Bandwidth Manager

Antamedia Bandwidth Manager is a Windows PC gateway software which helps you control and limit Internet usage, including download and upload rate, for every computer in your network. Computers can be limited with specified time and quota per session, day time when access is allowed and set to logout after inactivity. Software includes statistics and reporting with many useful features.
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1 Introduction

1.1 What is Antamedia Bandwidth Manager?

Antamedia Bandwidth Manager is a Windows PC gateway software which helps you control and limit Internet usage, including download and upload rate, for every computer in your network. Computers can be limited with specified time and quota per session, day time when access is allowed and set to logout after inactivity. Our bandwidth shaper is suitable for various purposes:
- Home or neighborhood Internet sharing, user connection limitation, blocking child sensitive URLs based on keywords
- Company Internet sharing, limitation, tracking what employees are visiting, and blocking sensitive content, desired non-work related websites etc.
- Internet and game cafes where every computer can have different download and upload rates. No additional Client software installations are required

Bandwidth Manager doesn't require any proprietary hardware so you can use any standard PC with two network cards. It's hardware independent and you can use any type of Access Points, Routers, Switches and other equipment. You can use it with WiFi, WiMax, LAN, Cable, DSL, Satellite and other type of network connections. Software includes statistics and reporting with many useful features.

1.2 How Can It Help You?

Bandwidth Manager Benefits
Antamedia Bandwidth Manager has advanced architecture which allows both, simple and very large networks. You can install it on one computer and start controlling computers from your network. As your network grows, you do not need to change anything. Everything is routed through the same computer which saves deployment time and maintenance. With use of Bandwidth Manager software you can control computer Internet access based on MAC, IP address or both, limit bandwidth quota, daily bandwidth quota, upload and download speed, usage time, daily usage time etc.

Defined Internet Access for Known and Unknown Users
If you offer Internet access to walk-in customers (unknown users), Bandwidth Manager helps you configure separate limitations for such users. By enabling Autologin, you can allow access for unknown computers on the network, with separate connection parameters. Advantage of our solution is very high customization of User accounts which allows creating limited or unlimited accounts. Among classic features like time and bandwidth quota limits, you can configure daily time limit, number of daily logins, number of simultaneous logins with aggregation which is very practical when offering free WiFi Internet. In addition, it's very easy to offer paid Internet access with higher speeds, quota or unlimited daily or monthly access.

Control Employee Internet Use
It is strongly recommended that you produce a company policy on Internet usage, ensuring that within it you include your policy on employee monitoring. That way employees know both what they can and cannot do and what you may be doing to observe them. Bandwidth Manager software have incorporated monitoring within actual control of what can be accessed. Software does not trap or record emails since they has raised more technical legal issues than accessing networks or websites.
Instead it simply records what computer and user accessed, what website, as that removes any challenge on the basis of “intercepting private communication”. From software you will be able to block access to sites and achieve the basic aim, which is reducing the time and bandwidth wasted on “web surfing”. Beside blocked access to sites, you can go further and set banned keywords within URLs, for example automatically blocking any website with “sex” or “porn” in the URL. Rather than presenting your employees with a blank screen, you can also set Bandwidth Manager to auto-redirect certain URLs to more work friendly sites. Alternatively you can display your Internet usage policy as a blunt reminder, or perhaps a request form, so if necessary the user can ask for an exception for that specific site.

**Offer WiFi Services in Your Hotel, Coffee Shop, Restaurant**
Offering high-speed wireless Internet services in one hotel will only help you increase occupancy and improve tenant and guest satisfaction. Furthermore, it will also represent additional source of revenue for your business. With the use of Antamedia Bandwidth Manager software in your WiFi Hotel, you will be able to:
- control and monitor access to the Internet for all computers, both wired and wireless in your guest rooms
- provide reliable wireless Internet access in your restaurant, lobby and conference rooms, which makes it ideal for seminars and meetings
- maintain secure access to the Internet resources outside the hotel, like on golf courses or by the hotel pools.

**Serve Walk-in Laptop Customers in Your Cyber Cafe**
If you run an Internet Cafe or Gaming Center, a great profit booster can be a wireless network. Many people use their own laptop for everyday job or on vacation to stay in touch with family and friends. Even in non-working hours of your primary business, your customers will be able to use your services and generate profit. Best of all, it's automated, there are no maintenance fee for computers, licenses for software and OS.

