

Chapter 2 Getting Started

2.1 System Requirements

You will need the following to install WebASM.

Software Requirements

- Windows NT 4.0 or higher version, NetWare 4.11 or higher version
- Netscape Navigator 4.0 or higher, Internet Explorer 4.01 w/sp1 or higher
- JRE v1.1 or higher for Windows (downloadable from Sun Microsystems) or JVM for NetWare (downloadable from Novell)
- WebASM Installation CD
- ASM Agent v1.2 for Windows NT, NetWare, and UnixWare installed in the server or v3.0/3.1 for Windows NT, NetWare, and SCO Open Server/UnixWare installed in the server.

Hardware Requirements

- 486 or higher processor
- 16MB minimum memory
- 10MB minimum hard disk free space
- Network Card
- Optional:
 - Modem (External/Internal) class 1 or higher
 - Pager
 - Sound card

2.2 Installing WebASM

It is a prerequisite to install JRE (Java Runtime Environment) under Windows NT before installing WebASM into your system. This software is downloadable from Sun Microsystems. You will need to install JVM (Java Virtual Machine) under NetWare. The JVM and intraNetWare Support Pack v5.0 for NetWare v4.11 is downloadable from Novell. Note that the JVM is a component of OSA SDK. Because NetWare v5.0 is Java enabled, you do not need to preinstall anything.

To install JRE into an NT system, execute the software downloaded and follow the instructions.

To install JVM into a NetWare v4.11 system, you will need to use NetWare Client 32 for Windows to log-in to a NetWare server as admin user. Then follow the instructions in lwsp5a.txt file that you got from executing the Support Pack file (lwsp5b.exe). After that, you may execute the JVM installation program (jvminst.exe) in Windows and follow the instructions.

Now you are ready to install WebASM by executing the setup program included on the WebASM CD. The Installation Wizard will guide you through most of the installation procedures.

To install WebASM in Windows NT:

1. Insert the CD into the CD-ROM drive and execute *your_CD-ROM_drive:\WebASM\Setup\NT\setup.exe*. The installation wizard will guide you throughout the installation procedure.
2. Specify the path where you want to install WebASM.
3. Enter your host systems IP address. You can also use a domain name if you are connected to one.



You have to apply the proper IP address or WebASM will not work properly.

4. Enter your SMTP host IP address to connect to your mail-server. You may use a public mail-server like mail.net.tw or mail.ttn.com.tw.
5. Under Windows NT, click the **Services** icon located in the **Control Panel** and run WebASM manually.

To install WebASM in NetWare:

1. On the target NetWare server, make sure the IP protocol is enabled and that long file names are supported for the volume you will install WebASM into.
2. Use NetWare Client 32 for Windows to login as admin user to that NetWare server.
3. Insert the Installation CD into the CD-ROM drive and execute the following line:

your_CD-ROM_drive:\WebASM\Setup\NW\setup.exe

The installation wizard will guide you through the installation procedure.

4. Specify the mapped drive of the SYS volume on the target NetWare server.
5. Enter your SMTP host IP address to connect to your mail-server. You may use a public mail-server like mail.net.tw or mail.ttn.com.tw.
6. On the console screen, use the „load WebASM“ command to start running WebASM.

Saving the Configuration of WebASM

In case you need to save your configuration of WebASM, make a copy of the following files:

```
{INST_DIR}\jigsaw\jigsaw\config\*.db  
{INST_DIR}\jigsaw\jigsaw\config\auth\*.db  
{INST_DIR}\jigsaw\jigsaw\logs\log  
{INST_DIR}\jigsaw\jigsaw\logs\errlog  
{INST_DIR}\jigsaw\jigsaw\logs\jigidx  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\*.conf  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\*.con  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\*.htm  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\*.log  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\nodedb  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\nodedb.bak  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\logfile  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\linkdb  
{INST_DIR}\jigsaw\jigsaw\WWW\classes\Startup\*.view
```



You should keep the structure of the file relative. After the installation is finished, copy them into the WebASM current program directory with the same relative path.

