

Before reading this manual

Remarks

■ Symbols

Symbols used in this manual have the following meanings:

	These sections explain prohibited actions and points to note when using this device. Make sure to read these sections.
	These sections explain information needed operate the hardware and software properly. Make sure to read these sections.
→	This mark indicates reference pages or manuals.

■ Screen Shots and Figures

Screen shots and figures are used as visual aids throughout this manual. The actual screens will differ depending on the OS being used. Also, screen shots used in this manual are extracted a part of the actual screens for the purpose of explanation.

■ Displaying Consecutive Operations

In this manual, consecutive operations are linked using "→".

Example: Procedure of clicking the "Start" button, pointing to the "Programs", and clicking the "Accessories".

↓

Click "Start" → "Programs" → "Accessories" in this order.

■ Product Names

The following expressions and abbreviations are used to describe the product names used in this manual.

[table: Abbreviated names of products](#)

Product names	Expressions and abbreviations
Microsoft® Windows Server™ 2003, Standard Edition	Windows Server 2003
Microsoft® Windows Server™ 2003, Enterprise Edition	
Microsoft® Windows® 2000 Server	Windows 2000 Server
Microsoft® Windows® 2000 Advanced Server	

Reference Information

■ Software Manuals

Software information and points to note not described in this manual are described in the "Software manual". Read this manual before using ServerStart.

"Software manual" is registered on the ServerStart CD-ROM under the file name "README.TXT". Use a text editor to read it.

■ ServerStart Up to Date Information

For update information about ServerStart, refer to the Fujitsu PRIMERGY website (<http://primergy.fujitsu.com>).

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Chapter 1

How to Configure the Network

This chapter explains each of the network patterns that can be configured when setting up the server using ServerStart.

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1.1 Network Patterns

This section explains the setting points of each of the network pattern that can be configured when setting up the server using ServerStart.

Using ServerStart the following server network configurations are possible.

- Domain controller (Active Directory domain) server
- Domain member server
- Stand alone server

POINT

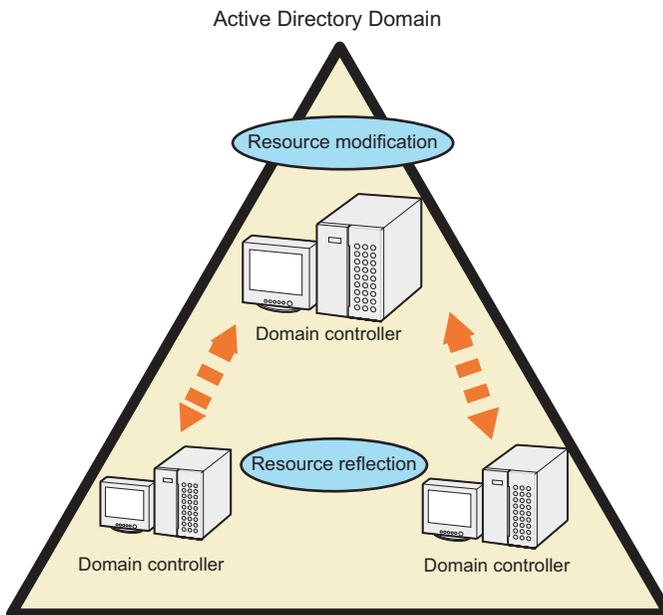
- ▶ When configuring various network patterns, enter the setting values in the "Design Sheet" - "OS Wizard (for OS installation)" in the "Configuration Sheets" in advance to make installation smoother.
- ▶ The setting window differs depending on the installed OS. Windows Server 2003 is used here as an example to describe the configuration of Active Directory domain.

1.1.1 The Features of Each Network Pattern

This section gives an outline of each network pattern. Take the information laid out in this section into consideration when deciding in which network pattern to operate.