**Can Be Used in Various Locations**
Flexible architecture makes it suitable for different locations like Internet Cafe, Cyber Cafe, Resorts, Hotels, Motels, enterprises that provide Internet access to guests, Hospitals, Universities, Schools or other education institutions, Coffee Shops, Shopping Malls.
2 Requirements

In order to control wireless users, Bandwidth Manager software has to be set up on a gateway computer in your network. For minimal configuration you need 3 devices:
- Bandwidth Manager gateway PC
- Internet modem/router
- Wi-Fi device for providing access to users (Wi-Fi router or access point)

System requirements for Bandwidth Manager gateway PC:

We strongly encourage you to install Bandwidth Manager on SSD drive because it can significantly improve software performance.

- **CPU**: 2 gigahertz (GHz) or faster 64-bit (x64) processor
- **RAM**: 4 gigabyte (GB)
- **NIC**: 2 network interface cards, for maximum performance we recommend using Intel PRO/1000 (EXPI9400PTBLK) network adapters

Most modern computers have one network card built in, the other one you will need to purchase and install to computer’s PCI slot.

Please connect one network card to the Internet router and other one to Wi-Fi device that your customers will use to access Bandwidth Manager. If you plan to use a Wi-Fi router to provide access for customers, please connect it to server PC using LAN (not WAN) port.
Note that 2 network cards on the Bandwidth Manager server cannot be bridged, the Internal network has to operate in different IP range than External network. Please refer to the diagrams for the example IP settings.
2.1 **Network Adapters Setup**

Here are detailed step by step instructions how to set gateway computer network adapters to work with Bandwidth Manager NAT and support use of DNS WEB FILTER:

- **Static IP addresses** for network connection used for to the Internet router/modem.
  - It is recommended to set same IP address that is already assigned dynamically by router.
  - To see which IP NIC1 has currently assigned, go to Windows Control Panel - Network and Sharing Center screen
  - Click on Change adapter settings link and double click on the NIC (Internet) network adapter

- From General tab press on Details button.
Here you will see all current network connection details that you need to set as static.

After that go to Windows Control Panel – Network and Sharing Center screen.
Click on Change adapter settings link.
Right-click on NIC1 (Internet) and select Properties from menu.
- Select Internet Protocol Version 4 (TCP/IPv4) and click Properties button.

- Click Use the following IP address radio button and enter details that you get from ipconfig previously

- Enter IP address (e.g. 192.168.136.129), Subnet mask same as in Network Connection Details
  - IP address of the default gateway (IP of the Internet router)
• Enter DNS addresses such as Google (8.8.8.8, 8.8.4.4) **Static IP address** should be set for **NIC2**, the network card used for communication with the client computers.

• To set static IP address for NIC2, go to Windows Control Panel - Network and Sharing Center screen
• Click on Change adapter settings link and make right-click on NIC2 (Local) and select Properties from menu.

• Select Internet Protocol Version 4 (TCP/IPv4) and click Properties button.
- Click on Use the following IP address and set IP address (e.g. 192.168.9.1) and Subnet mask (e.g. 255.255.255.0) but not Gateway IP. Then press on Advanced ...

- From Advanced tab press on Add.. and add virtual IP address needed for DNS WEB Filter. Be sure that it is in same IP range with IP address and with same Subnet Mask (e.g. 192.168.9.2) and Subnet mask (e.g. 255.255.255.0)
2.2 **Network Topology Examples_2**

Here you can see couple network topology examples that can give you better insight into how you should set switches, access points and routers on local network in order to control it from Bandwidth Manager gateway PC.

**NETWORK TOPOLOGY EXAMPLE FOR DNS WEB FILTER SETUP**

- **Known users with defined access rights**
- **Antamedia Bandwidth Manager**

```
NIC 2 192.168.9.1
additional IP 192.168.9.2
Subnet 255.255.255.0
```

```
Switch
```

```
Obtain IP address automatically
OR
IP 192.168.9.3 - 192.168.9.254
Subnet 255.255.255.0
Gateway 192.168.9.1
DNS 192.168.9.1, 192.168.9.2
```

```
NIC 1 192.168.136.129
Subnet 255.255.255.0
Gateway 192.168.136.2
DNS 8.8.8.8, 8.8.4.4
```

Router

```
IP 192.168.136.2
ADSL
```

Internet
Network Topology Example for DNS Web Filter Setup

Devices in Local Network obtain IP address automatically

NIC 2 192.168.9.1
additional IP 192.168.9.2
Subnet 255.255.255.0

Access Point / WiFi Router
IP 192.168.9.3
Subnet 255.255.255.0
Gateway 192.168.9.1
DNS 192.168.9.1, 192.168.9.2

