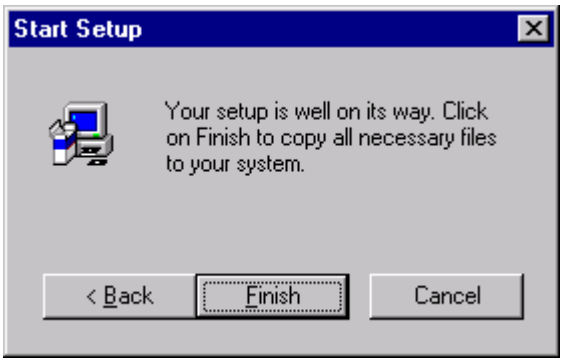


19. Enter the homepage URL information.

    The URL you enter can be your own homepage or any other page that you want to present when an IAC has finished.

    The URL you enter must be accessible by the client. You can modify this setting in the global service file any time after the installation.

Complete the AGate Installation



20. To install the software as specified, choose *Finish*.

    If you want to modify any of your settings, use the *Back* button to proceed backwards through the installation procedure.

    When you choose *Finish*, the setup program completes the installation. You then see a dialog, which asks if you want to read the Release Notes.

21. Choose *Yes*.

    Read the Release Notes to check for release changes. When you close the Release Notes, you see the *Setup is complete* dialog.

22. Confirm with *OK*.

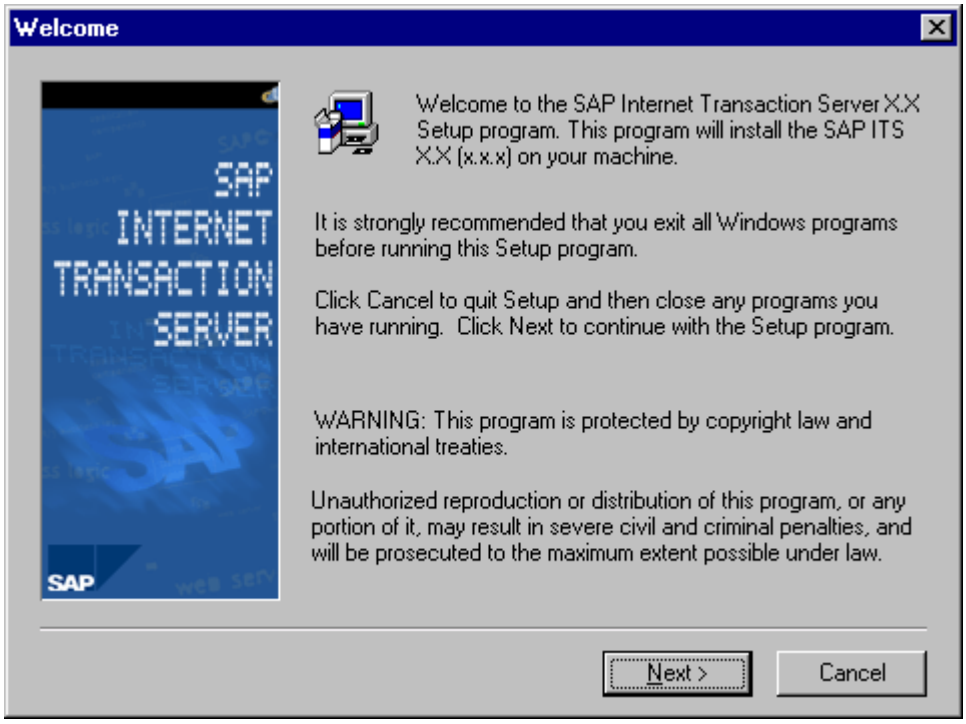
Your installation of AGate is now complete. Continue by installing WGate, as described in the next section.

Installing WGate on the Web Host

To install Wgate on an NT system, proceed as follows:

1. Log on to the Web host with the ITS administrator account *ITSadm*.
2. Insert the presentation CD-ROM.
3. On the Windows NT 4.0 desktop choose *Start* → *Run*.
4. Choose *Browse* and select the directory **`\its\nt\i386`** on the CD-ROM drive.
5. Double-click **`setupits.exe`** and choose *OK*.
   You see the *Welcome* screen.

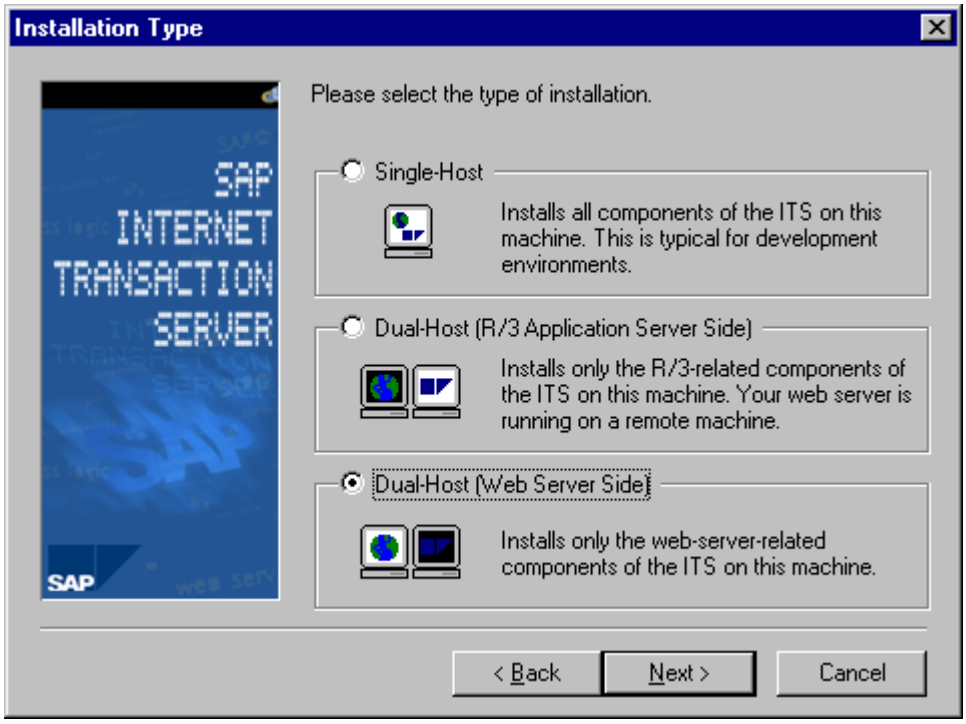
Setup Program Welcome



6. Choose *Next*.

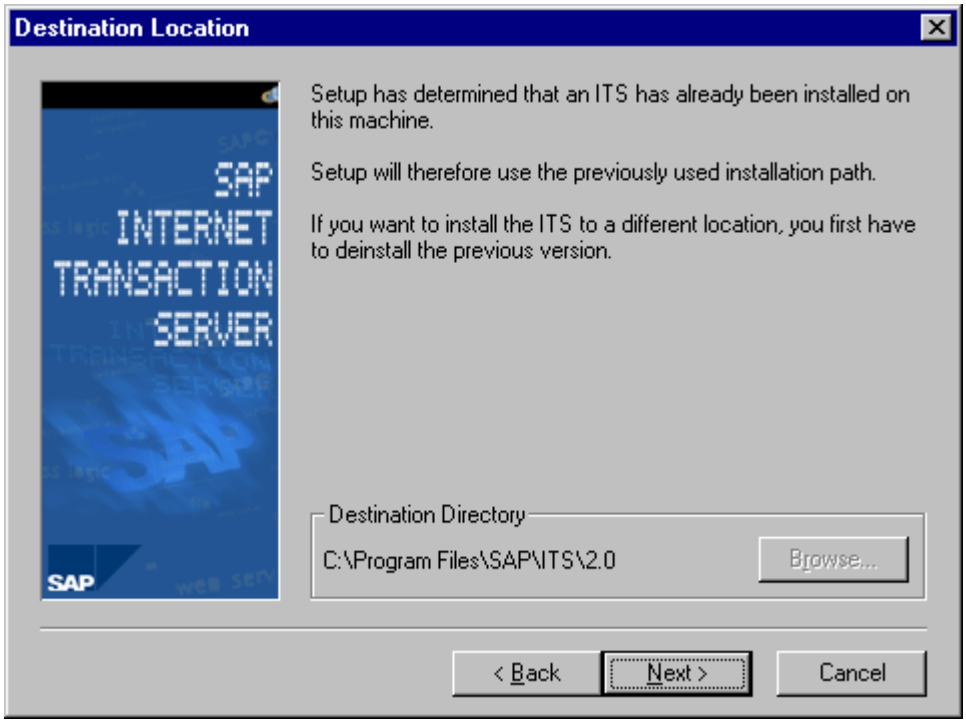
   You see the *Installation Type* screen.

Select Installation Type



7. Select *Dual-Host (Web Server Side)* and choose *Next*.
   You see the *Destination Location* screen.

Select Destination Location



8. Choose *Next* to accept the default destination of the ITS main directory, or choose *Browse* to change it.

   If there is already an ITS instance installed on this machine, the previous installation directory is used. In this case, the *Browse* option is not activated, and you cannot change the destination.

   When you choose *Next*, you see the *ITS Installation Type* screen.

Select ITS Installation Type

9. Select an installation type and choose *Next*.

Note

If you select *Administration*, the setup program installs an ITS instance that runs the ITS Administration Tool. Like any other ITS instance, the administration instance must run under its own dedicated ITS server. You can install the administration instance on a single host, but it must reside on the same machine as Agate.

If you already have ITS 1.1 on this host, do not install a separate administration instance, because it will deinstall your current ITS instance. If you need to run the ITS Administration Tool, you should:

i. Install an ITS of type *Typical*.

