

Clearspan[®] Communicator Desktop for Windows – Quality of Service

APRIL 2016

TECHNICAL NOTES



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PURPOSE

This document describes the steps required to successfully implement Differentiated Services Code Point (DSCP) markings for RTP packets originated by the Clearspan Communicator application in a Windows environment. This allows Clearspan Communicator users to prioritize the outbound RTP media traffic associated with the Communicator application, in order to ensure the best possible audio and video experience.

OVERVIEW

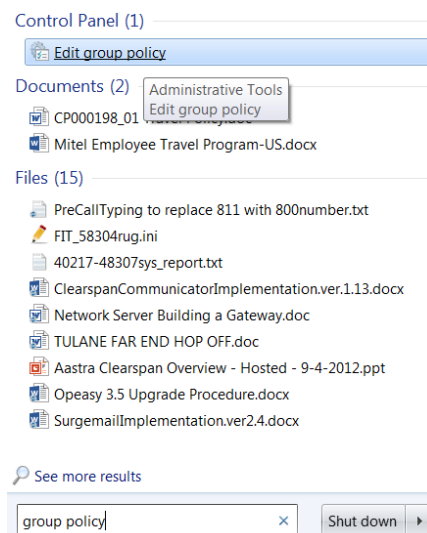
Achieving an acceptable Quality of Service (QoS) in VoIP communication is heavily dependent upon the bandwidth, latency, and jitter characteristics of the network over which it flows. One of the methodologies available to help ensure acceptable audio and/or video call quality is the marking of Real Time Protocol (RTP) media packets with a high-priority DSCP setting, typically Expedited Forwarding. The DSCP markings are intended to be used by routers (and some switches) in the end-to-end path to accordingly prioritize packet flow. It must be noted however that ALL switching/routing components in the IP path must be intentionally configured to respond to DSCP settings and behave accordingly; it is not the default behavior in private networks, and it is not an implemented behavior on the public Internet. Such configuration of network switches and routers to read and respond to DSCP settings is outside the scope of this document.

Assuming the subject network environment has been set up to prioritize packet delivery based on DSCP, a Windows Group Policy can then be provisioned that causes the Windows operating system to set DSCP markings in IP packets as they egress from the PC. Administrator access privileges for the PC are required. Depending on the user environment, the described changes may be implemented by the end user or may require a group administrator.

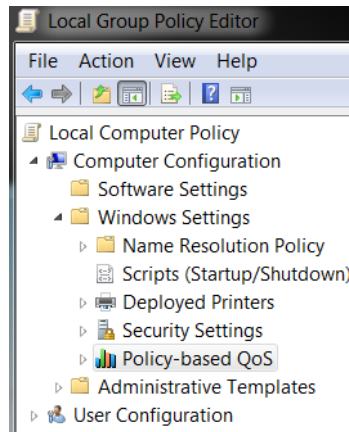
EDIT/CREATE A WINDOWS GROUP POLICY

The following steps describe the procedure to establish a group policy on a PC running Windows 7 Professional (not supported on Home version).

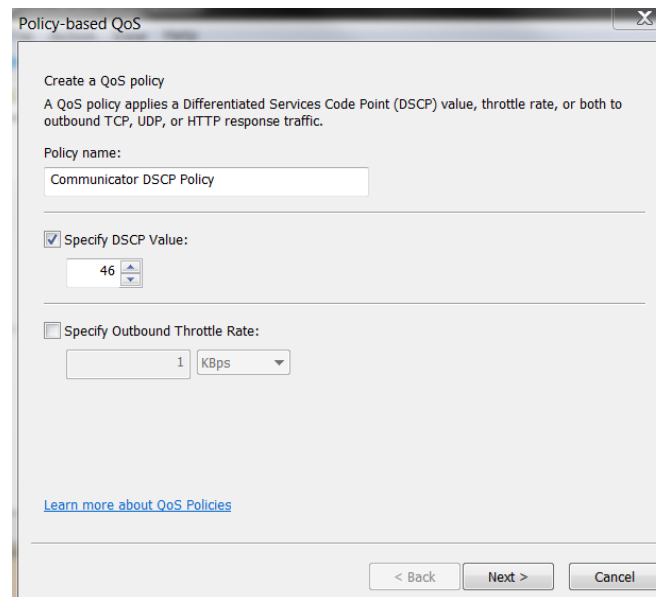
1. From Explorer search for “Group Policy” and select **Edit Group Policy**.



