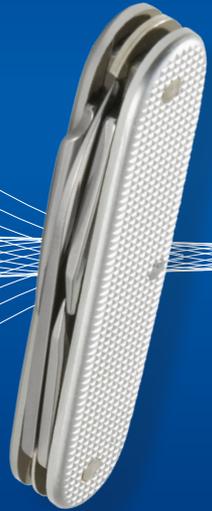


Windows 8.1 Administration Essentials & Configuration

William R. Stanek
Author and Series Editor



Pocket Consultant

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To my readers—thank you for being there with me through many books and many years. It has been an honor and a privilege to be your pocket consultant.

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—William R. Stanek

Introduction

Writing *Windows 8.1 Administration Pocket Consultant: Essentials & Configuration* was a lot of fun—and a lot of work. As I set out to write this book, my initial goals were to determine how Windows 8.1 was different from its predecessors and what new features and options were available. As with any new operating system, I had to do a great deal of research and a lot of digging into the internals of the operating system to determine exactly how things work.

Anyone transitioning to Windows 8.1 from Windows 8 might be surprised at just how much has been updated, because changes both subtle and substantial have been made throughout the operating system. For anyone transitioning from Windows 7 or earlier, the extensive UI changes will be among the most substantial revisions to the operating system. Like Windows 8, Windows 8.1 supports a touch-based UI, as well as the traditional mouse and keyboard. When you are working with touch UI-enabled computers, you can manipulate on-screen elements in ways that weren't possible previously. You can do any of the following:

- **Tap** Tap an item by touching it with your finger. A tap or double-tap of elements on the screen is generally the equivalent of a mouse click or double-click.
- **Press and hold** Press your finger down and leave it there for a few seconds. Pressing and holding elements on the screen is generally the equivalent of a right-click.
- **Swipe to select** Slide an item a short distance in the opposite direction compared to how the page scrolls. This selects the items and also might bring up related commands. If press and hold doesn't display commands and options for an item, try using swipe to select instead.
- **Swipe from edge (slide in from edge)** Starting from the edge of the screen, swipe or slide in. Sliding in from the right edge opens the Charms panel. Sliding in from the left edge shows open apps and allows you to switch between them easily. Sliding in from the top or bottom edge shows commands for the active element.
- **Pinch** Touch an item with two or more fingers, and then move the fingers toward each other. Pinching zooms in or shows less information.
- **Stretch** Touch an item with two or more fingers, and then move the fingers away from each other. Stretching zooms out or shows more information.

You also are able to enter text by using the on-screen keyboard. Although the UI changes are substantial, they aren't the most significant changes to the operating system. The most significant changes are below the surface, affecting the underlying architecture and providing many new features. Some of these features are revolutionary in that they forever change the way we use Windows.

Because Pocket Consultants are meant to be portable and readable—the kind of book you use to solve problems and get the job done wherever you might be—I had to carefully review my research to make sure that I focused on the core essentials and configuration of Windows 8.1. The result is the book you hold in your hands, which I hope you’ll agree is one of the best practical, portable guides available.

Because my focus is on giving you maximum value in a pocket-size guide, you don’t have to wade through hundreds of pages of extraneous information to find what you’re looking for. Instead, you’ll find exactly what you need to address a specific issue or perform a particular task. In short, the book is designed to be the one resource that you turn to whenever you have questions regarding Windows 8.1 essentials and configuration. It zeroes in on daily procedures, frequently used tasks, documented examples, and options that are representative, although not necessarily inclusive.

One of the goals for this book is to keep its content concise so that it remains compact and easy to navigate, while at the same time packing it with as much information as possible to make it a valuable resource. Instead of a hefty 1,000-page tome or a lightweight, 100-page quick reference, you get a valuable resource guide that can help you quickly and easily perform common tasks, solve problems, and implement everyday solutions.

Who is this book for?

The focus of *Windows 8.1 Administration Pocket Consultant: Essentials & Configuration* is on the Standard, Professional, and Enterprise editions of Windows 8.1. The book is designed for the following readers:

- Accomplished users who want to configure and maintain Windows 8.1
- Current Windows system administrators and support staff
- Administrators upgrading to Windows 8.1 from earlier releases of Windows
- Administrators transferring from other platforms

To pack in as much information as possible, I had to assume that you have basic networking skills and a basic understanding of Windows operating systems. As a result, I don’t devote entire chapters to understanding Windows basics, Windows architecture, or Windows networks. I do, however, cover desktop customization, system optimization, automation, maintenance, and much more. The book also goes into depth on troubleshooting, and I’ve tried to ensure that each chapter, where appropriate, has troubleshooting guidelines and discussions to accompany the main text. From the start, troubleshooting advice is integrated into the book, instead of being captured in a single, catchall troubleshooting chapter inserted as an afterthought. I hope that after you read these chapters and dig into the details, you’ll be able to improve the overall experience of your users and reduce downtime.

How is this book organized?

Rome wasn't built in a day, nor was this book intended to be read in a day, or in a week, or even in a month for that matter. Ideally, you'll read this book at your own pace, a little each day as you work your way through each of the ten chapters. The chapters are arranged in a logical order, taking you from deployment and installation to configuration, optimization, and maintenance.

Ease of reference is an essential part of this hands-on guide. This book has an expanded table of contents and an extensive index for finding answers to problems quickly. Many other quick-reference features have been added to the book as well, including quick step-by-step procedures, lists, tables with fast facts, and extensive cross references.

As with all Pocket Consultants, *Windows 8.1 Administration Pocket Consultant: Essentials & Configuration* is designed to be a concise and easy-to-use resource. This is the readable resource guide that you'll want on your desktop at all times. The book covers everything you need to perform the essential tasks for deployment, installation, configuration, optimization, maintenance, and much more.

Although designed and written to stand on its own, this book can also be used with *Windows 8.1 Administration Pocket Consultant: Storage, Networking, & Security*. The latter book focuses on boot configuration and startup, drive configuration and encryption, advanced storage, file sharing and security, TCP/IP networking and remote accesses, advanced networking solutions, and much more.

Conventions used in this book

I've used a variety of elements to help keep the text clear and easy to follow. You'll find code listings in monospace type, except when I tell you to actually enter a command. In that case, the command appears in **bold** type, as does any text that the user is supposed to enter. When I introduce and define a new term, I put it in *italics*.

Other conventions include the following:

- **Best Practices** To examine the best technique to use when working with advanced configuration and maintenance concepts
- **Caution** To warn you about potential problems
- **Important** To highlight important concepts and issues
- **More Info** To provide more information on a subject
- **Note** To provide additional details on a particular point that needs emphasis
- **Real World** To provide real-world advice when discussing advanced topics
- **Security Alert** To point out important security issues
- **Tip** To offer helpful hints or additional information

I truly hope you find that *Windows 8.1 Administration Pocket Consultant: Essentials & Configuration* provides everything that you need to perform essential tasks on Windows 8.1 systems as quickly and efficiently as possible. You are welcome to send your thoughts to me at williamstanek@aol.com. Follow me on Twitter at WilliamStanek and on Facebook at www.facebook.com/William.Stanek.Author. Thank you.

Other resources

No single magic bullet for learning everything you'll ever need to know about Windows 8.1 exists. Although some books are offered as all-in-one guides, there's simply no way one book can do it all. With this in mind, I hope you use this book as it is intended to be used—as a concise and easy-to-use resource. It covers everything you need to perform essential tasks, but it is by no means exhaustive.

