BYOSOFT®

# BYOSOFT System Configuration Utility User Guide

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# Change History

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|---|---|---|
| 2018.11.08 | V1.0 | Initial draft |
| 2019.01.10 | V1.1 | Add attention |
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# Introduction

## 1.1 Overview

The ByoSoft System Configuration Utility (SCU) helps you retrieve and modify BIOS setup option of the host UEFI system. SCU will expose UEFI HII FORMS package as XML file format and convert user's modifications into HII VarStores modification to update non-volatile setup data.

## 1.2 SCU features

Byosoft SCU supports the following setup option types to be modified.

- NUMERIC
- ONE_OF
- STRING
- ORDERED_LIST
- CHECKBOX

User's modifications are saved inside a XML file. With that XML file, new modifications can be applied to any machine for production. Even on a board with different BIOS version, new modifications can still be applied if the question's name, its type, the name of its form and the name of its formset are not changed.

## 1.3 SCU requirement

SCU is compatible with the following OS & pre-OS:

UEFI Shell

## 1.4 Quickly Start

SCU supports to convert local HII database into XML file and apply modifications into setup option via XML file.

### 1.4.1 Install driver

- ***Redhat***

There is one driver for UEFI variable operation. Since this driver is made as a Linux module not a kernel obj. When user first uses this utility under Linux OS, you need install that driver. For example:

1) If you are not a Linux root user, please use su command or login out/in as a root user
2) copy sculinux folder into some Linux folder, like /home
3) build and install driver

   cd /home/sculinux/driver

   make
4) After install driver successfully, you can use this utility.

- ***Windows***
- ***Shell***
- ***Ubuntu***
- ***CentOS***

### 1.4.2 SCU commands and parameters

- ***SCU -d***

With this command, SCU will parse local HII database, and convert setup information into scu.xml file.

- ***SCU -m xyz.xml***

With this command, SCU will validate and apply user's modifications inside xyz.xml into BIOS non-volatile variables.

## 1.4.3 How to modify xml

User can modify five types of setup options and new changes will be validated per type requirement before they are applied into variables. All types requirements have been exposed into XML file and user can follow that information to customize new setup options. User would use a text editor, like notepad, to edit xml file.

Examples:

- ***NUMERIC***

<question id="17" name="Fan PWM Offset" type="NUMERIC" radix="unsigned decimal" min="0" max="100" step="0" stddefault="0" mfgdefault="0">

<current value="0"/>

<modified value="0"/>

<help info="Valid Offset 0-100. This number is added to the calculated PWM value to increase Fan Speed"/>

</question>

User need change <modified value="50"/> to select value from min value to max value on step value and new value will be modified to 50

If the modified value is less than min value or greater than max value, or not on steps, that change is ignored.

- ***ONE_OF***

<question id="29" name="Wake On Lan from S5" type="ONEOF" radix="unsigned decimal">

<current value="0"/>

<modified value="0"/>

<option value="0" name="Disable" stddefault="yes" mfgdefault="yes"/>

<option value="1" name="Enable"/>

<help info="Enables or Disables Wake on Lan from S5"/>

</question>

User need change <modified value="1"/> to select value from one of option value list and new value will be modified to 1

If the modified value is not inside option value list, that change is ignored.

- ***STRING***

<question id="17" name="User Name" type="STRING" minsize="2" maxsize="33">

<current value="tester1"/>

<modified value="tester1"/>

<help info="set user name of LAN channel"/>

</question>

User need change <modified value="amdin"/> to fill string with char numbers from minsize to maxsize and new value will be modified to admin

If the char number of the modified value is less than minsize value or greater than maxsize max value, that change is ignored.

- ***ORDERED_LIST***

<question id="36" name="order list test" type="ORDERLIST" radix="unsigned decimal" maxcontainers="5">

<current value="1,34,816,771,1028"/>

<modified value="1,34,816,771,1028"/>

<option value="1" name="order1"/>

<option value="34" name="order2"/>

<option value="816" name="order3"/>

<option value="771" name="order4"/>

<option value="1028" name="order5"/>

<help info="order list test for uint16"/>

</question>

User can reorder the value in the current value list into modified value list, eg <modified value="1028,1,771,816,34"/>

If new value or duplicated value is found or the total number of value list is not same as the number of current value list, the modified list is ignored.

- ***CHECKBOX***

<question id="5" name="Bios Guard Supported" type="CHECKBOX" radix="boolean" stddefault="unchecked" mfgdefault="unchecked" stddefault="0" mfgdefault="0">

<current value="1"/>

<modified value="1"/>

<help info="Indicates whether Bios Guard is supported in the platform. This value is updated by BIOS at boot time."/>

</question>

User need change <modified value="0"/> to set the current checkbox option to unchecked state and new value will be modified to 0

If the modified value is not 0, then that value is treated as 1 for checked state.

# Attention

- SCU tool only supports UEFI mode and does not support legacy mode.
- Make sure Secure Boot is disable in Setup when using SCU tool under Shell. If users want to enable Secure Boot and use SCU tool under Shell at the same time, the Tool must be signed. The document for how to sign the Tool as follows:

  http://192.168.6.5/svn/UNC/Tools/ByoUnifiedToolPkg/工具签名说明书.docx