

Getac

**Getac BIOS Configuration
with
Windows Management
Instrumentation**

Rev 1.08

Sept 17 , 2020

Revision History

Rev	Date	Description
R1.00	2015/12/30	First release
R1.01	2016/02/18	Second release
R1.02	2016/04/011	<ul style="list-style-type: none"> ● Add "BootTypeOrder" example ● modify *note3 ● DKBDWakeupS3support modify ● Combined Models mapping table
R1.03	2016/04/20	<ul style="list-style-type: none"> ● Add model B300, S410 ● Add SCU items <ul style="list-style-type: none"> ■ CDDVDAPowerControl ■ P1Function ■ EmergencybuttonDelay ■ P2Function ● Combine BIOS settings item table in one
R1.04	2017/06/02	<ul style="list-style-type: none"> ● Add model T800G2, A140 ● Add SCU items <ul style="list-style-type: none"> ■ SystemImageRecovery ■ WirelessLANBluetooth ■ UpperLeftPortSetting ■ LowerLeftPortSetting ■ DebugUartPort ● Remove SCU items <ul style="list-style-type: none"> ■ InternalMicrophone
R1.05	2017/10/24	<ul style="list-style-type: none"> ● Add model EX80, F110G4, S410G2 ● Add SCU items <ul style="list-style-type: none"> ■ TYPECPortSetting ■ StrongPassword ● Notes for maximum length of password
R1.05A	2017/12/25	Correct P1function values:"QuickBtn","EmergencyBtn" (No space)
R1.06	2018/4/25	<ul style="list-style-type: none"> ● Add model V110G4, B300G6, X500G3, B300G7, K120, RC11 ● Add SCU items <ul style="list-style-type: none"> ○ VirtualIMAC ○ PowerShareUSB ○ SATAMode ○ MACAddressPassThrough ○ UpperBackPortSetting ○ LowerBackPortSetting ○ SerialPortCOM1 ○ COM1Mode ○ SerialPortCOM2 ○ COM2Mode ○ SGX ○ SecurityFreezeLock

R1.06A	2018/5/8	<ul style="list-style-type: none"> ● Remove RC11 relevant contents
R1.06B	2018/6/20	<ul style="list-style-type: none"> ● Confirm B300G7 supports "BottomRightPortSetting" in the table "Appendix A-1.Models Mapping Table" ● "PasswordConfig" accepts digital value from 4 to 64.
R1.06C	2019/1/17	Add a note to brief "Intel Trusted Execution Technology" & "TPM Support" items support conditions. (*Note10)
R1.07	2019/10/21	Add SCU "Magnetic Sensor" item
R1.08	2020/09/17	Modify Appendix A-1.Models Mapping Table for T800G2

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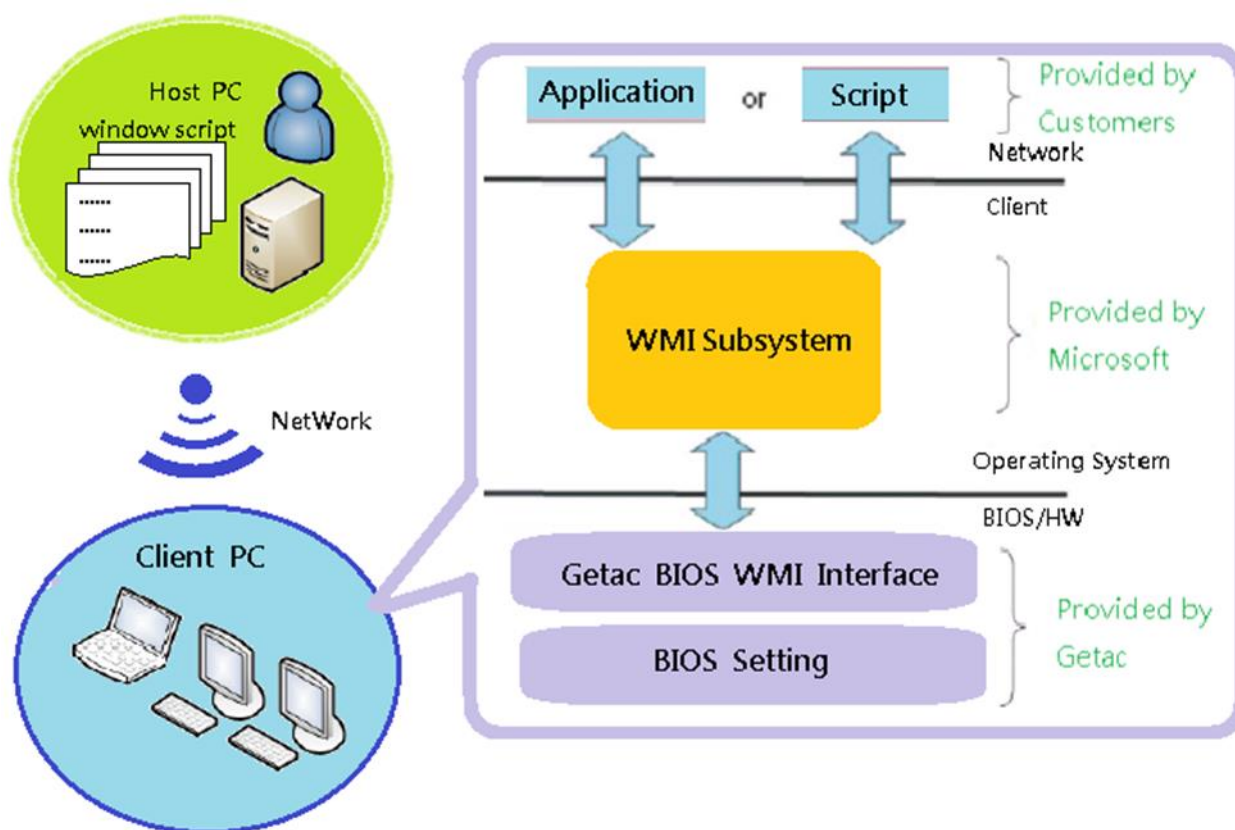
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Chapter 1.Introduction

This chapter will introduce the Getac WMI that will provide users the overview.

1.1. Overview

The most of Windows® operating systems provide Windows Management Instrumentation (WMI). Getac BIOS WMI interface can receive the instruction from Operating system and access the BIOS settings. IT administrator can query and set all the BIOS settings (except read only item), recover the BIOS to factory settings, set and change passwords, and modify the boot order in the remote PCs.



1.2. Disclaimer

BIOS setting are related to the WMI instruction and computer device. Getac assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the computers' BIOS and the manual.

Chapter 2. Getac WMI Interface

In this chapter, describes details of how to operate the Getac WMI Interface to access the BIOS settings in remote PCs.

2.1. Configuring the BIOS Settings

The following interface accesses the Getac BIOS settings.

Namespace: “\root\WMI”

2.2. Query BIOS User Password Status

User can check if the password is registered by this class.

Class name/Method name: Query_GetacBIOSPassWord

Type: Method

Example: “SUIPW”

Item table:

Page	Item	WMI Item	Attr.
Security	Set Supervisor password	SUIPW	R
	Set User password	USERPW	R

Return value: “Registered”, “Null”, “Not support”

2.3. Set BIOS User Password

To set Password include Supervisor password and User password by this class. If user wants to set user password, the supervisor password must set before. If the supervisor password is clean, the user password will be clean at the same time.

Class name/Method name: Set_GetacBIOSPassWord

Type: Method

Example: “SUIPW,1e234,AB4567”

Item table:

Page	Item	WMI Item	Attr.	Current PW	New PW
Security	Set Supervisor password	SUIPW	W	*note1	*note2/3
	Set User password	USERPW	W	*note1	*note2/3

*note1 : If the password is not registered, the blank is set to Current PW for password setting.

*note2 : If the blank is set to New PW, the current password will be deleted.