Your current knowledge will largely determine your success with this or any other Windows resource or book. As you encounter new topics, take the time to practice what you've learned. Seek out further information as necessary to get the practical hands-on know-how and knowledge you need.

For topics this book doesn't cover, you may want to look to *Windows 8.1 Administration Pocket Consultant: Storage, Networking, & Security*. I also recommend that you regularly visit the Microsoft website for Windows (microsoft.com/windows/) and support.microsoft.com to stay current with the latest changes. To help you get the most out of this book, you can visit my corresponding website at pocket-consultant.com. This site contains information about Windows 8.1 and updates to the book.

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Every effort has been made to ensure the accuracy of this book and its companion content. Any errors that have been reported since this book was published are listed at:

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Customizing the desktop and the interface

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As an administrator, you'll often be asked to help users customize their desktops and user profile data. Windows 8.1 provides many desktop and screen customization options. Although these options are useful, they can cause problems that you might be asked to help resolve. You might also find users struggling to fix these issues on their own, so you might want to offer some help. This chapter focuses on the configuration and troubleshooting of the following areas:

- PC settings, the taskbar, and toolbars
- Desktop themes and backgrounds
- Custom desktop content
- Screen savers
- Display appearance and settings
- Logging on to the desktop instead of Start

Optimizing PC settings

The PC Settings screen and its related pages are designed to provide easy access to settings commonly used for customizing the user interface and the way that apps can be used. You can display the PC Settings screen by using one of the following techniques:

- With touch UI, slide in from the right, tap Settings, and then tap Change PC Settings.
- With the mouse and keyboard, press Windows key + I, and then click Change PC Settings.

You navigate between pages by tapping or clicking the name of the page. The top-level pages available include the following:

- **PC And Devices** Provides quick access to commonly used configuration settings, including lock screen, display, power, and AutoPlay options. Note that when you are using a Remote Desktop connection to configure a computer, you won't be able to configure PC And Devices/Microsoft Display options. Display options can be configured only when you are logged on locally.
- **Accounts** Provides options for managing basic account settings, including the account picture and sign-in options. Also provides options for managing local accounts and connecting the computer to a Microsoft account.
- **SkyDrive** Provides options for connecting to a Microsoft account on the computer and accessing files saved to Microsoft SkyDrive. By connecting a Microsoft account, you can sync PC settings from the Microsoft account to the currently logged-on domain account.
- **Search And Apps** Provides options for configuring online search and sharing settings. Also provides options for configuring app installation, default apps, and app notifications.
- **Privacy** Provides options for controlling app access to account and location information. Also provides options for controlling whether apps can access the computer's webcam and microphone.
- **Network** Provides options for managing networking and joining workplace networks. Under Network/Connections, you'll find current Ethernet, Wi-Fi, DirectAccess, and VPN connections. Select a connection to view, and optionally copy, its configuration settings, including the MAC address of the network card. With Wi-Fi connections, you can enable device discovery and data usage display. You also can specify whether the connection is metered.
- **Time And Language** Provides options for- setting the computer date, time, region, and language. Prior to Windows 8, the input language context was managed per thread by default. As a result, the input language used in one program could be different from the input language in another program if you changed the input language in one program but not in others. Now Windows manages the input language on a per-user basis by default. If you change the input language in the currently active program and then open

another program or switch to another open program, the input language in that program will also change because the current input language settings follow the focus by default.

- **Ease Of Access** Provides quick access to accessibility options, including the Narrator, Magnifier, and High Contrast features. You'll also find handy keyboard and mouse options. Under Ease of Access\Keyboard, use the On-Screen Keyboard option to enable or disable the on-screen keyboard. Under Ease of Access\Mouse, use the Mouse Keys options to control whether the numeric keypad can be used to move the mouse pointer around on the screen.
- **Update And Recovery** Provides quick access to options for working with the Windows Update, File History, and Recovery features of the operating system.

Figure 3-1 shows the PC And Devices page in PC Settings. Pages and options you have might be slightly different depending on your computing device.

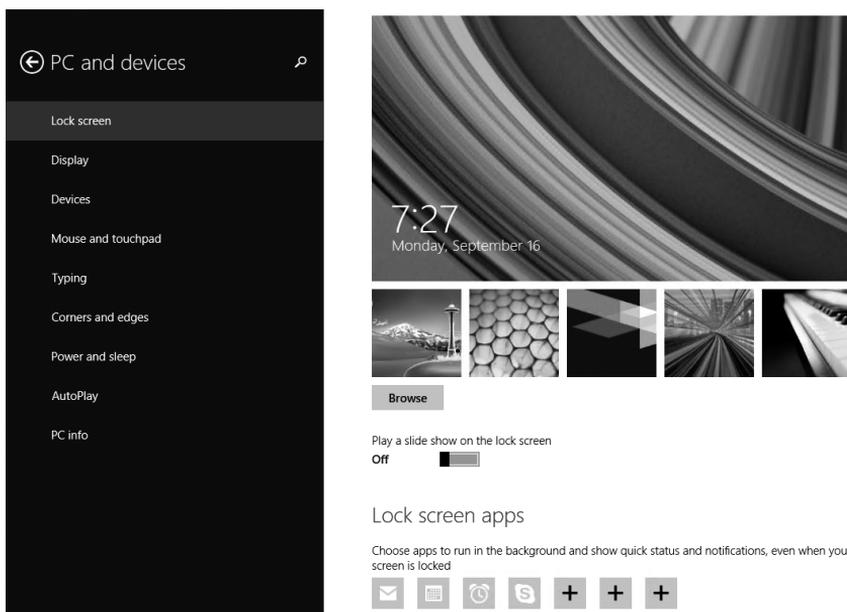


FIGURE 3-1 Use PC Settings pages and options to customize the user interface.

NOTE Throughout this section, I use the term *apps* to refer to desktop apps, as opposed to traditional desktop programs. For more information about apps, see Chapter 7, "Installing and maintaining applications."

Each user who logs on to a computer has separate settings. The sections that follow examine key areas of the operating system that can be configured by using these pages and options.

Personalizing the lock screen

On the PC And Devices\Lock Screen page, you can choose a picture to display in the background by tapping or clicking the picture you want to use. If you want to use a picture from somewhere else on your computer, select Browse, and then use the options provided to navigate to and choose the picture you want to use. When you browse for pictures, the default folder is This PC\Pictures. You can also search in the following ways:

- To search another folder on the computer, tap or click Go Up. You'll then have quick access to the Desktop, Documents, Downloads, Music, and Videos folders as well as fixed and removable media volumes.
- To search for files on a network share, tap or click This PC, and then select Network. On the Network screen, you'll find and can access any currently mapped network locations. To map a new location, enter the network path, such as \\CorpServer23\Data.

Some apps, those referred to as *lock screen apps*, can run in the background and show quick status and notifications even when the screen is locked. Typically, the messaging, mail, and calendar apps are configured to display quick status information by default. Other apps installed on the computer might also be able to show quick status and notifications on the lock screen. Tap or click the Add option (which appears as a plus sign) to display a list of these apps and then tap or click an app to add it. To remove a lock screen app, tap or click the app and then tap or click Don't Show Quick Status Here.

Some apps, like Calendar and Weather, can display a detailed status on the lock screen, but normally only one app can actively display detailed status at a time, and that app is listed under Choose An App To Display Detailed Status. If no detailed status app has been added, tap or click the Add option (which appears as a plus sign), and then tap or click the app you want to add. To remove the detailed status app, tap or click the app, and then tap or click Don't Show Detailed Status On The Lock Screen.