2.3 Configuring WebASM for Out of Band (OOB) Management (Optional for NT only)

To perform out-of-band management:

1. Configure your target device so that its Management type is Out-Of-Band. Refer to section 3.4 for more information.
2. When you start to manage that device, the machine where WebASM resides will try to make a connection to a remote server via dial-up networking. Then you can manage devices that can be reached through the network where the remote server resides.



Currently, WebASM only supports Windows RAS (Remote Access Services).

To configure an RAS server on Windows NT, refer to Windows NT's on-line help for more information.

Some notes on configuring RAS:

- You need to configure RAS on the server side so that it provides a user whose dial-in permission has been granted and allows RAS to use TCP/IP.
- Also configure your RAS server to receive dial-in calls and allow remote TCP/IP clients to access the entire network.
- For your RAS client side (the machine WebASM resides), you just need to create a connection (or new phonebook entry, on Windows NT) called "WebASM". Refer to the on-line help of WebASM for setting up an OOB manageable device.

To configure an RAS client under Windows NT:

1. Execute the *Dial-Up Networking* icon in the „My Computer" folder on your screen. Then follow the instructions to install the basic components.
2. It should prompt you with a panel named *Remote Access Setup* and ask you to add the RAS device. You should try to allocate a modem on your machine.
3. After a proper one is installed, you should configure it by pressing the **Network** button. Make sure the "TCP/IP" item for "Dial out Protocols" is chosen.



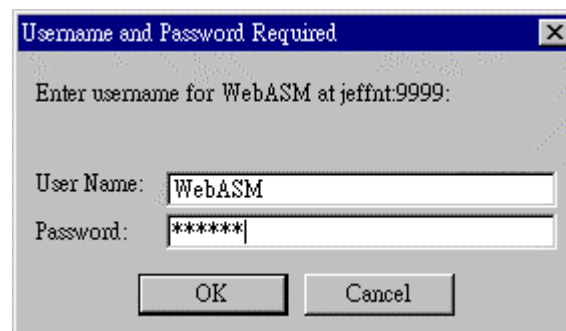
Please refer to the appropriate Windows user's manual for more information on configuring RAS.

2.4 Running WebASM

Type this address in your browser:

`http://{IPADDRESS}:9999/WebASM/start.html`

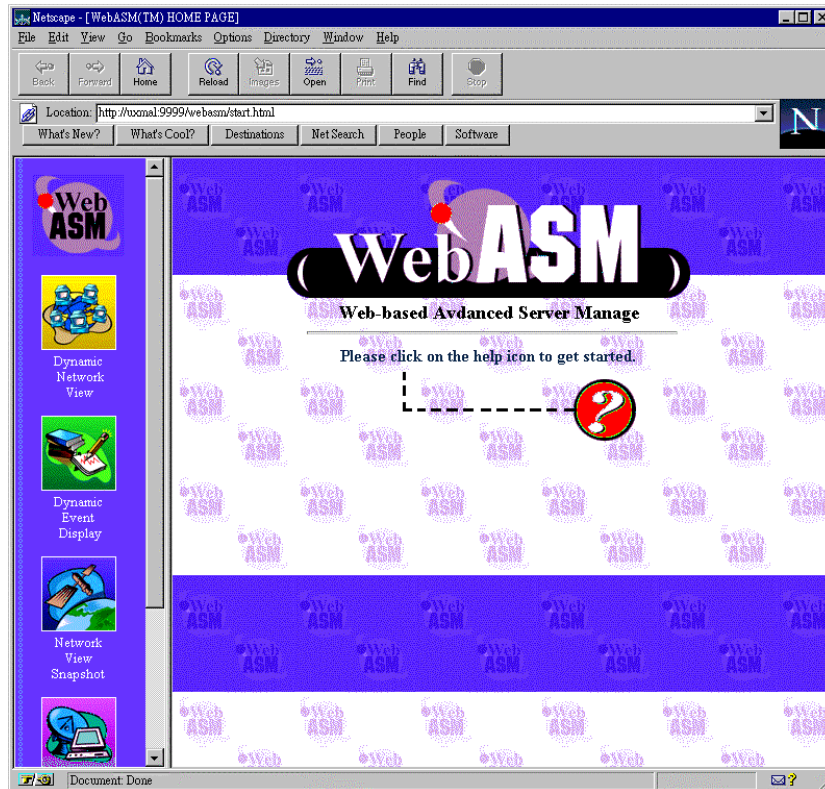
The password window appears prompting for authentication as shown below.