Antamedia Bandwidth Manager
NIC 1 192.168.136.129
Subnet 255.255.255.0
Gateway 192.168.136.2
DNS 8.8.8.8, 8.8.4.4

Router
IP 192.168.136.2
ADSL

Internet
NETWORK TOPOLOGY EXAMPLE FOR DNS WEB FILTER SETUP

Unknown users with assigned download/upload quota

Access Point / WiFi Router
IP 192.168.9.10
Subnet 255.255.255.0
Gateway 192.168.9.1
DNS 192.168.9.1, 192.168.9.2

Antamedia Bandwidth Manager
NIC 2 192.168.9.1
additional IP 192.168.9.2
Subnet 255.255.255.0
DHCP enabled

Devices in Local Network obtain IP address automatically

Access Point / WiFi Router
IP 192.168.9.20
Subnet 255.255.255.0
Gateway 192.168.9.1
DNS 192.168.9.1, 192.168.9.2

Ethernet Connection over Switch

Known users with defined access rights

Internet

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3 Bandwidth Manager Setup

3.1 Pre-installation Steps

Before installing Antamedia Bandwidth Manager software, please ensure that following conditions are met:

✓ Windows account on which software will be installed and used must have administrative privileges.

✓ Windows User Account Control is set to Never Notify level.
  - Go to Windows Control Panel – User Accounts screen
  - Click on Change User Account Control settings link
  - Move the slider to Never Notify level and click OK
  - Restart the computer to apply changes

✓ Windows Smart Screen is turned off.
  - Go to Windows Control Panel - Security and Maintenance screen.
  - Click on Change Windows Smart Screen settings
  - In new window select "Don't do anything (turn off Windows Smart Screen)" and press on OK
  - Restart the computer to apply changes

✓ Windows Defender exclusions are set.
  - Go to Windows Control Panel - Windows Defender and click on Settings.
  - Exclusion section press on "Add an exclusion" to exclude C:\Antamedia folder.
  - Restart the computer to apply changes

✓ Microsoft Security Essentials should not block it (Windows 7):
  - Go to Windows Control Panel and start Microsoft Security Essentials click on Settings.
  - From "Excluded files and locations" panel press on browse and select C:\Antamedia folder.
  - Press on Add and Save changes button

✓ Antamedia Bandwidth Manager software can be used to set computer as gateway using Bandwidth Manager NAT.
  Beside that, computer may be set as gateway using Windows Connection Sharing and Windows Routing and remote access. For additional information's about the Windows configuration and setup be free to consult our technical support.

✓ There are no applications running on gateway PC that are using port 78, 80, 81, 82, 443, 463, 614, 12010, 1700, 1812, 1813 (IIS, proxy software).
3.2 Software Installation

Once when pre-installations steps are done you can proceed with Bandwidth Manager software installation. As soon you start Bandwidth Manager software installer on computer you will get notification "Reboot Required"

After that start Bandwidth Manager installer if it is not started automatically. Select "I accept terms in the license agreement" and press on Next
New window will give you option to choose between Express Install, Custom Install or Uninstall. We recommend you to select Express Install and press on Next.

During Bandwidth Manager installation process you will be informed about current installation of required drivers, Database Server and creating of required files. Reboot is required when process in completed.
3.3 **Setup Wizard**

After reboot login on Bandwidth Manager. As soon it is started you will get Setup Wizard that will guide you through basic setup.

If you select "No thanks, do not show wizard again" and press on Close button, you will need to go to **Setup - Network** tab and to set manually network adapters and autostart. Then press on **Save** and **Start** button.
If you click on **Lets Start!** button, you will get ability to set upload and download limit for the accounts. Press Next to continue.

From new window you get instructions what are computer requirements and how to set it as gateway on network. Press Next to continue.
This window shows information about selected network interfaces. Press Next to continue.

Last window gives Final notes regarding setup of Bandwidth Manager software. Press on Close Wizard to stop it.
Be sure that network connections are properly selected from Network and press on Start
After that go to DNS WEB FILTER panel. From Blacklist tab select desired Category and press on Save & Activate button. Here is required to set your Virtual IP address (e.g. 192.168.9.2) then Enable and Start it.
Then go to **DNS** tab and set your Virtual IP address (e.g. 192.168.9.2) then **Enable DNS Web Filter** and **Start** it.
As soon as computer connects to your Access Point (or switch in case of wired connection) and type any web URL address, computer will access to Bandwidth Manager network based on the software configuration. Computers that have account configured in software will be controlled based on User settings, while computers without an account will be controlled based on settings configured on Users - Autologin page.