■ Domain controller

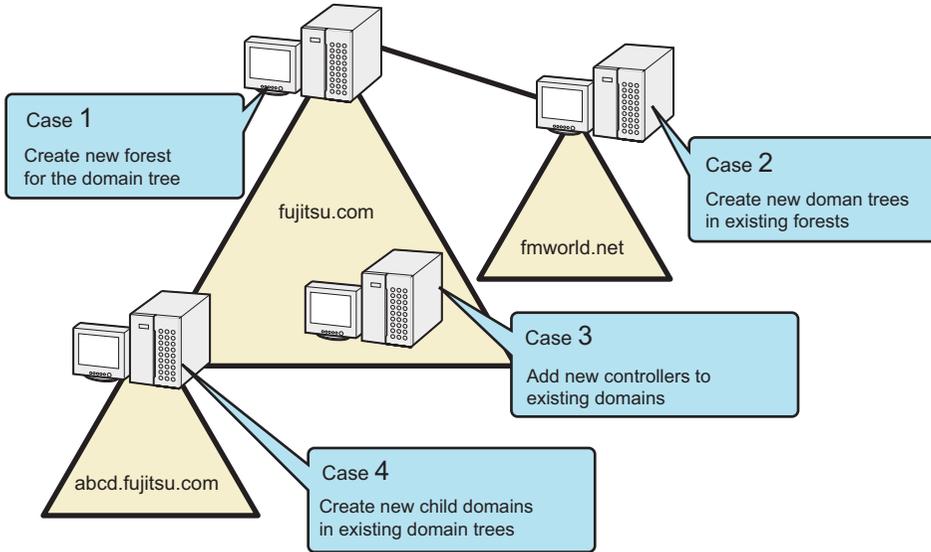
Windows Server 2003/Windows 2000 Server domain is configured using Active Directory (a directory service with LDAP as a base) as a base and is generally referred to as Active Directory domain. Active Directory does not have the concept of PDC (Primary domain controller) and BDC (Backup domain controller). Resources modified on a domain controller in the Active Directory will be reflected in all domain controllers in the same network. Therefore, it is necessary to understand Active Directory when using Windows Server 2003/Windows 2000 Server as a domain controller.



● Active Directory configuration pattern

To configure Active directory the following 4 patterns are available.

- Case1: New Forest
- Case2: New Tree
- Case3: Additional domain controller
- Case4: Child domain



POINT

Terminology relating to Active Directory

- ▶ Domain tree
A domain tree is the smallest unit that configures a domain. When creating a child domain in an existing domain tree the DNS suffix is inherited.
- ▶ Forest
This shows the connection relationship of more than one domain tree which are not dependant on each other.
When creating a new domain tree, the DNS suffix is not inherited.

IMPORTANT

Points to note when configuring a domain controller

- ▶ Depending on the level of the client OS added on in to the domain environment, it may be necessary to install services such as WINS that are supposed to be provided by the domain controller.
- ▶ Depending on the network pattern installed it may be necessary to set the high level domain controller (DNS server) in advance.

■ What is a domain member server?

A domain member server is a multipurpose server in the domain.
It can access all the resources in the domain with privileges and can also be accessed.

■ What is a stand alone server?

A stand alone server is a server that is used in a small sized area which is generally called a workgroup environment. There is a limit to the range of access to resources by the standalone server because it is presumed that it will be used in a small sized area. Also, when accessing the resources of a stand alone server via the network, control performance will be diminished because of referring to the stand alone server local user information.

1.2 Active Directory - Configuring a New Forest

When configuring Active Directory as a new forest, Active Directory is defined as the route domain of the whole network. Because of this when creating a new system or remaking an already existing system the creation of the Active Directory is the first task to be completed.

Before configuring the Active Directory, it is necessary to review the network configuration and then design it.



Points to note when configuring an Active Directory

- ▶ An Active Directory cannot be configured using an existing DNS server.
- ▶ When using an existing DNS to configure a domain, after installing the OS configure the domain as a stand alone server manually.

1.2.1 How to Configure a New Forest

When configuring a domain as a new forest, carry out settings in each OS setup configuration wizard screen as shown below.

■ [Computer Identification] window

- 1 Set "will participate in" to "a workgroup" and enter the workgroup name (Default value: MYUSERGROUP).

Windows Server 2003 Setup Configuration Wizard

Computer Identification

Operating System Type: Windows Server 2003, Standard Edition

License Mode: Per Seat per Server

User permitted: 6

will participate in: a workgroup a domain

Workgroup or Domain Name: MYUSERGROUP

Install Operating System from Local CD

Install Operating System from Remote Server

Remote Source Path: (e.g. \\myservershare)

Remote Username:

Remote Password:

■ [Network Protocol] window

- 1 Uncheck "Use DHCP" and specify the IP address/subnet mask/default gateway.