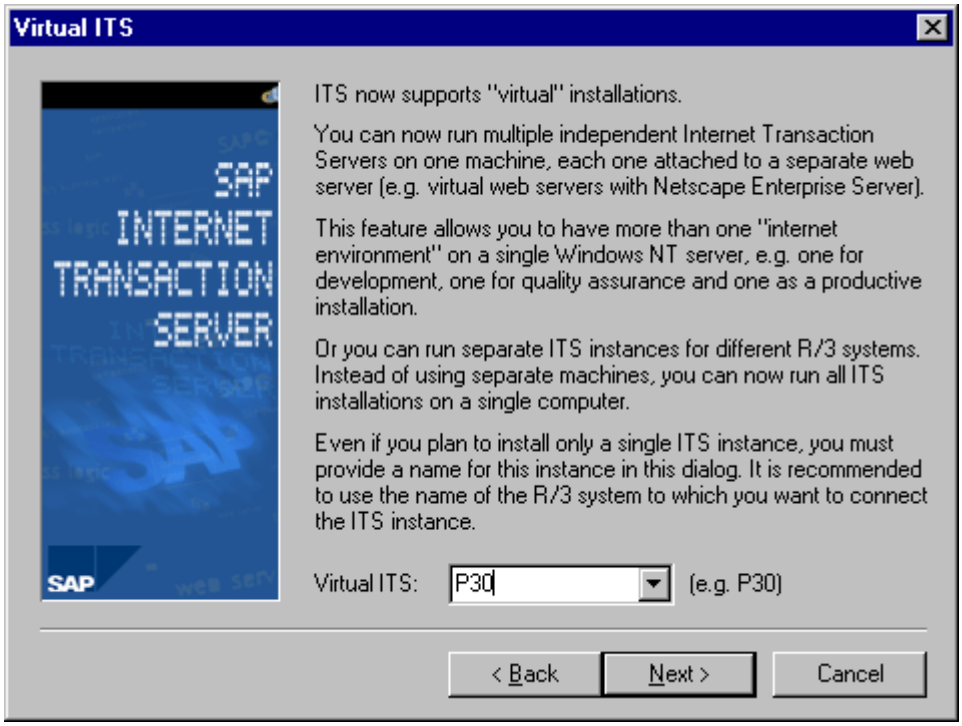
ii. Install another ITS of type *Administration* to run the ITS Administration Tool.

The setup program informs you of this in a special dialog box.

For further information about all aspects of ITS administration after installation, see the *ITS Administration Guide*. You can find the 4.5B version of this documentation in the R/3 library of any Release 4.5B R/3 System. Choose *Help* → *R/3 library* → *CA - Cross-Application Components* → *Web Basis* → *ITS Administration Guide*.

The setup program now prompts for an ITS instance name. If you chose *Administration* as the installation type, the name *ADM* is proposed.

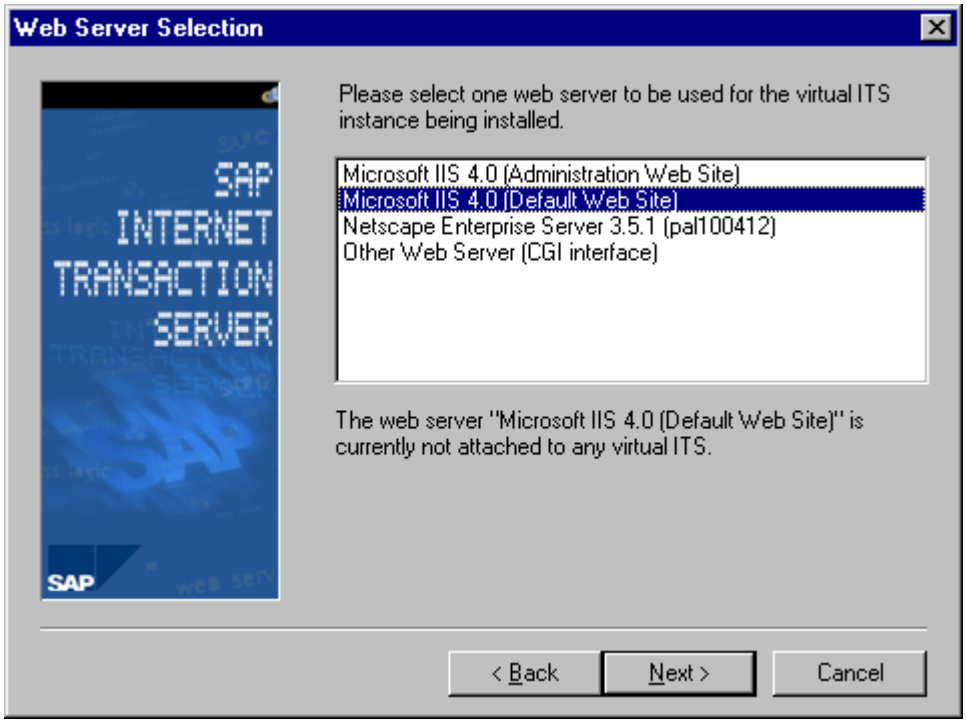
Specify Virtual ITS



10. Enter a virtual ITS instance name and choose *Next*.

    SAP recommends that you use the R/3 System name as the instance name. If there are virtual ITS instances already installed on this machine, you can display their names in the dropdown box.

Select a Web Server



11. Select a Web server and choose *Next*.

    The setup program notifies you if the selected server is already attached to an ITS instance. You can only attach a Web server to one ITS instance.

    If you choose *Other Web Server (CGI interface)*, the setup program prompts you for the *Documents* and *CGI Directories*. Otherwise, you go directly to the following step.

Upgrading or Installing

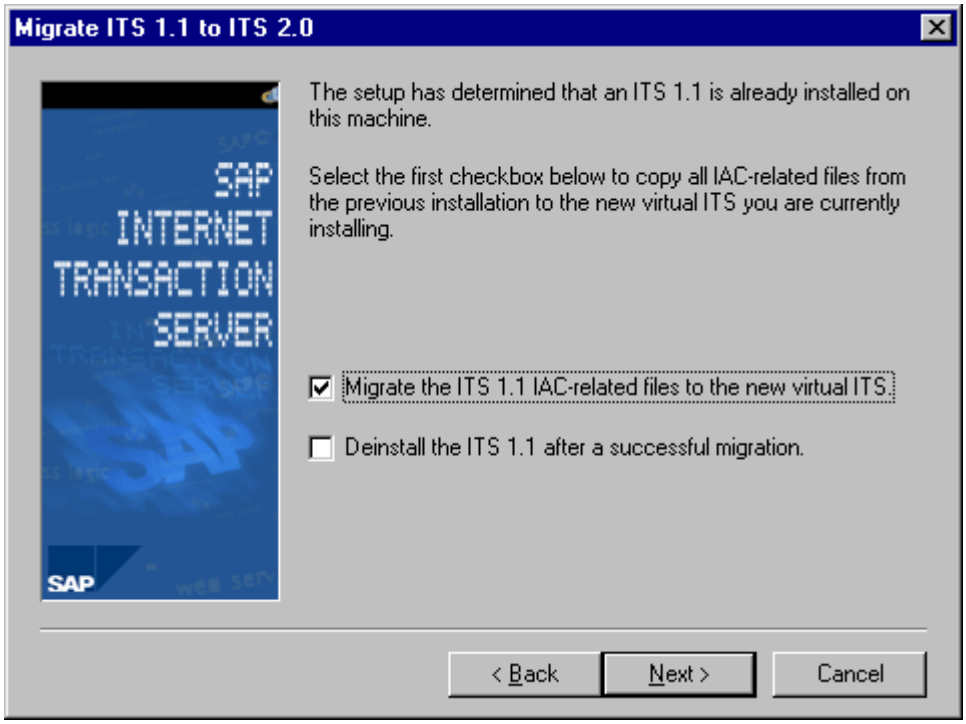
When you choose *Next*, the system tells you whether an older version of the ITS exists on this host. Your next few steps depend on whether you have an older ITS installed, and which one.

- If you have ITS 1.1:

  Continue with the section *Migrate ITS 1.1 Files* described here.
- If you have ITS 2.0/2.1 or no ITS version at all

  You don't see the upgrade-related dialogs described here, so you can skip to *Select Installation Packages*.

Migrate ITS 1.1 Files

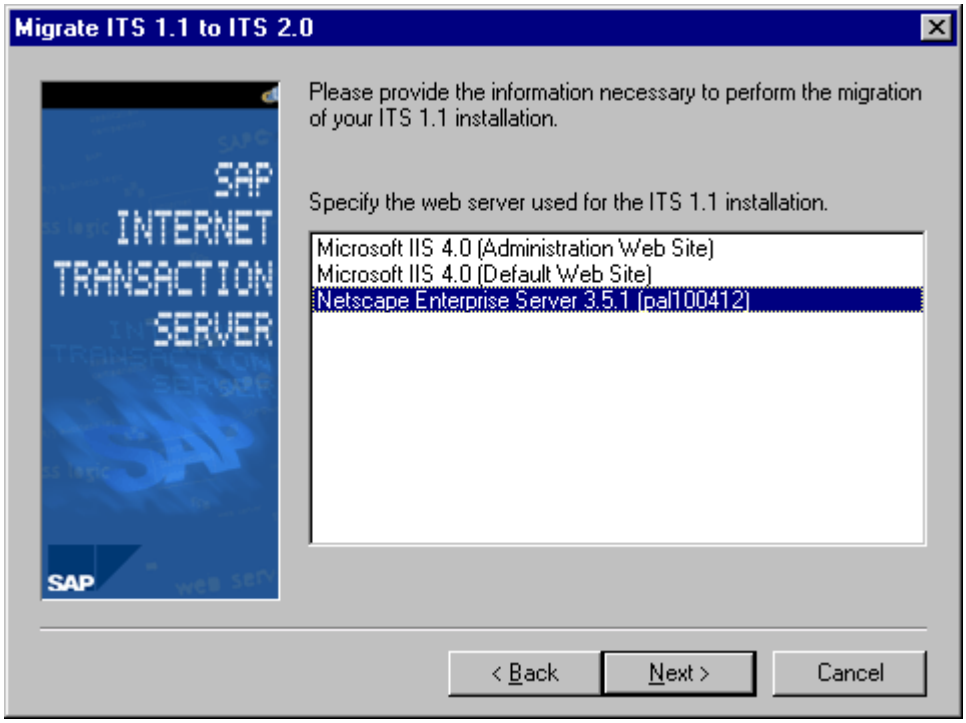


13. Specify how you want the older ITS installation handled and choose *Next*.
    - To keep the existing files for the new ITS version, select *Migrate the ITS 1.1 IAC related files to the new virtual ITS*.
    - To delete the older ITS installation, select *Deinstall the ITS 1.1 after a successful migration.*

    If you choose not to migrate, you do not see the next migration-related dialog, so you can skip to *Select Installation Packages*.

