

IPMaster-[Help Documentation](#)

1 System Summarize

IPMaster is IP address management software. It provides visual IP address assignment (network topology tree), automatic subnet calculation, mask calculation, subnetting, network segment scanning, host monitoring, ping, traceroute, telnet, and netsend etc. It supports VLSM (Variable Length Subnet Masks) and CIDR (Classless Inter-Domain Routing). With the help of IPMaster, network administrator can increase their working efficiency and avoid fault. The purpose of this software is to assign and manage IP address efficiently for enterprise network.

2 Running environment

- Operation system: WinNT, WinMe, Win2000, WinXP, Win2003, WinVista, Win 7;
- Min CPU: 450MHz;
- Min Ram: 64M;
- Min HD Space: 100M;
- Best screen resolution: 1024*768 or above;

3 Glossary

- IP address management library:
The library to store all IP assigning information.
- Network segment:
Represents IP range and is the root of IP address management library. It is identified by IP address and mask, e.g. 192.168.100.0/24. We can perform subnet dividing under it.
- Subnet:

A smaller network created by dividing a larger network into equal parts, which is identified by IP address and mask. There are four types of subnet: assigned, subdivisible, reserved, and unused.

- Topological tree:

The tree shows the affiliation of network segment and subnet. The root of the tree is network segment and the subnet is middle node or leaf node.

- Assigned subnet:

This kind of subnet can not be subdivided, for this kind of subnet, the user can maintain the host information in this subnet. It was showed as a leaf node in topological tree.

- Subdivisible subnet:

This kind of subnet can be subdivided into smaller subnet and was showed as middle node or leaf node in topological tree.

- Reserved subnet:

This kind of subnet was reserved by the user and can not be used.

- Unused subnet:

This kind of subnet hasn't been planed and is the remaining network segment other than the above mentioned subnet.

- Host:

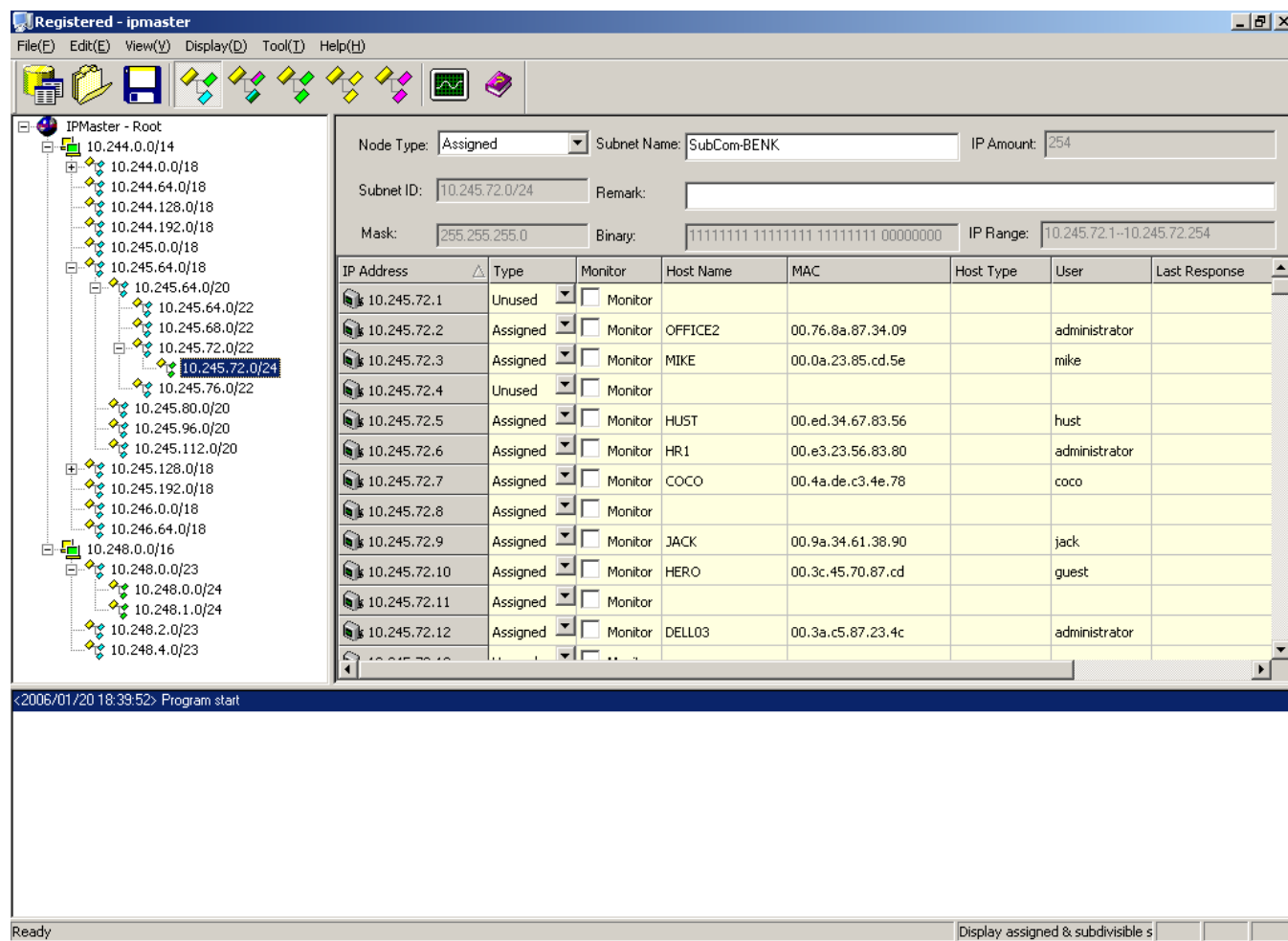
It represents a computer or other device on a TCP/IP network. It is a logical mapping of each IP address in the assigned subnet. There are 3 types of host: assigned, reserved, unused.