Windows Server 2003 Setup Configuration Wizard

Network Protocol

Install Unattended
 Install Manually

Available Protocols: TCP/IP, NWIPX, AppleTalk, PPTP
 Selected Protocols: TCP/IP

Adapter Name: Adapter 1
 Connection Name:

Use DHCP
 IP-Address: 192 . 168 . 16 . 2
 Subnet Mask: 255 . 255 . 255 . 0
 Default Gateway:
 Netbios Option: Enable NetBIOS over TCP/IP

More IP Addresses, Gateways ...
 DNS/WINS Configuration...

- 2 Click [DNS/WINS Configuration] and perform DNS related detailed settings.

Windows Server 2003 Setup Configuration Wizard

DNS / WINS Configuration

DNS Domain Name: fujitsu.com
 DNS Server: 192.168.16.2

Use WINS
 WINS Server:

DNS Address:
 WINS Address:

In this example, the DNS domain name is fujitsu.com, and the DNS server is set as itself (192.168.16.2). Remember the DNS domain name because it will also be used in subsequent settings.

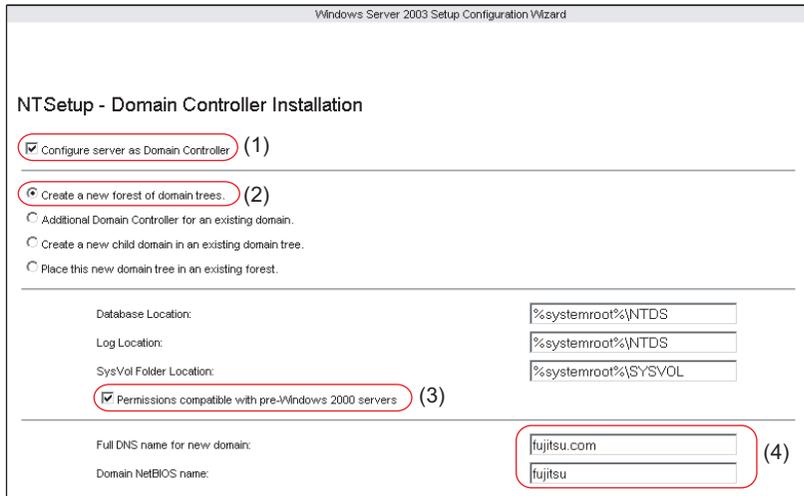
Also perform WINS settings as necessary.

■ [Services] window

- 1 Check the "MS DNS Server" and click [Setup Domain Controller].
If WINS is set, set a check against "WINS Server".



- 2 Set the various parameters in the [NTSetup - Domain Controller Installation] window.



1. Set a check against "Configure server as Domain Controller".
2. Check that "Create a new forest of domain trees" has been selected.
3. When also managing a machine with an OS of earlier than Windows 2000, set a check against "Permission compatible with pre-Windows 2000 servers".
4. Specify the DNS server name in "Full DNS name for new domain" and the NetBIOS name in the "Domain NetBIOS name".

1.3 Active Directory - Configuring a New Tree

This section explains the settings necessary to configure Active Directory as a new tree.

When configuring Active Directory as a new tree, Active Directory is defined as the route domain of the new subordinate organization. Because of this when creating a new system or remaking an already existing system the creation of the Active Directory is the very first task to be completed.

1.3.1 Preparing to Create a New Tree

Before creating a new tree, it is necessary to review a network configuration that takes the connectability with a forest into consideration and then design it. Check the following information in advance.

- Network address of the existing route domain
- Administrator information of the existing domain
- Network address of new tree route
- Domain name of new tree



- ▶ Points to note when configuring an Active Directory
When installing this pattern that used ServerStart, it is necessary to create a DNS zone that will be used by the new tree in advance.

1.3.2 Creating a DNS Zone

For new trees it is necessary to manage the DNS zone as a "New zone" in an existing forest. This section explains how to create a DNS zone.

After that the minimum required procedures for using ServerStart are shown. However, other than these procedures other more detailed parameter settings may be necessary for operations and management. Refer to Active Directory relate manuals for details about management methods etc.

- 1** Logon to the route controller of the existing forest using domain administrators privileges.
- 2** Click "Start" → "Programs" → "Management tools" → "DNS" in this order.

- 3** Select DNS server from the console tree and click "Procedure" - "New zone" in this order.

A new zone wizard is activated.



- 4** Click [Next].

A screen in which the type of zone can be selected appears.

- 5** Select the type of zone and click [Next].

A screen in which the zone data replication methods can be selected appears.

- 6** Select the zone replication method and click [Next].