REAL WORLD The Force A Specific Default Lock Screen Image setting controls whether you can personalize the image on the lock screen. If you enable this setting on a domain-joined computer, you can specify the path to an image that must be displayed on the lock screen when no user is signed in. The path can be a local path on the computer, such as %WinDir%\web\screen\corp-ls.jpg, or a UNC path to a network share, such as \\FileServer18\Images\corp-ls.jpg. In Group Policy, you'll find this setting in the Administrative Templates policies for Computer Configuration, under Control Panel\Personalization.

Personalizing account settings

On the Accounts\Your Account page, you can choose an account picture to display. A silhouette graphic is used by default, but any picture can be added as an account picture. If you want to use a picture from somewhere else on your computer, tap or click Browse, and then use the options provided to navigate to and choose the picture you want to use.

If the computer has a camera, you can create an account picture by clicking Camera and following the prompts. You also use the Accounts\Your Account page to manage the logged-on account. If the logged-on account is using a Microsoft account, you can use the options provided to switch to a local account, and you can also use the options provided to switch from a local account to a Microsoft account.

The settings on the Accounts\Sign-In Options page allow you to create or change a picture password for the logged-on user (if allowed in Group Policy). You also can control whether a user must enter a password when waking the computer. For more information on working with user accounts, see Chapter 5, "Managing user access and security."

You can personalize colors on the account's Start screen by completing the following steps:

1. Display the Personalize options for Start by using one of the following techniques:
 - With the touch UI, slide in from the right, tap Settings, and then tap Personalization.
 - With the mouse and keyboard, point to the hidden button in the lower-right corner of the screen to display the Charms bar. On the Charms bar, click Settings, and then click Personalize.
2. Select one of the default background images provided. Next, select a color to display behind the background image. A default color palette is provided that is close in hue to the colors used in the image. To display a different color palette, use the color selector.
3. Select an accent color for the background image. A default color palette is provided that is close in hue to the colors used in the image. To display a different color palette, use the color selector.

REAL WORLD When working with backgrounds and colors for the Start screen, keep the following in mind:

- **Force A Specific Background And Accent Color in the Administrative Templates for Computer Configuration** under Control Panel\Personalization controls whether you can personalize colors on the Start screen. If you enable this setting, you can specify background and accent colors for the Start screen in Group Policy and users will be unable to change these colors. You must specify the colors as hexadecimal RGB values, similar to the way you set background colors for webpages in HTML. The colors you use must have at least a 2:1 contrast ratio with white text or the setting will not be applied.
- **Force A Specific Start Background for Computer Configuration** under Control Panel\Personalization controls whether you can personalize the background image on the Start screen. If you enable this setting, you can specify a numeric identifier for one of the available background images and users cannot change the background image. A value of 1 indicates the first default background; a value of 2, the second; and so on.

Personalizing search and apps settings

The Search page in the Search And Apps section allows you to personalize the way search works. Windows 8.1 tracks a history of your searches, and it can use this search history to show the apps that you search most often at the top of your search results and to save searches for future suggestions. Use the Search History options to modify the way this works or to delete the current search history.

Certain apps are configured for quick sharing, allowing you to quickly share photos, documents, or other items. The Share page allows you to personalize the way sharing works. Windows 8.1 tracks a history of the apps that you use for sharing and can display these apps in a prioritized list. Up to five apps are in the list by default. Tap or click the Items In List drop-down box to select a different number of apps. Tap or click Clear List to clear and reset the list.

Certain apps, such as Mail and People, are configured for sharing automatically. Options are provided to turn sharing on or off for each app individually. Simply tap or click the related button to switch sharing on or off.

Many apps can display notifications, which can be controlled from the Notifications page in the Search And Apps section. Top-level notification controls include:

- **Show App Notifications** Controls whether apps can display notifications on Start and the desktop
- **Show App Notifications On The Lock Screen** Controls whether apps can display notifications on the lock screen
- **Play Notification Sounds** Controls whether apps can play notification sounds

Tap or click the control to turn the related notifications on or off. In addition to being able to turn notifications on or off for individual apps, you can also set quiet hours to stop notifications during certain hours of the day.

TIP On the PC And Devices\Corners And Edges page under App Switching, you can specify whether a user can switch between recent apps by tapping or clicking in the upper-left corner of the screen. A list of recently used apps can also be displayed by swiping in from the left edge. When app switching is allowed, Windows 8.1 tracks recently used apps in a history; you can clear this history by tapping or clicking Clear List.

Managing privacy settings

Apps can use your name and account picture by default. You configure these and related settings on the General page in the Privacy section. Simply tap or click the related button to specify whether you want this information to be available to apps.

Apps can use the computer's location to provide relevant content by default. On the Privacy\Location page, you can control the availability of location data to apps. You can disable app access to location data completely by setting Let Windows And Apps Use My Location to Off. Alternatively, you can enable access for specific

apps by setting Let Windows And Apps Use My Location to On and then using the additional options provided to specify which apps can use the location data.

Apps can use the computer's webcam by default. On the Privacy\Webcam page, you can control the availability of the webcam to apps. You can disable app access to the webcam completely by setting Let Apps Use My Webcam to Off. Alternatively, you can enable webcam access for specific apps by setting Let Apps Use My Webcam to On, and then using the additional options provided to specify which apps can use the webcam.

Apps can use the computer's microphone by default. On the Privacy\Microphone page, you can control the availability of the microphone to apps. You can disable app access to the microphone completely by setting Let Apps Use My Microphone to Off. Alternatively, you can enable microphone access for specific apps by setting Let Apps Use My Microphone to On, and then using the additional options provided to specify which apps can use the microphone.

Configuring sync settings

When the currently logged-on user has a Microsoft account, you can control the way settings are synchronized between devices on the SkyDrive\Sync Settings page. Settings that can be synchronized include the following:

- The user's Start screen tiles and layout
- Appearance settings for colors, backgrounds, and account picture
- Desktop personalization settings for themes, the taskbar, and more
- Sign-in passwords for some apps, websites, networks, and HomeGroups
- Ease of Access options and language preferences
- Browser settings, browser history, and browser favorites
- Other Windows settings for File Explorer, the mouse, and more

The Sync Your Settings On This PC option is the top-level control. Turn this setting on or off depending on whether you want settings to be synchronized between devices.

When synchronization is allowed, use the additional options provided to control the type of settings that are synchronized. Because Windows 8.1 also can recognize when a computer is on a metered connection, such as a cellular network, you can turn syncing on or off over metered connections and specify whether syncing is ever allowed when the metered connection is roaming.

In the Administrative Templates for Computer Configuration, under Windows Components\Sync Your Settings, you'll find the following settings for controlling how settings can be synced:

- Do Not Sync Apps
- Do Not Sync Apps Settings
- Do Not Sync Desktop Personalization
- Do Not Sync On Metered Connections

- Do Not Sync Other Windows Settings
- Do Not Sync Passwords
- Do Not Sync Personalize
- Do Not Sync Start Settings
- Do Not Sync Browser Settings

Working with desktops and startup applications

In the Windows operating system, items on the desktop and startup applications are configured with shortcuts, and the location of the shortcut determines how the shortcut is used. For example, if you want to configure startup applications for all users, you can add shortcuts to the %SystemDrive%\ProgramData\Microsoft\Windows\Start Menu\Programs\Startup folder. These applications then automatically start when a user logs on to the system locally. If you want to configure startup applications for a particular user, you can add shortcuts to the %UserProfile%\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup folder.

