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UNIFIED CONFIGURATION TOOL GUIDE

INTRODUCTION

The Unified Configuration Tool (UCT) is a Microsoft Management Console (MMC) snap-in which enables local and remote management of Lockdown and Branding features installed on a Windows Embedded Standard 8 device. UCT supports configuring settings for Keyboard Filter, Dialog Filter, Unified Write Filter, and Custom Shell Launcher all from a single graphical interface making configuration of Windows Embedded devices more accessible to a wider audience spanning embedded developers to IT pros.

STEP 1: INSTALL UCT AND CONNECT TO YOUR DEVICE

You can either install UCT directly on your device, or you can install it on your computer and then connect remotely to your device. Your device must be connected to a network if you want to use UCT remotely to configure your device. If you install UCT on your computer, you also need to configure your device for remote management.

HARDWARE REQUIREMENTS

The computer or device must meet or exceed the following requirements:

- 1 GHz 32-bit or 64-bit processor
- 1 GB of operating system memory (32-bit system) or 2 GB of operating system memory (64-bit system)
- 2 GB of free hard drive space for complete installation

SOFTWARE REQUIREMENTS

The computer or device must meet or exceed the following requirements:

- It must be running one of the following operating systems:
 - o Windows 7
 - o Windows 8
 - Windows Embedded Standard 8
 - It must have the following software installed:
 - o .NET Framework 2.0 on Windows 7
 - o .NET Framework 4.0 or higher on Windows 8 and Windows Embedded Standard 8
 - Microsoft Management Console (MMC)

To install UCT

- 1. On the Windows Embedded Standard 8 Toolkit disk, run EmbLockSetup_x86.msi for 32-bit computers and devices, or EmbLockSetup_amd64.msi for 64-bit computers and devices.
- 2. In the installation wizard, follow the instructions.
- 3. Click **Start**, type **Unified**, and then under Programs, click **Unified Configuration Tool**.

To configure your device for remote management



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- 1. In UCT, press F1 to open Help.
- 2. In the Help window, navigate to **Configure a Device for Remote Management**, and then follow the instructions.

To connect UCT to a Windows Embedded Standard 8 device

1. In UCT, on the Actions pane, select Connect to Device.



- 2. In the **Select Computer** dialog box, do one of the following:
 - If you installed UCT on your Standard 8 device, select Local Computer, and then click OK.
 - If you installed UCT on your computer, select **Another Computer**, and then do the following:
 - In the text box, enter the name of your Standard 8 device.
 - Click **Set User** and then enter the user name and password of the administrator account to use to connect to the device.

Important

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You must use an administrator account to connect to a device. If you attempt to connect to a device by using a non-administrator account, Embedded Lockdown snap-in becomes unresponsive until the connection attempt times out.



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This section walks through examples of configuring lockdown settings on your device. Each example is independent of the other examples, and you can follow them in any order.

•	Configure Dialog Filter	3
•	Only show dialog boxes from select processes	4
•	Configure keyboard filter to prevent locking the device	5
•	Configure Shell Launcher to Launch Internet Explorer for Guests	6
•	Configure Unified Write Filter to Protect Your Disk Drives from unwanted changes	7

CONFIGURE DIALOG FILTER

You use Dialog Filter to control which pop-up windows and dialog boxes are displayed by the OS.

The easiest way to configure Dialog Filter is to use UCT to capture information about active windows and dialog boxes on your device.

To block the Save As dialog box in Notepad

- 1. On your device, open Notepad.exe.
- 2. In Notepad, on the File menu, click Save As, and leave the Save As dialog open.
- 3. In UCT, expand **Dialog Filter** and then select **Windows/Dialogs**.
- 4. In the **Actions** pane, click **Refresh** to make sure UCT reflects the current state of the device.
- 5. In the center pane, under **Dialog Name**, right-click **Save As**, point to **Set Action**, and then click **Cancel**.