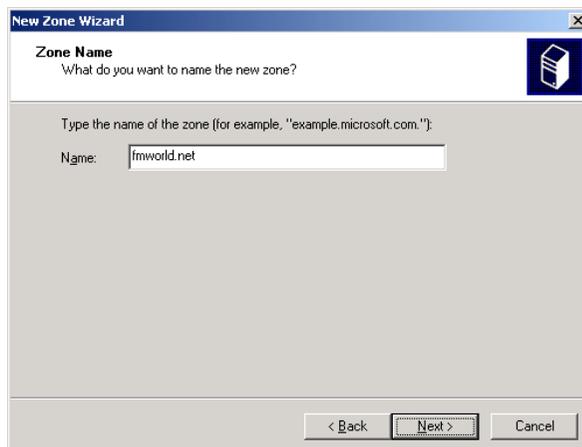
A screen in which the type of reference zone can be specified appears.

- 7** Select the type of zone and click [Next].

A screen in which the zone name is to be entered appears.

- 8** Specify the zone name.

This zone name is equivalent to the "DNS Domain Name" of ServerStart.



9 Click [Next].

A screen in which the type of dynamic update can be selected appears.

10 Select the type of dynamic update and click [Next].

When the completion window appears it is confirmed that the zone has been created.

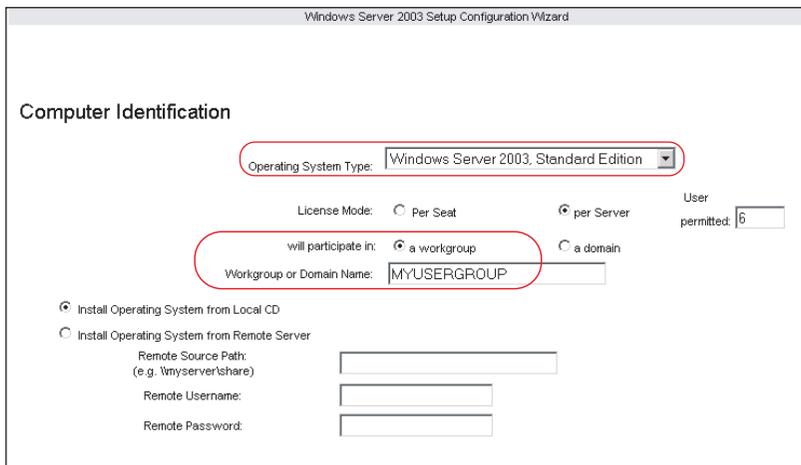
11 Click [Finish].

1.3.3 How to Set a New Domain Tree

When configuring a domain as a new tree, carry out settings in each OS setup configuration wizard screen as shown below.

■ [Computer Identification] window

1 Set "will participate in" to "a workgroup" and enter the workgroup name (Default value: MYUSERGROUP).



■ [Network Protocol] window

- 1 Uncheck "Use DHCP" and specify the IP address/subnet mask/default gateway.

Windows Server 2003 Setup Configuration Wizard

Network Protocol

Install Unattended
 Install Manually

Available Protocols: TCP/IP, NWIPX, AppleTalk, PPTP

Selected Protocols: TCP/IP

Adapter Name: Adapter 1

Connection Name: [Empty]

Use DHCP

IP-Address: 192, 168, 16, 2
 Subnet Mask: 255, 255, 255, 0
 Default Gateway: [Empty]

Netbios Option: Enable NetBIOS over TCP/IP

More IP Addresses, Gateways ...
DNS/WINS Configuration...

- 2 Click [DNS/WINS Configuration] and perform DNS related detailed settings.

Windows Server 2003 Setup Configuration Wizard

DNS / WINS Configuration

DNS Domain Name: fmworld.net

DNS Server: 192.168.16.1, 192.168.16.2

DNS Address: [Empty]

Use WINS
 WINS Server: [Empty]

WINS Address: [Empty]

Specify the domain name (in this example fmworld.net) of the new tree in "DNS Domain Name". Enter the following address in "DNS server".