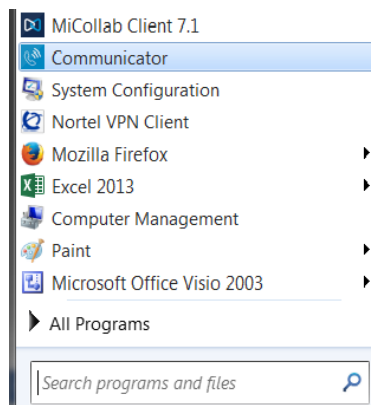
2. From the “Local Group Policy Editor”, open **Computer Configuration** and then open **Windows Settings**. Then right-click on **Policy-based QoS**.



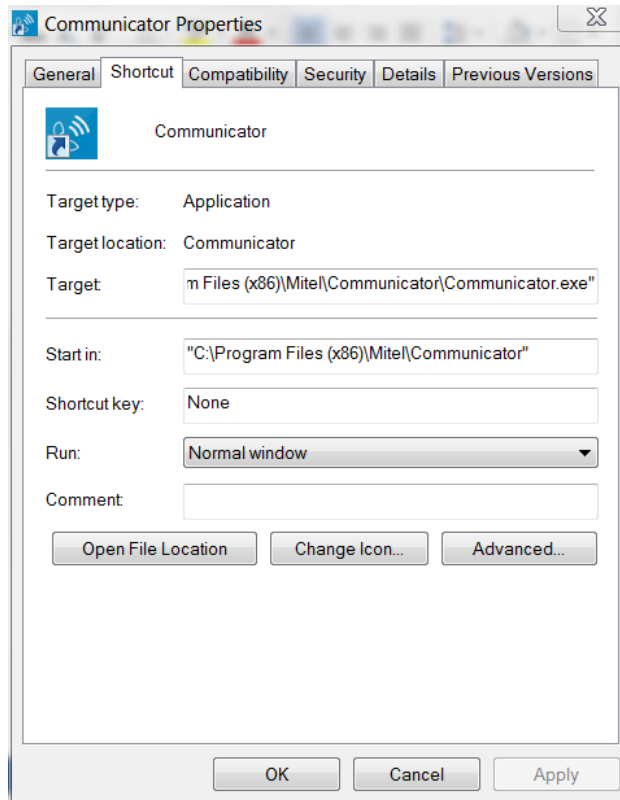
3. Select **Create new policy** and give the policy a name (e.g. Communicator DSCP Policy). Ensure the **Specify DSCP Value** box is checked and set the value to 46. Click **Next**.



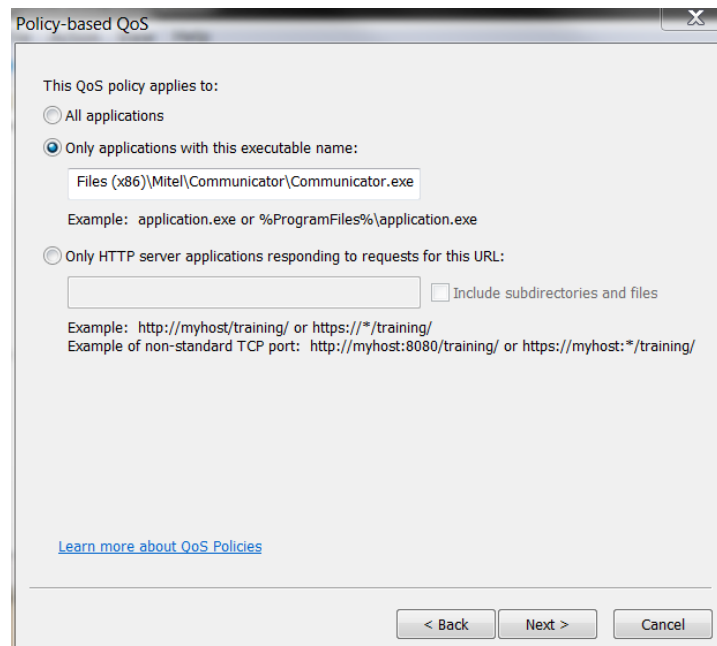
4. Leave the “Policy-based QoS” window open and go back to Explorer. Right-click on the **Communicator** icon and select **Properties**.