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File Action View Help	File Action View Help						
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Unified Configuration Tool	Dialog Name	Process	Status	Action	Actions		
	C:\Windows\system	cmd.exe	Visible		Windows/Dialogs		
Windows/Dialogs	Save As	notenad exe Set Action	Visible	6	Default Action		
Protected Processes	Volucied - Notepad	Protect process		Cancel	View		
Keyboard Filter Shell Launcher		Properties		Close	Refresh		
Inified Write Filter		Toperaes			12 Help		
		Сору	Ctrl+C		Save As		
					Set Action		
					Protect process		
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On your device, in Notepad, verify that you cannot open the Save As dialog box.



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ONLY SHOW DIALOG BOXES FROM SELECT PROCESSES

You can configure Dialog Filter to hide all non-administrator dialog boxes and windows except for those opened by selected processes. You do this by marking specific processes as protected and then setting the default action to close. Marking a process as protected means that the default action is not applied to any window or dialog that is created by that process.

Before setting the dialog boxes or windows to close, be sure to view the processes running on your device and protect the critical processes in order to avoid unexpected behavior. For example, if you are using the Windows 8 Shell, you must add C:\windows\explorer.exe to the protected processes list to avoid loss of shell functionality, such as the Start menu and the charms bar.

Important:

If you run UCT on your device, you must protect the mmc.exe process to allow UCT to continue to run.

To close all dialog boxes except those opened by Internet Explorer

- 1. On your device, start Internet Explorer.
- 2. In UCT, expand **Dialog Filter** and then select **Windows/Dialogs**.
- 3. In the Actions pane, click Refresh to make sure UCT reflects the current state of the device.
- 4. In the center pane, under Process, right-click iexplore.exe , and then click Protect process.

Unified Configuration Tool							
File Action View Help							
 Unified Configuration Tool EMBEDDEDDEVICE Dialog Filter Windows/Dialogs Protected Processes Keyboard Filter Shell Launcher Mified Write Filter 	Dialog Name ✓ Bing - Windows Internet Explorer ✓ C:Windows\system32\cmd.exe X Save As	Process iexplore.exe cmd.exe notepad.exe	Set Ac Prote Copy	Actions Windows/Dialoge action ect process erties / Ctrl+C Bing - Windows Internet Explorer Set Action Properties Protect process Help			
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- 5. If Shell Launcher is installed on your device, under **Process**, right-click your shell, for example cmd.exe in the previous screenshot, and then click **Protect process**.
- 6. In the left pane, expand **Dialog Filter** and then click **Protected Processes**.
- 7. In the Actions pane, click Default Action and then click Close.



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Unified Configuration Tool				
File Action View Help				
Unified Configuration Tool Process Name	Path	Actions		
EMBEDDEDDEVICE EmbedDebDEVICE Implication Conditional Conditinal Conditional Conditional Conditina Conditional Conditional Co	C:\Windows\System32	Protected Processes	•	
Windows/Dialogs	C:\Program Files\internet explorer	Default Action	•	Show
Protected Processes		Protect a different process	✓	Close
Shell Launcher		View	·	
> 🐌 Unified Write Filter		Refresh		
		👔 Help		
	III	b		
Set default action to close all windows/dialogs.				

On your device, all non-administrator windows will automatically close when opened, except for windows opened by Internet Explorer. If you have marked other processes that you have marked as protected they will also automatically close.

CONFIGURE KEYBOARD FILTER TO PREVENT LOCKING THE DEVICE

You can use Keyboard Filter to lock down specific key combinations on your device, for example to block Ctrl+Alt+Del or Windows logo key+L so that users cannot lock the device.

To block key combinations that can lock the device

- 1. In UCT, expand Keyboard Filter and then select Security Keys.
- 2. In the center pane, under **Blocked Key**, right-click **Ctrl+Alt+Del**, and then click **Block Keys**.
- 3. In the center pane, under **Blocked Key**, right-click **Win+L**, and then click **Block Keys**.