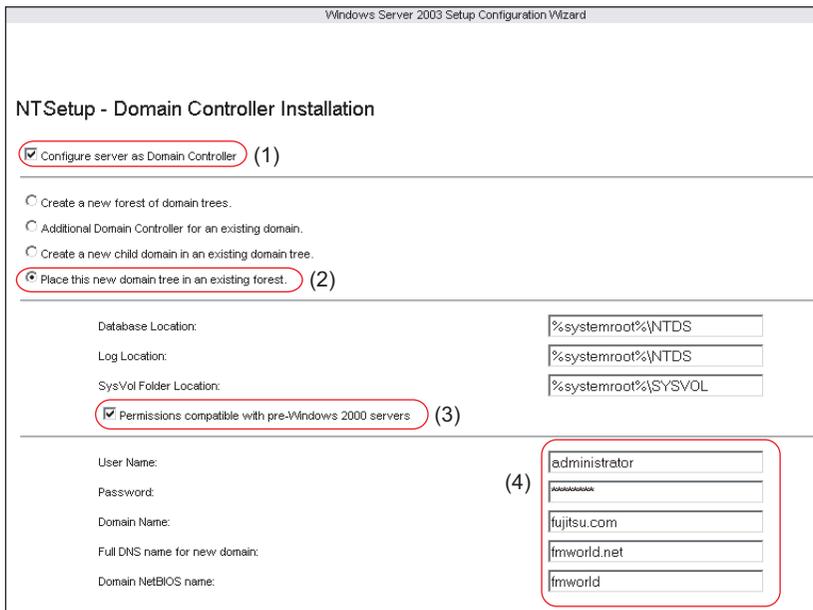
- The IP address of the DNS server (domain server) of the existing forest
- The IP address of the domain of the new tree

■ [Services] window

- 1 Check the "MS DNS Server" and click [Setup Domain Controller].
If WINS is set, set a check against "WINS Server".



- 2 Set the various parameters as follows.



1. Set a check against "Configure server as Domain Controller".
2. Select "Place this new domain tree in an existing forest".
3. When also managing a machine with an OS of earlier than Windows 2000, set a check against "Permission compatible with pre-Windows 2000 servers".

4. Enter the information used for domain registration.

table: Domain registration information

Parameter	Description
User Name	A user account that exists in a group that has privileges to create a computer account in a high level domain (Example: Domain Admin user)
Password	High level user password
Domain Name	The domain that the high level user belongs to
Full DNS name for new domain	The domain name of the new tree
Domain NetBIOS name	The new domain NetBIOS name

1.4 Active Directory - Configuring an Additional Domain Controller

When a new domain controller is added, the reliability and redundancy of the system is emphasized.

This section explains the settings when adding a new domain controller. Check the following information in advance.

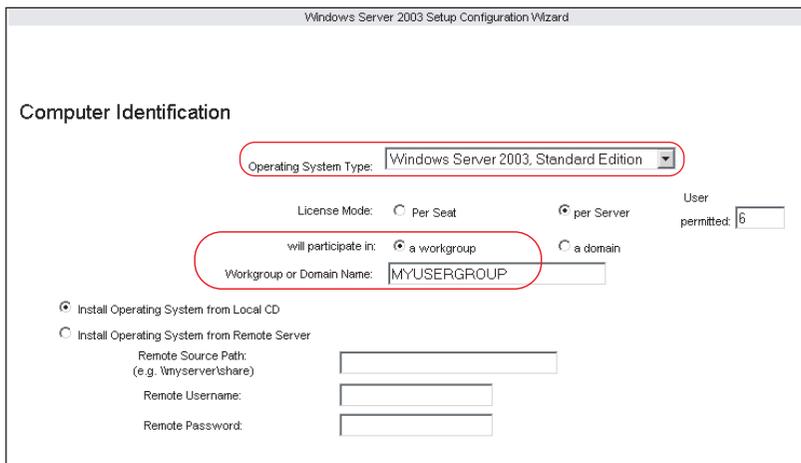
- Network address of the existing domain
- Administrator information of the existing domain
- Network address of new domain controller

1.4.1 How to Configure an Additional Domain Controller

When configuring an additional domain controller, carry out settings in each OS installation wizard screen as shown below.

■ [Computer Identification] window

- 1 Set "will participate in" to "a workgroup" and enter the workgroup name (Default value: MYUSERGROUP).



■ [Network Protocol] window

1 Uncheck "Use DHCP" and enter the IP address/subnet mask/default gateway.

Windows Server 2003 Setup Configuration Wizard

Network Protocol

Install Unattended
 Install Manually

Available Protocols: TCP/IP, NWIPX, AppleTalk, PPTP

Selected Protocols: TCP/IP

Adapter Name: Adapter 1

Connection Name: []

Use DHCP

IP-Address: 192 168 16 2
 Subnet Mask: 255 255 255 0
 Default Gateway: [] [] [] []

Netbios Option: Enable NetBIOS over TCP/IP

More IP Addresses, Gateways ...