4 System Function





4.1 Visual IP address management function

The whole GUI is divided into three parts: the left part is network topology tree to display subnet hierarchy, right above part is the property of subnet, right below part is the content of subnet (which displays all next level subnets for subdivisible subnet or all hosts in the

subnet for assigned subnet), the bottom part is tip message area.



Different types of subnet is showed by different colored icon:

- Assigned subnet 
- Subdivisible subnet 
- Reserved subnet 
- Unused subnet 

4.2 New network segment

Clicking "File->New Network Segment" menu item (or press Ctrl + N), the dialog box of "New Network Segment" would appeared, after inputting "Segment Name" and "Segment Address", the system will automatically determine the network mask according to the address type and display the information such as segment type, subnet ID, address

range etc. The user can also get the network segment by modifying the mask. There are two ways of modifying the mask, one is to input mask address directly, and the other is to adjust the mask bits slider. The GUI is displayed as following:

New Network Segment

Network Segment Information

Segment Name: test1 Remark: this is a demo

Segment Address: 192 . 168 . 100 . 0 Binary: 11000000 10101000 01100100 00000000

Mask: 255 . 255 . 255 . 0 Binary: 11111111 11111111 11111111 00000000

Mask Bits: [Slider] 24bits

Segment Information Statistic

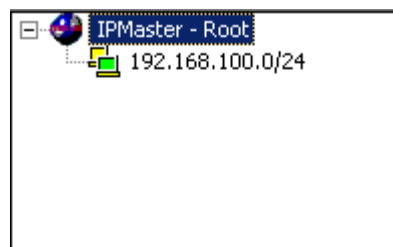
Segment Type: Class C address Amount of Address: 254

Subnet ID: 192.168.100.0/24 Broadcast Address: 192.168.100.255

Range: 192.168.100.1 To: 192.168.100.254

OK Cancel

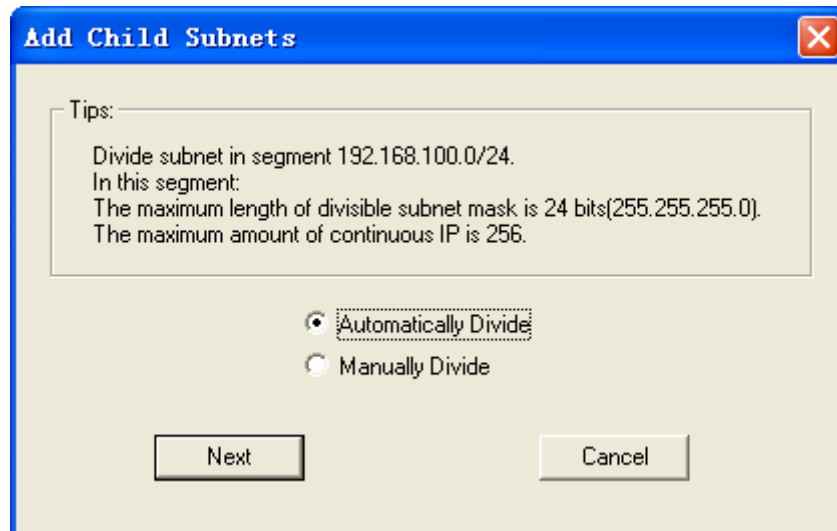
After clicking “OK” button, the system will establish a new network segment under “IPMaster-Root” node of topological tree.



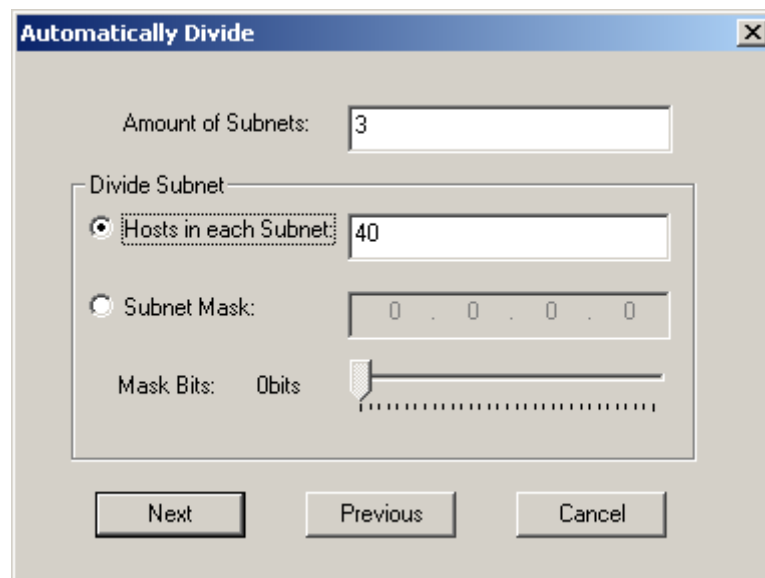
The newly established network segment will be placed under “IPMaster-Root” node and become the root of IP address management library, in which the node type is “subdivisible” acquiescently. If further division of subnet is needed, you can right-click the node of the network segment and choose “Divide Subnet” menu item on the pop-up menu , then you can perform network segment division.