The user name is **WebASM** and the default password is also **WebASM**. Click **OK**, and the WebASM main screen appears.

2.5 WebASM User Interface

To use WebASM, simply point your browser to the WebASM home page and the screen below appears.





Dynamic Network View button shows the current state of network devices. It lets you view different portions of your network using a graphical display. The graphical display called the *Global View* automatically displays when you start WebASM. It shows you the gateways and subnets in your network system. If you are using WebASM for the first time, a window will appear prompting if you want WebASM to automatically discover devices on your network. For a more detail discussion on the different types of network views and how to use them please refer to chapter 3.



Dynamic Event Display button enables you to open a window to display network events as they occur. Network events include SNMP traps from various devices, discovery of new nodes on the network, state changes on nodes, etc. For more information please refer to chapter 4.



Network View Snapshot button shows you a "snapshot" of the current state of various network devices in a table format. Like the Dynamic Network View, it displays an HTML page showing you the information of concerned subnets and gateways associated with each subnet, and from there you can manage these subnets.



Network Event Log button logs network events to an HTML file and also functions as a link to that file. This log file is updated constantly as events occur so you have to periodically refresh the display to see the current events. Refreshing this file is one way to observe network events if you are unable to use the dynamic event view described above.



Help button provides guidance when you do not know what to do.



Configure WebASM button allows you to edit various configurations to customize WebASM to your needs. If you are a first time user, you probably do not need to worry about configuring WebASM for the moment.

Obtaining Information on Network Devices

The *Global View* displays a graphical representation of your network devices. If you are using WebASM for the first time, the *Global View* window will not be able to display any information concerning your network devices. To make this step easier for you, WebASM will prompt you to start Network Discovery. Network Discovery will automatically scan for SNMP devices by sending out queries for information about these devices and then storing into a database called *Node Database*, then the next time you open WebASM, the *Global View* window will automatically display information about your network devices. For more information about Network Views, please refer to Chapter 3.

2.6 Configuration for Jigsaw

Jigsaw is W3C's sample implementation of HTTP; the project constitutes an ongoing W3C activity. Jigsaw is a full-blown HTTP server entirely written in Java. Its design goals were:

- Portability. The Jigsaw server will run on any machine running Java.
- Extensibility. The server can be extended by writing new *resource* objects. This is a replacement for CGI, where server extensions have to be written as processes (of course, CGI is handled, too).
- Efficiency. The design has been done in such a way as to minimize file system accesses. By using some caching mechanisms, the server will reduce file system accesses (eventually to the point that most requested documents served will require *no* file system access).

WebASM utilizes the extensibility feature of Jigsaw by adding new resource objects that are capable of processing SNMP packets and retrieving corresponding data from the agents to form HTML pages for the browser. The WebASM user needs to configure Jigsaw for authentication purposes. All resources can be configured to limit the rights of users from different „realms“. For example, users registered in the „WebASM“ realm can only browse pages for managing SNMP, while users from the „Admin“ realm can access the pages for configuring Jigsaw.



Users of „WebASM“ can browse both parts, because there are two users called „WebASM“ under different realms and they use the same password.