Creating shortcuts for desktops, startup, and more

In File Explorer, you can create shortcuts for the desktop, folders, and startup applications by logging on to a user's computer and creating shortcuts in the appropriate locations. In Group Policy, you can create shortcuts for desktops, startup applications, and more by using Shortcuts preferences, and these preference items are applied automatically to all users and computers that process the related Group Policy Object.

To configure Shortcuts preferences, follow these steps:

1. Open a Group Policy Object for editing in the Group Policy Management Editor. To configure preferences for computers, expand Computer Configuration\Preferences\Windows Settings, and then select Shortcuts. To configure preferences for users, expand User Configuration\Preferences\Windows Settings, and then select Shortcuts.
2. Press and hold or right-click the Shortcuts node, point to New, and then select Shortcut. This opens the New Shortcut Properties dialog box, as shown in Figure 3-2.
3. In the Action list, select Create, Update, or Replace as appropriate. Then, complete the other options as discussed later in this section.
4. Use the options on the Common tab to control how the preference is applied. Often, you'll want to apply a shortcut only once. If so, select Apply Once And Do Not Reapply.
5. Tap or click OK. The next time policy is refreshed, the preference item will be applied as appropriate for the Group Policy Object in which you defined the preference item.

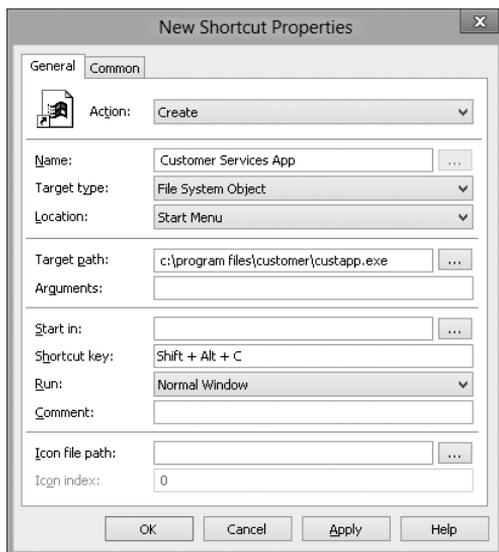


FIGURE 3-2 Create a shortcut by using a preference item.

In the Location list, you'll find a list of special folders that you can use with shortcuts. Table 3-1 provides a summary of these folders.

TABLE 3-1 Special folders for use with shortcuts

SPECIAL FOLDER	USAGE
All Users Desktop	Desktop shortcuts for all users
All Users Explorer Favorites	Explorer favorites for all users
All Users Programs	Programs menu options for all users
All Users Start Menu	Start menu options for all users
All Users Startup	Startup applications for all users
Desktop	Desktop shortcuts for a specific user
Explorer Favorites	Favorites for a specific user
Explorer Links	Favorite links for a specific user
My Network Places	Network shortcuts for a specific user
Programs	Programs menu options for a specific user
Quick Launch Toolbar	Toolbar folder with shortcuts for a specific user

SPECIAL FOLDER	USAGE
Recent	Recently used document shortcuts for a specific user
Send To	Send To menu shortcuts for a specific user
Start Menu	Start menu shortcuts for a specific user
StartUp	Startup applications for a specific user

Shortcuts can point to local and network files, as well as to remote Internet resources. Shortcuts for working with local or network files are referred to as *link shortcuts*. Shortcuts for working with remote Internet resources are referred to as *URL shortcuts*.

A link shortcut is usually used to start an application or open a document rather than access a URL in a browser. Because of this, link shortcuts have different properties than URL shortcuts. The properties are summarized in Table 3-2. If you set any property incorrectly or set a property that isn't supported by a linked application, the shortcut might not be created or might not work as expected. In this case, you need to correct the problem and try to create the shortcut again.

One of the most valuable options is the Arguments property. You can use this property to set arguments to pass in to an application that you are starting. By using this property, you can create a shortcut that starts Microsoft Word and opens a document by setting the target path for Word and the argument for the document to open.

When you add shortcuts to the desktop or menus, you can specify a sequence of keystrokes that activates the shortcut. The keyboard shortcut sequence must be specified with at least one modifier key and a key designator. The following modifier keys are available:

- Alt
- Ctrl
- Shift

TABLE 3-2 Link shortcut properties

PROPERTY	DESCRIPTION	SAMPLE VALUE
Arguments	Arguments to pass to an application started through the shortcut.	C:\Gettingstarted.doc
Comment	Sets a descriptive comment for the shortcut.	Opens the Getting Started Document
Icon File Path	Sets the location of an icon for the shortcut. If not set, a default icon is used.	C:\Program Files\Internet Explorer\Iexplore.exe

PROPERTY	DESCRIPTION	SAMPLE VALUE
Icon Index	Sets the index position of the icon for the shortcut. Few applications have multiple icons indexed, so the index is almost always 0.	0
Location	Specifies where the shortcut should be created.	Desktop
Name	Sets the name of the shortcut.	Getting Started
Run	Sets the window style of the application started by the shortcut. The available styles are Normal Window, Minimized, and Maximized.	Normal Window
Shortcut Key	Sets a keyboard shortcut sequence that activates the shortcut. This property can be used only with desktop shortcuts and Start menu options.	Alt+Shift+Z
Start In	Sets the working directory of the application started by the shortcut.	C:\Working
Target Path	Sets the path of the file to execute.	%WinDir%\Notepad.exe
Target Type	Specifies the type of shortcut you are creating. Choose File System Object for link shortcuts, URL for URL shortcuts, and Shell Object for Explorer shell shortcuts.	File System Object

Modifier keys can be combined in any combination, such as Alt+Ctrl or Shift+Ctrl, but the combination shouldn't duplicate key combinations used by other shortcuts. Key designators include the alphabetic characters (A–Z) and numeric characters (0–9), as well as End, Home, Page Up, and Page Down. For example, you could create a shortcut that uses the sequence Shift+Alt+G.

When you create shortcuts for applications, the applications normally have a default icon that is displayed with the shortcut. For example, if you create a shortcut for Windows Internet Explorer, the default icon is a large E. When you create shortcuts to document files, the Windows default icon is used in most cases.

If you want to use an icon other than the default icon, you can use the Icon Location property. Normally, the icon location equates to an application name, such as `explore.exe` or `Notepad.exe`, and the icon index is set to 0. Windows has to be able to find the executable file in the path; otherwise, the icon can't be set. Because of this, be sure to enter the full path to the executable file.

The working directory sets the default directory for an application. This directory is used the first time that a user opens or saves files.

URL shortcuts open Internet documents in an appropriate application. For example, webpages are opened in the default browser, such as Internet Explorer. With URL shortcuts, you can't use the Arguments, Start In, Run, or Comment properties.

Adding and removing startup applications

Administrator-installed or user-installed applications that run in the background can be managed through the Startup folder. Startup programs that are made available only to the currently logged-on user are placed in the Startup folder that is located within the profile data for that user (%UserProfile%\AppData\Roaming\Microsoft\Windows\Start Menu\Programs), and startup programs that are available to any user that logs on to the computer are placed in the Startup folder for all users (%SystemDrive%\ProgramData\Microsoft\Windows\Start Menu\Programs).