Main screen shows the most important details of connected computers: IP and MAC address, time, quota, download and upload rate and inactivity timeout. Bottom status line shows number of connected computers as users and current total download and upload rate represented in KB/sec, and these values are continuously updated. On top status bar software displays important messages, like users login and logout, so you can always see what’s happening on your Bandwidth Manager.
From the main screen represented on picture below, you can choose one of the options:

**CONNECTIONS**  Displays (logged in) computers and their current status  
**USERS**  Network interface which connects Bandwidth Manager to your client network  
**STATISTICS**  Contains log, statistics and reports, visited URLs and connection log showing who is trying to login in your network  
**DNS WEB FILTER**  Integrated DNS server uses blacklists to filter HTTP and HTTPS traffic.  
**SETUP**  Administrator configuration options  
**LOGOUT**  Lock Bandwidth Manager software to prevent unauthorized activity. Bandwidth Manager continues traffic control after employee or administrator logout.

From the main screen you can automatically Create User based on current Autologin session, Stop Device, Add to Whitelist or Set Download / Upload Speed for active session.

If you prefer smaller computer icons, you can switch to compact view and display more computers on screen. Option is located in Bandwidth Manager - Setup - Options - Options page.

Inactivity field is showing remaining time until automatic logout. Inactivity is optional for every account and default number of seconds can be specified in Bandwidth Manager - Network page.
# 5 Users Limitations

## 5.1 Users Configuration

Configure login parameters for known Users on your network from Bandwidth Manager Users panel. To define User configure IP address, MAC, or both.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IP address</strong></td>
<td>Specify user computer IP address that will be used for login.</td>
</tr>
<tr>
<td><strong>MAC</strong></td>
<td>Specify user computer MAC address that will be used for login.</td>
</tr>
<tr>
<td><strong>Download</strong></td>
<td>Set maximum download speed that computer can download from the Internet. Download speed is represented in: KBytes, Kbits, MBytes or Mbits</td>
</tr>
<tr>
<td><strong>Upload</strong></td>
<td>Set maximum upload speed that computer can upload to the Internet.</td>
</tr>
<tr>
<td><strong>Quota</strong></td>
<td>Set bandwidth quota that computer can download or upload from the Internet. In the right dropdown menu select if quota is represented in: Bytes, KB, MB, GB or TB</td>
</tr>
<tr>
<td><strong>Unlimited quota</strong></td>
<td>Unlimited Quota checkbox enabled means that bandwidth quota is not limited for computer.</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Limitation how much time computer can spend on the Internet via Bandwidth Manager.</td>
</tr>
<tr>
<td><strong>Unlimited time</strong></td>
<td>Unlimited Time checkbox enabled means time that computer time on the Internet is not limited from Bandwidth Manager.</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Enter description for this computer.</td>
</tr>
<tr>
<td><strong>Allow login in time interval</strong></td>
<td>Tick this option to enable computers autologin only in selected time interval.</td>
</tr>
<tr>
<td><strong>Pause between logins</strong></td>
<td>Use it to set time limit between two logins from same computer.</td>
</tr>
<tr>
<td><strong>Expire</strong></td>
<td>This option defines user expiration date. Set computer user expiration date in the field or untick option if you want to disable account expiration.</td>
</tr>
<tr>
<td><strong>Bandwidth quota daily limit</strong></td>
<td>Specify how much Internet bandwidth computer can use per day. When daily limit exceed, computer will be logged out automatically.</td>
</tr>
<tr>
<td><strong>Limit daily time usage</strong></td>
<td>Specify how much time computer can be logged per day. When daily limit exceed, computer will be logged out automatically. Next day, autologin for computer will be enabled again.</td>
</tr>
<tr>
<td><strong>Limit number of daily logins</strong></td>
<td>Specify how many times daily computer can login to Bandwidth Manager.</td>
</tr>
<tr>
<td><strong>Inactivity timeout</strong></td>
<td>Use it to enable automatic logout if client do not use Internet bandwidth for specified time period.</td>
</tr>
<tr>
<td><strong>Active</strong></td>
<td>With this option you specify does computer user account can be used for access or not.</td>
</tr>
</tbody>
</table>

When you finish configuring login parameters for known user press on Add User button to save it and add to Users list.
**Remove User**  To remove user from User list, select user and press on Remove User button.