Provide Migration Information

If the Web server part (WGate) of an ITS 1.1 installation has to be migrated, you must provide the name of the Web server used.



14. Select the desired Web server and choose *Next*.

Select Installation Packages

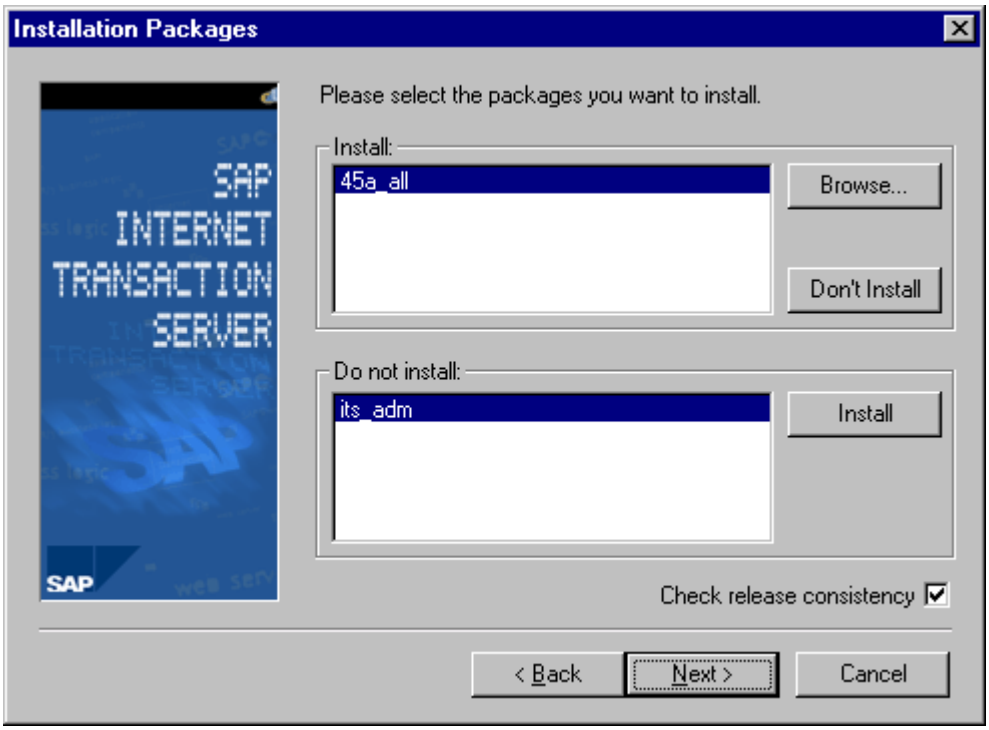
The setup program asks you to choose the IAC package(s) you want to install. These packages contain the IAC-related files to be used for your installation.

- If you have ITS 2.0/2.1:

  Do **not** select any packages. If the dialog below contains package names in the *Install* box, make sure that you select each one and choose *Don't Install*. Then, choose *Next* and skip to *Specifying System Information*.

- If you have no ITS at all (that is, you are installing ITS for the first time):

  Continue with the steps below.



15. Select the package you want to install and choose *Install*.

    If you are installing an Asian language version, choose *Browse* to locate the correct package.

    You can install more than one package. If you do this, make sure that *Check release consistency* is selected.

Note

You cannot add packages to an existing ITS later by running the setup program again, so make sure that you choose all the packages you need. For information on using IAC packages, see *Chapter 1: Planning the Installation*.

The installation CD contains Retail packages with names like **`45a_reta.car`**. You can install Retail packages separately by browsing to them in the **`packages`** directory, but they are also included in the **`xxx_all.car`** file.

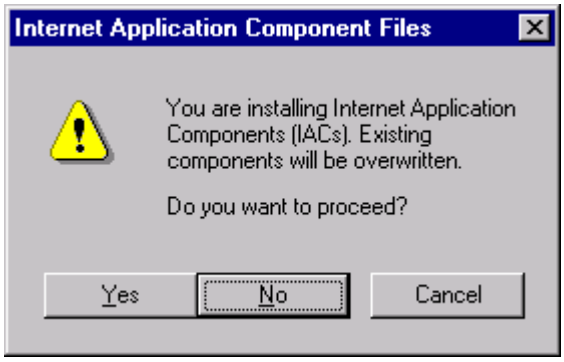
– If you want to install a full set of IACs (that is, both Retail and other types), install the **`xxx_all.car`** package alone.

– If you want to install Retail IACs only, select the Retail package for installation.

The reason is that the Retail package replaces all the standard IAC homepages with the specific logon page for the Retail IACs.

When you have selected all the packages you want, choose *Next*.

Confirm Setup

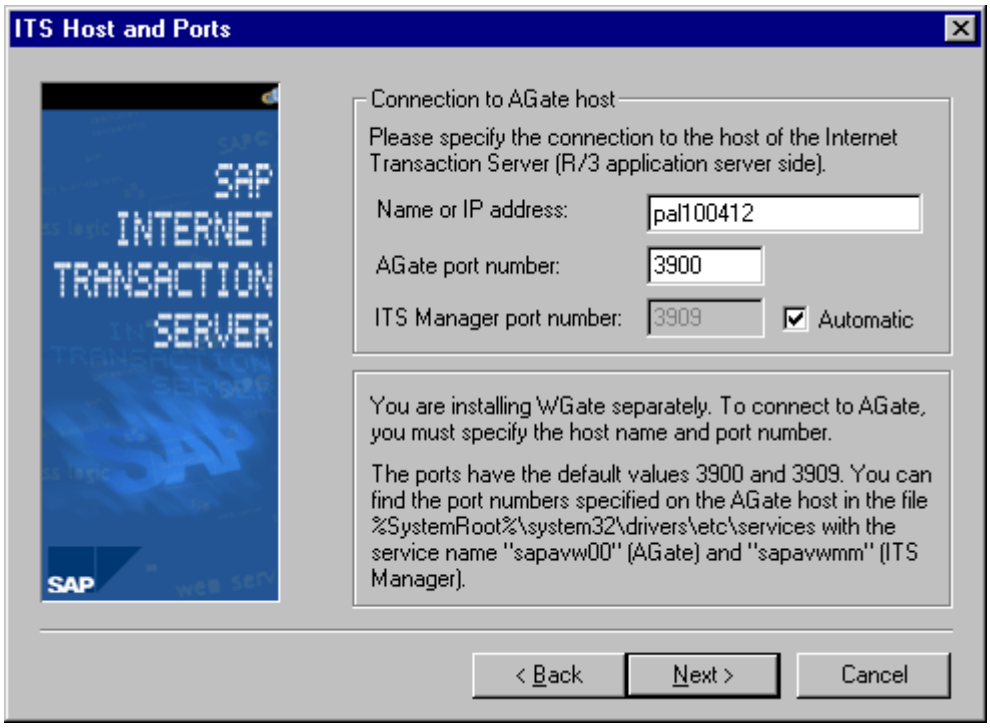


16. To confirm that you want to proceed, choose *Yes*.

Specifying System Information

The setup program now asks you to specify the ITS (that is, AGate) host.

Specify Connection to AGate Host



16. Enter values for the following and choose *Next*.
    - *Name or IP address*

      This is the AGate host name or address, as it is known by the domain name server (DNS).
    - *AGate port number*

      This is the port number on the AGate host that AGate is listening on.
    - *ITS Manager port number*

      If you select *Automatic*, this value is the value of the AGate port number, plus 9.

      If you do not select *Automatic*, enter the port number as specified in the **`file <drive>:\<winnt>\system32\drivers\etc\services`**, where **`<drive>`** is the system's hard drive and **`<winnt>`** is your Windows NT directory (system root) on the AGate host. To find the correct value, look up the port number for the port named **`sapavwmm_<virtual ITS>`**.