For more information concerning Jigsaw, please refer to this website:

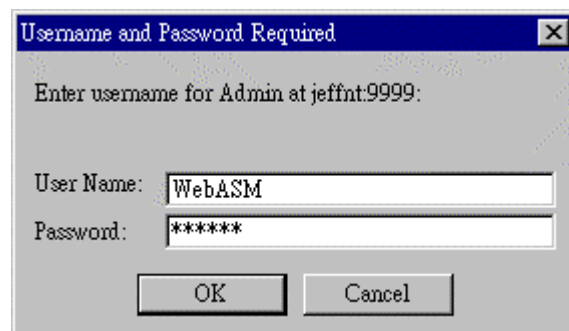
<http://www.w3.org/jigsaw>

2.6.1 Adding New Users to the Realm

1. Type this address in your browser:

`http://{IPADDRESS}:9999/Admin/Realms`

The authentication window for Admin user appears.



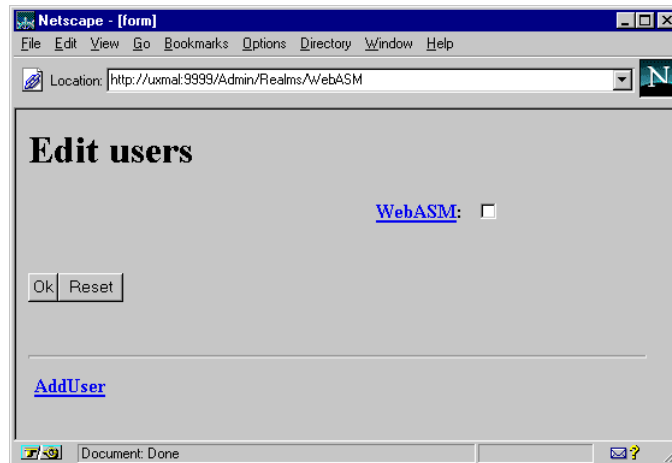
A screenshot of a Windows-style dialog box titled "Username and Password Required". The text inside says "Enter username for Admin at jeffnt:9999:". Below this, there are two input fields. The first is labeled "User Name:" and contains the text "WebASM". The second is labeled "Password:" and contains seven asterisks "*****". At the bottom of the dialog are two buttons: "OK" and "Cancel".

2. The default user name is **WebASM** and the password is **WebASM**. Click **OK** and the Edit authentication realms window appears.



A screenshot of a Netscape browser window. The title bar says "Netscape - [form]". The menu bar includes "File", "Edit", "View", "Go", "Bookmarks", "Options", "Directory", "Window", and "Help". The location bar shows "http://uxmal:9999/Admin/Realms". The main content area has the heading "Edit authentication realms". Below the heading, there are two lines of text: "Admin: ☐

-
3. Check the realm where you want to add a new user, then click **OK**, and the window below appears. To show a list of users, who are authenticated to access this realm, click the **WebASM** link.



4. Click the **AddUser** link and follow the instructions below.

The screenshot shows a Netscape browser window with the title 'Netscape - [form]'. The address bar shows 'Location: http://uxmal:9999/Admin/Realms/WebASM/anup'. The main content area has a heading 'Attributes of anup'. Below the heading are several form fields: 'identifier:' with the value 'anup', 'email:', 'comments:', 'ipaddress:', 'password:', and 'groups:'. The 'ipaddress' and 'groups' fields are multi-line text areas. At the bottom of the form are 'Ok' and 'Reset' buttons. The status bar at the bottom of the browser window shows 'Document: Done'.

5. Fill up the details for the new user. Access can be restricted by specifying the IP address of the nodes from which this new user can start WebASM. Make sure that every user has a password. After filling up all the fields in the form, click **OK**.
6. Point your browser to `http://{IPADDRESS}:9999/Admin/Exit` to exit.



Sometimes a message may pop up on your browser saying that the document contains no data. If this happens do the following: Close WebASM and Start WebASM again.

2.6.2. Deleting Users from the Realms

1. Enter the following address in your browser:
`http://{IPADDRESS}:9999/Admin/Realms` and the authentication window for Admin user appears.
2. Click the realm where the user is attached. A list of users appears.
3. Select the user to be deleted by clicking on the checkbox next to the user and then click **OK**.
4. Point your browser to `http://{IPADDRESS}:9999/Admin/Exit` to exit.