To add or remove startup programs for all users, follow these steps:

1. In File Explorer, browse to the hidden %SystemDrive%\ProgramData\Microsoft\Windows\Start Menu folder. If hidden items aren't being displayed, tap or click View, and then select Hidden Items.
2. In the left pane, tap or click the Programs folder under Start Menu, and then tap or click Startup.
3. You can now add or remove startup programs for all users. To add a startup program, create a shortcut to the program that you want to run. To remove a startup program, delete its shortcut from the Startup folder.

To add or remove startup programs for a specific user, follow these steps:

1. Log on as the user whose startup applications you want to manage. In File Explorer, browse to the hidden %UserProfile%\AppData\Roaming\Microsoft\Windows\Start Menu folder.
2. In the left pane, tap or click the Programs folder under Start Menu, and then tap or click Startup.
3. You can now add or remove startup programs for this user. To add a startup program, create a shortcut to the program that you want to run. To remove a startup program, delete its shortcut from the Startup folder.

NOTE Technically, you don't need to log on as the user to manage that user's startup applications—it's just easier if you do. If you can't log on as the user, access the Users folder on the system drive and work your way down through the user profile data folders. These are listed by account name.

Using Group Policy preferences, you specify applications that should be started after a user logs on by creating shortcuts in the AllUsersStartup and Startup folders. The AllUsersStartup folder sets startup applications for all users that log on to a system. The Startup folder sets startup applications for the current user.

When you create a shortcut for a startup application, the only options you need to set in most cases are Name, Target Type, Location, and Target Path. Occasionally

you might also want to set a working directory for an application or specify startup arguments.

If you later want to remove a startup application, you delete it by creating a preference with the action set to Delete.

Customizing the taskbar

The taskbar provides quick access to frequently needed information and active applications. You can change the taskbar's behavior and properties in many ways. This section explores key techniques you can use to modify the taskbar.

Understanding the taskbar

The taskbar is one of the least appreciated areas of the Windows desktop. Users and administrators tend to pay very little attention to its configuration, yet we use it day in and day out, relying on it for quick access to just about everything we do with the Windows operating system. If you find that users are having frequent problems accessing Windows features or running applications, you can help them by tailoring the taskbar to their needs. The Windows taskbar can contain several toolbars to assist users in different ways.

Sometimes you can provide tremendous productivity increases simply by adding a frequently used item to the taskbar. For example, most people spend a lot of time finding and reading documents. They browse the web or their corporate intranet to find the latest information. They open documents in Microsoft Word, Excel, PowerPoint, or other applications, finding documents individually or also starting applications to read those documents. By adding an Address bar to the taskbar, users can access documents directly and start the appropriate application automatically. They just need to enter the document path and press Enter. As time passes, the history feature of the Address bar tracks more and more of the user's previously accessed documents, making it easier to find the information the user needs.

Pinning shortcuts to the taskbar

Windows 8.1 allows you to pin commonly used programs directly to the taskbar. You can do this whenever you are working with the Start screen. Simply press and hold or right-click an item you want to add to the taskbar, and then tap or click Pin To Taskbar. After you pin an item to the taskbar, you can change the item's position on the taskbar by tapping or clicking and dragging the program's icon. To unpin an item, press and hold or right-click the item on the taskbar, and then tap or click Unpin This Program From Taskbar.

Changing the taskbar's size and position

By default, the taskbar appears at the bottom of the screen and is sized so that one row of options is visible. As long as the taskbar's position isn't locked, you can dock it at any edge of the Windows desktop and resize it as necessary. To move the taskbar, simply tap or click it and drag it to a different edge of the desktop. As you drag

the taskbar, the taskbar will appear at the edge of the Windows desktop, and when you release the mouse button, the taskbar will remain in the new location. To resize the taskbar, point to the taskbar's edge, and then drag it up or down.

Auto-hiding, locking, and controlling taskbar visibility

When you want to control the visibility of the taskbar, you have several options. You can enable the Auto Hide feature to hide the taskbar from view when it's not in use. You can lock the taskbar so that it can't be resized or repositioned. You can also make the taskbar appear in a specific location and with a specific appearance. After the taskbar is positioned and sized the way a user wants it, you should lock it. In this way, the taskbar has a fixed location, and users don't have to hunt for it.

To configure the taskbar, follow these steps:

1. Press and hold or right-click the taskbar, and then tap or click Properties.
2. On the Taskbar tab, select the appropriate Taskbar appearance options. You can lock the taskbar, auto-hide the taskbar, and use small icons.
3. Use the Taskbar Location On Screen list to select the location for the taskbar on the desktop. You can select Bottom, Left, Right, or Top.
4. Use the Taskbar Buttons list to specify whether taskbar buttons are combined and labels are hidden. Choose Always Combine, Hide Labels to always combine buttons of the same type and hide their labels. Choose Combine When Taskbar Is Full to combine buttons only when the taskbar is full. Choose Never Combine to never combine buttons.
5. Tap or click OK.

TIP Locking the taskbar is one of the most useful taskbar options. If you lock the taskbar when it is optimized, users will have fewer problems caused by accidentally altering taskbar options. Locking the taskbar doesn't prevent users from changing the taskbar on purpose. If users really want to change the taskbar, all they need to do is press and hold or right-click the taskbar and then clear Lock All Taskbars.

Controlling programs in the notification area

The notification area or system tray is the area on the far right of the taskbar that shows the system clock and notification icons from applications. The two standard notification icons are for Action Center and the Network console. When you point to icons in the notification area, a tooltip provides information about the state of the application. To control an application in this area, press and hold or right-click the application icon to display a menu of available options. Each application has a different menu of options, most of which provide quick access to routine tasks.

You can optimize the notification area by setting properties that control whether system icons—such as for the clock, speaker volume, and network—are displayed and whether application icons are displayed or hidden.

Controlling icon display in the notification area

The notification area can display both application and system icons. Icons for applications appear in the notification area for several reasons. Some programs, such as Action Center, are managed by Windows itself, and their icons appear periodically when notifications are pending. Other types of programs, such as antivirus programs, are configured to load at startup and then run in the background. You can often enable or disable the display of icons through setup options for the related applications, but Windows 8.1 provides a common interface for controlling icon display in the notification area. You can specify whether and how icons are displayed on a per-application basis.

To control the display of icons in the notification area, follow these steps:

1. Press and hold or right-click the taskbar, and then tap or click Properties.
2. On the Taskbar tab, for the Notification Area setting, tap or click Customize to display the Notification Area Icons page, as shown in Figure 3-3.

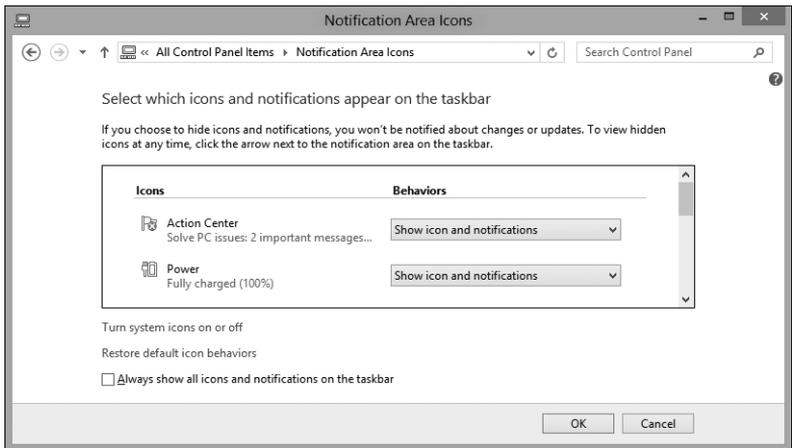


FIGURE 3-3 Configure notification icons.