*note3 : By default, maximum length of password is 10, except models support

“StrongPassword” the maximum length of password can be up to 64 and the minimum length of password is 4.

Return value: “Success”, “Fail”, “Not support”

Note : If the WMI item is not provided, the return value will be “Not support”

2.4.Switch to the BIOS Configure Mode

As the BIOS security, users must switch to the BIOS configure mode before access the Getac WMI Interface. If Getac WMI interface receives wrong Supervisor password 3 times, Getac WMI interface will lock itself for security. If the Getac WMI interface is locked, any access will return “Locked”. Users can entry BIOS setup utility to unlock.

Class name/Method name: Set_GetacBIOSConfigMode

Type: Method

Example: “1234,SetStart” (if Supervisor password [SUIPW] is 1234.)

Item table:

WMI Item	Description
SUIPW	Supervisor password(*note1)
SetStart	Start of the access mode of BIOS when the supervisor is registered.
SetEnd	End of the access mode of BIOS.

Return value: “Success”, “Fail”, “Not support” , “Locked”

*note1 : By default, maximum length of password is 10, except models support “StrongPassword” the maximum length of password can be up to 64 and the minimum length of password is 4.

2.4.1.Load the default BIOS settings

This class name can recover the BIOS to default settings.

Class name: Load_GetacDefaultSettings

Type: Method

Return value: “Success”, “Fail”, “Locked”

Note: As security-related options, the password is not recovered even if the “load default” is

requested.

2.4.2.Query/Change the Getac BIOS Settings

This section contains details on the WMI implementation for Query/Change the Getac BIOS settings.

The queries can be used to retrieve setting values currently set.

Class name/Method name: Query_GetacBIOSSettings

Type: Method

Example: "OSSelect"

Note: If the Query item is not provided, the return value will be "Not support"

To change/set the BIOS settings,

Class name/Method name: Set_GetacBIOSSettings

Type: Method

Example1: "LegacyUSBSupport,Enabled"

Example2 : "BootTypeOrder, HardDisk, USBDisk,USBFloppy ,Network,USBCD"

Return value: "Success", "Fail", "Locked","Not Support"

Item table:

Page	Item	WMI Item/ Return Item	Attr.	Return/AcceptValues	Def.
Information	Virtual MAC Address (*Note2)	VirtualMAC	R	XX-XX-XX-XX-XX-XX	
Main	OS Select (*Note3/4)	OSSelect	R/W	"WIN7", "WIN7 32bit", "WIN7 64bit", "WIN8.1", "WIN8/10", "WIN8.1/10" "WIN10","Server 2016"	Y
	Legacy USB Support(*Note3)	LegacyUSBSupport	R/W	"Disabled", "Enabled"	Y
	CSM Support (*Note3)	CSMSupport	R/W	"Off","On"	Y
	PXE Boot (*Note3/4)	PXEBoot	R/W	"UEFI","Legacy"	Y
	Internal Numlock	InternalNumlock	R/W	"Disabled","Enabled"	Y
	WMI Version	WMIVersion	R	"0000"- "9999"	Y
	UEFI Boot(*Note4)	UEFIBoot	R/W	"Off", "On"	Y
	Legacy Boot	LegacyBoot	R/W	"Off","On"	Y
	Boot Priority	BootPriority	R/W	"UEFI First", "Legacy First"	Y
Advanced	CD/DVD Auto Power Control	CDDVDAPowerControl	R/W	"Disabled", "ODDDoor", "ZPODD"	Y
	Wake Up Capability	AnyKeyWakeup	R/W	"Disabled", "Enabled"	Y
		DKBDWakeupS3	R/W	"Disabled", "Enabled"	Y
		USBWakeup	R/W	"Disabled", "Enabled"	Y
		RTCS4Wakeup	R/W	"Disabled", "Enabled"	Y
	Battery Mode	BatteryMode	R/W	"Performance", "Balance", "PowerSaver"	Y
	Power Button Delay	PowerButtonDelay	R/W	"NotDelay", "1sec","2sec"	Y
	System Policy (*Note5)	SystemPolicy	R/W	"Performance", "Balance", "Powersaver"	Y
	AC Initiation	ACInitiation	R/W	"Disabled", "Enabled"	Y
	Magnetic Sensor	HallSensor	R/W	"Enabled", "Disabled"	Y
	USB Power-off Charging	PowerShareUSB	R/W	"Disabled", "Enabled"	Y
SATA Mode	SATAMode	R/W	"AHCI", "RAID"		

Page	Item	WMI Item/ Return Item	Attr.	Return/AcceptValues	Def.
	Selection				
	System Image Recovery	SystemImageRecovery	R/W	"Disabled", "Enabled"	Y
	Screen Tapping for Boot Options	ScreenTappingforBootOp	R/W	"Disabled", "Enabled"	Y
	MAC Address Pass Through	MACAddressPassThrough	R/W	"Disabled", "Enabled"	Y
	Charging Backup battery	ChargingBackupbattery	R/W	"Disabled", "Enabled"	Y
	Active Management Tech. Support (*Note8)	IntelAMTSupport	R/W	"Disabled", "Enabled"	Y
		IntelAMTSetupPrompt	R/W	"Disabled", "Enabled"	Y
		IntelAMTUSBProvision	R/W	"Disabled", "Enabled"	Y
	Virtualization Tech. Setup	IntelVT	R/W	"Disabled", "Enabled"	Y
		VTd	R/W	"Disabled", "Enabled"	Y
		SGX	R/W	"Disabled", "Enabled" "Software Controlled"	Y
	Graphic Setup (*Note6)	DVMT	R/W	"32MB", "64MB", "128MB", "256MB", "512MB"	Y
	Button Setup	P1Function	R/W	"Blackout", "QuickBtn", "EmergencyBtn"	Y
		EmergencybuttonDelay	R/W	"No delay", "2 sec", "4 sec", "6 sec", "8 sec"	Y
		P2Function	R/W	"SunLight", "ECO", "Quick Btn"	Y
	Device Configuration	WirelessLAN	R/W	"Disabled", "Enabled"	Y
		WWAN	R/W	"Disabled", "Enabled"	Y
		Bluetooth	R/W	"Disabled", "Enabled"	Y
		WirelessLANBluetooth	R/W	"Disabled", "Enabled"	Y
		MediaCardReader	R/W	"Disabled", "Enabled"	Y
		SmartCardReader	R/W	"Disabled", "Enabled"	Y
		RFID	R/W	"Disabled", "Enabled"	Y
		HDAudio	R/W	"Disabled", "Enabled"	Y
		FingerprintScanner	R/W	"Disabled", "Enabled"	Y
		IntergratedWebcam	R/W	"Disabled", "Enabled"	Y
		SystemUSBPort	R/W	"Disabled", "Enabled"	Y
	UpperLeftPortSetting	R/W	"USB2.0", "USB3.0"	Y	