DNS/WINS Configuration...

2 Click [DNS/WINS Configuration] and perform DNS related detailed settings.

Windows Server 2003 Setup Configuration Wizard

DNS / WINS Configuration

DNS Domain Name: fujitsu.com

DNS Server: 192.168.16.1, 192.168.16.2

Use WINS

WINS Server: []

DNS Address: [] [] [] []

WINS Address: [] [] [] []

In this example the existing domain name (in this case fujitsu.com) is set in "DNS Domain Name".

Enter the following address in "DNS server".

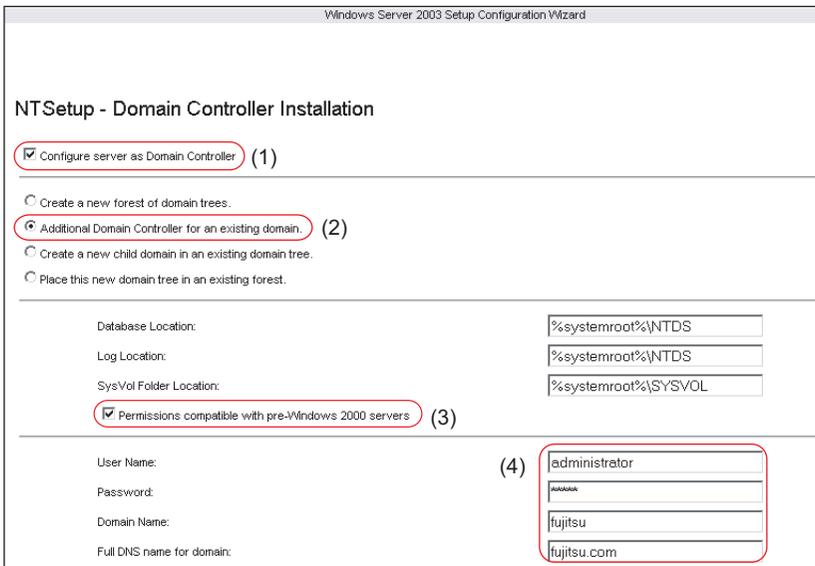
- The IP address of the existing DNS server
- The IP address of the new domain controller

■ [Services] window

- 1 Check the "MS DNS Server" and click [Setup Domain Controller].
If WINS is set, it is also necessary to set a check against "WINS Server" installation.



- 2 Set the various parameters as follows.



1. Set a check against "Configure server as Domain Controller".
2. Select "Additional Domain Controller for an existing domain".
3. When also managing a machine with an OS of earlier than Windows 2000, set a check against "Permission compatible with pre-Windows 2000 servers".

4. Enter the information used for domain registration.

table: Domain registration information

Parameter	Description
User Name	A user account that exists in a group that has privileges to create a computer account in a high level domain (Example: Domain Admin user)
Password	High level user password
Domain Name	The domain NetBIOS name that the high level user belongs to
Full DNS name for domain	The domain name that the high level user belongs to

1.5 Active Directory - Configuring a Child Domain

This section explains how to configure a child domain

1.5.1 Before Configuring a Child Domain

A child domain is created when a new secondary system is configured.

This is similar to configuring a new tree but a child domain will inherit the DNS suffix from the high level forest unlike a new tree, which will not.

In the case of the following examples first select the corresponding domain pattern.

table: Domain pattern

Example	Domain pattern
A new consultancy department has been set up in ABC company.	Child domain
The consultancy department breaks away from ABC company and ABC consultancy company is founded.	New tree

Before configuring the child domain check the following information.

- Network address of the existing domain
- Administrator information of the existing domain
- Network address of new domain controller



Points to note when configuring a child domain

- ▶ It is necessary to create a new domain zone in advance in a DNS server. Refer to "1.3.2 Creating a DNS Zone" (→P.12)

1.5.2 How to Configure a Child Domain

When configuring a child domain, carry out settings in each OS setup configuration wizard screen as shown below.

■ [Computer Identification] window

- 1 Set "will participate in" to "a workgroup" and enter the workgroup name (Default value: MYUSERGROUP).