- From **Properties** select and copy (CTRL-C) the complete path as shown in the “Target” box. Leave out the quotes (“).



- Return to the “Policy-based QoS” window and select the **Only applications with this executable name** radio button and paste the path copied above as the executable name. Click **Next**.



- Ensure both the **Any source** and **Any destination IP address** radio buttons are selected. Click **Next**.

Policy-based QoS

Specify the source and destination IP addresses.
A QoS policy can be applied to outbound traffic that is from a source or to a destination IP (IPv4 or IPv6) address or prefix. For HTTP response traffic, the destination IP address or prefix denotes the client(s) that issued the HTTP request.

This QoS policy applies to:

☒ Any source IP address

☐ Only for the following source IP address or prefix:

This QoS policy applies to:

☒ Any destination IP address

☐ Only for the following destination IP address or prefix:

Example for a host address: 1.2.3.4 or 3ffe:ffff::1
Example for an address prefix: 192.168.1.0/24 or fe80::1234/48

[Learn more about QoS Policies](#)

< Back Next > Cancel

8. From the “Select the protocol this QoS policy applies to” dropdown, select the **UDP** option. Ensure both the **From any source** and **To any destination port** radio buttons are selected. Click **Finish**.

Policy-based QoS

Specify the protocol and port numbers.
A QoS policy can be applied to outbound traffic using a specific protocol, a source port number or range, or a destination port number or range.

Select the protocol this QoS policy applies to:

UDP

Specify the source port number:

☒ From any source port

☐ From this source port number or range:

Example for a port: 443
Example for a port range: 137:139

Specify the destination port number:

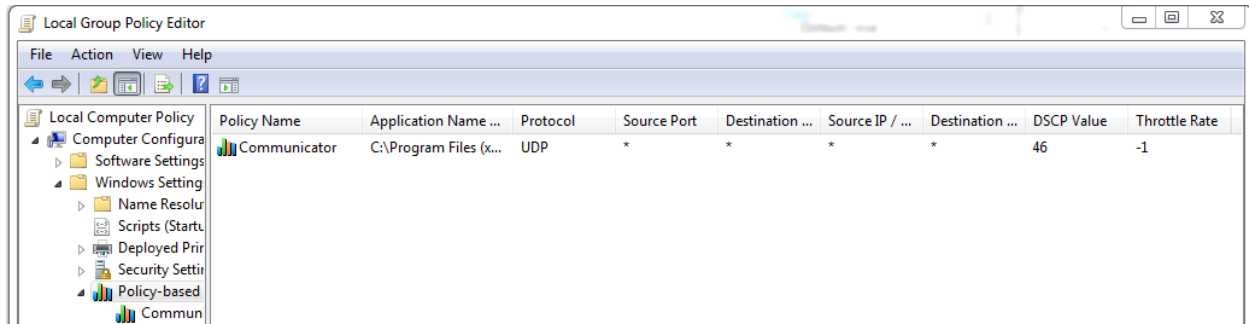
☒ To any destination port

☐ To this destination port number or range:

[Learn more about QoS Policies](#)

< Back Finish Cancel

The finished product should resemble the following screen shot.



REFERENCES

- DSCP Settings for Communicator, April 1, 2016, Mitel, Inc.
- Broadsoft FAQs, "Does BTBC Support DSCP/QoS?" <http://xchange.broadsoft.com/php/xchange/node/463348>