Page	Item	WMI Item/ Return Item	Attr.	Return/AcceptValues	Def.
		LowerLeftPortSetting	R/W	"USB2.0", "USB3.0"	Y
		UpperBackPortSetting	R/W	"USB2.0", "USB3.0"	Y
		LowerBackPortSetting	R/W	"USB2.0", "USB3.0"	Y
		BottomRightPortSetting	R/W	"USB2.0", "USB3.0"	Y
		UpperRightPortSetting	R/W	"USB2.0", "USB3.0"	Y
		BackPortSetting	R/W	"USB2.0", "USB3.0"	Y
		LeftofBackPortSetting	R/W	"USB2.0", "USB3.0"	Y
		RightofBackPortSeting	R/W	"USB2.0", "USB3.0"	Y
		LeftPortSetting	R/W	"USB2.0", "USB3.0"	Y
		RightPortSetting	R/W	"USB2.0", "USB3.0"	Y
		TYPECPortSetting	R/W	"USB2.0", "USB3.0"	Y
		DockingUSBPortSetting	R/W	"USB2.0", "USB3.0"	Y
		Microphone	R/W	"Disabled", "Enabled"	Y
		InternalSpeaker	R/W	"Disabled", "Enabled"	Y
		ExternalUSBPort	R/W	"Disabled", "Enabled"	Y
		PortSetting	R/W	"USB2.0", "USB3.0"	Y
		SerialPortCOM1	R/W	"Disabled", "Enabled"	Y
		COM1Mode (*Note9)	R/W	"RS232", "RS422", "RS485 TX", "RS485 RX"	Y
		SerialPortCOM2	R/W	"Disabled", "Enabled"	Y
		COM2Mode (*Note9)	R/W	"RS232", "RS422", "RS485 TX", "RS485 RX"	Y
	Debug UART Port Status	DebugUartPort	R/W	"Disabled", "Enabled"	Y
Security	Password on Boot	PasswordonBoot	R/W	"Disabled", "Enabled"	Y
	StrongPassword	StrongPassword	R/W	"Disabled", "Enabled"	Y
	PasswordConfig	PasswordConfig	R/W	"04"- "64"	Y
	Secure Boot Configuration (*Note3)	SecureBoot	R/W	"Disabled", "Enabled"	Y
	Security Freeze Lock	SecurityFreezeLock	R/W	"Disabled", "Enabled"	Y
	TPMSetupMenu (*Note9) (*Note10)	TPMSupport	R/W	"Disabled", "Enabled"	Y
	Intel Trusted Execution Technology (*Note8) (*Note10)	IntelTrustedExeTech	R/W	"Disabled", "Enabled"	Y
	Boot Type Order (*Note7)	BootTypeOrder	R/W	"HardDisk", "USBDisk", "USBFloppy",	Y

Page	Item	WMI Item/ Return Item	Attr.	Return/AcceptValues	Def.
Boot				"Network", "USBCD", "CDROM"	
	Boot Device	USBFloppyDrive	R/W	"Off", "On"	Y
		HardDiskDrive	R/W	"Off", "On"	Y
		USBDiskDrive	R/W	"Off", "On"	Y
		USBCDDVDDrive	R/W	"Off", "On"	Y
		NetworkDrive	R/W	"Off", "On"	Y
		CDDVDDrive	R/W	"Off", "On"	Y

*note2 : It will return virtual MAC address when there is no physical network card in this system.

*note8 : Only AMT SKU systems are supported.

*note3 :

"OSSelect" Individual model return/accept values case			
T800	S410	X500G3	Others
"WIN7 32bit", "WIN7 64bit", "WIN8/WIN10"	"WIN7", "WIN7 32bit", "WIN8.1/WIN10"	"WIN10", "Server 2016"	"WIN7","WIN8.1" or "WIN8.1/WIN10"

1. If HDD is MBR partition, user wants to set "OSSelect" to "WIN 7".
 Step1. Set "OSSelect" to "WIN7".
 Step2. Set "CSMSupport" to "On".
 Step3. Set "BootPriority" to "Legacy First".
 Step4. Set "SecureBoot" to "Disabled".
 PS: User must to determine PXEBOOT option.
2. If HDD is GPT partition, user wants to set "OSSelect" to "WIN 7".
 Step1. Set "OSSelect" to "WIN7".
 Step2. Set "CSMSupport" to "On".
 Step3. Set "BootPriority" to "UEFI First".
 Step4. Set "SecureBoot" to "Disabled".
3. If HDD is GPT partition, user wants to set "OSSelect" to "WIN 8.1/10".
 Step1. Set "OSSelect" to "WIN8.1/10".
 Step2. Set "CSMSupport" to "Off".
 Step3. Set "BootPriority" to "UEFI First".
 Step4. Set "SecureBoot" to "Enabled".
 Step5. Set "PXEBoot" to "UEFI".

*note4 :

If user select the OS is WIN 7 - 64bit then the default setting of "PXE Boot" is "UEFI".
 If user select the OS is WIN 7 - 32bit then the default setting of "PXE Boot" is "Legacy".

If user select the OS is WIN 8 and "UEFIBoot" is set to "Off" then "PXEBoot" is not available.
 If user select the OS is WIN 8 and "UEFIBoot" is set to "On" then "PXEBoot" will be available and the setting is "UEFI".

*note5 :

"SystemPolicy" Individual model return/accept values case	
RX10	Others
"Performance", "Balance", "Powersaver"	"Performance", "Balance"

*note6 :

"DVMT" Individual model return/accept values case			
RX10/F110G2/V110G2	T800	T800G2/EX80	Others
"32MB", "64MB", "128MB", "256MB"	"64MB", "128MB", "256MB", "512MB"	"32MB", "64MB", "128MB", "256MB", "512MB"	"64MB", "128MB", "256MB"

*note7 :

"BootTypeOrder" Individual model return/accept values case	
S410/S410G2/B300G6/B300G7/X500G3	Others
"HardDisk", "USBDisk", "USBFloppy", "Network", "USBCD", "CDROM"	"HardDisk", "USBDisk", "USBFloppy", "Network", "USBCD"

*note9 :

"COM1Mode/COM2Mode" Individual model return/accept values case	
X500G3	Others
"RS232", "RS422"	"RS232", "RS485 TX", "RS485 RX"

note10 :

"Intel Trusted Execution Technology "Individual model return/accept case	
F110G4/V110G4/S410G2/B300G7/RX10G2/K120/X500G3	Others
This item can be allowed to update only when "TPM Support" is enabled.	"Disabled", "Enabled"
In other case the return FAIL is not support.	

"TPM Support" Individual model return/accept values case	
F110G4/V110G4/S410G2/B300G7/RX10G2/K120/X500G3	Others
"TPM Support" item can be updated just when "Intel Trusted Execution Technology" doesn't been enabled.	"Disabled", "Enabled"
In other case the return FAIL is not support.	

Appendix A-1.Models Mapping Table

Page	Item	WMI Item/ Return Item	Attr.	RX10	T800	T800 G2	F110 G2/G3	F110 G4	V110 G2/G3	B300 G6	B300 G7	S410	A140	EX80
Information	Virtual MAC Address	VirtualMAC	R	X	X	X	X	o	X	X	X	X	X	o
Main	OS Select	OSSelect	R/W	o	o	X	o	X	o	o	X	o	o	X
	Legacy USB Support	LegacyUSBSupport	R/W	o	X	X	o	o	o	o	o	o	o	X
	CSM Support	CSMSupport	R/W	o	X	X	o	o	o	o	o	o	o	X
	PXE Boot	PXEBoot	R/W	o	o	X	o	o	o	o	o	o	o	X
	Internal Numlock	InternalNumlock	R/W	X	X	X	X	X	o	o	o	X	X	X
	WMI Version	WMIVersion	R	o	o	o	o	o	o	o	o	o	o	o
	UEFI Boot	UEFIBoot	R/W	X	o	X	X	X	X	X	X	X	X	X
	Legacy Boot	LegacyBoot	R/W	X	o	X	X	X	X	X	X	X	X	X
Boot Priority	BootPriority	R/W	o	X	X	o	o	o	o	o	o	o	X	
Advanced	CD/DVD Auto Power Control	CDDVDAPowerControl	R/W	X	X	X	X	X	X	o	o	X	X	X
	WakeUp Capability	AnyKeyWakeup	R/W	X	X	X	X	X	o	o	o	X	X	X
		USBWakeup	R/W	o	o	X	o	o	o	o	o	o	o	X
		DKBDWakeupS3	R/W	o	X	X	X	X	X	X	X	X	X	X
		RTCS4Wakeup	R/W	X	o	X	X	X	X	X	X	X	X	X
	Battery Mode	BatteryMode	R/W	X	o	X	X	X	X	X	X	X	X	X
	Power Button Delay	PowerButtonDelay	R/W	o	X	X	X	X	X	X	X	X	X	X
	System Policy	SystemPolicy	R/W	o	X	X	o	o	o	o	o	o	o	X
	AC Initiation	ACInitiation	R/W	o	o	o	o	o	o	o	o	o	o	X
Magnetic Sensor	HallSensor	R/W	X	X	X	X	o	X	X	o	X	o	X	
USB Power-off Charging	PowerShareUSB	R/W	X	X	X	X	X	X	X	X	o	X	X	