Sometimes a message may pop up on your browser saying that the document contains no data. If this happens, do the following: Close WebASM and Start WebASM again.

2.7 Managing Network Devices

There are two kinds of device management pages available to WebASM:

- Those that come with a customized management page provided by the vendor
- Those without a customized management page

WebASM provides a set of default pages that basically allow you to manage only **Standard** SNMP information, such as MIB-2, for those that come with a customized page.

For those without a management page, WebASM can provide a highly customized interface to manage such devices.

To manage network devices:

1. Select the device you want to manage from the *Global View*. If the device is not a gateway, you need to open a subnet that the device is in and then select it.
2. After selecting the device, choose the *Manage* option from the *Operations* menu. This will open the management page where you can manage your devices.

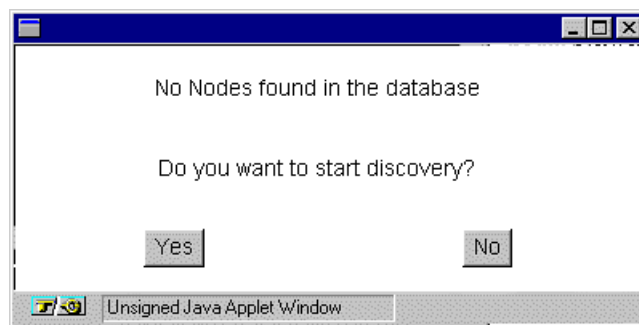
If you cannot run the dynamic network view applet, you can manage devices using the Network View Snapshot discussed in section 3.1.

2.8 Network Discovery

WebASM automatically detects all SNMP manageable devices in your network. It recognizes a variety of devices such as routers, printers, gateways, etc. The discovery undergoes two processes:

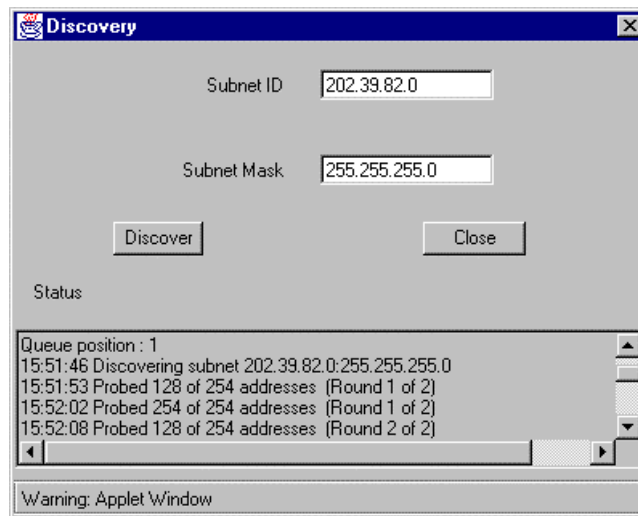
- It identifies Live Nodes on the subnet checks if the nodes have IP Forwarding and then fetches the name, SYSOID, and number of the interface of the node
- It fetches the IP table for all Gateways (IP Forwarding nodes). WebASM then builds a graphical view of the network from the information gathered by the discovery process

If you are using WebASM for the first time, the discovery process will automatically kick in and prompt you to start discovery.



Discover needs the Subnet ID and Subnet Mask to start the discovery process.

1. Type in the Subnet ID and the Subnet Mask, then click Discover to start the process. After Discovery finishes detecting the devices, the Cancel button will change to the Close button.



2. Click the Close button to exit.

You can also manually start Discovery in *Global View* or in *Subnet View*. If you start Discovery without selecting any subnet, then you will be prompted for the subnet ID and subnet Mask.

To start Discovery in *Global view*:

1. Select a subnet in the *Global View*.
2. Click *Operations -> Discover* at the menu bar to start Discovery.
3. Discovery will start detecting devices from that subnet.

To start Discovery in Subnet View:

1. Click *Operations* -> *Discover* at the menu bar to start Discovery.
2. Discovery will start detecting devices from that subnet.