IP/MAC/Hostname-Based Network Access Controls

Technical Note

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IPScan can be used to register specific, required MAC address, IP address and Hostname combinations for gaining network access, and to enable blocking of violating MAC/IP/Hostname combinations as well as unknown MAC and IP addresses. Specifically, IPScan can defined policies that require:

- That only a single or multiple defined IP addresses may be used with a specific MAC address
- That only a single or multiple defined MAC addresses may be used with a specific IP address
- That only a single defined hostname may be used with a specific MAC address

Definition of these policies can be done after automatically scanning all the active IP devices on the network, so that all the administrator needs to do is confirm the current settings being used on the network. This auto-detection and policy registration capabilities greatly decreases the manual labor needed to register and define per user network access control policies.

Policy definition can be performed on a per probe or on a network-wide basis by opening a view of IP devices on the network in the IPScan Console (these can be viewed inclusively or based on whether they are online or offline), right clicking on one more IP devices, then selecting the Apply MAC/IP registration options, as seen in figure 1:
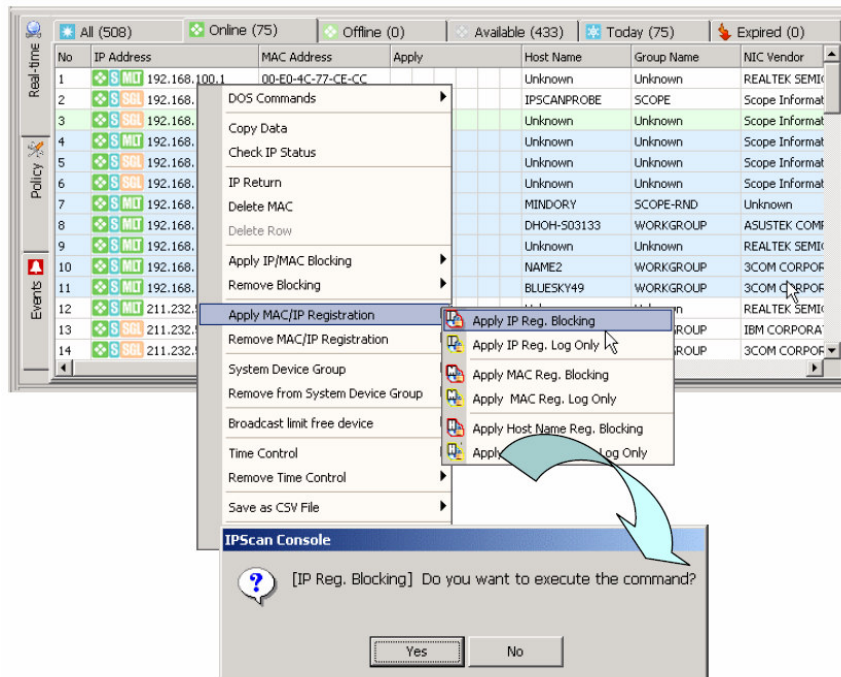

Figure 1: Implementing MAC/IP/Host based network access controls with IPScan

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After implementing MAC/IP/Hostname policy restrictions on network access, the network administrator can apply new IP and MAC address blocking to prevent unknown addresses from accessing the network. This option is implemented at the probe level in the IPScan Console and is performed separately for new IP blocking and new MAC blocking, as shown in Figure 2:
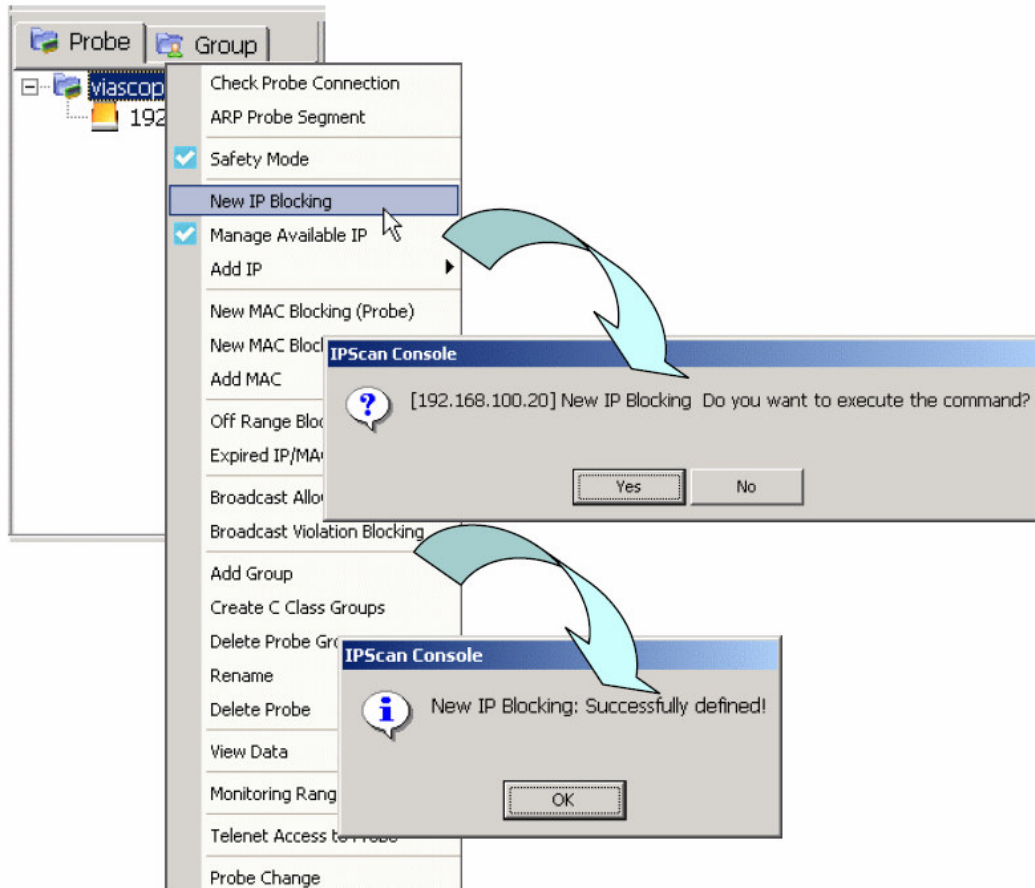

Figure 2: New/Unknown IP and MAC address blocking enabled in IPScan

By applying MAC/IP/Hostname policies to known IP devices, then implementing automatic blocking of new and unknown MAC and IP addresses, network managers can ensure the integrity of basic IP network access control across all IP devices, whether their IP addresses are statically or dynamically assigned.

IPScan is the only solution that provides full management, access control and auditability of all IP devices on the network. Deployed in production by dozens of global Fortune 2000 enterprises, government and military organizations, Services Providers and educational institutions, IPScan is the leading IP/MAC access control solution.

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