3. If you want all icons to be displayed, select Always Show All Icons And Notifications On The Taskbar, and then tap or click OK. Skip the remaining steps.
4. If you want to customize the appearance of icons, clear Always Show All Icons And Notifications On The Taskbar. You can now optimize the notification behavior. Each entry in the left column has a selection menu in the right column with the following options:
 - **Hide Icon And Notifications** Never displays the icon and notifications
 - **Only Show Notifications** Displays only notifications
 - **Show Icon And Notifications** Always displays the icon and notifications
5. When you have finished updating the notification entries, tap or click OK twice.

Optimizing toolbars

Several toolbars are available for the taskbar. The toolbar that most users are familiar with is the Quick Launch toolbar—available in prior versions of Windows but not in Windows 8 or 8.1—that provided quick access to commonly used programs and the Windows desktop. The taskbar can display any of several toolbars that come with Windows 8.1, and users can create their own toolbars as well.

Displaying toolbars

Toolbars available for the taskbar include:

- **Address** Provides an Address box into which you can enter a URL or other address that you want to access, either on the web, on the local network, or on the local computer. When full file paths are specified, the default application for the file is started to display the specified file.
- **Links** Provides access to the Links folder on the Favorites menu for Internet Explorer. To add links to files, webpages, or other resources, drag shortcuts onto the Links toolbar. To remove links, press and hold or right-click the link and tap or click Delete. When prompted, confirm the action by tapping or clicking Yes.
- **Desktop** Provides access to all the shortcuts on the local desktop so that you don't have to minimize application windows or tap or click the Show Desktop button on the right end of the taskbar to access them.
- **Touch Keyboard** Provides quick access to the touch keyboard.

To display or hide individual toolbars, follow these steps:

1. Press and hold or right-click the taskbar to display the shortcut menu.
2. Point to Toolbars, and then select the toolbar name in the list provided. This switches the toolbar on and off.

TIP By default, a name label is displayed for most toolbars. You can turn off the name label by pressing and holding or right-clicking the toolbar and then choosing Show Title to clear that command. If the taskbar is locked, you must first unlock it by clearing Lock The Taskbar on the shortcut menu.

Creating personal toolbars

You can create personal toolbars for users as well. Personal toolbars are based on existing folders, and their buttons are based on a folder's contents. The toolbars that you might create most often are ones that point to shared folders on the network. For example, if all users have access to CorpData, a shared folder in which corporate information is stored, and UserData, a folder in which personal information is stored,

you can add toolbars to the taskbar that point to these resources. When users want to access one of these folders, they can simply tap or click the corresponding toolbar button.

You can create personal toolbars by completing these steps:

1. Press and hold or right-click the taskbar to display the shortcut menu. Tap or click Toolbars, and then tap or click New Toolbar to display the New Toolbar—Choose A Folder dialog box, which is similar to the Open dialog box.
2. Use the options provided to navigate to and select the folder you want to use as a basis for a toolbar.
3. When you tap or click Select Folder, the folder is displayed as a new toolbar on the taskbar. If you add shortcuts to the toolbar view, the shortcuts are added to the folder. Similarly, if you delete items from the toolbar view, the items are removed from the folder.

NOTE When it comes to personal toolbars, there's good news and bad news. The good news is that most users find them valuable. The bad news is that if a user decides to close a toolbar, it must be re-created before it can be viewed on the taskbar again.

Working with desktop themes

Desktop themes are combinations of backgrounds plus sets of sounds, icons, and other elements that help personalize the desktop and the operating environment. Administrators tend to hate themes; users tend to love them. In this section, you'll learn how to apply themes, how to tailor individual theme options, and how to delete themes.

Applying and removing themes

Several types of themes are available, and some themes are installed with the operating system. To apply a theme, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize. This opens the Personalization console in Control Panel, shown in Figure 3-4.
2. Use the theme list to select the theme you want to use. If you want to use a theme from the Microsoft website, tap or click Get More Themes Online to open the Microsoft website in your default browser. To use an online theme, select it, and then tap or click Download Theme. When prompted, select a save location. When the download is complete, tap or click Open in the Download Complete dialog box. The theme is now available for use and is applied.
3. The lower portion of the Personalization console provides appearance options for the selected theme. To change one of these items, tap or click it.

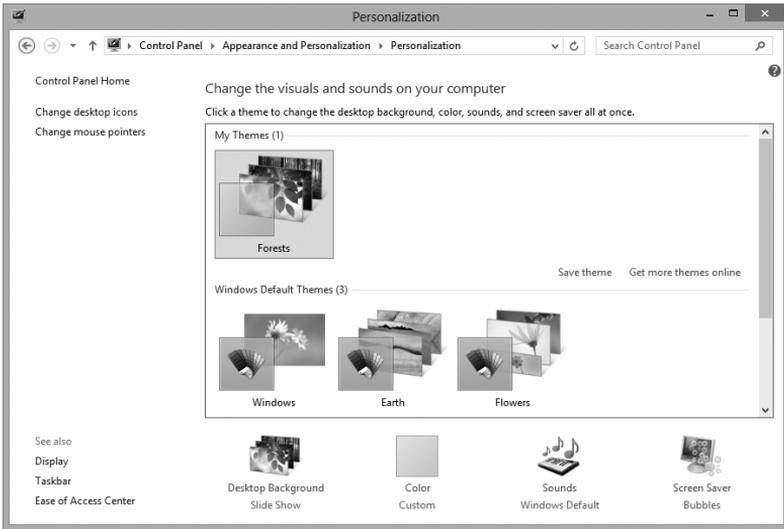


FIGURE 3-4 Use the Personalization console to access dialog boxes for configuring themes, display settings, and more.

To restore the original desktop theme, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Select Windows as the theme.

TIP Because the display of themes is controlled by the Themes service, you can stop this service if you need to quickly turn off themes without changing their configuration, such as when you are troubleshooting or trying to resolve an issue. To stop the Themes service, enter the following command at an elevated command prompt: **net stop themes**. To restart the Themes service, enter the following command at an elevated command prompt: **net start themes**.

Tailoring and saving themes

When you apply a theme to the Windows desktop, many different system settings can be affected. Typically, users might like a theme but dislike a specific aspect of it, such as the sounds. To fix this, you can change the system setting that the user doesn't like and then save the updated theme so that he or she can restore it in the future.

You manage themes by using the Personalization console, which you open by pressing and holding or right-clicking an area of the desktop and then tapping or clicking Personalize.

In the Personalization console, the primary settings that themes affect are as follows:

- **Screen savers** To change the screen saver, tap or click Screen Saver. In the Screen Saver Settings dialog box, select a screen saver, or select None to remove the screen saver, and then tap or click OK.
- **Sounds** To change sounds, tap or click Sounds. In the Sound dialog box, use the Sound Scheme list box to select a different set of program event sounds. To restore the default, select Windows Default. To turn off program event sounds, select No Sounds. Tap or click OK. If you are turning off sounds, you might also want to clear the Play Windows Startup Sound check box.
- **Mouse pointers** To change mouse pointers, tap or click Change Mouse Pointers in the left pane. In the Mouse Properties dialog box, use the Scheme list box on the Pointers tab to select a different set of pointers. Tap or click OK.
- **Desktop background** To change the desktop background, tap or click Desktop Background. Use the Picture Location list to select the location of the pictures to use for a background. Tap or click Browse to display the Browse For Folder dialog box. You can also choose Windows wallpapers to use as backgrounds from the %SystemRoot%\Web\Wallpaper folder, which is where standard backgrounds included with Windows 8.1 are stored by default. Tap or click the background you want to use, set the picture position, and then tap or click Save Changes.
- **Color schemes** To change color schemes, tap or click Color. Tap or click the color you want to use, and then tap or click Save Changes.

