

How to change firmware image id into bootup image

Test example: DGS-3200 2.21.B006

Step1) Check the image id of DUT:

Command	snmpwalk -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.13.1.1
Example	<p>The first entry is ID for image 1, the second entry is for image 2:</p> <pre>C:\>snmpwalk -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.13.1.1 SNMPv2-SMI::enterprises.171.12.1.2.13.1.1.257 = INTEGER: 257 SNMPv2-SMI::enterprises.171.12.1.2.13.1.1.258 = INTEGER: 258</pre>
SNMP OID	<p>swMultiImageCtrlTable → swMultiImageCtrlEntry → swMultiImageCtrlID:</p> <pre>Object name swMultiImageCtrlID Object ID 1.3.6.1.4.1.171.12.1.2.13.1.1 Module AGENT-GENERAL-MIB Base syntax Integer Composed syntax INTEGER Access Read-Only Status Current Parent node swMultiImageCtrlEntry First child None Description The stacking section ID of the firmware image. The stacking section ID = 256 * Unit ID + Image File ID.</pre>

Step2) Change the bootup image to image_id 2:

Command	snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.13.1.2.258 i 1
Example	<ul style="list-style-type: none"> - Now we know image 1 is ID 257, and image 2 is ID 258 after step1. - And the integer 1 means action config-as-bootup-fw(1) <pre>C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.13.1.2.258 i 1 SNMPv2-SMI::enterprises.171.12.1.2.13.1.2.258 = INTEGER: 1</pre>
SNMP OID	<p>swMultiImageCtrlTable → swMultiImageCtrlEntry → swMultiImageCtrlAction:</p> <pre>Object name swMultiImageCtrlAction Object ID 1.3.6.1.4.1.171.12.1.2.13.1.2 Module AGENT-GENERAL-MIB Base syntax Integer Composed syntax INTEGER Access Read-Write Status Current Value list 1 : config-as-bootup-fw(1) 2 : delete(2) 3 : none(3) Parent node swMultiImageCtrlEntry First child None Description This object indicates the running status of the image which is specified by swMultiImageCtrlID and swMultiImageCtrlUnitID. config-as-bootup-fw (1) - Configured as the bootup firmware by the indicated firmware(ID). delete (2) - Delete the firmware by indicated firmware ID. none (3) - No action.</pre>

Step 3) before upload firmware, we need to check a table

Command	snmpwalk -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.1.1.2
Example	<p>You need to know the “boot file” belongs to which ID (the following frame I marked red):</p> <pre>C:\>snmpwalk -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.1.1.2 SNMPv2-SMI::enterprises.171.12.1.2.1.1.2.1 = STRING: "boot file" SNMPv2-SMI::enterprises.171.12.1.2.1.1.2.2 = STRING: "log file" SNMPv2-SMI::enterprises.171.12.1.2.1.1.2.3 = STRING: "config file" SNMPv2-SMI::enterprises.171.12.1.2.1.1.2.7 = STRING: "attack log file"</pre>
SNMP OID	<p>agentBasicConfig → agentBscSwFileTable → agentBscSwFileEntry → agentBscSwFileDscr:</p> <pre>Object name agentBscSwFileDscr Object ID 1.3.6.1.4.1.171.12.1.2.1.1.2 Module AGENT-GENERAL-MIB Base syntax OctetString Composed syntax DisplayString Access Read-Write Status Current Value list 1 : 0..64 Parent node agentBscSwFileEntry First child None Description The description of the software file purpose in this entry. Note: For systems that do not support a change to this object, setting a value for this object will cause the system to return bad-value error messages.</pre>

Step 4) now we upgrade firmware to the bootup image:

Command	snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.13.1.2.258 i 1
Example	<pre>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.1.2.1.1.3.1 a 10.90.90.200 1.3.6.1.4.1.171.12.1.2.1.1.4.1 i 2 1.3.6.1.4.1.171.12.1.2.1.1.5.1 x 3132332e686164 1.3.6.1.4.1.171.12.1.2.1.1.7.1 i 3 1.3.6.1.4.1.171.12.1.2.1.1.8.1 i 3</pre>
Explanation	<p>1 = boot file index after step 3.</p> <p>a 10.90.90.200 = TFTP Server IP address</p> <p>i 2 = action “network-load(2)”</p> <p>x 3132332e686164 = the firmware name, character turns into HEX, please refer to ASCII code table.</p> <p>i 3 = action “download(3)”</p> <p>i 3 = action “start (3)”</p>
SNMP OID	<p>agentBasicConfig → agentBscSwFileTable → agentBscSwFileEntry → agentBscSwFileAddr 1.3.6.1.4.1.171.12.1.2.1.1.3</p> <pre>Object name agentBscSwFileAddr Object ID 1.3.6.1.4.1.171.12.1.2.1.1.3 Module AGENT-GENERAL-MIB Base syntax IP Address Composed syntax IpAddress Access Read-Write Status Current Parent node agentBscSwFileEntry First child None Description The IP address where the file that needs to be downloaded is located, or the IP address where the file will be uploaded to.</pre>

agentBscSwFileTransferType 1.3.6.1.4.1.171.12.1.2.1.1.4

Object name	agentBscSwFileTransferType
Object ID	1.3.6.1.4.1.171.12.1.2.1.1.4
Module	AGENT-GENERAL-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : network-load(2) 3 : out-of-band-load(3)
Parent node	agentBscSwFileEntry
First child	None
Description	The channel through which the file will be downloaded or uploaded. Note: For systems that do not support all channels, setting a value to the unsupported channel will cause the system to return bad-value error messages.

agentBscSwFile 1.3.6.1.4.1.171.12.1.2.1.1.5

Object name	agentBscSwFile
Object ID	1.3.6.1.4.1.171.12.1.2.1.1.5
Module	AGENT-GENERAL-MIB
Base syntax	Octet String
Composed syntax	DisplayString
Access	Read-Write
Status	Current
Value list	1 : 0..128
Parent node	agentBscSwFileEntry
First child	None
Description	The name of the file to be downloaded from, or uploaded to, the TFTP server.

agentBscSwFileLoadType 1.3.6.1.4.1.171.12.1.2.1.1.7

Object name	agentBscSwFileLoadType
Object ID	1.3.6.1.4.1.171.12.1.2.1.1.7
Module	AGENT-GENERAL-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : upload(2) 3 : download(3)
Parent node	agentBscSwFileEntry
First child	None
Description	This object provides the user with a choice of uploading or downloading the selected file. Note: For systems that do not support a change to this object, setting a value for this object will cause the system to return bad-value error messages.

agentBscSwFileCtrl 1.3.6.1.4.1.171.12.1.2.1.1.8

Object name	agentBscSwFileCtrl
Object ID	1.3.6.1.4.1.171.12.1.2.1.1.8
Module	AGENT-GENERAL-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : inactive(2) 3 : start(3) 4 : delete(4) 5 : config-as-bootup(5) 6 : apply(6)
Parent node	agentBscSwFileEntry
First child	None
Description	<p>This object gives the user the option of downloading runtime software. This setting will take effect when the system restarts. See Note (1) below</p> <p>Note: For systems that do not support changes to this object, setting a value to this object will cause the system to return bad-value error messages.</p> <p>start - Activate firmware. delete (4) - Delete the firmware by indicated firmware ID. config-as-bootup (5) - Configured as bootup firmware by the indicated firmware(ID). apply (6) - Apply the configuration to be the active configuration by the indicated config ID.</p>