4.3 Automatic subnetting function

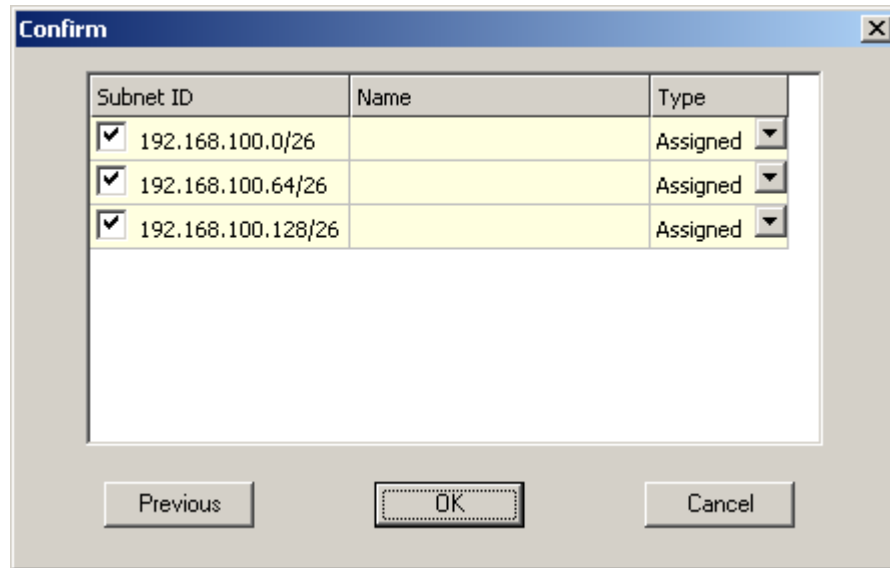
Right-click at the subdivisible node and choose "Divide Subnet" menu item, then the following dialog box will be appeared to perform subnetting:



After choosing "Automatically Divide", click "Next" button, then input "Amount of Subnets", "Hosts in each Subnet" or "Subnet Mask", as following:



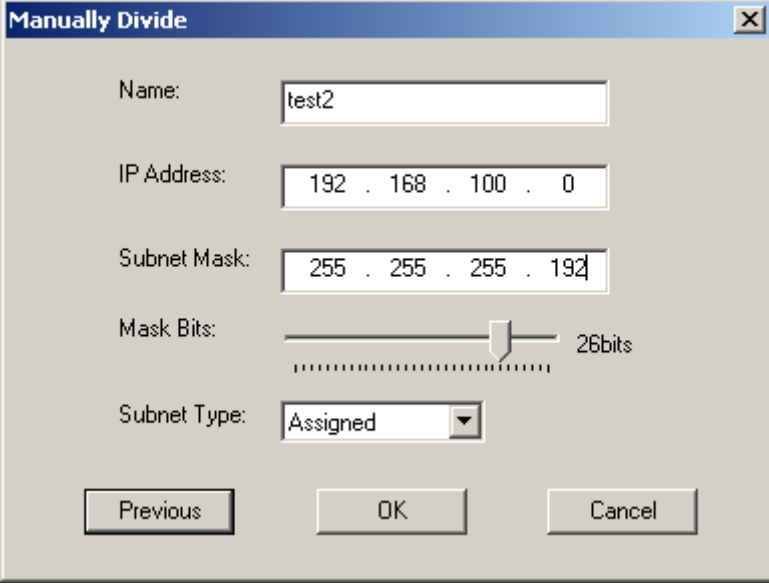
Click "Next" button, system will generate subnet automatically and will skip the assigned and reserved subnet, as following:



The default subnet type generated by the system is “assigned”, the user can modify the type of the subnet in this GUI and input the subnet name or cancel the division of some subnet (by uncheck the check box before the subnet), after clicking” OK’ button, the system will generate subnet at the designated node automatically.

4.4 Manual subnetting function

Right-click at the subdivisible node and choose ”Divide Subnet” menu item, then choose “Manually Divide” at the popped up dialog box, click ”Next” button, the dialog box of “Manually Divide” would be popped up to perform subnetting, then input the ”subnet name”, ”IP address”, “subnet mask” and “subnet type” as following:

A screenshot of a Windows-style dialog box titled "Manually Divide". The dialog has a blue title bar with a close button (X) in the top right corner. The main area is light gray and contains several input fields and controls. The "Name:" field contains the text "test2". The "IP Address:" field contains "192 . 168 . 100 . 0". The "Subnet Mask:" field contains "255 . 255 . 255 . 192". The "Mask Bits:" field is a slider control with a vertical bar and a horizontal line, showing a value of 26 bits. The "Subnet Type:" field is a dropdown menu with "Assigned" selected. At the bottom, there are three buttons: "Previous", "OK", and "Cancel".

After click" OK" button, the system will generate a designated subnet by the user.

4.5 Redo and undo function

Clicking "Edit->Undo Subnet Operation" menu item or "Edit->Redo Subnet Operation" menu item can cancel or repeat the last step of subnetting operation.

4.6 Modifying the subnet type directly for the leaf node

As regards the leaf node, the subnet type can directly be modified by choose other type at the combo box of "Node Type".

4.7 Delete function

Right-click at the node to be deleted, choose "delete" menu item at the pop-up menu, then the appointed subnet would be deleted and all child subnet represented by sub node under this subnet would also be deleted.

4.8 Scan function

Right-click at the node of assigned type, choose "Scan" menu item at the pop-up menu, then the host name, MAC address and user name of all hosts in the assigned subnet can be obtained automatically.

4.9 Monitoring function

Clicking "Tool->Monitor" menu item, the monitor dialog box will pop up. The dialog box can monitor the running status of the monitored host. When the host is shutdown, the tip message area would warn by red hints and the warning record would be saved into "warning.log" file in the directory of the executive program file.

Check "Monitor" check box of the host, the host would be added into the monitoring scope of the system.

4.10 Multi-way of subnet display

The system provides several display way of subnet such as "display assigned and subdivisible segment", "display all segment", "display assigned segment", "display unused segment", "display reserved segment". The default way is "display assigned and subdivisible segment". And the system also supports the display by "subnet ID" or "subnet name". The default way is "subnet ID".

It can be selected by click "Display->Subnet Display" menu item.