Page	Item	WMI Item/ Return Item	Attr.	RX10	T800	T800 G2	F110 G2/G3	F110 G4	V110 G2/G3	B300 G6	B300 G7	S410	A140	EX80
	SATA Mode Selection	SATAMode	R/W	X	X	X	X	X	X	X	X	X	X	X
	System Image Recovery	SystemImageRecovery	R/W	o	o	X	o	X	o	o	X	o	o	X
	Screen Tapping for Boot Options	ScreenTappingforBootOp	R/W	o	o	o	o	o	o	X	X	X	o	o
	MAC Address Pass Through	MACAddressPassThrough	R/W	X	X	X	X	o	X	X	o	X	X	o
	Charging Backup battery	ChargingBackupbattery	R/W	o	X	X	X	X	X	X	X	X	X	X
	Active Management Tech. Support	IntelAMTSupport	R/W	o	X	X	o	o	o	o	o	o	o	X
		IntelAMTSetupPrompt	R/W	o	X	X	o	o	o	o	o	o	o	X
		IntelAMTUSBProvision	R/W	X	X	X	X	o	X	X	o	X	X	X
	Virtualization Tech. Setup	IntelVT	R/W	o	o	o	o	o	o	o	o	o	o	o
		VTd	R/W	o	X	X	o	o	o	o	o	o	o	X
		SGX	R/W	X	X	X	X	o	X	X	o	X	X	X
	Graphic Setup	DVMT	R/W	o	o	o	o	o	o	o	o	o	o	o
	Button Setup	P1Function	R/W	X	X	X	X	X	X	o	X	o	X	X
		EmergencybuttonDelay	R/W	X	X	X	X	X	X	o	X	o	X	X
		P2Function	R/W	X	X	X	X	X	X	X	X	o	X	X
	Device Configuration	WirelessLAN	R/W	o	o	X	o	o	o	o	o	o	o	o
		WWAN	R/W	o	o	o	o	o	o	o	o	o	o	o
		Bluetooth	R/W	o	o	X	o	o	o	o	o	o	o	o
		WirelessLANBluetooth	R/W	X	X	o	X	X	X	X	X	X	X	X
		MediaCardReader	R/W	X	o	o	X	X	X	o	o	o	X	X
		SmartCardReader	R/W	X	X	X	X	X	X	o	o	o	X	X
		RFID	R/W	X	X	X	X	o	X	X	X	X	o	X
		HDAudio	R/W	X	o	o	X	X	X	o	o	o	X	X
		FingerprintScanner	R/W	X	X	X	X	X	X	o	o	o	X	X
	IntergratedWebcam	R/W	X	X	X	X	X	X	X	X	o	X	X	

Page	Item	WMI Item/ Return Item	Attr.	RX10	T800	T800 G2	F110 G2/G3	F110 G4	V110 G2/G3	B300 G6	B300 G7	S410	A140	EX80	
		SystemUSBPort	R/W	○	X	X	○	○	○	○	○	○	○	X	
		UpperLeftPortSetting	R/W	X	X	X	X	X	X	X	X	X	X	○	X
		LowerLeftPortSetting	R/W	X	X	X	X	X	X	X	X	X	X	○	X
		UpperBackPortSetting	R/W	X	X	X	X	X	X	X	X	X	X	X	X
		LowerBackPortSetting	R/W	X	X	X	X	X	X	X	X	X	X	X	X
		BottomRightPortSetting	R/W	X	X	X	X	X	X	X	○	○	X	X	X
		UpperRightPortSetting	R/W	X	X	X	X	X	X	X	○	X	X	X	X
		BackPortSetting	R/W	X	X	X	X	X	X	X	○	X	X	X	X
		LeftofBackPortSetting	R/W	X	X	X	X	X	X	○	X	X	○	X	X
		RightofBackPortSeting	R/W	X	X	X	X	X	X	○	X	X	○	X	X
		LeftPortSetting	R/W	○	X	X	○	○	X	X	X	X	X	X	X
		RightPortSetting	R/W	X	X	X	X	X	X	X	X	X	○	X	X
		TYPECPortSetting	R/W	X	X	X	X	X	X	X	X	X	X	X	X
		DockingUSBPortSetting	R/W	○	X	○	○	○	○	○	X	X	○	○	X
		Microphone	R/W	○	X	X	○	○	○	○	X	X	X	○	X
		InternalSpeaker	R/W	○	X	X	○	○	○	○	X	X	X	○	○
		ExternalUSBPort	R/W	X	○	○	X	X	X	X	X	X	X	X	X
		PortSetting	R/W	X	○	X	X	X	X	X	X	X	X	X	X
		SerialPortCOM1	R/W	X	X	X	X	X	X	X	X	X	X	X	X
	COM1Mode	R/W	X	X	X	X	X	X	X	X	X	X	X	X	
SerialPortCOM2	R/W	X	X	X	X	X	X	X	X	X	X	X	X		
COM2Mode	R/W	X	X	X	X	X	X	X	X	X	X	X	X		
	Debug Uart Port Status	DebugUartPort	R/W	X	X	X	X	X	X	X	X	X	X	○	
Security	Password on Boot	PasswordonBoot	R/W	○	○	○	○	○	○	○	○	○	○	○	
	StrongPassword	StrongPassword	R/W	X	X	X	X	○	X	X	○	X	X	X	
	PasswordConfig	PasswordConfig	R/W	X	X	X	X	○	X	X	○	X	X	X	
	Secure Boot	SecureBoot	R/W	○	○	○	○	○	○	○	○	○	○	○	

Page	Item	WMI Item/ Return Item	Attr.	RX10	T800	T800 G2	F110 G2/G3	F110 G4	V110 G2/G3	B300 G6	B300 G7	S410	A140	EX80
	Configuration													
	SecurityFreezeLock	SecurityFreezeLock	R/W	X	X	X	X	o	X	X	o	X	X	X
	TPMSetupMenu	TPMSupport	R/W	o	o	o	o	o	o	o	o	o	o	o
	Intel Trusted Execution Technology	IntelTrustedExeTech	R/W	X	X	X	o	o	o	o	o	o	o	X
Boot	Boot Type Order	BootTypeOrder	R/W	o	o	o	o	o	o	o	o	o	o	o
	Boot Device	USBFloppyDrive	R/W	o	o	o	o	o	o	o	o	o	o	o
		HardDiskDrive	R/W	o	o	o	o	o	o	o	o	o	o	o
		USBDrive	R/W	o	o	o	o	o	o	o	o	o	o	o
		USBCDDVDDrive	R/W	o	o	o	o	o	o	o	o	o	o	o
		NetworkDrive	R/W	o	o	o	o	o	o	o	o	o	o	o
		CDDVDDrive	R/W	X	X	X	X	X	X	X	o	o	o	X