**Clear & New User**  Press on this button to reset setup user computer fields for new configurations.
5.2 Autologin Configuration

From Bandwidth Manager - Users - Autologin panel you can configure default settings, these will be used when unknown computers connect to the Internet through the software.

**Enable Autologin**
Tick this option to enable autologin for unknown computers, otherwise only computers with accounts will be able to connect.

**Download**
Set maximum download speed that computer can download from the Internet. Download speed is represented in: KBytes, Kbits, MBytes or Mbits.

**Upload**
Set maximum upload speed that computer can upload to the Internet.

**Quota**
Set bandwidth quota that computer can download or upload from the Internet. In the right dropdown menu select if quota is represented in: Bytes, KB, MB, GB or TB.

**Unlimited quota**
Unlimited Quota checkbox enabled means that bandwidth quota is not limited for computer.

**Time**
Limitation how much time computer can spend on the Internet via Bandwidth Manager.

**Unlimited time**
Unlimited Time checkbox enabled means time that computer time on the Internet is not limited from Bandwidth Manager.

**Inactivity timeout**
Use it to enable automatic logout if client do not use Internet bandwidth for specified time period.

**Allow login in time interval**
Tick this option to enable computers autologin only in selected time interval.

**Pause between logins**
Use it to set time limit between two logins from same computer.

**Disable access in ___ days from first login**
Use this option to set for how many days from first login user will be possible to access to Internet over Bandwidth Manager.

**Bandwidth quota daily limit**
Specify how much Internet bandwidth computer can use per day. When daily limit exceed, computer will be logged out automatically.

**Limit daily time usage**
Specify how much time computer can be logged per day. When daily limit exceed, computer will be logged out automatically. Next day, autologin for computer will be enabled again.

**Limit number of daily logins**
Specify how many times daily computer can login to Bandwidth Manager.
5.3 Autologin Sessions

From Bandwidth Manager - Users - Autologin Sessions panel you can see a list of all user devices that were automatically logged-in. A user device in this list may access the Internet as long quota, time or some other parameters meet autologin criteria. Expired user can not access Internet until you delete it from the list or until it’s re-enabled automatically using the options below.

**Delete Selected**  
Delete selected autologin user from the list.

**Delete all**  
Delete all autologin users from the list.

**Re-enable expired user after _ days and _ minutes**  
Specify after how much time expired user will be automatically enabled.

5.4 Disconnecting From The Internet

Bandwidth Manager user will be disconnected from the Internet automatically when left time or bandwidth quota expires.

If you enable option **Inactivity timeout** from Setup - Network page, session will be automatically closed and user disconnected after specified time period.
Network Setup page shows the following options:

**Network Interface 1** Network interface which connects to your Internet router, modem, 3G-4G modem etc.

**Network Interface 2** Network interface which connects Bandwidth Manager to your client network

**Autostart HotSpot** Automatically starts Bandwidth Manager control when program starts

**Maximum users** Maximum number of users connected at the same time

**Inactivity logout** Automatically disconnects a user after specified time of inactivity

**DNS Redirector** Redirect devices and computers from local network to Internet based on DNS

**Start** Press Start button to activate Bandwidth Manager control

**Stop** Press Stop button to deactivate Bandwidth Manager control

**Save** Save network settings

The first step in setting up the Bandwidth Manager is sharing Internet connection. This step is required in order to allow all customers in your network to access the Internet.
There are several ways to share the Internet connection. It can be done by:

- Using Antamedia Bandwidth Manager NAT (Network Address Translation).
- Using Microsoft Internet Connection Sharing available in Windows operating system
- Using Routing and Remote Access available in Windows Server editions

After you configure Internet sharing, please select **Network Interface** which connects your network to the Bandwidth Manager. On the selected network interface Bandwidth manager will activate portal control. By changing the network interface, **IP address** will be automatically filled in. Please enable **Autostart** and press on the **Save** button to store your settings.

The last option to configure is **DNS redirector**. Please type here one of the DNS addresses specified by your Internet service provider, or any other working DNS server. This option helps in cases when customer has incorrectly configured DNS address. Bandwidth Manager will redirect client to the correct address and DNS query will be resolved.

The last step is clicking on **Start** button for activating Bandwidth Manager engine. From that moment your customers access to Internet is limited and done based on configuration over Bandwidth Manager.