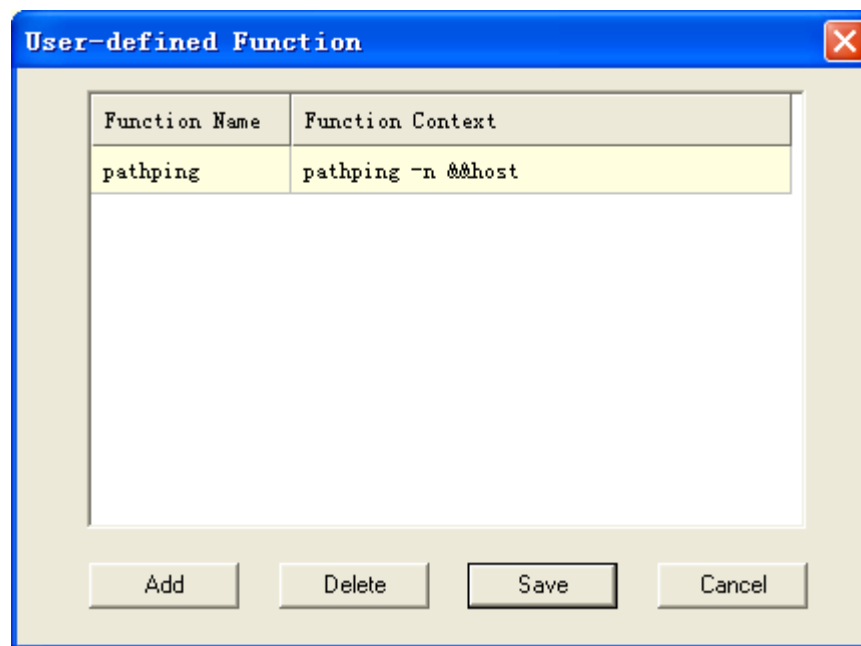
4.11 Relevant function of host

The system provides functions such as ping, traceroute, telnet, net send etc. "Net send" function can only be available for the windows host, which has already started up the Messenger service. Right-click at the host, then you can perform all these operations at

the pop-up menu, the results of the operation will be displayed in the tip message area.

4.12 User-defined command function

The system provides 4 default functions - ping, traceroute, telnet and net send, the user can also customize other function, if the user would like to define the “pathping” function, click “Tool->User-defined Function” menu item, then input the “Function Name” and “Function Context” as following:



The “&&host” represents the target host, when running “pathping” function, the system will replace “&&host” by the IP address of the target host, for example, right-click at the target host “10.245.72.3”, the “pathpaing” function will be added into the pop-up menu. When running pathping function, the system will perform the below command: “pathping -n 10.245.72.3”.

User	Last Response	Response Time	Other	Location

4.14 Exact find function

Click "Edit->Exact Find" menu item (or press Ctrl + E), the "Exact Find" dialog box will be appeared. The user can search relevant message in the IP address management library by subnet ID, host IP or name, it is case sensitive when searching by the name. When the object is found, the main screen focus will skip to the object row automatically. If multi match result is found, the "Confirm" dialog box will be appeared, double click the object row in the "Confirm" dialog, the main screen focus will skip to the object row automatically.

4.15 Fuzzy find function

Click "Edit->Fuzzy Find" menu item (or press Ctrl + F), the "Fuzzy Find" dialog box will be appeared, the user can search for all match results according to the input content, the search function isn't case sensitive. The user can specify the search scope will be covered in the host columns and subnet columns. In the "Search Result" dialog box, double click the object row, the main screen focus will skip to the object row automatically. During the search process, the user can pause or resume the search operation.

4.16 Saving function

Click "File->save" menu item (or press Ctrl + S), the IP address management library information will be saved and it will be loaded automatically when the system running

next time. The data is saved in the IPMaster.adl file, which is in the directory of the executive program file and at the same time the old file will be backed up automatically as IPMaster.adl.bk.

4.17 Opening function

Click "File->Open Address Library" menu item (or press Ctrl + O), the IP address management library information file as .adl format can be opened and displayed.