Appendix A-2.Models Mapping Table

Page	Item	WMI Item/ Return Item	Attr.	V110 G4	S410 G2	X500 G3	VR- X20	K120	VR- X20PC	RX10 G2				
Information	Virtual MAC Address	VirtualMAC	R	○	○	X	X	X	X	○				
Main	OS Select	OSSelect	R/W	X	X	○	X	X	X	X				
	Legacy USB Support	LegacyUSBSupport	R/W	○	○	○	○	○	○	○				
	CSM Support	CSMSupport	R/W	○	○	○	○	○	○	○				
	PXE Boot	PXEBoot	R/W	○	○	○	○	○	○	○				
	Internal Numlock	InternalNumlock	R/W	○	○	○	X	○	X	X				
	WMI Version	WMIVersion	R	○	○	○	○	○	○	○				
	UEFI Boot	UEFIBoot	R/W	X	X	X	X	X	X	X				
	Legacy Boot	LegacyBoot	R/W	X	X	X	X	X	X	X				
Boot Priority	BootPriority	R/W	○	○	○	○	○	○	○					
Advanced	CD/DVD Auto Power Control	CDDVDAPowerControl	R/W	X	X	X	X	X	X	X				
	WakeUp Capability	AnyKeyWakeup	R/W	○	○	○	X	○	X	X				
		USBWakeup	R/W	○	○	○	○	○	○	○				
		DKBDWakeupS3	R/W	X	X	X	X	X	X	X	○			
		RTCS4Wakeup	R/W	X	X	X	X	X	X	X	X			
	Battery Mode	BatteryMode	R/W	X	X	X	X	X	X	X				
	Power Button Delay	PowerButtonDelay	R/W	X	X	X	X	○	X	X				
	System Policy	SystemPolicy	R/W	○	○	○	○	○	○	○				
	AC Initiation	ACInitiation	R/W	○	○	○	X	○	X	○				
	Magnetic Sensor	HallSensor	R/W	○	○	○	X	○	X	○				
USB Power-off Charging	PowerShareUSB	R/W	○	X	X	X	○	X	X					
SATA Mode	SATAMode	R/W	X	X	○	X	X	X	X					

Page	Item	WMI Item/ Return Item	Attr.	V110 G4	S410 G2	X500 G3	VR- X20	K120	VR- X20PC	RX10 G2				
	Selection													
	System Image Recovery	SystemImageRecovery	R/W	X	X	X	X	X	X	X				
	Screen Tapping for Boot Options	ScreenTappingforBootOp	R/W	o	X	X	o	o	o	o				
	MAC Address Pass Through	MACAddressPassThroug h	R/W	o	o	o	X	o	X	o				
	Charging Backup battery	ChargingBackupbattery	R/W	X	X	X	X	X	X	o				
	Active Management Tech. Support	IntelAMTSupport	R/W	o	o	o	X	o	X	o				
IntelAMTSetupPrompt		R/W	o	o	o	X	o	X	o					
IntelAMTUSBProvision		R/W	o	o	o	X	o	X	o					
Virtualization Tech. Setup	IntelVT	R/W	o	o	o	o	o	o	o	o				
	VTd	R/W	o	o	o	o	o	o	o	o				
	SGX	R/W	o	o	o	o	o	o	o	o				
Graphic Setup	DVMT	R/W	o	o	o	o	o	o	o	o				
Button Setup	P1Function	R/W	X	X	X	X	X	X	X	X				
	EmergencybuttonDelay	R/W	X	X	X	X	X	X	X	X				
	P2Function	R/W	X	X	X	X	X	X	X	X				
Device Configuration	WirelessLAN	R/W	o	o	o	o	o	o	o	o				
	WWAN	R/W	o	o	o	o	o	o	o	o				
	Bluetooth	R/W	o	o	o	o	o	o	o	o				
	WirelessLANBluetooth	R/W	X	X	X	X	X	X	X	X				
	MediaCardReader	R/W	X	o	o	X	o	X	X	X				
	SmartCardReader	R/W	X	o	o	X	o	X	X	X				
	RFID	R/W	X	o	X	X	X	X	X	X				
	HDAudio	R/W	X	o	o	o	X	o	X	X				
	FingerprintScanner	R/W	X	o	o	X	o	X	X	X				
	IntergratedWebcam	R/W	X	o	X	X	X	X	X	X				
	SystemUSBPort	R/W	o	o	o	X	o	X	o					

Page	Item	WMI Item/ Return Item	Attr.	V110 G4	S410 G2	X500 G3	VR- X20	K120	VR- X20PC	RX10 G2				
		UpperLeftPortSetting	R/W	X	X	o	X	X	X	o				
		LowerLeftPortSetting	R/W	X	X	o	X	X	X	o				
		UpperBackPortSetting	R/W	X	X	o	X	X	X	X				
		LowerBackPortSetting	R/W	X	X	o	X	X	X	X				
		BottomRightPortSetting	R/W	X	X	X	X	X	X	X				
		UpperRightPortSetting	R/W	X	X	X	X	X	X	X				
		BackPortSetting	R/W	X	X	X	X	X	X	X				
		LeftofBackPortSetting	R/W	o	o	X	o	X	o	X				
		RightofBackPortSeting	R/W	o	o	X	o	X	o	X				
		LeftPortSetting	R/W	X	X	X	X	o	X	X				
		RightPortSetting	R/W	o	o	X	X	X	X	X				
		TYPECPortSetting	R/W	X	o	X	X	o	X	X				
		DockingUSBPortSetting	R/W	o	o	o	X	o	X	o				
		Microphone	R/W	o	X	X	X	o	X	o				
		InternalSpeaker	R/W	o	X	X	X	o	X	o				
		ExternalUSBPort	R/W	X	X	X	X	X	X	X				
		PortSetting	R/W	X	X	X	X	X	X	X				
		SerialPortCOM1	R/W	X	X	o	o	X	o	X				
		COM1Mode	R/W	X	X	o	o	X	o	X				
	SerialPortCOM2	R/W	X	X	o	o	X	o	X					
COM2Mode	R/W	X	X	o	o	X	o	X						
	Debug Uart Port Status	DebugUartPort	R/W	X	X	X	X	X	X	X				
Security	Password on Boot	PasswordonBoot	R/W	o	o	o	o	o	o	o				
	StrongPassword	StrongPassword	R/W	o	o	o	o	o	o	o				
	PasswordConfig	PasswordConfig	R/W	o	o	o	o	o	o	o				
	Secure Boot Configuration	SecureBoot	R/W	o	o	o	o	o	o	o				
	SecurityFreezeLoc	SecurityFreezeLock	R/W	o	o	o	o	o	o	o				

Page	Item	WMI Item/ Return Item	Attr.	V110 G4	S410 G2	X500 G3	VR- X20	K120	VR- X20PC	RX10 G2				
	k													
	TPMSetupMenu	TPMSupport	R/W	○	○	○	○	○	○	○				
	Intel Trusted Execution Technology	IntelTrustedExeTech	R/W	○	○	○	X	○	X	○				
Boot	Boot Type Order	BootTypeOrder	R/W	○	○	○	○	○	○	○				
	Boot Device	USBFloppyDrive	R/W	○	○	○	○	○	○	○	○			
		HardDiskDrive	R/W	○	○	○	○	○	○	○	○			
		USBDrive	R/W	○	○	○	○	○	○	○	○			
		USBCDDVDDrive	R/W	○	○	○	○	○	○	○	○			
		NetworkDrive	R/W	○	○	○	○	○	○	○	○			
CDDVDDrive	R/W	X	○	○	○	X	X	X	X					

Appendix B.VB Script to set the supervisor password

User can set the supervisor password by below VB Script when the supervisor password is not registered and "1" is set.

```
strComputer = "."
Set objWMIService = GetObject("winmgmts:\\\" &strComputer& "\root\WMI")

'-----
' Obtain an instance of the class
' using a key property value.
'-----
Set objShare = objWMIService.Get("Set_GetacBIOSPassWord.InstanceName='ACPI\PNPOC14\0_0'")

'-----
' Obtain an InParameters object specific to the method.
'-----
Set objInParameter = objShare.Methods_("Set_GetacBIOSPassWord").inParameters.SpawnInstance_()

'-----
' Add the input parameters.
'-----
objInParameter.Properties_.Item("DataIn") = "SUIPW,,1"

'-----
'Execute the method and obtain the return status.
' TheOutParameters object in objOutParams is created by the provider.
'-----
Set objOutParams = objWMIService.ExecMethod("Set_GetacBIOSPassWord.InstanceName='ACPI\PNPOC14\0_0'",
"Set_GetacBIOSPassWord", objInParameter)

'-----
' ListOutParams
'-----
Wscript.Echo "Out Parameters: "&objInParameter.Properties_.Item("DataIn")
Wscript.echo "DataOut: " &objOutParams.DataOut
```