If you have issues with access to Internet from local network, please check [pre-installation steps](#)
7 DNS Web Filter

7.1 DNS Filter Setup

DNS Web Filter use blacklist to filter HTTP and HTTPS Traffic. Beside many already predefined sites in blacklist, you can add manually your own URL's.

From DNS Web Filter - DNS page is required to set following options:

- **Virtual IP on LAN NIC**: This is virtual IP address configured on the LAN NIC. It is required to enable DNS WEB Filter.
- **DNS port**: DNS Port over which filter is working.
- **Source DNS**: Source DNS can be predefined with default values 8.8.8.8 and 8.8.4.4.
- **Exclude IP or IP Range**: Specify IP or IP range for which filter will be excluded.
Please select where to redirect blocked website:

- **Redirect to Restricted page**
  Enabling this option will redirect user with blocked content to Restricted Page

- **Redirect to URL**
  Enabling this option will give you field to specify URL address of web site where user will be redirected

- **Redirect to IP**
  Enabling this option will give you field to specify IP address to which user will be redirected

To activate it select **Enable DNS Web Filter** and press on **Start/Stop** button.

If you have issues in setup and configuration of **DNS Web Filter** you can **Watch Video** or to get detailed instructions in the **PDF Setup Guide**.
7.2 Blacklist

From Blacklist page you will set Categories and sites that will be blocked for your users.

Step 1: Press on Download Updates button to get latest blacklist package.
Step 2: Select Categories that you want to block.
Step 3: Press on Save & Activate button

In case that some URL should be whitelisted, press on Add URL to Whitelist
Search filed is useful in case that you need to find site which is blocked by mistake
7.3 Whitelist

From DNS Web Filter - Whitelist tab page you can see a list of Whitelisted sites from Blacklist. Using Search field you can easily find any website address that you add to this list.

Management over the whitelist is done using available set of options:

- **Update List**: Network interface which connects to your Internet router, modem, 3G-4G modem etc.
- **Add new URL to Whitelist**: Network interface which connects Bandwidth Manager to your client network
- **Delete URL**: Automatically starts Bandwidth Manager control when program starts
- **Save & Activate**: Maximum number of users connected at the same time
7.4 Restricted Page

From Bandwidth Manager DNS Web Filter - Restricted page you can set and modify restricted page code.
Database Server

Antamedia Database Server is additional application that stores software database files (including: users, statistic reports, action log database etc.). Database Server installer is included in the Bandwidth Manager installer which is available for download from Antamedia web site download page (www.antamedia.com/download).

Database server can be installed on the same computer as Antamedia Bandwidth Manager or some other computer. For small installations (100 simultaneous users) Database Server can be located on the same computer, assuming that such computer is fast enough to handle all tasks. Please use Task Manager to monitor system resources and CPU usage. When idle, Bandwidth Manager and Database Server doesn’t show any significant CPU usage. However, with large number of concurrent users, Bandwidth Manager and Database Server might reach 40-50% of CPU usage, and this is a sign to move Database Server to other computer.

Upon installing Database Server, Installer will start ADBConfigurator (Antamedia Database Configurator) which will perform maintenance, update and add new database tables, stored procedures, triggers etc.

Recommendation: To keep your database safe, please use UPS (Uninterruptible power supply) on a computer where Database Server is installed. In case of power issues, database will remain intact. Power problems might lead to corrupted database and cause downtime. You can learn more about UPS in Wikipedia: http://en.wikipedia.org/wiki/Uninterruptible_power_supply
8.1 Connecting With Database Server

On the first run of Antamedia Bandwidth Manager, setup Wizard will configure Database Server IP address, and you will not need to modify anything on this page. If you have installed Database Server on other computer, please configure correct IP address.

Database settings page contains following options:

- **DBServer IP Address**: IP address of the computer where Database Server has been installed. This IP is usually the same as Internet Cafe IP address or it use local host IP address 127.0.0.1.
- **DBServer Port**: Port used by Database Server. Default port is 12010*.
- **DBServer Username**: Database Server username. Default username is Administrator*.
- **DBServer Password**: Database Server Password. Default password is EDBDefault*.
- **DBServer Compression**: If Internet Cafe is connected to the Database Server through the Internet it is recommended to use higher compression to get a faster response from the database. When running on the same computer, default compression setting (6) is recommended.
- **Save & Reconnect**: Save settings and reconnect software to the Database Server.
Options

From Bandwidth Manager - Setup - Options - Options page should be set following:

Display small laptop icons
With this option choose the size of laptop icons located in main server screen.