Deleting custom themes

Themes that users install from other locations can take up a lot of space on the hard disk. To delete a theme and remove the theme-related files, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Under My Themes, press and hold or right-click the theme to be deleted, and then tap or click Delete Theme. Windows removes that theme's definition file and the theme-related media files.

IMPORTANT By default, definition files for themes installed by Windows are located in the %WinDir%\Resources\Themes folder, and themes created by users are stored in their user profiles. If you want to determine the total space used by themes, check the space used by these folders and their subdirectories. You shouldn't delete files from these folders manually. Instead, use the technique just described.

Optimizing the desktop environment

When you open programs or folders, they appear on the desktop. You can arrange open programs and folders on the desktop by pressing and holding or right-clicking an empty area of the taskbar and then selecting Cascade Windows, Show Windows Stacked, or Show Windows Side By Side. If you tap or click Show The Desktop, Windows minimizes all open windows and displays the desktop. Tapping or clicking Show Open Windows restores the minimized windows to their previous states.

You can put files, folders, and shortcuts on the desktop. Any file or folder that you save on the desktop appears on the desktop. Any file or folder that you drag from a File Explorer window to the desktop stays on the desktop. To add a shortcut to a file or folder to the desktop, press and hold or right-click the file or folder, point to Send To, and then tap or click Desktop (Create Shortcut).

Beyond these basic techniques, Windows 8.1 provides many additional ways to optimize the desktop environment. One technique is to add a background containing a corporate logo or other symbol to the standard desktop build. This is particularly useful with loaner laptops; for example, you can create a logo with a message such as “Technology Department Loaner.” Another technique is to use Windows gadgets to add custom content directly to the desktop.

Setting the desktop background

Windows 8.1 provides multiple sets of background images and groups these images into named sets according to the folders in which the image files are stored. On the computer’s hard disk, background images are stored in subfolders of the %WinDir%\Web\Wallpaper folder. Each folder represents a named set. For example, images in the Landscapes folder are displayed in the Landscapes set of background images.

Background images can be created as .bmp, .gif, .jpg, .jpeg, .dib, and .png files. If you add an image in one of these formats to any of the subfolders in the %WinDir%\Web\Wallpaper folder, the image will be available as part of that set. If you want to create a new set, simply create a folder under the %WinDir%\Web\Wallpaper folder and add the appropriate images to this folder.

To set the background for the desktop, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize. In the Personalization console, tap or click Desktop Background. This displays the Desktop Background page, as shown in Figure 3-5.
2. When you select Windows Desktop Backgrounds as the Picture Location, Windows 8.1 organizes desktop backgrounds into sets of similar images. Use the scroll bar to navigate between sets, such as Nature or Windows.
3. Tap or click the image you want to use as the background. If you can’t find a background that you want to use, tap or click Browse to search for a background on the file system or network.

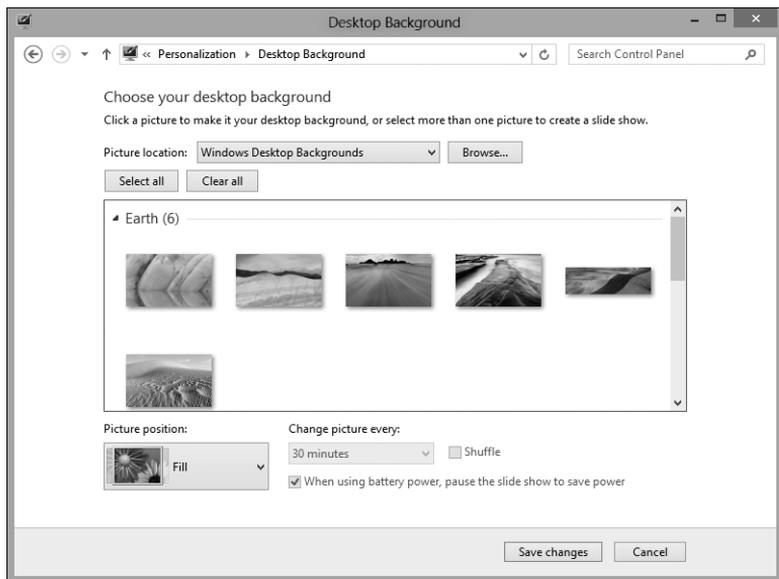


FIGURE 3-5 Select which desktop background to use.

4. Use the Picture Position options to select a display option for the background. Picture Position options include:
 - **Center** Centers the image on the desktop background. Any area that the image doesn't fill uses the current desktop color.
 - **Fill** Fills the desktop background with the image. The sides of the image might be cropped.
 - **Fit** Fits the image to the desktop background. Current proportions are maintained. This is a good option for photos and large images that you want to view without stretching or expanding.
 - **Stretch** Stretches the image to fill the desktop background. The current proportions are maintained as much as possible, but the height is stretched to fill any remaining gaps.
 - **Tile** Repeats the image so that it covers the entire screen. This is a good option for small images and icons.
5. When you are finished updating the background, tap or click Save Changes.

Working with the default desktop icons

By default, only the Recycle Bin is added to the desktop. Double-tapping or double-clicking the Recycle Bin icon opens a window where you can view files and folders that you've marked for deletion. By tapping or clicking Manage and then selecting Empty Recycle Bin, you permanently delete all the items in the Recycle Bin. By tapping or clicking Manage and then selecting Recycle Bin Properties, you can control how the Recycle Bin is used. Each volume on an internal disk has a Recycle Bin

folder. If you tap or click the related folder, you can set the maximum size of the Recycle Bin on that volume or specify that files should be removed immediately when deleted.

Other common desktop icons you can add to the desktop are as follows:

- **Computer** Adds the Computer console, which has been renamed This PC. Double-tapping or double-clicking the This PC icon opens a window from which you can access hard disk drives and devices with removable storage. Right-clicking the This PC icon and tapping or clicking Manage opens the This PC Management console. Pressing and holding or right-clicking the This PC icon and tapping or clicking Map Network Drive enables you to connect to shared network folders. Pressing and holding or right-clicking the This PC icon and tapping or clicking Disconnect Network Drive enables you to remove a connection to a shared network folder.
- **Control Panel** Double-tapping or double-clicking the Control Panel icon opens Control Panel, which provides access to system configuration and management tools.
- **Network** Double-tapping or double-clicking the Network icon opens a window from which you can access the computers and devices on your network. Pressing and holding or right-clicking the Network icon and tapping or clicking Map Network Drive allows you to connect to shared network folders. Pressing and holding or right-clicking the Network icon and tapping or clicking Disconnect Network Drive enables you to remove a connection to a shared network folder.
- **User's Files** Double-tapping or double-clicking the User's Files icon opens your personal folder.

You can add or remove common desktop icons by following these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize. This displays the Personalization console.
2. In the left pane, tap or click Change Desktop Icons. This displays the Desktop Icon Settings dialog box, as shown in Figure 3-6.
3. The Desktop Icon Settings dialog box has check boxes for each of the default icons. Clear the corresponding check box to remove an icon. Select the check box to add an icon.
4. Tap or click OK.