Appendix C.VB Script to Query the OS Select

User can query the OS select by below VBScript.

```
strComputer = "."
Set objWMIService = GetObject("winmgmts:\\\" &strComputer& "\root\WMI")

'-----
' Obtain an instance of the class
' using a key property value.
'-----

Set objShare = objWMIService.Get("Query_GetacBIOSSettings.InstanceName='ACPI\PNP0C14\0_0'")

'-----
' Obtain an InParameters object specific to the method.
'-----

Set objInParam = objShare.Methods_("Query_GetacBIOSSettings").inParameters.SpawnInstance_()

'-----
' Add the input parameters.
'-----

objInParam.Properties_.Item("DataIn") = "OSSelect"

'-----
' Execute the method and obtain the return status.
' TheOutParameters object in objOutParams is created by the provider.
'-----

Set objOutParams = objWMIService.ExecMethod("Query_GetacBIOSSettings.InstanceName='ACPI\PNP0C14\0_0'",
"Query_GetacBIOSSettings", objInParam)

'-----
' ListOutParams
'-----

Wscript.Echo "Out Parameters: "&objInParam.Properties_.Item("DataIn")
Wscript.echo "DataOut: " &objOutParams.DataOut
```

Appendix D.VB Script to enable the TPM Support. Enable (TPM Support)

User can enable the TPM Support by below VBScript after configure mode set.

```
strComputer = "."
Set objWMIService = GetObject("winmgmts:\\" & strComputer & "\root\WMI")

'-----
'As the BIOS security, users must switch to the BIOS configure mode before access the Getac WMI Interface
'See this Spec 2.4. Switch to the BIOS Configure Mode
'-----

Set objShare = objWMIService.Get("Set_GetacBIOSConfigMode.InstanceName='ACPI\PNP0C14\0_0'")
Set objInParam = objShare.Methods_("Set_GetacBIOSConfigMode").inParameters.SpawnInstance_()
objInParam.Properties_.Item("DataIn") = ",SetStart"
Set objOutParams =
objWMIService.ExecMethod("Set_GetacBIOSConfigMode.InstanceName='ACPI\PNP0C14\0_0'", "Set_GetacBIOSConfigM
ode", objInParam)

Wscript.echo "Feature: " & objInParam.Properties_.Item("DataIn")
Wscript.echo "DataOut: " & objOutParams.DataOut

'-----
'Add the input parameters, for this this example "TPMSupport,Enabled"
'-----

Set objShare = objWMIService.Get("Set_GetacBIOSSettings.InstanceName='ACPI\PNP0C14\0_0'")
Set objInParam = objShare.Methods_("Set_GetacBIOSSettings").inParameters.SpawnInstance_()
objInParam.Properties_.Item("DataIn") = "TPMSupport,Enabled"
Set objOutParams =
objWMIService.ExecMethod("Set_GetacBIOSSettings.InstanceName='ACPI\PNP0C14\0_0'", "Set_GetacBIOSSettings",
objInParam)

Wscript.echo "Feature: " & objInParam.Properties_.Item("DataIn")
Wscript.echo "DataOut: " & objOutParams.DataOut
```

Appendix E. Check Procedure for Remote Access

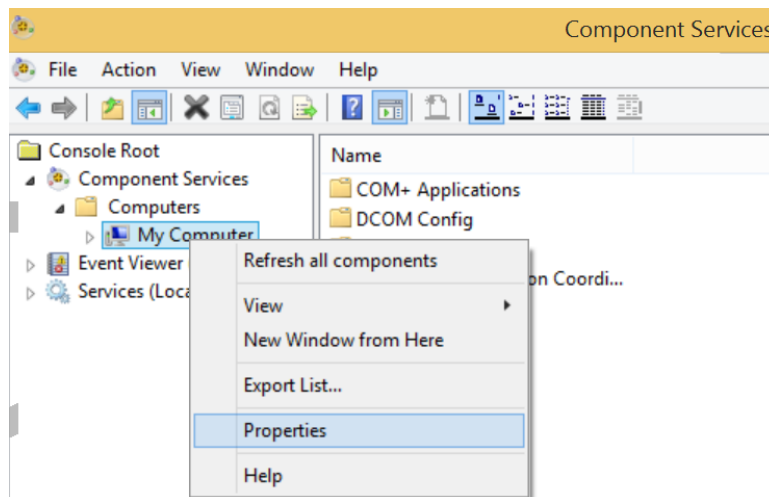
E.1. DCOM permissions

Step 1. Search->**Dcomcnfg**

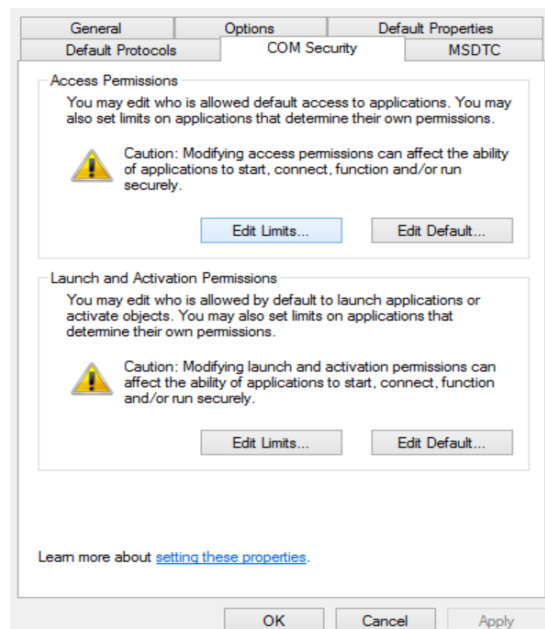
Step 2. Run **Dcomcnfg**

Step 3. Expand **Component Services** ->**Computers** ->**My computer**

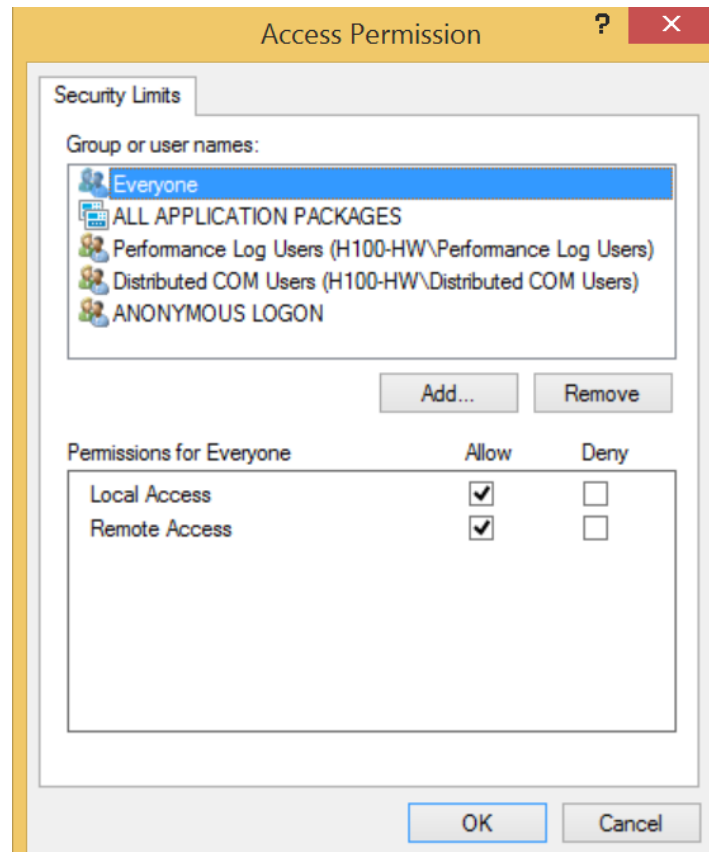
Step 4. Open **My Computer Properties**



Step 5. Go to **COM Security** page.