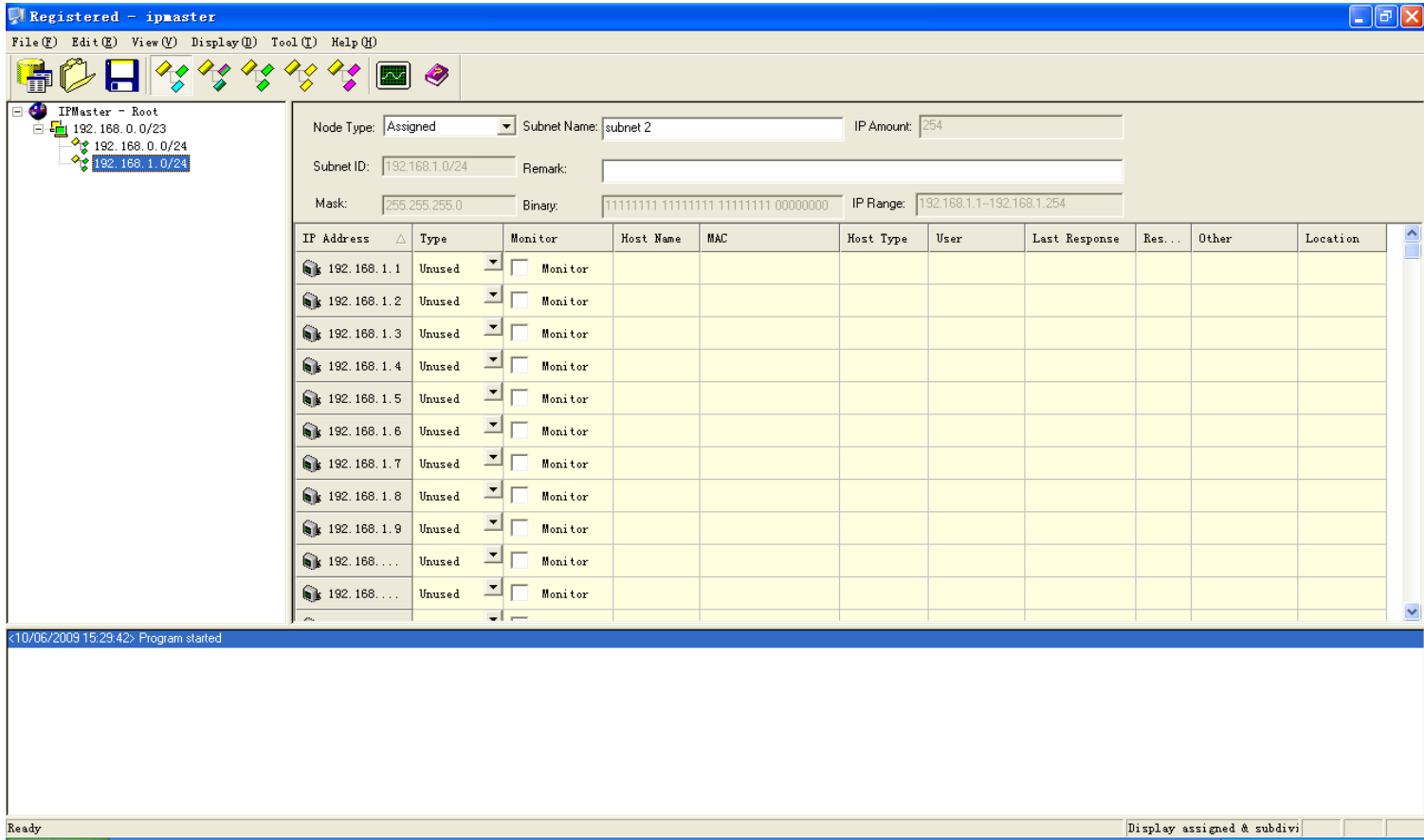
4.18 Export function

Click "File->Export" menu item, all the information of the leaf node in the IP address management library will be output to a MS Excel file, which includes: subnet name, network segment type, subnet ID, subnet mask, address range and address amount, the host information of the assigned subnet will be output at the same time.

4.19 Import function

The system allows the user to import host information from a Excel file, click "File->Import" menu item, then select the import file, the host information in the file will be imported to the system. The first row of the Excel file must be title row, the first column name in the title row must be 'IP Address', the other column name must be same as the IPMaster host information column name, and the sheet name in the Excel file must be subnet ID (The corresponding subnet must be assigned type), since the MS Excel application don't allow using '/' character, so the '/' character must be replace by '_' character, this means for the sheet name, subnet ID '192.168.0.0/24' must be replace by '192.168.0.0_24'.

For example there are a network segment '192.168.0.0/23' and its 2 subnets '192.168.0.0/24', '192.168.1.0/24' as below:



	A	B	C	D	E	F	G	H
	IP Address	Type	Host Name	MAC	Host Type	User	Other	Location
2	192.168.1.1	Assigned	John01	00.ab.00.cd.ff.01	Windows PC	John Brown		F10-R02
3	192.168.1.2	Assigned	John02	00.ab.00.cd.ff.02	Windows PC	John Brown		F10-R02
4	192.168.1.3	Assigned	Martin01	00.ab.00.cd.ff.03	Windows PC	S. Martin		F10-R02
5	192.168.1.4	Assigned	Martin02	00.ab.00.cd.ff.04	Windows PC	S. Martin		F10-R02
6	192.168.1.5	Assigned	Public01	00.ab.00.cd.ff.05	Windows PC	Admin	For Visitor	F10-R02
7	192.168.1.6	Assigned	Public02	00.ab.00.cd.ff.06	Windows PC	Admin	For Visitor	F10-R02
8	192.168.1.7	Assigned	Public03	00.ab.00.cd.ff.07	Linux PC	Admin	For Visitor	F10-R02
9	192.168.1.8	Unused						
10	192.168.1.9	Unused						
11	192.168.1.10	Unused						
12	192.168.1.11	Unused						
13	192.168.1.12	Unused						
14	192.168.1.13	Unused						
15	192.168.1.14	Unused						
16	192.168.1.15	Assigned	Mary01	3a.ab.fe.cd.ff.03	Windows Laptop	P. Mary		F10-R01
17	192.168.1.16	Assigned	Mary02	4d.ab.23.cd.ff.04	Windows PC	P. Mary		F10-R01
18	192.168.1.17	Assigned	Johnson01	3a.ab.fe.cd.ff.04	Mac PC	M. Johnson		F10-R01
19	192.168.1.18	Assigned	Johnson02	4d.ab.23.cd.ff.05	Mac Laptop	M. Johnson		F10-R01
20	192.168.1.19	Assigned	Lee01	3a.ab.fe.cd.ff.05	Mac PC	Q.Lee		F10-R01
21	192.168.1.20	Assigned	Lee02	4d.ab.23.cd.ff.06	Mac Laptop	Q.Lee		F10-R01
22	192.168.1.21	Assigned	Printer Server	3a.ab.fe.cd.ff.06	PC Server	Admin		F10-R01
23	192.168.1.22	Unused						
24	192.168.1.23	Unused						
25	192.168.1.24	Unused						
26	192.168.1.25	Unused						
27	192.168.1.26	Unused						
28	192.168.1.27	Unused						
29	192.168.1.28	Unused						
30	192.168.1.29	Unused						
31	192.168.1.30	Unused						
32	192.168.1.31	Unused						
33	192.168.1.32	Unused						
34	192.168.1.33	Unused						
35	192.168.1.34	Unused						