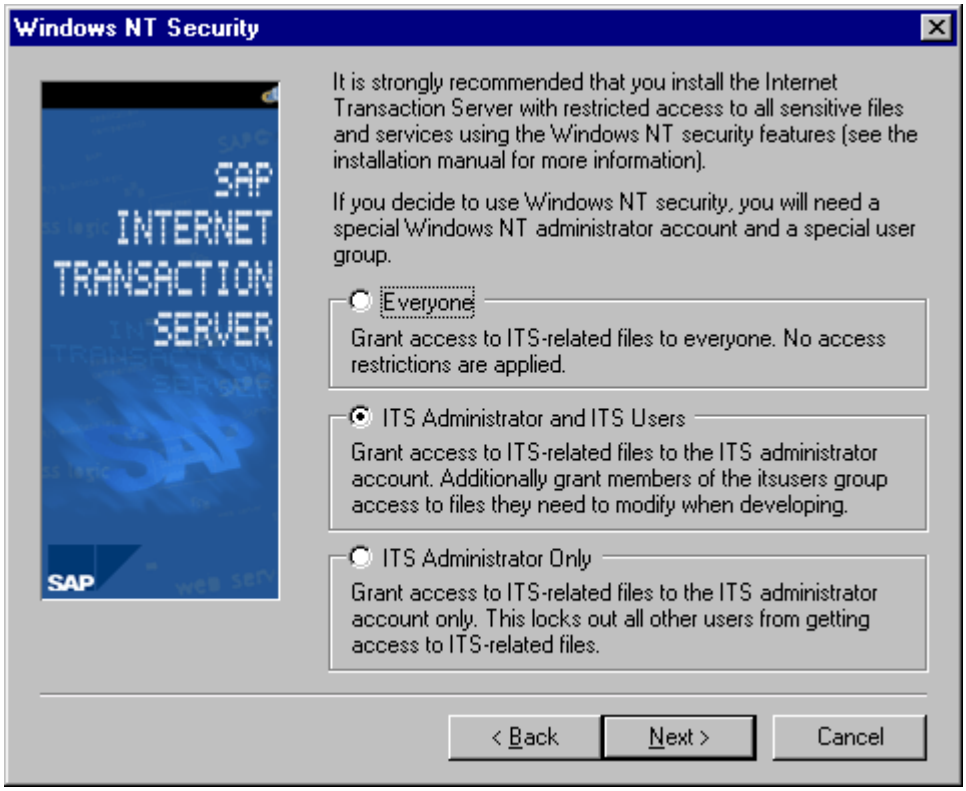
    Both the Web host and the AGate host must have identical settings for the AGate network ports **`sapavw00_<virtual ITS>`** and **`sapavwmm_<virtual ITS>`**.
    - The default value of **`sapavwmm_<virtual ITS>`** is 3900.
    - The default value of **`sapavw00_<virtual ITS>`** is the AGate port number, plus 9.

    During the AGate installation, the entries are automatically added to the file **`<drive>:\<winnt>\system32\drivers\etc\services`**.

If port 3900 is already in use on the AGate host, the setup program automatically chooses the next available block of 10 free ports. During the WGate installation, you must make sure that the same port number is used on the WGate host.

When you choose *Next*, the setup program asks about security.

Specify Security Access



17. Select a security access level.

    The setup program can configure the Windows NT Security in a way that provides optimal security for your system.

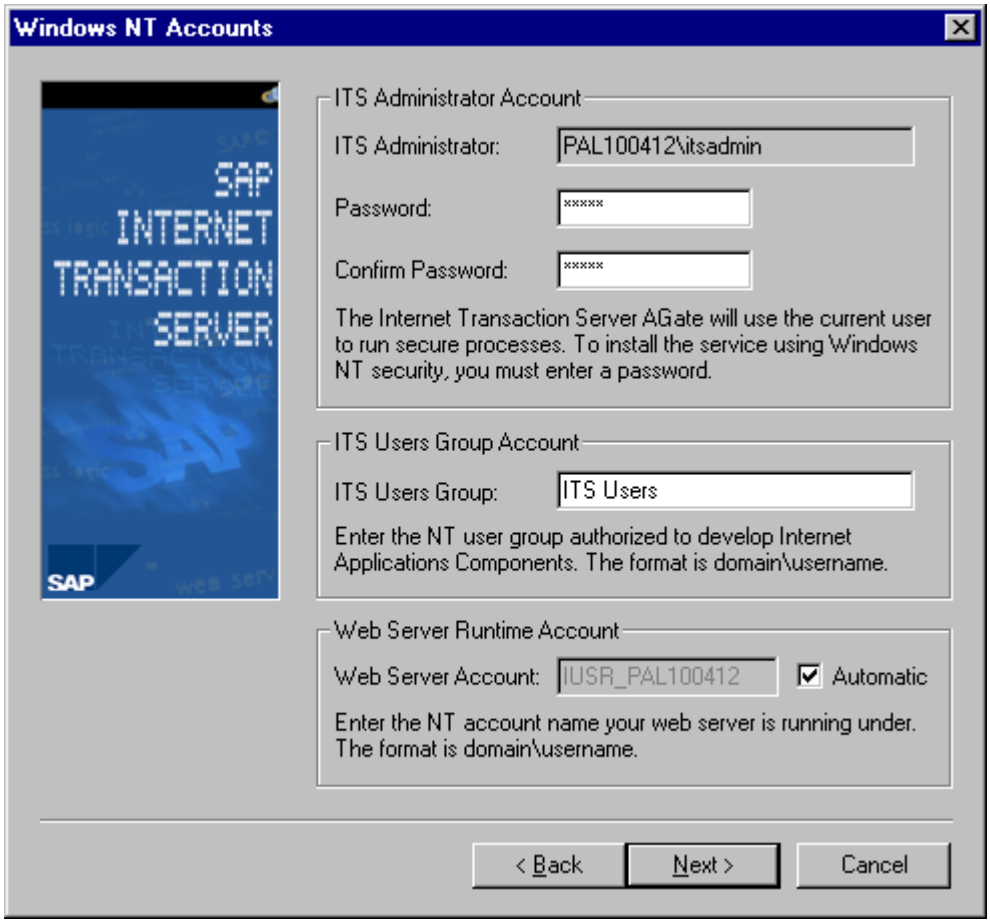
    If you select *ITS Administrator and ITS Users*, you restrict access to AGate, and to the service files, HTML templates, and graphics, all of which may contain sensitive information. In this case, the ITS administrator has full control of all files, while the ITS user group has the access rights required for development purposes.

    During development, however, access restrictions may be undesirable. You should analyze your needs and decide whether to use the security restrictions provided by the setup program, or whether to use some other security procedure.

Note

SAP strongly recommends that you install the ITS with restricted access to all sensitive files and services using the Windows NT Security features.

Set Up Security Accounts



18. If you have chosen to use Windows NT Security, enter the following information to set up restricted access:
    - *ITS Administrator*

      The user running the setup program must be the ITS Administrator, so this name is displayed here. You cannot choose a different user as the ITS administrator.
    - *Password*

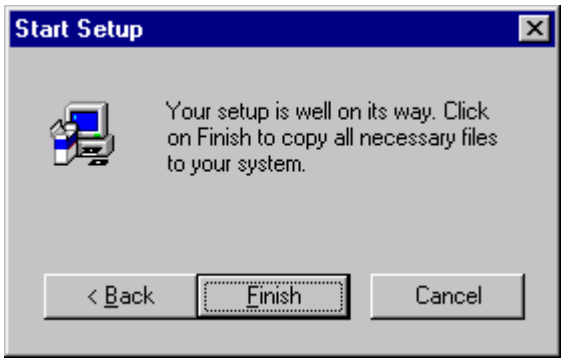
      The password for the ITS administrator.
    - *Confirm Password*

      Enter the password again.
    - *ITS Users Group*

      The name you have chosen for the ITS user group.
    - *Web Server Account*

      The user account under which the Web server is running.

Complete the WGate Installation



19. To install the software as specified, choose *Finish*.

    If you want to modify any of your settings, use the *Back* button to proceed backwards through the installation procedure.

    When you choose *Finish*, the setup program completes the installation. You then see a dialog, which asks if you want to read the Release Notes.

20. Choose *Yes*.

    Read the Release Notes to check for release changes. When you close the Release Notes, you see the *Setup is complete* dialog.

21. Confirm with *OK*.

Your ITS installation is now complete. Continue with *Checking the Installation* on page 2–67.

Checking the Installation

When you have completed the ITS installation, you should check that:

- The setup program ran successfully
- The R/3 System is available
- The ITS connection between the Web browser and the R/3 System works

Did the Setup Program Run Successfully?

To check your installation:

1. Log on to the host(s) containing the ITS components (WGate, AGate, or both), and perform the checks as listed in the tables below according to the installation type.

Single Host Installation

Check	Procedure
Check that the Web server status is started and that startup is automatic.	1. On the Windows NT desktop, choose *Start → Settings → Control Panel*. 2. Double-click on *Services*. 3. Find the Web server in the list of *Services* and check that the values in the *Status* and *Startup* columns are set to *Started* and *Automatic*.
Check that the WGate component is present.	Look in the subdirectory **`scripts`** of your Web server. - If you are using the Microsoft Internet Information Server (IIS), you should find **`wgate.dll`** in the **`scripts`** directory (usually **`C:\InetPub\scripts`**). - If you are using the Netscape Enterprise Server (NES), you should find **`wgate20.dll`**, **`wgate30.dll`**, or **`wgate35.dll`** in the subdirectory **`scripts`** of the Web server's document root directory. To see .dll files, make sure that your Windows NT Explorer displays all file types.
Check that the ITS Manager is started and that startup is set to automatic.	1. On the Windows NT desktop, choose *Start → Settings → Control Panel*. 2. Double-click on *Services*. 3. Find the ITS Manager in the list of *Services* and check that the values in the *Status* and *Startup* columns are set to *Started* and *Automatic*. The ITS Manager is listed as *ITS Manager - <virtual ITS>*.

Dual Host Installation

Check	Procedure
On the Web host, check that the Web server is started and *Startup* is *Automatic*.	1. On the Windows NT desktop, choose *Start* → *Settings* → *Control Panel*. 2. Double-click on *Services*. 3. Find the Web server in the list of *Services* and check that the values in the *Status* and *Startup* columns are set to *Started* and *Automatic*.
On the Web host, check that the Wgate component is present.	Look in the subdirectory **`scripts`** of your Web server. - If you are using the Microsoft Internet Information Server (IIS), you should find **`wgate.dll`** in the **`scripts`** directory (usually **`C:\InetPub\scripts`**). - If you are using the Netscape Enterprise Server (NES), you should find **`wgate20.dll`**, **`wgate30.dll`**, or **`wgate35.dll`** in the subdirectory **`scripts`** of the Web server's document root directory. To see .dll files, make sure that your Windows NT Explorer displays all file types.
On the AGate host, check that the ITS Manager is started and startup is set to automatic.	1. On the Windows NT desktop, choose *Start* → *Settings* → *Control Panel*. 2. Double-click on *Services*. 3. Find the ITS Manager in the list of *Services* and check that the values in the *Status* and *Startup* columns are set to *Started* and *Automatic*. The ITS Manager is listed as *ITS Manager - <virtual ITS>*.

