

## Skype – Voice over IP threat to Mobile Operators

Skype has been installed by over 250,000,000 users worldwide, mainly on their PCs to allow them to engage in free VoIP telephone calls, file transfers, conference calling, voice-mail and video calling functionality. There are additional services offered by Skype that allow users to Skype-out (call to the standard PSTN services) and Skype-in (call from PSTN to Skype-enabled devices) at local rates.

Many mobile telephones now run Windows derivatives and Skype can be installed on those devices. The user can then utilize the mobile operators network to use Skype functionality.

This is a major threat to the calling revenue of mobile operators.

Blue Coat's ProxySG family of appliances can recognize Skype traffic being sent across the network and (working together with firewalls) the ProxySG appliances can block Skype, ensuring the mobile operators call revenue is not negatively impacted.

Some mobile operators may choose to offer a premium-rate value-added service where authorized users pay an additional amount each month to allow them to use Skype. As the ProxySG appliances can integrate with both the operators LDAP and RADIUS directories, the operator can deploy Blue Coat appliances to block Skype for most users and allow it for users who sign up for the premium-rate service.

Operators can provide a web-based interface where users self-select the Skype-enabled premium-rate service.

## Technical Overview

If the operator uses the port-blocking capabilities of firewalls to block the standard IP ports used by Skype, then the Skype application will try to transmit its data over TCP port 80 or TCP port 443, commonly used for web browsing and SSL traffic respectively.

As the traffic over port 80 is not valid HTTP traffic, the ProxySG can recognize this and block the Skype traffic.

Skype then tries to use port 443, the standard port for HTTPS traffic. The ProxySG can be configured to block all traffic over port 443 that does not contain a valid SSL certificate.

In this way, Skype is blocked effectively from the mobile operator's network.

### Blocking Skype:

- Skype is a service that offers free VoIP calls worldwide between Skype-enabled devices.
- Most devices enabled to use Skype are PCs, however mobile 'phones are becoming Skype-enabled at a growing rate.
- There are now more than 250 million Skype users worldwide
- Skype is a major threat to the revenue stream of mobile operators
- As more mobile phones becomes Internet-ready, the threat keeps increasing
- Blue Coat can block Skype within Mobile Operator networks
- Operators may choose to embrace Skype and offer a value-added service that includes Skype
- Blue Coat can integrate with LDAP and RADIUS directories simultaneously to enable the operator to offer this premium service
- Users can be offered a web-based self-select service to sign up for a contract that allows Skype traffic to pass across the network.