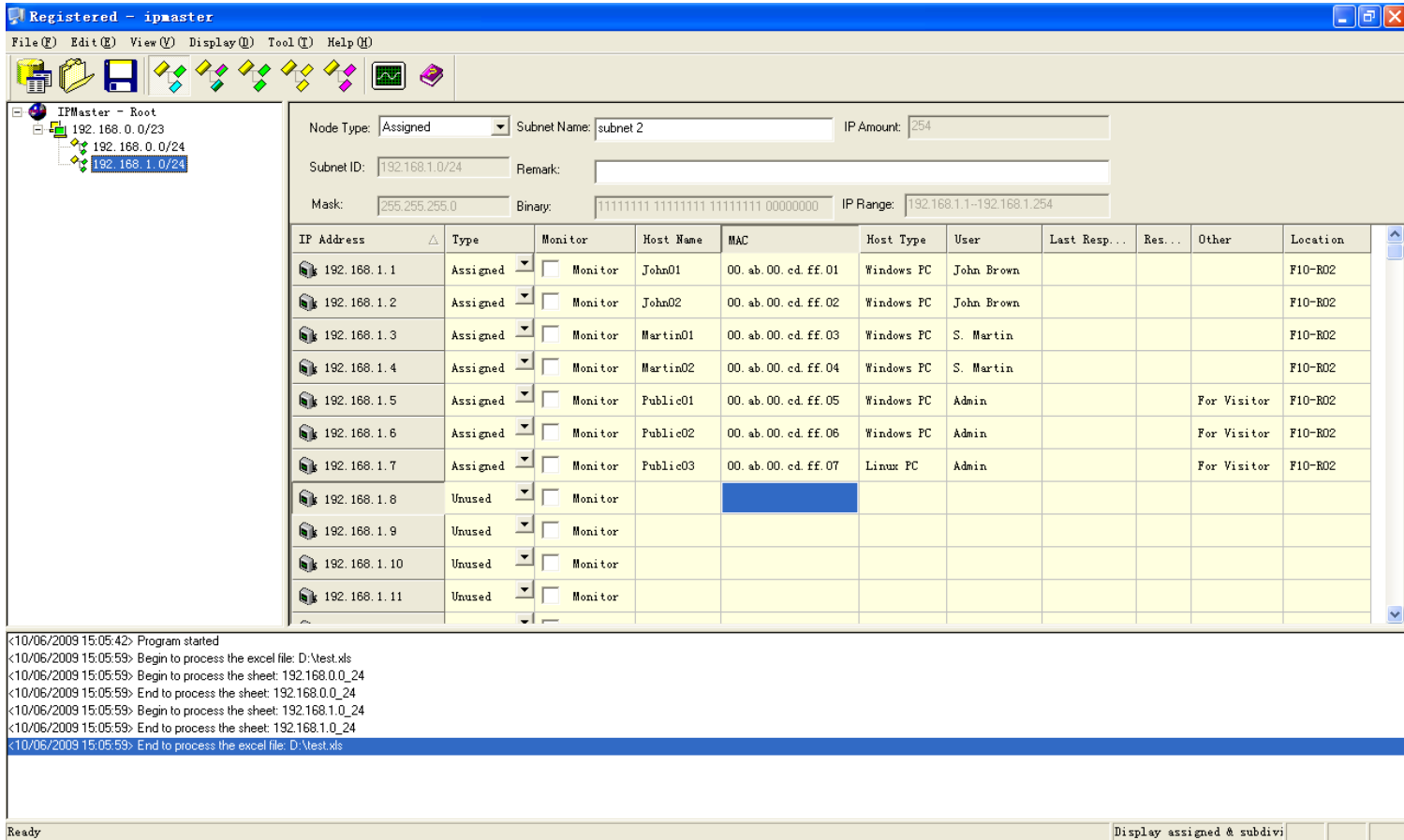
This is a user-defined column.

The first column name must be 'IP Address'

The content of this column must be Assigned, Unused or Reserved.

The sheet name must be subnet ID of assigned type.
NOTICE: The sheet name is '192.168.1.0_24', NOT '192.168.1.0/24'.

After import the file, the information in the sheet '192.168.0.0_24' will be imported into the subnet '192.168.0.0/24', and the information in the sheet '192.168.1.0_24' will be imported into the subnet '192.168.1.0/24'.



4.20 Password log in function

The password is not required when you login for the first time.

4.21 Password modifying function

Clicking "Edit->Modify Password" menu item, the "Modify Password" dialog box will pop up and the login password can be modified in this dialog box.

4.22 Multi-users using IPMaster

If you purchased several licenses, multi-users are allowed to use IPMaster at different computer, they can share and access the address library data file on a server. In the ordinary case, the address library data is saved in the IPMaster.adl file, which is in the

directory of the executive program file, but you can put it on a file server to share and access it, and you can also control the access levels of multi-users by using the file permission management of the operation system.

4.23 Examples

Assumed that three 24-bits mask subnets are to be divided in the network segment of “192.168.0.0/22”, and two 26-bits mask child subnets are to be divided under one of the subnets, which can be achieved as following.

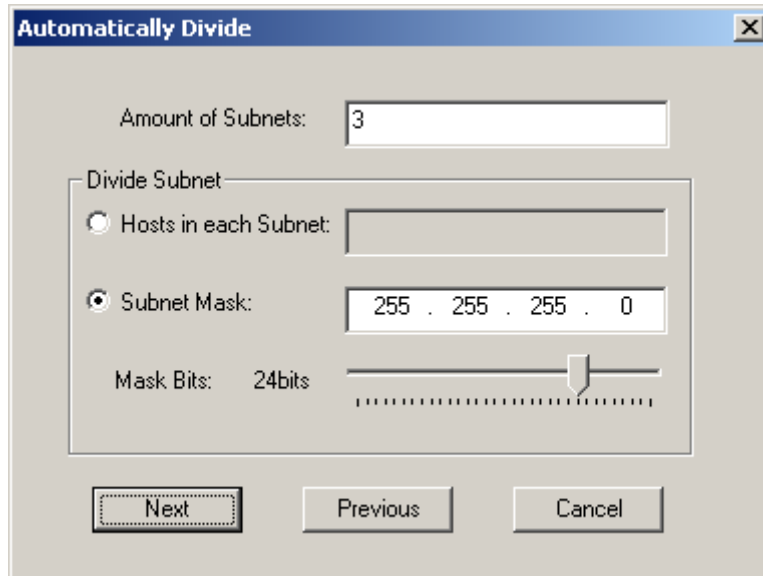
At first newly establishing a network segment “192.168.0.0/22”, the GUI is as following:

Network Segment Information			
Segment Name	test3	Remark	
Segment Address	192 . 168 . 0 . 0	Binary	11000000 10101000 00000000 00000000
Mask	255 . 255 . 252 . 0	Binary	11111111 11111111 11111100 00000000
Mask Bits	[Slider: 22bits]		22bits

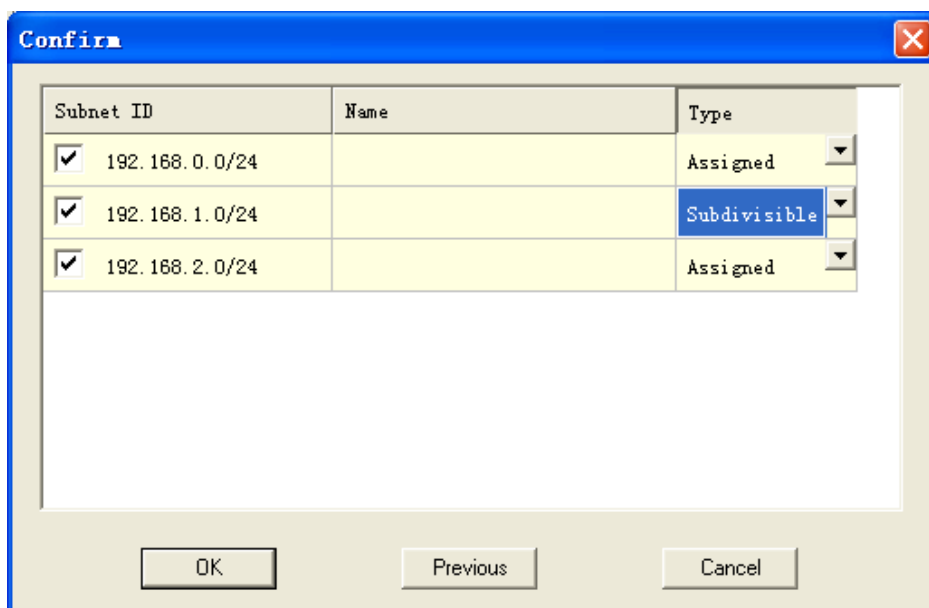
Segment Information Statistic			
Segment Type	Class C address	Amount of Address	1022
Subnet ID	192.168.0.0/22	Broadcast Address	192.168.3.255
Range	192.168.0.1	To	192.168.3.254

OK Cancel

Then dividing three 24-bits mask subnets under the network segment node, the GUI is as following:

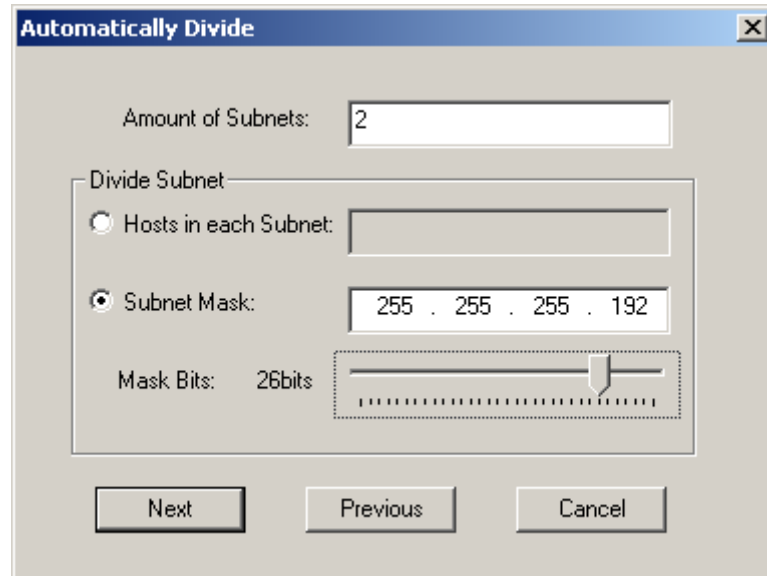


Clicking "Next" button, then change the subnet to be continued dividing as "Subdivisible" type in the "Confirm" dialog box.

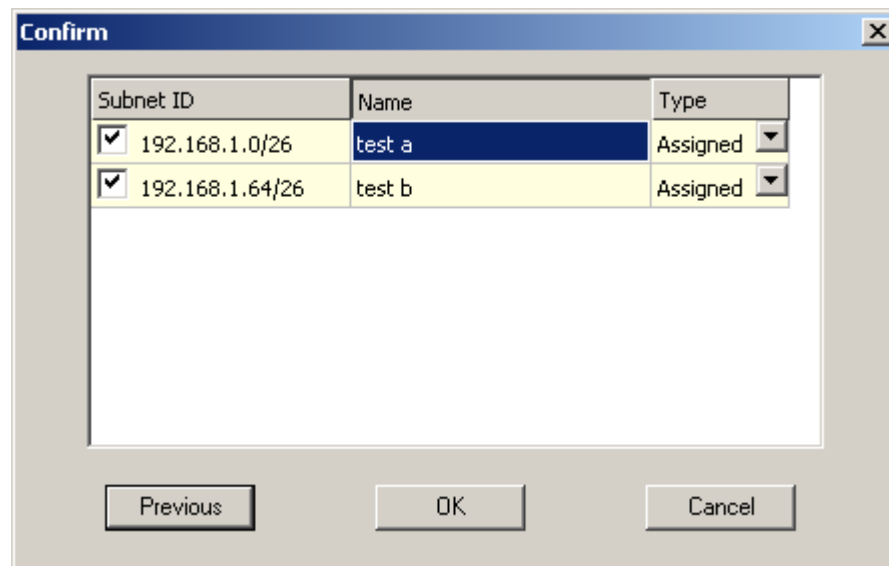


After clicking "OK", the system will divide three subnets as "192.168.0.0/24", "192.168.1.0/24" and "192.168.2.0/24" under "192.168.0.0/22" network segment, in which the "192.168.1.0/24" subnet is appointed to be "Subdivisible" type.