Is the R/3 System Available?

To check whether the R/3 System is available:

- Do you have R/3 Release 3.0D or later installed and operating?
- Can you log on to the R/3 System via the SAPgui and run transaction WEX1?

  Make sure that you enter the same logon information that you specified in the installation step *Enter R/3 Logon Information*. To do this, check the entries in the global service file under

  <drive>:\Program Files\SAP\ITS\2.0\<virtual_ITS>\services\global.srvc

Does the ITS Connection Work?

To test the connections:

1. Start a Web browser and enter the following URL:
   - Microsoft Internet Information Server (IIS):

     http://<webhost>:<serverport>/scripts/wgate/wex1/!
   - Netscape Enterprise Server (NES):

     http://<webhost>:<serverport>/scripts/wgate/wex1/!

     <webhost> is the hostname of your web server.

     <serverport> is the the port number on which the Web server is listening (this is typically port 80).

   You should see a logon screen for the service WEX1 containing the following fields:
   - *Customer Number*
   - *Password*
   - *Login*

   If you do not see this logon screen in your Web browser, see *Chapter 3: Troubleshooting the ITS Installation* for more information.

Installing an Asian Language Version

If you are installing an Asian language version, you need to follow a slightly different procedure. SAP provides these files as a separate IAC package, because they are usually delivered some months later than the R/3 release for which they are intended.

When the setup program asks you to choose the package you want, you need to know where the packages for these languages are stored, because you have to locate them with the *Browse* function. Make sure you have this information before proceeding with the installation

Chapter 3: Troubleshooting the ITS Installation

Contents

Installation Problems 3–2
Diagnosis Problems 3–2
Trace Facility Settings 3–2
Changing the AGate Host 3–4
Changing the R/3 Connection Information 3–4
Uninstalling the ITS 3–4
Reporting a Problem 3–4

Installation Problems

If you get error messages like *General file transfer error* when using the **`setupITS.exe`** program, make sure that your **`TEMP`** directory is empty.

Diagnosis Problems

To diagnose a problem, check the trace files. You can find these in the directory **`C:\Program Files\SAP\ITS\<virtual ITS>\Traces`**.

Trace Facility Settings

You can modify the trace facility settings listed below, but only to make a temporary diagnosis of a problem. Remember that changing these settings can adversely affect performance.

You can modify the following settings:

- **`HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\Programs\AGate\IoalTraceLevel`**

  Default: 1

  Range: 1 (errors only)
  2 (errors and warnings)
  3 (errors, warnings and information records)

  Description: Trace level for tracing the ITS interface to the R/3 System.

- **`HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Traces\TracePath`**

  Default: **`C:\Program Files\SAP\ITS\2.0\<virtual ITS>\Traces`**

  Description: Path where all virtual ITS-related trace files are stored.

- **HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\virtual ITS>\Traces\...**

  followed by one of:

  ```
  AGate\TraceLevel
  MManager\TraceLevel
  SAPjulep\TraceLevel
  SAPirf\TraceLevel
  SAPxGDK\TraceLevel
  ```

  Default: 1

  Range: 1 (errors only)
  2 (errors and warnings)
  3 (errors, warnings and information records)

  Description: Trace level for the corresponding trace type.

- **HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Traces\...**

  followed by one of:

  ```
  AGate\TraceAppend
  MManager\TraceAppend
  SAPjulep\TraceAppend
  SAPirf\TraceAppend
  SAPxGDK\TraceAppend
  ```

  Default: 1

  Range: 1 (only one trace file; additional records are always appended)
  0 (each new version of this software creates a new trace file; the old one is renamed with a timestamp in the trace file name)

  Description: Toggle switch to select one or more trace files. Do not change.

Changing the AGate Host

If you want to change the AGate host, run the setup program for the AGate as described in the section *Dual Host Installation*. Also, change the registry key on the WGate host that points to the new AGate Host as follows:

```
HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Connects\Host:
                                                    <new AGate-host>
```

Changing the R/3 Connection Information

For each service you offer on the Web, there is:

- A specific service file **`<service>.srvc`**, where **`<service>`** is the service name.
- A global service file **`global.srvc`**, which contains settings that apply to all services.

These service files are located in the directory:

```
C:\Program Files\SAP\ITS\2.0\P30\Services
```

You can create and maintain these service files in the SAP@Web studio. If you modify them manually using a text editor, do not to change the file structure and syntax.

Basic definitions like R/3 connection information are written to the global service file at setup. You can change the setup information by modifying the relevant entries in this file.

Each service can also define its own particular connection information in its own service file. Settings in service-specific files always override settings in the global service file.

Uninstalling the ITS

Before uninstalling the ITS, SAP recommends that you:

- Make a backup copy of all files you want to keep.
- Stop your Web server and the ITS Manager service.

To uninstall the ITS, log in as the ITS administrator and use the standard Windows NT 4.0 uninstall procedure. To do this from the Windows NT 4.0 desktop, choose *Start* → *Settings* → *Control Panel* → *Add/Remove Programs*.

Reporting a Problem

If you need to report a problem that you cannot solve, provide SAP with as much information as possible. In particular, you should do the following:

1. Make a note of the exact error message you see in the Web browser.
2. Save all current trace files. The default location of the trace files is:
   `C:\Program Files\SAP\ITS\2.0\P30\Traces\`
3. Find a way to reproduce the error.
4. Make a note of your configuration (Windows NT version, host name(s), Web server software, Web browser software, network/firewall configuration, user accounts, etc.).

Chapter 4: Installing the SAP@Web Studio

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Introduction

The SAP@Web Studio is a tool for creating, modifying, and managing all the external files required by the Internet Transaction Server (ITS) to run R/3 transactions as Internet Application Components (IACs).

SAP recommends that you install the SAP@Web Studio on all development and administration workstations used for ITS work.

The SAP@Web Studio includes easy-to-use wizard dialogs that allow you to generate the required service files, HTML templates, and language resource files. Please note that the template wizard only works with R/3 System Release 3.1G or later.

Note

Before you proceed with the installation, read the following notes in the Online Service System (OSS):

105055 *ITS, R/3 and Web Server Supported Releases*

113914 *SAP Internet Transaction Server Release 2.2 News*

These notes contain the latest installation and upgrade information.

Caution

SAP@Web Studio installation tools must be used in accordance with the instructions and for the purposes described in this installation documentation. Improper use can damage existing files and systems.

Requirements

Hardware Requirements

Hardware component	Requirements
Hardware	Intel Pentium, PentiumPro, or Pentium II architecture
Backup (optional)	Either over network or tape drive (DAT 4mm or DLT; hardware compression recommended)
CD-ROM drive	ISO 9660 compatible
Memory	1 GB
RAM	32 MB

Software Requirements

Software component	Requirements
Operating system	Windows NT 4.0
Virtual memory	According to Microsoft guidelines
File system	NTFS
Network / TCP/IP	Installed

Installation Procedure

The following procedure applies to Windows NT 4.0 operating systems.

Installation Preparations

- Check the requirements for the installation.
- Make sure that the **TEMP** directory is empty.
- For security reasons, use the Windows NT File System (NTFS) to store ITS files.

  NTFS fully supports Windows NT Security and long file names. To check the type of file system used, select the hard drive icon in the Windows NT Explorer window, press the right mouse button and choose *Properties* from the menu. Then, choose the *General* tab and check that the file system is *NTFS*.
- Check that your version of Windows is 4.0 or later.
- If there is no SAPgui installed on the system where you intend to install the ITS, and you are not using a SAProuter to access your R/3 System, add SAP ports manually to the service file **<drive:>\<winnt>\system32\drivers\etc\services**.
- Open the file and use your editor to add the following entries:

  sapdp<systemnumber> **32<systemnumber>**
  sapgw<systemnumber> **33<systemnumber>**

  where **<systemnumber>** is the two-digit number identifying your R/3 instance.

  Example

  ```
  sapdp00          3200
  sapgw00          3300
  ```

  If you append these entries to the end of the file, make sure that there is an additional line in the **services** file, i.e. make sure that the **sapgw<systemnumber>** entry is not the last line.
- Make sure that all other applications are closed.

Installing the SAP@Web Studio

To install the SAP@Web Studio:

1. Log on to the Windows NT 4.0 server with the ITS administrator account.
2. Insert the presentation CD-ROM.
3. On the Windows NT 4.0 desktop, choose *Start* → *Run*.
4. Choose *Browse*. and select the subdirectory **`studio\NT\I386`** on the CD-ROM drive.
5. Double-click **`setupex.exe`** and choose *OK*.
6. Choose *Next*.
7. Choose the destination.

   The default is **`c:\Program Files\SAP\Studio\`**
8. Choose *Next*.
9. Select *Yes, I want to restart my computer now*.
10. Choose *OK*.

This completes the installation.

Setup Tasks After Installation

When you have installed the SAP@Web Studio, there are a number of setup tasks you need to complete. These tasks are described below.

Starting the SAP@Web Studio

To start the SAP@Web Studio:

1. On the Windows NT 4.0 Desktop, choose *Start* → *Programs* → *SAP@Web Studio.*

Setting up R/3 Servers

To set up R/3 servers for the HTML template generator and the ITS source control in the SAP@Web Studio:

1. Choose *Options* → *R/3 Systems*

   You see the Select R/3 System screen, which contains a list of all R/3 Systems maintained in the SAP Logon application.
2. To specify a new R/3 System, or change an existing entry, choose *New* or *Edit*, or use the *Group* or *Server* selection options.

Installation Problems

If you get error messages such as *General file transfer error* when running the **`setupex.exe`** program, make sure that your **`TEMP`** directory is empty.

Chapter 5: Maintaining ITS Instances

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Performing the Initial Installation

The initial ITS installation creates the physical version of the ITS server and one virtual ITS instance. This chapter explains how to create and manage additional instances.