Step 6. Entry Access Permissions by click **Edit Limits**, and ensure **Everyone** has the **Local Activation** and **Local Launch** allow.

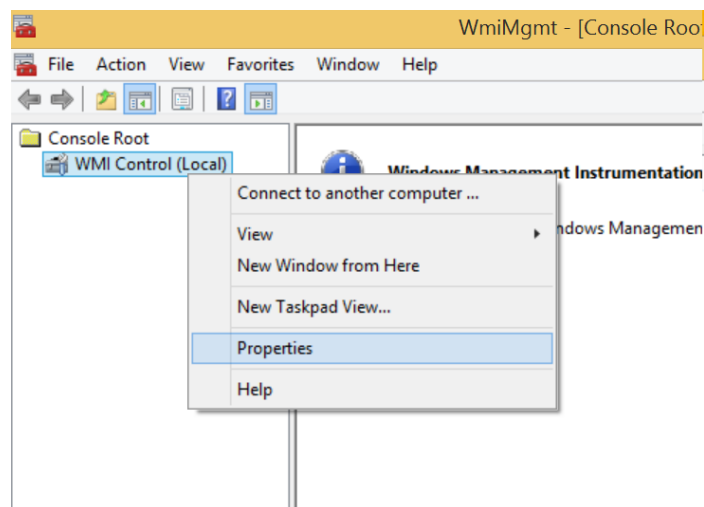


E.2. WMI permissions

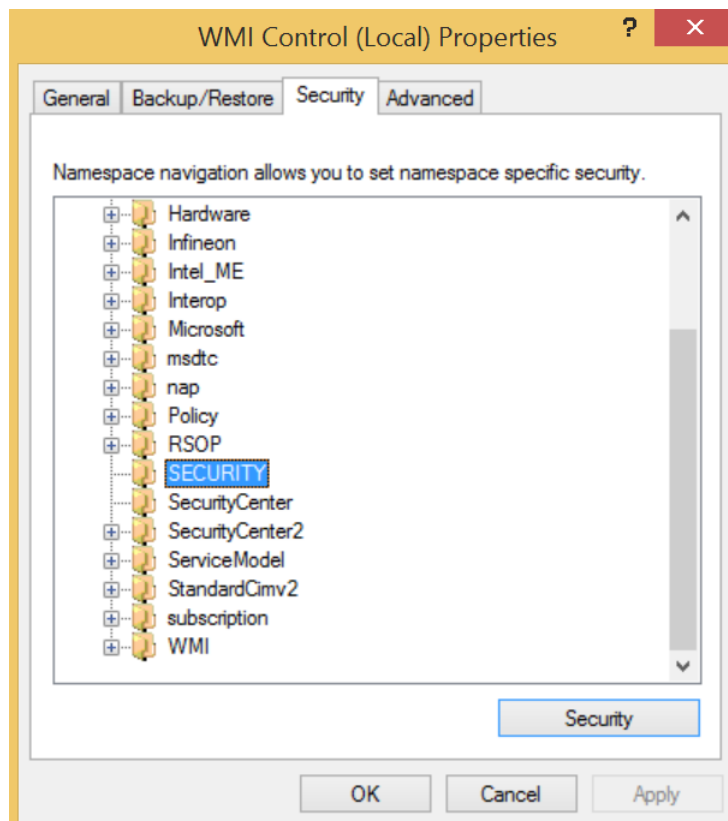
Step 1. Search->[WMIimgmt.msc](#)

Step 2. Run [WMIimgmt.msc](#)

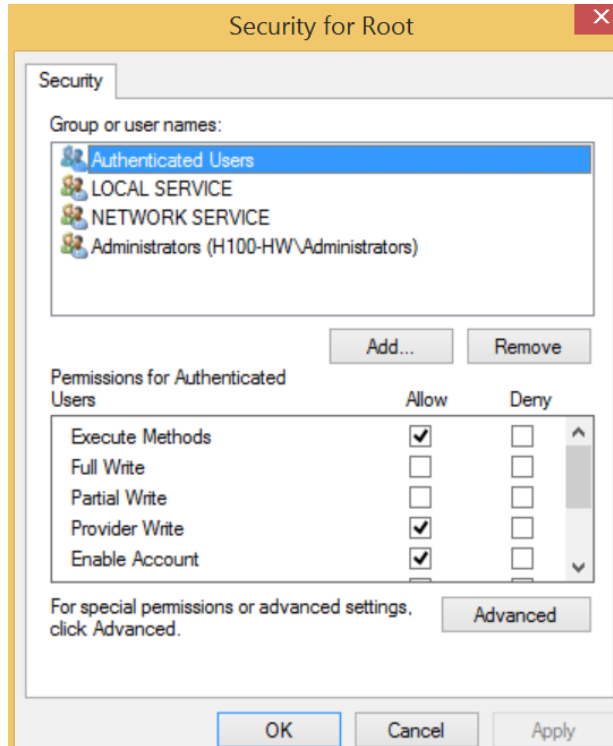
Step 3. Open the [Properties](#) of WMI control



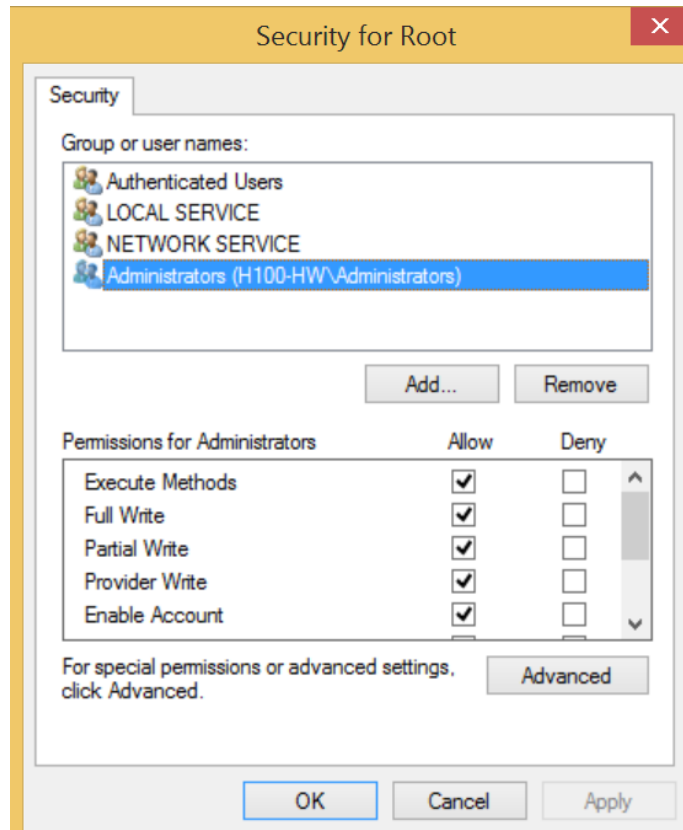
Step 4. Open SECURITY in [Security page](#) of [WMI Control Properties](#)



Step 5. Ensure the [Execute Methods](#), [Provider Write](#) and [Enable Account](#) enabled in [Permission for Authenticated Users](#).



Step 6. Ensure all permissions enabled in [Permissions for Administrators](#).