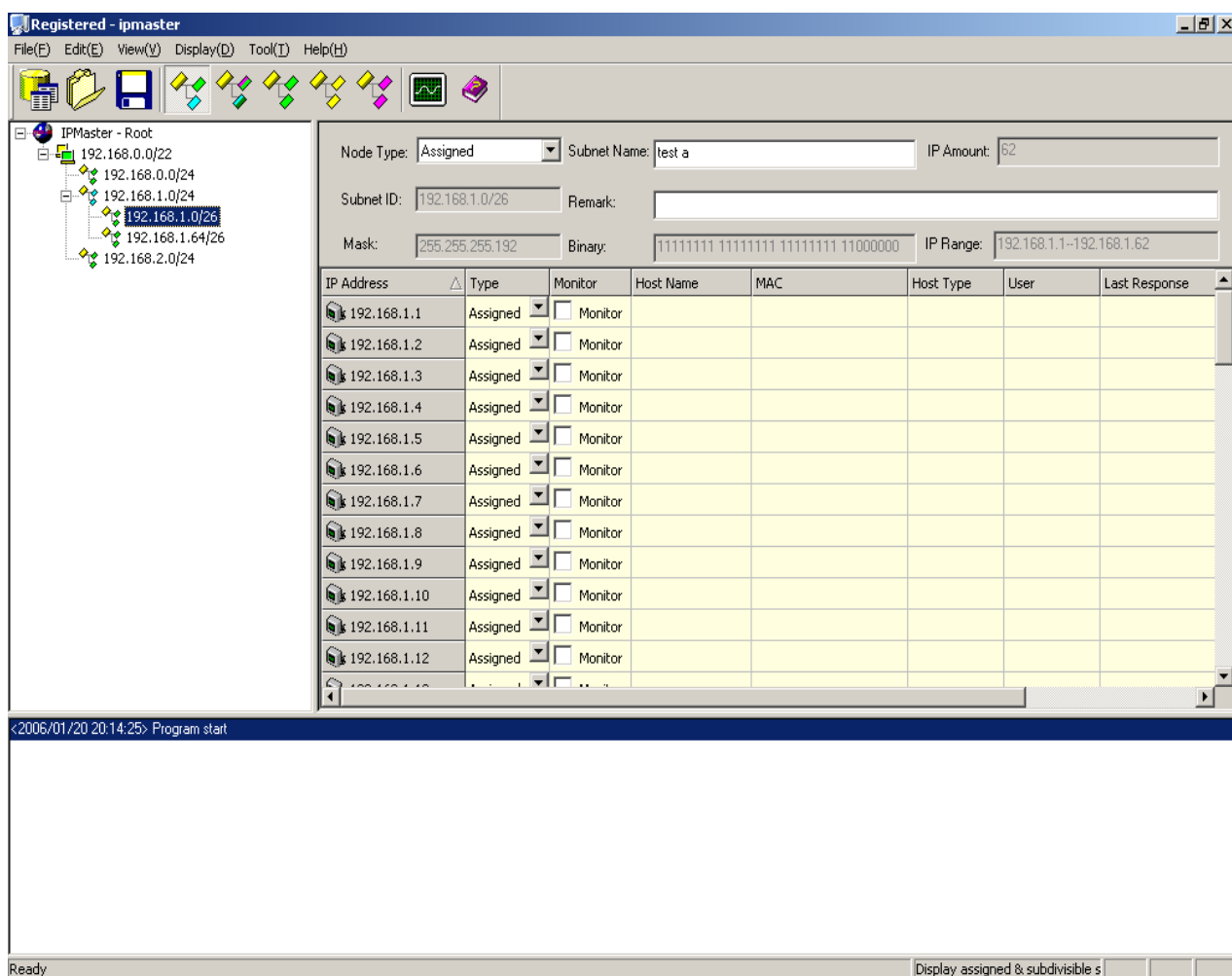
Continuing to divide two 26-bits mask child subnets under the subdivisible type "192.168.1.0/24" subnet, the GUI is as following:



Clicking "Next" button,



After clicking "OK", the system will divide two 26-bits mask child subnets as "192.168.1.0/26" and "192.168.1.64/26" under "192.168.1.0/24" subnet.



This subnetting example is performed with “Automatically Divide” function. The user can also achieve it by “Manually Divide” function.

5 License Agreement

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Home page: <http://www.softsession.com>

Consult mailbox: support@softsession.com

6 History of the edition

V1.5:

- Added the function of file import.
- Added the function of fuzzy search.

V1.4:

- Speeded up the data loading when starting the system.
- Cancelled the limitation of the mask bit be over 23 for the assigned subnet.
- Added the function of user-defined command.
- Added the function of user-defined host information column.
- Added exporting the host information in the export function.

- Optimized the GUI.

V1.3:

- Fixed several bugs in subnetting function.

V1.2:

- Fixed the bug in V 1.1.
- Optimized the saving function.

V1.1:

- Fixed the bug in V 1.0.
- Added mask bits slider function.

V1.0:

- New release.