

# Tech Overview : IP / MAC Addresses as a Basis for Recording

## The Need for Effective Internet Recording Devices

The Internet provides businesses with significant convenience and speed, but it has also bought about a new avenue for employees to abuse. According to statistics, during business hours approximately forty percent of employees use the Internet for their own personal use. Consequently, a growing number of businesses are now utilizing Internet recording devices to put a stop to these inappropriate online activities.

## Recording Internet Services Based on IP / MAC Addresses

Internet recording devices are capable of recording vast amounts of data. For classifying this data to identify users, Internet recording devices adopt a recording basis. The majority of Internet recording devices use IP-address-based recording to associate online activities with a user. Despite this approach being viable for the majority of network setups, it can't be applied to networks utilizing dynamic assigned IP addresses ( i.e. DHCP ).

To accommodate for all the different kinds of network setups, Nusoft Internet Recorder does not just provide IP-address-based recording, MAC-address-based recording is also provided as an additional option ( see Figure 1 ).

## Key Differences between the Two Recording Methods

### IP-Address-Based Recording

This method associates every user with an IP address and is therefore suited to networks adopting static IP addresses. If the network is utilizing dynamic IP addresses, inaccuracies between the user and associated IP address will occur whenever the DHCP server distributes new IP addresses.

For networks containing a router, IP-address-based recording must be adopted. This is due to packets passing through the router will have their MAC address replaced with that of the router.

### MAC-Address-Based Recording

This method is suitable for both statically and dynamically distributed networks due to an association being built with a user and their MAC address. MAC-address-based recording can still effectively nail down individuals who purposely modify their own IP address to evade recording.



Figure 1 Selecting IP Addresses as Recoding Basis



## Product News : The Necessity of IM Software Management



In recent years, the benefits exhibited from instant messaging software such as the convenience, speed and no charges have resulted in it becoming a vastly popular communication medium. Real-time communication combined with no cost has been the main attraction for businesses and clients to use it as their primary means for correspondence. However, this convenience has come at a cost for some business as employees can easily install it and engage in their own personal non-work related activities.

On the one hand, instant messaging provides businesses with immense benefits, but on the other hand, its misuse has resulted in a major productivity loss for businesses. As a result, businesses have tried to manage its use in ways such as blocking the port number, but these have proved unsuccessful for firewalls due to the variety of port numbers that it can adopt (including HTTP port 80). Businesses are left with dilemma of deciding whether to completely ban their use.

Nusoft Internet Recorder can provide detailed recordings of instant messaging software such as MSN, Yahoo, QQ, ICQ and Gadu-Gadu, etc. Along with a range of management controls and authentication options, it allows IT administrators to take full control over the employees' instant messaging use.

### Available IM Controls

#### Only accept unencrypted messages (applies to MSN and Gadu-Gadu)

Since the encrypted conversations made from either MSN or Gadu-Gadu is not recordable, the IT administrator can choose to block the use of encrypted MSN and Gadu-Gadu conversations, preventing employees from using encryption to evade being recorded.



#### Only accept authenticated users sending unencrypted messages (applies to MSN and Gadu-Gadu)

To assist IT administrators placing controls over employees' instant messaging use, Nusoft Internet Recorder comes with an authentication mechanism. When this option is enabled, only authenticated users sending unencrypted messages will be permit.

#### Only accept authenticated users (applies to MSN and Gadu-Gadu)

This option only permits users who have been authenticated with the device.



**Accept all instant messaging users (applies to MSN, Yahoo, QQ, ICQ, Skype, Gadu-Gadu, Google talk)**

This option places no instant messaging restrictions on users.



**Block all Instant messaging users (applied to MSN, Yahoo, QQ, ICQ, Skype, Gadu-Gadu, Google Talk)**

With this option, the device bans the use of instant messaging software.

**Only accept users with a valid password (applies to QQ)**

For encrypted instant messaging software such as QQ, the device is capable of recording the information of registered users only. Thus, the IT administrator can only accept registered users to ensure the management of instant messaging software.



**Only accept authenticated users with a valid password (applies to QQ)**

Employees can use the instant messaging software only if they are registered and authenticated by the device.

**Only accept official Web messenger (applies to MSN Web messenger)**

Nusoft Internet Recorder can block the use of Web instant messengers as well as record the contents. (Official MSN Web messenger only)



**Accept all Web messengers (applies to MSN, Yahoo messenger, QQ and ICQ)**

IT administrators can select this mode to allow the use of all Web instant messengers.

**Block all Web messengers (MSN, Yahoo messenger, QQ and ICQ)**

IT administrators can select this mode to forbid the use of all Web instant messengers.

Apart from the above mentioned management controls (known as the Default Rule), Nusoft Internet Recorder is also able to apply rules to each instant messenger account (known as the Account Rule). As a suggestion, IT administrators can begin making configurations from the Default Rule and then use the detailed settings provided in the Account Rule.