Windows Server 2003 Setup Configuration Wizard

Computer Identification

Operating System Type: Windows Server 2003, Standard Edition

License Mode: Per Seat per Server User permitted: 6

will participate in: a workgroup a domain

Workgroup or Domain Name: MYUSERGROUP

Install Operating System from Local CD

Install Operating System from Remote Server

Remote Source Path (e.g. \\myserver\share):

Remote Username:

Remote Password:

■ [Network Protocol] window

- 1 Uncheck "Use DHCP" and enter the IP address/subnet mask/default gateway.

Windows Server 2003 Setup Configuration Wizard

Network Protocol

Install Unattended

Install Manually

Available Protocols: TCP/IP, NWIPX, AppleTalk, PPTP

Selected Protocols: TCP/IP

Adapter Name: Adapter 1

Connection Name:

Use DHCP

IP-Address: 192 168 16 2

Subnet Mask: 255 255 255 0

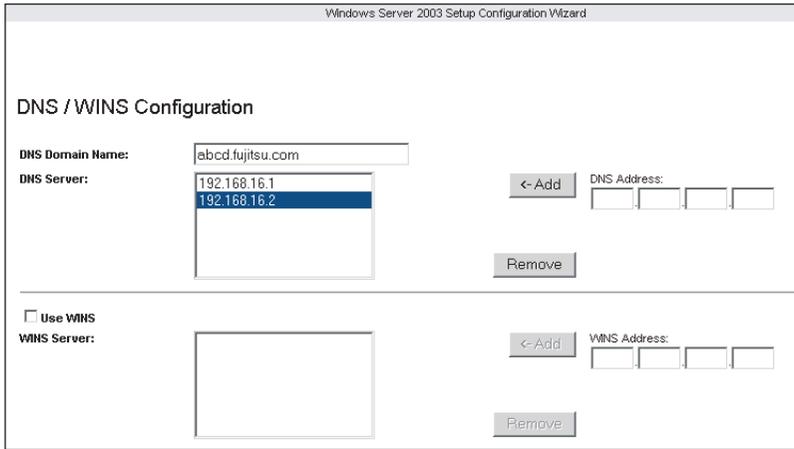
Default Gateway:

Netbios Option: Enable NetBIOS over TCP/IP

More IP Addresses, Gateways ...

DNS/WINS Configuration...

2 Click [DNS/WINS Configuration] and perform DNS related detailed settings.

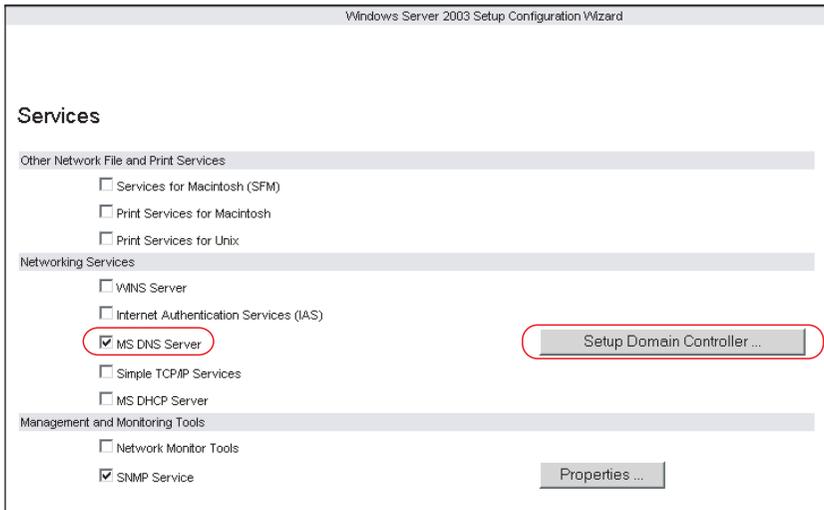


Specify the child domain name (in this example abcd.fujitsu.com) in "DNS Domain Name". Enter the following address in "DNS server".

- The IP address of the existing DNS server
- The IP address of the domain controller of the child domain

■ [Services] window

1 Check the "MS DNS Server" and click [Setup Domain Controller]. If WINS is set, set a check against "WINS Server".



2 Set the various parameters as follows.

Windows Server 2003 Setup Configuration Wizard

NTSetup - Domain Controller Installation

Configure server as Domain Controller (1)

Create a new forest of domain trees.
 Additional Domain Controller for an existing domain.
 Create a new child domain in an existing domain tree (2)
 Place this new domain tree in an existing forest.