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Unified Configuration Tool	Blocked Key	Filter Status	Description	Actions
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⊿ 🛲 Keyboard Filter	✓ Win+L	Allowed	Lock Console	Block all keys
Accessibility Keys	Block Keys			Allow all keys
Browser Keys	Allow Keys			View
🕅 Extended Shell Keys				Q Refresh
Media Keys				🛛 Help
Security Keys				Win+L
🕅 Shell Keys				Block this key
All Keys				👔 Help
Custom Reps Custom Scan Codes				
Shell Launcher				
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4. On your device, verify that you cannot lock the screen by pressing Win+L or Ctrl+Alt+Del.

CONFIGURE SHELL LAUNCHER TO LAUNCH INTERNET EXPLORER FOR GUESTS

You can use Shell Launcher to launch a custom program as the shell instead of the standard Windows 8 shell. You can configure specific shells to be launched for specific users or for user groups.

To configure Shell Launcher to launch Internet Explorer as the shell for Guest accounts

- 1. In UCT, navigate to Shell Launcher.
- 2. In the Actions pane, click Add a shell.
- 3. In the Shell Launcher dialog box, in User or Group Name, click Edit.
- 4. In the **Browse Groups and Users** dialog box, under **Local Accounts**, select **Guests**, and then click **OK**.

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- 5. In the Shell Launcher dialog box, under Shell Executable, click Browse.
- 6. In the **Select Executable** dialog box, navigate to C:\Program Files\internet explorer, select **iexplore.exe**, and then click **OK**.

Select Executable			×		
EMBEDDEDDEVICE Image: Control of the second seco	Name	Date 6/29/2012 7:4 6/29/2012 7:5 6/29/2012 7:4 6/29/2012 7:4 6/29/2012 7:5	Size 24.0 KB 312 KB 456 KB 217 KB 745 KB		
Eile Name: c:\program files\internet explorer\iexplore.exe Applications (*.exe)					
Show Hidden Files					

7. In the Shell Launcher dialog box, click OK.

UCT now appears as shown in the following figure.

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<u>File Action View H</u> elp			
Unified Configuration Tool	User/Group	Shell	Actions
EMBEDDEDDEVICE Dialog Filter	BUILTIN\Guests	c:\program files\internet explorer\iexplore.exe	Shell Launcher
Keyboard Filter	Default Shell	cmd.exe	🛃 Export 🕨
Shell Launcher			🔜 Add a shell
Image: Second			View 🕨
			🖪 Refresh
			? Help
			-

8. On your device, sign in as a guest, and then verify that Internet Explorer is launched as the shell.

CONFIGURE UNIFIED WRITE FILTER TO PROTECT YOUR DISK DRIVES FROM UNWANTED CHANGES

You can use Unified Write Filter (UWF) to protect your storage media, such as disk drives, from unwanted writes and changes. You can also add file and registry exclusions to allow specific files and registry entries to be updated



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There are some files and folders that cannot be excluded. For more information, press F1 to open the help topic which contains the list of files and folders that cannot be excluded.

In the following example, you create three example text files on your device in order to demonstrate how to protect your disk while allowing specific files to be changed on the disk.

To enable UWF protection on the C: drive and allow changes to specific files to persist across device restarts

Important:

In this procedure, you use Notepad to modify files. Make sure that Dialog Filter has the default setting set to **Show**, and that no dialogs for notepad.exe are blocked. For more information, see CONFIGURE DIALOG FILTER and ONLY SHOW DIALOG BOXES FROM SELECT PROCESSES in this document.

- 1. In UCT, navigate to **Unified Write Filter**.
- 2. In the center pane, make sure that UWF is disabled. If UWF is not currently disabled, click **Disable Unified Write Filter**, and then restart your device.