Improve performance by minimizing Bandwidth Manager
Enable function to minimize Bandwidth Manager software after specified time period of inactivity.

Software Priority
Choose level of software priority between Normal and High

Time display format
Choose time format that is shown in the HotSpot software: HH:MM (2:35), Hh:Mm (2h 35m), Hh:Mmin (2h 35min), M m (155m), M min (155 min)

Quota display format
Choose quota format that can be shown in: bytes, KB, MB, GB, TB, PB

Bandwidth display format
Choose download and upload speed display format: KB (KBytes), Kb (Kbits), MB (Mbytes), Mb (Mbits)
Default Administrator login password is blank. Option to define new Administrator password is located on the Bandwidth Manager - Setup - Options - Options page. Type new password in **Main Administrator password** field and press **Save** button.

Confirm Administrator password in new pop-up menu and press **OK** button.
11 Autologin

Autologin option is used to allow Internet usage for specified computers based on IP and MAC address, VOIP etc. Autologin will be activated automatically when computer try to access to the Internet through the Bandwidth Manager server. Under the Bandwidth Manager - Setup - Options - Autologin tab specify ports that will trigger user autologin.

Tick Enable Autologin option on Users - Autologin tab to allow autologin.

* Bandwidth Manager software restart is required after enabling or disabling autologin feature
12 Whitelists

Whitelist is used to specify the computers which should pass through the software without authentication. Such computers are not listed at the Connections page, and their usage is not tracked. Whitelist can be used, for example, to let your IP cameras communicate without login procedure. You can also whitelist some of the computers which should be accessed remotely. Bandwidth Manager uses IP whitelist and MAC whitelist to define which computers are allowed to pass-through without authentication.

12.1 MAC Whitelist

Antamedia Bandwidth Manager software gives you ability to specify MAC addresses of computers which should pass through the software without authentication. MAC address is a unique identifier attached to most forms of networking equipment.

To add new computer that should pass without authentication type MAC address in Add MAC address to whitelist and press Add button. To remove computer from whitelist select it with the left mouse click from the whitelist and press Remove button. When you finish, please press Save button.
12.2 IP Whitelist

This type of whitelist is useful if computers in your network have static IP address. To add computer IP address that should pass to the Internet without authentication, please type computer IP address in **Add IP address** field and press **Add** button. To remove computer from the whitelist, please select computer IP address in the whitelist using left mouse click and press **Remove** button. When you finish, please press **Save** button.
12.3 **Host Whitelist**

Host whitelist helps you to allow access to specified websites without authentication. This feature can be used in advertising purposes, where you can allow the access to some websites without authentication. For example, your website which is located on the remote web hosting company. You can specify the host IP address or the host name like: 100.200.50.1 or www.mywebsite.com

In the Setup - Whitelist - Host Whitelist page you can see two different ways to add website to the whitelist:

**Add host IP to whitelist** - If you know website IP address (like 100.200.50.1)

**Add host URL to whitelist** - If you know website URL address (like www.mywebsite.com)

Press Add button to add host IP or host name, or press Remove button to remove host IP or URL address selected in the whitelist. When you finish, please press Save button.
URL Tracking feature helps you to track web pages which your customers visit on the Internet. By default, Bandwidth Manager will track *.htm, *.html, *.asp, *.php, *.txt files, but you can modify the list or add new extensions. We do not recommend tracking graphic files (like *.jpg, *.gif ...) since this significantly increases the processing. Using URL tracking you can also track the web pages which include specified keyword.

To add new a new keyword or extension, please type it in the Add keyword or extension field and press Add button. To remove keyword or extension from the list, please select it from the list using left mouse click and press Remove button. When you finish, please press Save button.

After enabling or disabling URL tracking option, Antamedia Bandwidth Manager should be restarted.
14 **IP & Port Filtering**

Outgoing traffic is filtered with IP and blocking rules. To block access to some ftp server or SMTP you can define IP and port range. Define **Starting IP address**, **Ending IP address**, **Starting port** and **Ending port**. Use Add button to add IP/Port rule to the list. To remove specified rule from the list select it with left mouse click and press Remove button. Use Save button.
Antamedia Bandwidth Manager has the ability to run as **Windows Service** which brings several benefits: application will start when computer starts, security is increased as there are no logged in users while application runs, Windows can control service and restart it if needed.