Database Location: %systemroot%\NTDS
 Log Location: %systemroot%\NTDS
 SysVol Folder Location: %systemroot%\SYSVOL
 Permissions compatible with pre-Windows 2000 servers (3)

User Name: (4) administrator
 Password:
 Domain Name: fujitsu.com
 Parent Domain Name: fujitsu.com
 Child Domain Name: abcd
 Domain NetBIOS name: abcd

1. Set a check against "Configure server as Domain Controller".
2. Select "Create a new child domain in an existing domain tree".
3. When also managing a machine with an OS of earlier than Windows 2000, set a check against "Permission compatible with pre-Windows 2000 servers".
4. Enter the information used for domain registration.

table: Domain registration information

Parameter	Description
User Name	A user account that exists in a group that has privileges to create a computer account in a high level domain. (Example: Domain Admin use)
Password	High level user password
Domain Name	The domain name that the high level user belongs to
Parent Domain name	High level domain name
Child Domain Name	The new domain name
Domain NetBIOS name	The new domain NetBIOS name

1.6 Configuring a Domain Member Server

This section explains necessary to configure a domain member server.

1.6.1 Configuring a Domain Member Server

When configuring a domain member server, perform the following settings.

- Creating a computer account
For a Windows 2000 domain a computer account that will participate on the domain controller is created. When creating a computer account it is necessary to decide the computer name in advance. Set in the [Computer Identification] window of the OS installation wizard.
- Setting network protocol
When specifying the DHCP in network protocol settings, settings will be different when specifying a fixed IP address.
When setting the IP address as a resource using DHCP, set DNS server information in the server option of the DHCP server and register the server to DNS.

■ [Computer Identification] window

- 1 Set the various parameters as follows.

Windows Server 2003 Setup Configuration Wizard

Computer Identification

Operating System Type: Windows Server 2003, Standard Edition (1)

License Mode: Per Seat per Server User permitted: 6

will participate in: a workgroup a domain (2)

Workgroup or Domain Name: MYUSERGROUP (3)

User account to create a computer account: (4)

Password:

Install Operating System from Local CD

Install Operating System from Remote Server

Remote Source Path: (e.g. \\myserver\share)

Remote Username:

Remote Password:

1. Select the OS to be installed in "Operating System Type".
2. Select "a domain" when specifying "will participate in".
3. Specify the participating domain in "Workgroup or Domain Name".
4. Specify the domain user account and password with the privileges to create a computer account in "User account to create a computer account".

POINT

- ▶ When creating a computer account in advance on the domain controller, in Step 4 a domain user without the privileges to create a computer account can be specified.

■ DNS/WINS settings

● When specifying DHCP in network protocol settings

Check if the "DNS server" has been set correctly in the DHCP server option when DHCP is configured in the participating domain.

● When specifying fixed IP in network protocol settings

- 1 Click [DNS/WINS Configuration] in the [Network Protocol] window and specify DNS domain name and DNS server.

Windows Server 2003 Setup Configuration Wizard

DNS / WINS Configuration

DNS Domain Name:

DNS Server:

DNS Address:

Use WINS

WINS Server:

WINS Address:

1.7 Configuring a Stand Alone Server

This section explains the settings necessary to configure a stand alone server.

● Stand alone server features

A stand alone server is a server that is used in a small sized area. Therefore there is a limit to the range of access to resources. Also, when accessing the resources of a stand alone server via the network, control performance will be diminished because of referring to the stand alone server local user information. It is recommended that you decide which server will carry out which task as soon as possible and move to the domain.

■ [Computer Identification] window

- 1 Set the various parameters as follows.

Windows Server 2003 Setup Configuration Wizard

Computer Identification

Operating System Type: Windows Server 2003, Standard Edition

License Mode: Per Seat per Server User permitted: 6

will participate in: a workgroup a domain

Workgroup or Domain Name: MYUSERGROUP

Install Operating System from Local CD

Install Operating System from Remote Server

Remote Source Path: (e.g. \\myserver\share)

Remote Username:

Remote Password:

1. Select the OS to be installed in "Operating System Type".
2. Select "a workgroup" when specifying "will participate in".
3. Specify the participating workgroup in "Workgroup or Domain Name".

👉 IMPORTANT

- ▶ It is not necessary to set anything in [NTSetup - Domain Controller Installation] window.

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Using ServerStart to Configure the Network

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