You start the initial installation by running the program **`setup.exe`** either from the installation CD or from a Web download package.

The setup is an InstallShield program that:

- Self-extracts its content
- Checks that it is currently running under a Windows NT account with administrator rights, and that the installation is taking place on a Windows NT 4.0 server.

  If either of these conditions is not satisfied, **`setup.exe`** exits immediately.
- Prompts you for information via dialog boxes, and checks your input.

  For example, the program checks that there is enough disk space to proceed with the installation, and that the message server you have specified is correct.

After running **`setup.exe`**, the initial installation is complete.

Note

This chapter describes only basic activities of the ITS installation. For full details about running the setup program, see *Chapter 2: Installing ITS on Windows NT*.

Creating Additional ITS Instances

Prerequisites

If you want to add ITS instances:

- There must be a one-to-one relationship between ITS instances and R/3 systems.

  For example, you cannot assign two instances to the same R/3 system.
- The Web server must support multiple (Web server) instances.

  Netscape Enterprise Server (NES) supports multiple Web server instances as of Version 2.0.

  Microsoft Internet Information Server (IIS) supports multiple Web server instances as of Version 4.0.
- If you are using IIS 4.0, make sure that each Web server instance runs in a separate memory space.

  To check this from the Windows NT 4.0 desktop:
  - Choose *Start* → *Programs* → *Windows NT 4.0 Option Pack* → *Microsoft Internet Information Server* → *Internet Service Manager*.
  - Click the Web server instance name to expand the hierarchy and select the `Scripts` subdirectory.
  - Press the right mouse button and choose *Properties*.
  - Select the *Virtual Directory* tab and make sure that *Run in separate memory space (isolated process)* is enabled.

With the Setup Program

When you want to create another virtual ITS instance, you simply run the setup program again. During the rerun, the setup program recognizes that an initial installation has already been performed.

SAP recommends that you use the setup program to create new instances, but you can also create them explicitly, using the Itsvinstall utility. This utility was used in previous releases, and is described in next section. The ITS utilities can target particular tasks more easily, but they require more knowledge to use.

With the Itsvinstall Utility

For added flexibility and procedural control, you can use the **itsvinstall** command to add virtual instances. This command provides arguments for supplying essential einvironment information (such as the Web server name).

You can either:

- Pass all the necessary information in the command line (using the **/d…** option).
- Create a configuration file.

  The configuration file is called **itsvinstall_<vits_id>.cfg**. It is more convenient to use, since (if available) you can copy the file used for earlier installations. Also, if errors occur, it is easier to use the file again if you have to repeat an installation.

You must also indicate whether you want to perform a single host installation or a dual host installation. In a dual host installation, the Web server and the ITS Manager run on separate machines.

If you want to know which command line options are supported by the **itsvinstall.exe** utility, enter the commands listed below in the command prompt.

Note

Replace <**dirItsRoot**> with your ITS root directory. This directory is the one you selected during the setup, by default **c:\program files\sap\its\2.0**.

To get the correct value for the **webServerName** parameter, use the current name recorded in the Windows NT Registry.

```
> cd <dirItsRoot>\admin
> itsvinstall /?
ITS VInstall Utility:
/?                    List of supported command-line arguments.
/d <field>=<value>    Command line arguments. <field> may be:
                        webServerName (for example: IIS, W3SRC)
                        webServerPathDocs
                        webServerPathScripts
                        itsaccount
                        itspassword
                        host
                        portAGate
                        portMManager
                        maxAGates
                        ~routeString
                        ~appServer
                        ~systemNumber
                        ~messageServer
                        ~loginGroup
                        ~systenName
                        ~client
                        ~login
                        ~password
                        ~language
/h                    Same as "/?".
```

```
/i <package>{,<package2>}
                        Install these IAC packages with the virutal ITS.
/m <package>            Minimize memory consumption for this virtual ITS
/p <wpackage>           Sets the WGate package file to <wpackage>. If a package
                        name is given and no /r option is defined, the
                        package will be installed.
/q                      Do not ask for user input.
/r <range>              The range or scope of the command; may be:
                            a[gate]   - install AGate part only
                            w[gate]   - install WGate part only
                            p[ackage] - create a WGate-package only
                            *         - install both AGate and WGate (default)
/t <tracelevel>         Set the trace level.
/v <vits_id>            The virtual ITS id to create

>
```

Adding a Single Host Virtual ITS

Suppose you simply want to add an unmodified, new virtual ITS called **Q30** to your existing ITS installation. The existing installation includes the physical version of the ITS, and an initial virtual ITS called **P30**. You want to attach **Q30** to Web server **w3svc**.

To do this, use commands like those listed below. Here we assume that the directory **Program files/SAP/2.0/install/packages** contains the package **45a_all.car**.

```
> cd <dirItsRoot>\admin
> itsvinstall /v Q30 /d webservername=w3svc /i 45a_all
Are you sure [y/n]? y

Virtual installation...
Installing virtual ITS (AGate)...Creating ITS directory share...
Virtual installation (AGate) ok.
Installing virtual ITS (WGate)...
Creating installation package for virtual ITS...
Collecting MIME files...
Creating package file...
Removing temporary files...
Creating installation package for virtual ITS ok.

The web server "W3SVC" is already attached to the virtual ITS "P30"!
Proceeding
will detach the web server from its current virtual ITS. Do you want to
proceed
[y/n]? y

Applying installation package for virtual ITS...
Extracting package...
There are already MIME files installed in "C:\InetPub\wwwroot\sap\its"! Do
you
want to overwrite them [y/n]? y

Copying MIME files...
Removing temporary files...
Creating MIME directory share...
Applying installation package for virtual ITS ok.
Virtual installation (WGate) ok.
Virtual installation ok.
>
```

The **/i** command line option specifies a package of IAC-related files (i.e. HTML templates, language resource files, and MIME files) to be included in the installation. If you omit this command, no IAC-related files are included.

The two command line options **/v** and **/d** are the only required settings. All other arguments are optional.

In the example above, the ITS gives you two warnings.

- The first warning notifies you that, by asking to attach the new virtual ITS **Q30** to the requested Web server, you are about to detach the existing **P30** from the same Web server.
- The second warning notifies you that your command overwrites already existing MIME files in the Web server's document directory.

If you want to run the ITS Manager service under a Windows NT account other than **system**, use the **/d itsaccount=…** and **/d itspassword=…** arguments (with the corresponding values).

Copying an Existing Virtual ITS (Single Host)

You can create a virtual ITS that is a copy of an existing instance. If you do this, the new virtual ITS takes all the attributes of the source instance.

For example, suppose you want to duplicate the virtual ITS **Q30** and call it **Q30B**. The following commands do this for you:

```
>
> cd <dirItsRoot>\admin
> itsvinstall /v Q30B /d webservername=https-pal001452 /i 45a_all
Are you sure [y/n]? y
Virtual installation...
>
```

Creating a Dual Host Virtual ITS

A dual host installation usually involves the following steps:

1. Install the AGate part of the virtual ITS.

   In this example, **P30** is the requested virtual ITS:

   ```
   >
   > cd <dirItsRoot>\admin
   > itsvinstall /v P30 /r agate /i 45a_all
   Are you sure [y/n]? y
   Virtual installation...
   Installing virtual ITS (Agate)...
   ...
   >
   ```

   AGate is now installed for **P30** on the ITS host.

2. Create a WGate package file on the ITS host for the current installation.

```
>
> cd <dirItsRoot>\admin
> itsvinstall /v P30 /r package /i 45a_all
Are you sure [y/n]? y
Virtual installation...
Creating installation package for virtual ITS...
...
>
```

   After this command, you'll find a file **package_P30.car** in the subdirectory **<dirItsRoot>\ install\packages**.

3. Copy the WGate package file to the Web host.

   The Web host is the home of the WGate side of the virtual ITS. If the **package_P30.car** file is not already in the folder **<dirItsRoot>\install\packages** on the Web host, you must move it there.

   To do this, you can use any file-transfer program, for example, **ftp**:

```
>
> cd <dirItsRoot>\install\packages
> ftp myRemoteWebHost
login: ...
password: ...
: binary
Switched to binary mode.
: prompt
Prompt is now off.
: put package_P30.car
### bytes transfered.
: bye
> cd ..
>
```

4. Install the WGate package on the Web host.

   The following commands install the Web host side of the virtual ITS.

```
>
> cd <dirItsRoot>\admin
> itsvinstall /v P30 /p package_P30.car /d webservername=w3svc /i 45a_all
Are you sure [y/n]? y
Virtual installation...
Installing virtual ITS (WGate)...
Creating installation package for virtual ITS...
Collecting MIME files...
Creating package file...
Removing temporary files...
Creating installation package for virtual ITS ok.
Applying installation package for virtual ITS...
Extracting package...
Copying MIME files...Removing temporary files...
Creating MIME directory share...
Applying installation package for virtual ITS ok.
Virtual installation (WGate) ok.
Virtual installation ok.

>
```

   Now the virtual ITS installation is complete.

Adding a Web Server Instance

Every ITS instance links to its own Web server instance. As a result, you may often need to create a virtual Web server when you create the ITS instance.

When you create an ADM ITS instance to run the ITS Administration Tool, you must create a separate Web server instance. This is because the ITS Administration Tool always runs under its own ITS instance and Web server instance.

The following is a quick guide to creating a Web server instance. For full details, see your Web server documentation.

Creating a Netscape Web Server Instance

To create a new instance in Netscape Enterprise Server 3.5:

1. On the Windows NT 4.0 desktop, choose *Start* → *Programs* → *Netscape SuiteSpot* → *Administration.*
2. Choose *Create New Enterprise Server* and configure the parameters:
   - *Server Port*: Set this value to an unused port (for example, **81** or **82**).
   - *Server Identifier:* Set this value to **<Hostname>adm**.
3. Choose *View Server Setting*.
4. Set *Primary Document Directory* to **C:/Netscape/SuiteSpot/https-<hostname>-adm/docs**.
5. Create a **docs** subdirectory under **C:/Netscape/SuiteSpot/https-<hostname>-adm/docs**.