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<u>File Action View Help</u>										
Unified Configuration Tool	🗙 Unified Write Filter	Disabled		Actions						
Dialog Filter	Setting Type	Current Value	Pending Value After Re							
 Keyboard Filter Shell Launcher 	Overlay Size Overlay Storage	1024 RAM	1024 RAM	Enable Unified Write Filter						
Unified Write Filter				Enable HORM						
				Edit overlay properties						
				View 🕨						
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- 3. On your device, create a new folder C:\UWF test.
- On your device, in the new folder C:\UWF test, create three new empty text files, ExampleOne.txt, ExampleTwo.txt, and ExampleThree.txt.
- In UCT, in the Actions pane, click Enable Unified Write Filter.
 Do not restart your device yet.



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<u>File Action View Help</u>				
Unified Configuration Tool	🔀 Unified Write Filte	r Disabled		Actions
Dialog Filter	Setting Type	Current Value	Pending Value After Re	Unified Write Filter
Keyboard Filter	Overlay Size	1024	1024	🛃 Export 🕨
Shell Launcher	Overlay Storage	RAM	RAM	Enable Unified Write Filter
Dified Write Filter				Enable HORM
				Edit overlay properties
				View 🕨
				Q Refresh
				P Help

- 6. In the left pane, navigate to **Volumes**.
- 7. In the center pane, right-click Local Disk (C:) and then click Protect.

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Unified Configuration Tool EMBEDDEDDEVICE Children Keyboard Filter Shell Launcher Unified Write Filter File Exclusions Registry Exclusions	 ✓ Unified Write Filter Ena ▲ In order for changes to Volume Name ♦● Local Disk (C:) 	abled after reboot take affect, a reboot is Status Unprotected	required. Pending Reb Protected	Reboot Now	Actions Volumes Disable Unified Write Filter Enable HORM Edit overlay properties View Refresh Help Local Disk (C:)			
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8. In the center pane, click **Reboot Now** to restart your device.

Wait for your device to restart, and for UCT to reload the configuration information.

- 9. In UCT, navigate to File Exclusions.
- 10. In the Actions pane, click Add file.
- 11. In the Add file dialog box, browse to C:\UWF test, select ExampleTwo.txt, and then click OK.



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Unified Configuration Tool	✓ Unified Write Filter Enabled		Actions
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Bailog Filter	A in order for changes to take affect, a reboot is required.	Reboot Now	Disable Unified Write Filter
Shell Launcher	File	Action	Enable HORM
a 🐌 Unified Write Filter	C:\uwf test\ExampleTwo.txt	Adding on reboot	Edit overlay properties
File Exclusions			📔 Add file
Registry Exclusions			F Add directory
			View 🕨
			Q Refresh
			? Help
			C:\uwf test\ExampleTwo.txt
			× Undo exclusion file
			Help
	1		1

- 12. Click **Reboot Now** to restart your device.
- 13. On your device, open a new command prompt as an Administrator.
- 14. At the command prompt, type cd "c:\UWF test"
- 15. Type **dir** to see the three text files you created earlier.
- 16. Type Erase ExampleOne.txt
- 17. Type **dir** to verify that ExampleOne.txt no longer appears in the directory.
- 18. Type **notepad ExampleTwo.txt** to open the second example file in notepad.
- 19. In Notepad, enter some text, such as "This change should persist", save the file and close Notepad.
- 20. At the command prompt, type **notepad ExampleThree.txt**.
- 21. In Notepad, enter some text, such as "This change should not persist", save the file and close Notepad.
- 22. In Notepad, reopen ExampleTwo.txt and ExampleThree.txt to verify that the changes have been saved.
- 23. Restart your device.
- 24. In Notepad, open ExampleOne.txt, ExampleTwo.txt, and ExampleThree.txt again. Verify the following:
 - ExampleOne.txt is not deleted.
 - ExampleTwo.txt contains your text.
 - ExampleThree.txt does not contain any text.