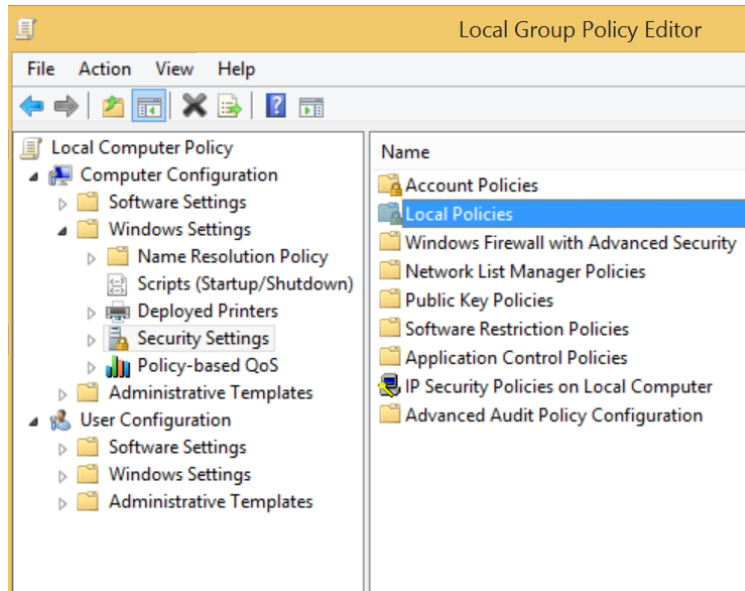


E.3. WMI impersonation Rights

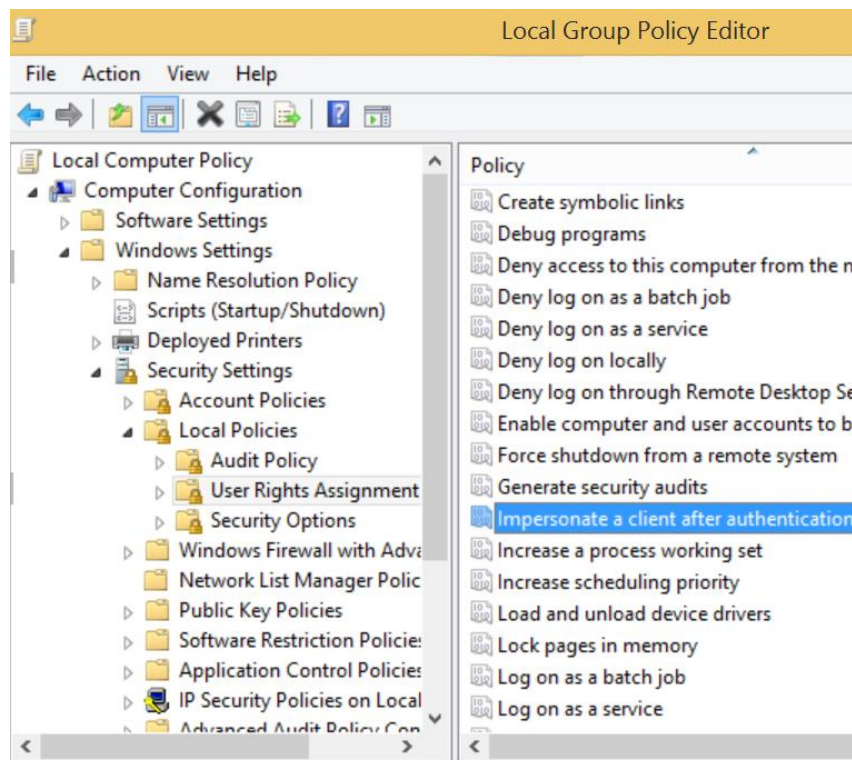
Step 1. Search->[gpedit.msc](#)

Step 2. Run [gpedit.msc](#)

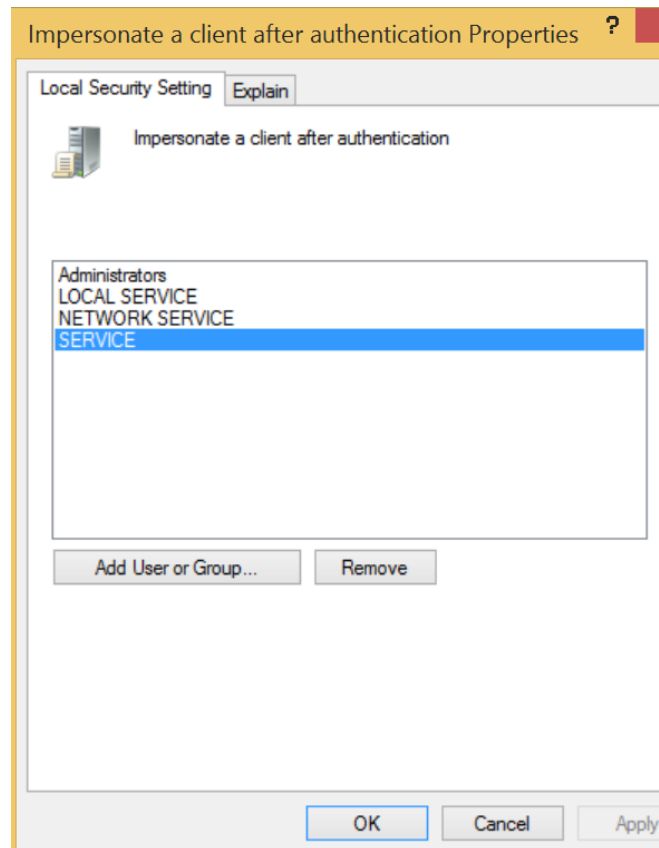
Step 3. Click the [Local Policies](#) of [Security Settings](#) in [windows Settings](#)



Step 4. Open the [Impersonate a client after authentication](#) in [User Rights Assignment](#) of [Local Policies](#).



Step 5. Verify **SERVICE** granted for **Impersonate a client after authentication** in **Local Security Setting**.

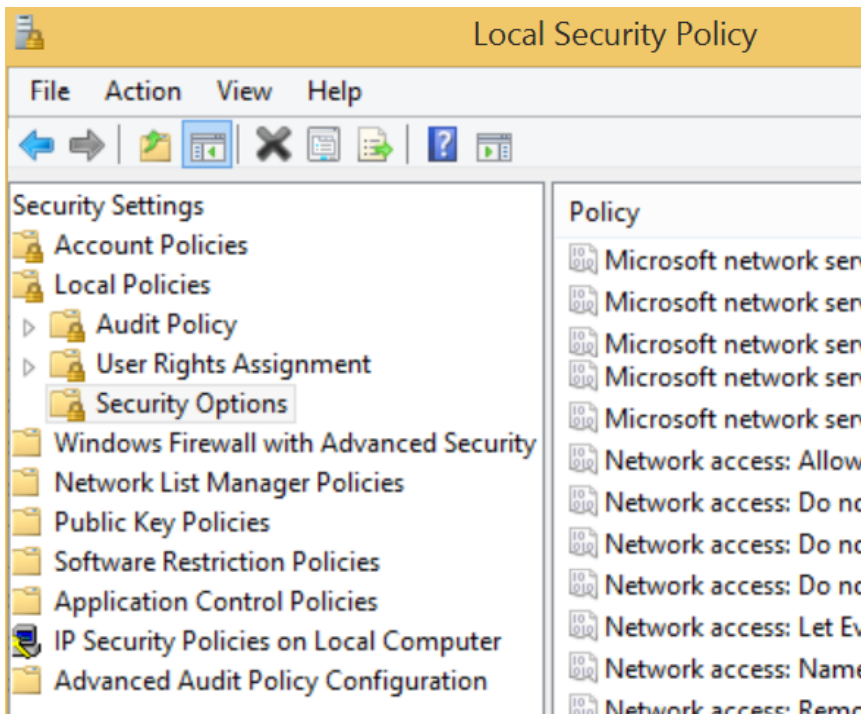


E.4. Network Access

Step 1. Search->**secpol.msc**

Step 2. Run **secpol.msc**

Step 3. Click the **Security Options** of **Local Policies** in **Security Settings**



Step 4. Check the Security setting of Network Access: Sharing and security model for local accounts is “Classic”