Creating a Microsoft Internet Information Server Instance

The following steps outline the procedure for adding a new instance of the Internet Information Server (IIS). With IIS, you can create second instances of the web server only with release IIS 4.0 or higher.

1. Select *Start → Programs → Windows NT 4.0 Option Pack → Microsoft Internet information Server→ Internet Service Manager*.
2. Click on the *Internet Information Server* folder.
3. Select the desired host name.
4. Click on the right mouse button and choose *New → Web Site*.
5. Enter a description in the *Web Site Description* field (for example **`pal002856-adm`**) and choose *Next*.
6. Enter an unused port (for example, **`81`** or **`82`**) in the *TCP Port this Web Site should use (Default: 80)* field.
7. Enter a directory name in *Enter the path for your home directory* field.

   You must have already created this directory. For example, **`C:\InetPub\wwwroot-adm`**.
8. Choose *Next*, and then *Finish*.

   The Web Site dialog disappears.
9. Click on the *Internet Service Manager* window again, and select the Web site you just created.
10. Select the *Scripts* subdirectory, right-click the mouse, and choose *Properties*.
11. Choose the *Home Directory* tab.
12. In the *Application Settings* group box, enable *Run in separate memory space (isolated process)*.
13. Choose *Apply*.

Stopping/Starting ITS Instances

Stopping/Starting an Entire Virtual ITS

If you want to stop a virtual ITS for any reason, use the **itsvcontrol** utility:

```
>
> cd <dirItsRoot>[1]\admin
> itsvcontrol /v P30 /c stop
Virtual ITS "P30":
The virtual ITS "P30" was successfully stopped.
The web server "W3SVC" was successfully stopped.
>
```

To start the virtual ITS again, use **itsvcontrol** as follows:

```
>
> cd <dirItsRoot>\admin
> itsvcontrol /v P30 /c start
Virtual ITS "P30":
The virtual ITS "P30" was successfully started.
The web server "W3SVC" was successfully started.
>
```

To start or stop all virtual ITS instances on your machine, use **/v ***. For example:

```
>
> itsvcontrol /v * /c stop
>
```

[1] Replace <dirItsRoot> by your actual ITS root directory. (This directory is the one you selected during the setup procedure. "c:\program files\sap\its\2.0" is the default)

Stopping/Starting AGate Only

If you want to start/stop only the AGate part of the ITS (and keeping the WGate and your Web server running), use **itsvcontrol** as follows:

```
>
> cd <dirItsRoot>\admin
> itsvcontrol /v P30 /c stop /r agate
Virtual ITS "P30":
The virtual ITS "P30" was successfully stopped.

> itsvcontrol /v P30 /c start /r agate
Virtual ITS "P30":
The virtual ITS "P30" was successfully started.
>
```

Displaying the Status of ITS Instances

You can also use **itsvcontrol** to display the status of virtual ITS instances:

```
>
> cd <dirItsRoot>\admin
> itsvcontrol /v * /c status
Virtual ITS "A30":
The virtual ITS "A30" is currently stopped.
There is no local web server attached to the virtual ITS "A30".
Virtual ITS "J30":
The virtual ITS "Q30" is currently stopped.
The web server "https-pal001452" is currently stopped.
Virtual ITS "K30":
The virtual ITS "K30" is currently stopped.
The web server "https-pal001452-K30" is currently stopped.
Virtual ITS "P30":
The virtual ITS "P30" is currently running.
The web server "W3SVC" is currently running.
Virtual ITS "R30":
The virtual ITS "R30" is currently stopped.
There is no local web server attached to the virtual ITS "R30".
Virtual ITS "S30":
The virtual ITS "S30" is currently stopped.
There is no local web server attached to the virtual ITS "S30".

>
```

Setting the Security Level of an ITS Instance

One aspect of ITS 2.2 is Windows NT file security. Whereas ITS 1.1 supported file protections at only two security levels, ITS 2.2 supports three levels.

Whenever you create a virtual ITS instance, you should protect it by assigning an ITS security level. You can do this using the **itsvprotect** command, which assigns permissions to ITS files and directories., as described below.

Security Level: Everyone

This security level applies no security attributes to ITS-related files. All files for this specific virtual ITS get the access attribute "everyone: full control".

The following example shows how to use **itsvprotect** to set the security to this level:

```
>
> cd <dirItsRoot>\admin
> itsvprotect /v Q30 /s everyone
Are you sure [y/n]? y
Setting security attributes...
Setting security attributes for shared files...
Setting security attributes for virtual ITS "Q30" related files...
Setting security attributes for virtual ITS "Q30" related files (AGate)...
Setting security attributes for virtual ITS "Q30" related files (WGate)...
Setting security attributes ok.

>
```

This option modifies the security attributes of ITS directories and files as follows:

Directory and Files	Security Attributes
<dirItsRoot>/admin/*	everyone: full control
<dirItsRoot>/install/*	everyone: full control
<dirItsRoot>/programs/*	everyone: full control
<dirItsRoot>/<vits_id>/*	everyone: full control
<dirWebScriptRoot$_{<vits_id>}$>/wgate*	everyone: full control
<dirWebScriptRoot$_{<vits_id>}$>/virtualits.conf	everyone: full control
<dirWebDocRoot$_{<vits_id>}$>/sap/its/*	everyone: full control
<admin$>/system32/sapbasis20.dll	everyone: full control

Caution

Since all virtual ITS instances share the files in the **<dirItsRoot>/programs** and **<dirItsRoot>/admin** directories, using this security level grants access to files which may have been protected for another virtual ITS! In general, it is wiser to use the

same security level for all virtual ITS instances on one machine. Only in this way can you avoid introducing unwanted security risks.

Security Level: ITS Administrators and ITS Users

Use this security level if you don't want to give ITS access to everybody, but there is a distinct group of users that needs access. This group usually includes developers who need to modify HTML templates and resource files.

This security level divides all ITS files into two classes:

- The first class is only accessible to the ITS administrator account.
- The second class includes all files needed to implement an IAC development.

To use this security level, you must create two Windows NT accounts on your ITS server machine or Windows NT domain:

- The ITS administrator account

  This is a regular Windows NT administrator account.
- The ITS users group

  Create this group with the Windows NT administration tools and add to it every account that needs access to IAC-related files.

The following example how to set the security to the ITS Administrator and ITS Users level.

```
>
> cd <dirItsRoot>\admin
> itsvprotect /v Q30 /s itsusers /d itsusers=mydomain\allItsUsers
/d webadmin=mydomain\myWebAdministrator
Are you sure [y/n]? y
Setting security attributes...
Setting security attributes for shared files...
Setting security attributes for virtual ITS "Q30" related files...
Setting security attributes for virtual ITS "Q30" related files (AGate)...
Setting security attributes for virtual ITS "Q30" related files (WGate)...
Setting security attributes ok.

>
```

The ITS Administrator and ITS Users level applies the following file security attributes:

Directory and Files	Security Attributes
<dirItsRoot>/admin	<itsadmin>: full control
<dirItsRoot>/install	<itsadmin>: full control
<dirItsRoot>/programs	<itsadmin>: full control
<dirItsRoot>/<vits_id>/logs	<itsadmin>: full control
<dirItsRoot>/<vits_id>/traces/agate*.trc <dirItsRoot>/<vits_id>/traces/mmanager*.trc	<itsadmin>: full control

<dirItsRoot>/<vits_id>/traces/sapirf*.trc <dirItsRoot>/<vits_id>/traces/sapjulep*.trc <dirItsRoot>/<vits_id>/traces/sapxgdk*.trc <dirItsRoot>/<vits_id>/traces/wgate*.trc	
<dirItsRoot>/<vits_id>/templates (except system subdirectory)	<itsadmin>: full control <itsusers>: change
<dirItsRoot>/<vits_id>/templates/system	<itsadmin>: full control <itsusers>: read
<dirItsRoot>/<vits_id>/services (except global.srvc)	<itsadmin>: full control <itsusers>: change
<dirItsRoot>/<vits_id>/services/global.srvc	<itsadmin>: full control <itsusers>: read
<dirWebScriptRoot$_{<vits_id>}$>/wgate*	<itsadmin>: full control <webadmin>: read
<dirWebScriptRoot$_{<vits_id>}$>/virtualits.conf	<itsadmin>: full control <webadmin>: read
<dirWebDocRoot$_{<vits_id>}$>/sap/its (except mimes/system subdirectory)	<itsadmin>: full control <webadmin>: read <itsusers>: change
<dirWebDocRoot$_{<vits_id>}$>/sap/its/mimes/system	<itsadmin>: full control <webadmin>: read <itsusers>: read
<admin$>/system32/sapbasis20.dll	<itsadmin>: full control <webadmin>: read

Security Level: ITS Administrators Only

Use this security level to deny access to all ITS-related files for everyone except the ITS administrator account.

This security level is important if you run your ITS in a production environment and want to make sure that no one but the ITS administrator can modify any ITS files.