To run as a service, several changes will be done to your system: Bandwidth Manager will stop current logged in users and two applications will be installed as a service: Bandwidth Manager and Database Server. After you install and start the services, please confirm from any client device that Internet access works as usually. When running as a service, Bandwidth Manager graphical interface can be started on the same computer to manage the settings. The service will continue to work in the background.
16 **API Integration**

Antamedia Bandwidth Manager can be easily integrated with the third-party software. This feature is located at Bandwidth Manager Setup - API page. Integration is done as a HTTP GET query and XML response which offer very short integration time. This feature allows you to perform actions in Bandwidth Manager from third-party software, such as user login, logout or user creation.

To put it simply, it works this way:
1. Your software should send a formatted query similar to URL you type in browser to see certain web page
2. Our software gets this query, parse it and execute the actions
3. Our software generate XML response with details and return it to your software
4. Your software parse XML and process the data

To activate this feature please **Enable Integration**, specify **port** (1082 by default), and **Secret PassPhrase**. Purpose of the PassPhrase is to protect from unauthorized usage while allowing you to use integration commands from different IP addresses. The time is displayed in seconds, Quota, Download, Upload are in kilobytes. Other fields with 0 and 1 represent false and true. If you have specific integration requirements, please contact Antamedia.

![API Integration Page](image-url)
17 Statistics

17.1 Log

Bandwidth Manager log shows actions and events initiated by Bandwidth Manager users, operator or software.

Log shows the following details:
- Level (Information, Warning, System Error), Date and Time, Description, Action (Login, Logout), IP and MAC

To display all the log items for specified time period, please select starting and ending date in the From and To fields and press Show button. If you like to show log for specific computer, please enter its account, IP or MAC address and press Show button.
17.2 URL Log

URL log page located in the Bandwidth Manager - Statistics - URL Log shows a list of the websites which your customers have visited. URL log is periodically saved to a hard drive (on each 1000 websites listed) and cleared, in order to keep good performance. If you like to check which pages your customers have visited on a specific day, please check the info in C:\Antamedia\Bandwidth Manager\Log folder. The files are named with the date and time when log was created.
17.3 **Connection Log**

Connection log shows all the connection attempts to your Bandwidth Manager which can give you a realtime report who is trying to login to your network. It is a powerful tool which shows IP and MAC address and the port which remote computer is trying to access, it also shows successful logins list with details such as time, user's IP, language of the client browser, user's device type and initial URL accessed during login.

This log can be used to monitor your network, to detect if any hacking attempts are in progress, to identify a reason when a customer is having a problem to login.

In case when **Autologin** feature is enabled, **connection log** will show which connection was granted to login automatically, based on autologin settings.

To activate this feature, please **Enable Connection Log**.
17.4 **Statistics Report**

Statistic report is providing valuable data about your Bandwidth Manager operation. It will show you **total time usage, bandwidth, number of logins** for selected day or time period.

Statistical data is collected continuously, after each customer logout, so you can always enjoy fast report display on screen.

Statistics is available in Chart and Table mode. By default, statistics is displayed in chart mode, giving you a graphical overview of Bandwidth Manager activity. You can see, for example, time usage displayed in minutes, over the selected period displayed as days of the year.

Depending on the date range selected, you will see an activity in 24 hours for current day, or for a time period defined with the starting and the ending date in the From and To fields.
Table mode shows statistics in a condensed view on a daily basis. For each year, month, and day, you will see usage time, number of logins, download and upload.
17.5 **Usage Report**

Usage report is a session based report which precisely shows **who**, **when** and **how much** has used your Bandwidth Manager services.

**Report details** are: IP, MAC, Start time, End time, Usage time, Download and Upload

To display usage report for specified time period, please select the starting and the ending date in the From and To fields, or choose one of the predefined time periods (Today, Yesterday, Last 7 days etc.), and press **Show Usage Report** button. You can filter such report for a specified account, IP or MAC address.

From Report type are offered: Usage Log (shows all sessions and its details), Summary per MAC (get totals for the selected MAC address) and Summary per IP address (get totals for the selected IP address)
License

After ordering software from our site [http://www.antamedia.com/buy/bandwidth/](http://www.antamedia.com/buy/bandwidth/) you will receive confirmation e-mail and informations about your Customer ID.

Go to Bandwidth Manager - Setup - License page. Click on Antamedia logo located in the center of the page.

If you already installed Antamedia software you will not have to change any configuration. All your settings will remain there and the trial limits will be removed so you can enjoy all features without restrictions.
Fill in all required fields and click on 'Send Request' button

We will make your unique license and send it to specified e-mail address. If you have any issues with the license, please contact directly our sales department at sales@antamedia.com