The security attributes of exactly the same files and directories are modified as in the security level "ITS Administrator and ITS Users" (see above) except that all "<itsusers> " permissions have to be removed:

The following security attributes are applied at this security level:

Directory and Files	Security Attributes
<dirItsRoot>/admin	<itsadmin>: full control
<dirItsRoot>/install	<itsadmin>: full control
<dirItsRoot>/programs	<itsadmin>: full control
<dirItsRoot>/<vits_id>/logs	<itsadmin>: full control
<dirItsRoot>/<vits_id>/traces/agate*.trc <dirItsRoot>/<vits_id>/traces/mmanager*.trc <dirItsRoot>/<vits_id>/traces/sapirf*.trc	<itsadmin>: full control

<dirItsRoot>/<vits_id>/traces/sapjulep*.trc <dirItsRoot>/<vits_id>/traces/sapxgdk*.trc	
<dirItsRoot>/<vits_id>/traces/wgate*.trc	<itsadmin>: full control <webadmin>: change
<dirItsRoot>/<vits_id>/templates (except system subdirectory)	<itsadmin>: full control
<dirItsRoot>/<vits_id>/templates/system	<itsadmin>: full control
<dirItsRoot>/<vits_id>/services (except global.srvc)	<itsadmin>: full control
<dirItsRoot>/<vits_id>/services/global.srvc	<itsadmin>: full control
<dirWebScriptRoot$_{<vits_id>}$>/wgate*	<itsadmin>: full control <webadmin>: read
<dirWebScriptRoot$_{<vits_id>}$>/virtualits.conf	<itsadmin>: full control <webadmin>: read
<dirWebDocRoot$_{<vits_id>}$>/sap/its (except mimes/system subdirectory)	<itsadmin>: full control <webadmin>: read
<dirWebDocRoot$_{<vits_id>}$>/sap/its/mimes/system	<itsadmin>: full control <webadmin>: read
<admin$>/system32/sapbasis20.dll	<itsadmin>: full control <webadmin>: read

The following is an example setting the security to the Administrator only level:

```
>
> cd <dirItsRoot>\admin
> itsvprotect /v Q30 /s itsadmin /d webadmin=mydomain\myWebAdministrator
Are you sure [y/n]? y
Setting security attributes...
Setting security attributes for shared files...
Setting security attributes for virtual ITS "Q30" related files...
Setting security attributes for virtual ITS "Q30" related files (AGate)...
Setting security attributes for virtual ITS "Q30" related files (WGate)...
Setting security attributes ok.

>
```

Deinstalling a Single ITS Instance

Occasionally, you need to remova a virtual ITS installation, that is, remove all files, registry entries, attachments to Web servers and Windows NT server entries. To do this, use the **itsvdeinstall** utility:

```
>
> cd <dirItsRoot>\admin
> itsvdeinstall /v Q30
Are you sure [y/n]? y
Virtual deinstallation...
Virtual ITS "P30"...
Virtual deinstallation ok.

>
```

You can deinstall all virtual ITS instances by using **/v ***, but remember that you are not asked to confirm each virtual ITS instance!

Deinstalling the Entire ITS Installation

To deinstall a physical installation and all subsequent virtual ITS installations from a machine, use the **itsdeinstall** utility. This program removes all ITS information from your system. The only exceptions to this are the deinstall-related routines. Therefore, make sure that you really want to deinstall everything!

To deinstall the ITS, use the following commands:

```
>
> cd <dirItsRoot>\admin
> itsdeinstall
Are you sure [y/n]? y
Deinstalling ...
Virtual deinstallation...
Virtual ITS "A30"...
There is no local web server attached to the virtual ITS "A30".
Virtual ITS "Q30"...
Virtual ITS "K30"...
Virtual ITS "P30"...
Virtual ITS "R30"...
There is no local web server attached to the virtual ITS "R30".
Virtual ITS "S30"...
There is no local web server attached to the virtual ITS "S30".
Virtual deinstallation ok.
Deinstallation ok.

>
```

Note

You can also deinstall the ITS by using the Windows NT *Add/Remove Programs* utility.To do this, open the Control Panel:

1. On the Windows NT 4.0 desktop, choose *Start* → *Settings* → *Control Panel*
2. Double-click on *Add/Remove Programs*.
3. Select the entry *Internet Transaction Server <ITS>*, where *ITS* specifies the relevant ITS version.
4. Choose *Add/Remove*.

When the deinstall is complete, you can delete the deinstall-related routines manually:

```
<dirItsRoot>\admin\itsdeinstall.exe
   <dirItsRoot>\admin\itsadmin.dll
   <dirItsRoot>\admin\itsadmin.trc
   <admin$>\system32\sapbasis20.dll
```

Migrating an Older ITS Upwards

With the Setup Program

Suppose you already have an older ITS (version 2.1 or earlier) installed on the machine where the ITS 2.2 runs, and you need to migrate to the current version (ITS 2.2).

To do this, you simply rerun the setup program, which handles migration automatically.

SAP recommends that you use the setup program to migrate a pre-2.2 version of ITS. Use the **Itsmigrate11** utility (described below) only as needed.

With the Itsmigrate11 Utility

For added flexibility, you can also use the **itsmigrate11** utility to upgrade old versions to a new virtual instance.

The migration process affects service and template files as well as all Web server-related files (for example, MIME files). The migration cleans up old Web server configuration files (by removing or updating any ITS-related data) and changes port entries (**sapavw00**, **sapavw99,** and **sapavwmm**) in the services file to **sapavw.._<vits_id>**. The setup program performs these actions automatically.)

Using the **/x** option, you can request that all ITS-related files and registry entries for the previous version be removed after a successful migration. Be careful when using this option, because your old files and settings cannot be recovered afterwards.

Set the **/d** options to the Web server name currently registered as an NT service.

```
> cd <dirItsRoot>\admin
> itsmigrate11 /v x30 /d webservername=w3svc /d webservername11=https-
pal001452-IPM
Are you sure [y/n]? y
Migrating ITS 1.1...
Stopping ITS 1.1...
Copying ITS 1.1 service and template directories...
Unregistering ITS 1.1...
Stopping ITS 1.1 web server "Netscape Enterprise Server 3.0 (pal001452-
IPM)"...
Copying ITS 1.1 MIME directories...
Migrating ITS 1.1 port settings...
Migration of ITS 1.1 ok.
>
```

If the older ITS installation was a dual host installation, use the **/r** option to specify whether you want to migrate just the AGate, just the WGate, or both. Use **/r a** or **/r w**. If you omit **/r**, the migration utility terminates with an error.

It is not possible to migrate an older ITS to a virtual ITS installation that has already been installed. You must:

1. Use **itsmigrate11.exe** to migrate the older ITS to a new virtual ITS.
2. Use **itsvinstall.exe** to install the migrated virtual ITS.

If you try to migrate to a virtual ITS already installed on the system, you get an error message.

Migrating from R/3 Release 3.x to 4.x

To migrate your ITS files from an R/3 3.X release to an R/3 4.X release, use **itsvllcnv.exe**. This utility renames all files and directories for a given ITS instance in accordance with the two-character language identifiers used in 4.X systems. This renaming includes:

- The language-specific subdirectory names in the MIME and template directories
- The language-specific **.html** and **.htrc** files

For example, a language resource file that gets a two-character language identifier might change from **axxx_e.htrc** to **axxxx_en.htrc**. Available command line arguments are:

```
cd <itsRootDir>\admin
itsvllcnv /?
ITS Language Length Conversion Utility:
/?                List of supported command-line arguments.
/h                Same as "/?".
/t <tracelevel>   Sets the trace level (1-3).
/i <install type> Possible values are:
     dual         - agate and wgate installation
     agate        - an agate installation
     wgate        - a wgate installation
/v <vits_id>      The virtual ITS id to apply changes on.
```

To use the **itsvllcnv** utility:

1. Back up all the relevant directories before running the utility.

   The templates, services and MIME files are contained in the following directories.

   - **Program Files\2.0\<virtual ITS>\services**
   - **Program Files\2.0\<virtual ITS>\templates**
   - **Sap\its\mimes**

2. Stop the ITS (before running the tool).
3. Run the **itsvllcnv** utility.

   Use the **/I** argument to specify the type of installation (dual, AGate or WGate).

For example:

```
cd <itsRootDir>\admin
itsvllcnv /i dual /v P30 /t 3
Retrieving list of Netscape Servers...
Retrieving list of Microsoft Internet Information Servers...
List of Netscape Enterprise Servers successfully retrieved.
Retrieving list of Microsoft Internet Information Servers...
List of Microsoft Internet Information Servers successfully retrieved.
Renamed file:
“C:\Program Files\ITS\2.0\P30\templates\aww1\99\aww1_e.htrc“ to
“C:\Program Files\ITS\2.0\P30\templates\aww1\99\aww1_en.htrc“
Renamed file: “C:\InetPub\wwwroot\Sap\its\mimes\aww1\99\e“ to
              “C:\InetPub\wwwroot\Sap\its\mimes\aww1\99\en“
.
.
Finished applying conversion.
```

4. Check the contents of all ITS service files for references to language codes.

   If your service files contain any references to single-character language identifiers, you must change these manually. You must change values for the **~language** and **~languages** parameters to two-character language identifiers. For example, **~languages e,d,j** should change to **~languages en,de,ja**.

Appendix A: ITS Components Included on the CD

This appendix lists the files available on the ITS delivery CD.

ITS Setup Files for Windows NT

These two files contain all the files needed to install or upgrade the ITS and the SAP@ Web Studio on Windows NT systems for Version 4.5B.

OS	File	Size (MB)	CD Location
WinNT (Intel)	`Setupits.exe`	15	`\its\nt\i386\setupits.exe` (includes WGate, AGate, ITS Manager, Version 4.5B, ITS administration package, and IAC packages)
WinNT (Intel)	`Setupex.exe`	8	`\its\nt\i386\setupex.exe` (SAP@Web Studio)

ITS Package Files

ITS packages contain all service files, HTML templates, language resource files and MIME files required for the IACS of a given R/3 release.

OS	File	Size (MB)	CD Location
All	`31g_all.car`	10	`\its\common\packages\31g_all.car`
All	`31h_all.car`	10	`\its\common\packages\31h_all.car`
All	`31i_all.car`	10	`\its\common\packages\31i_all.car`
All	`40a_all.car`	10	`\its\common\packages\40a_all.car`
All	`40b_all.car`	10	`\its\common\packages\40b_all.car`
All	`45a_all.car`	10	`\its\common\packages\45a_all.car`
All	`45a_reta.car`	4	`\its\common\packages\45a_reta.car`
All	`45b_all.car`	10	`\its\common\packages\45b_all.car`
All	`45b_reta.car`	4	`\its\common\packages\45b_reta.car`