You can hide all desktop icons by pressing and holding or right-clicking an open area of the desktop, pointing to View, and selecting Show Desktop Icons to clear the command. If you repeat this procedure and select Show Desktop Icons a second time, all the hidden desktop icons are restored.

If you no longer want an icon or a shortcut on the desktop, press and hold or right-click it, and then tap or click Delete. When prompted, confirm the action by tapping or clicking Yes. Note that if you remove an icon representing a file or folder from the desktop, the file or folder (and its contents) is deleted.

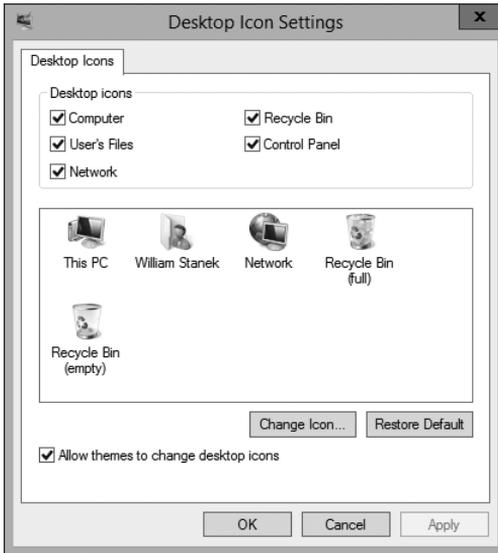


FIGURE 3-6 Use the Desktop Icon Settings dialog box to select the desktop icons to display and set their appearance.

Screen saver dos and don'ts

Screen savers are designed to turn on when a computer has been idle for a specified period of time. The original job of the screen saver was to prevent image burn-in on CRT monitors by displaying a continuously changing image. With today's monitors, burn-in is no longer a problem, but screen savers are still around. The primary benefit that they offer today is the ability to password-lock computers automatically when the screen saver turns on.

NOTE The Desktop Windows Manager is used to compose the desktop. Unlike Windows 7, in which the Desktop Windows Manager could be disabled by end users and apps, the current Desktop Windows Manager is always on and cannot be disabled.

Configuring screen savers with password protection

Password-protecting a screen saver deters unauthorized users from accessing a computer, which can protect both the personal data of the user and the intellectual property of an organization. As an administrator, you should ensure that the computers you deploy have password-protected screen savers enabled.

You can password-protect a screen saver by performing the following steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Tap or click the Screen Saver link to display the Screen Saver Settings dialog box, as shown in Figure 3-7.



FIGURE 3-7 Set a screen saver with password protection for user and organization security.

3. Use the Screen Saver list box to select a screen saver. To disable the screen saver, select None and skip the remaining steps.

REAL WORLD Unfortunately, screen savers use a computer's resources, increasing both the energy usage of the computer (which otherwise would be idle) and its memory and processor usage. Some screen savers can also cause the processor to run at a higher utilization percentage. The reason for this is that some designs are very complex and the computer must make a lot of computations to maintain and update the screen saver image. For tips on reducing resource usage when screen savers turn on, see the following sections, "Reducing screen saver resource usage" and "Setting energy-saving settings for monitors."

4. Select On Resume, Display Logon Screen.
5. Use the Wait box to specify how long the computer must be idle before the screen saver is activated. A reasonable value is between 10 and 15 minutes.
6. Tap or click OK.

NOTE One of the best screen savers is the Photos screen saver, which displays a slide show of photos from the Pictures library by default, but you can select any other folder. By editing the settings, you can set the slide show speed and choose to shuffle the pictures rather than display them in sequence.

Reducing screen saver resource usage

A computer that is running Windows 8.1 and that performs background tasks or network duties such as print services should not be configured to use a complex screen saver, such as 3D Text. Instead, the computer should be configured with a basic screen saver, such as the Blank screen saver. You can also modify the settings for advanced screen savers to reduce resource usage. Typically, you do this by reducing the redraw and refresh rates of the advanced screen saver.

To reduce screen saver resource usage, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Tap or click the Screen Saver link to display the Screen Saver Settings dialog box.
3. If you want to use a screen saver that uses fewer resources without making configuration changes, use the Screen Saver list box to select a basic screen saver, such as Blank.
4. If you want to use 3D Text or another advanced screen saver but reduce its resource usage, select that screen saver and then tap or click Settings. Use the Settings dialog box to reduce the values for Resolution, Size, Rotational Speed, or similar settings that affect the drawing or refreshing of the screen saver.
5. Tap or click OK to close each of the open dialog boxes.

Setting energy-saving settings for monitors

Many newer monitors have energy-saving features that cause them to shut off after a certain period of inactivity. Enabling this feature can reduce the organization's electricity bill because monitors typically use a lot of electricity to stay powered up. On some systems, this feature might have been automatically enabled by the operating system during installation. This depends, however, on the operating system properly detecting the monitor and installing any necessary drivers.

On a portable laptop computer running on batteries, saving energy is especially important. By configuring the monitor to shut off when the computer is idle, you can save the battery life and extend the available battery time for when the laptop is unplugged.

To manage a monitor's energy settings, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Tap or click the Screen Saver link to display the Screen Saver Settings dialog box.
3. Tap or click Change Power Settings. The Power Options console in Control Panel is displayed.

4. In the left pane, tap or click Choose When To Turn Off The Display.
5. If the options on the Edit Plan Settings page are unavailable, select Change Settings That Are Currently Unavailable.
6. Use the selection list provided to specify when the monitor should be turned off to save energy. Mobile computer devices might have separate on-battery and plugged-in options.
7. Tap or click Save Changes.

NOTE If a computer is connected to a monitor that doesn't support energy-saving settings, some power options might be unavailable. If you are configuring the computer in a build area and are using a different monitor than the one the user will have, you might want to obtain the user's monitor or a similar monitor and repeat this process.

REAL WORLD Typically, you'll want to turn off the monitor after 10 to 15 minutes of idle time. On my office computer, I turn on the screen saver after 7 minutes and then turn off the monitor after 15 minutes of idle time. On my laptop, I use settings of 5 minutes and 10 minutes, respectively.

Modifying display appearance and video settings

The display appearance and video settings have a major impact on the look and feel of the Windows 8.1 desktop and its graphical elements. Appearance options control window, button, color, and font settings. Video settings control screen resolution, color quality, refresh frequency, hardware acceleration, and color management.

Configuring window color and appearance

Windows Aero is an enhanced interface that provides features such as the transparent taskbar background, live previews, smoother window dragging, animated window closing and opening, and more. As part of the setup process, Windows 8.1 runs a performance test and checks the computer to find out whether it meets the requirements to take advantage of optimized appearance features.

XDDM and VGA drivers cannot be used with Windows 8.1. The display hardware must support Windows Display Driver Model (WDDM) 1.2 or later. If the hardware doesn't, the computer will use the Microsoft Basic Display Driver.

Display drivers that support WDDM 1.2 will offer improved performance over earlier drivers while also reducing the overhead needed for temporary surfaces in local and system memory. WDDM 1.2 supports Direct3D implemented in a graphics processing unit (GPU) with at least 128 megabytes (MB) of graphics memory. Although individual nodes in a physical adapter can reset GPU timeout detection and recovery behavior, preemption of GPU direct memory access (DMA) packets cannot be disabled.

WDDM 1.3 adds support for wireless displays. WDDM 1.3 also supports improved resource sharing between integrated and discrete GPUs. These latter

changes can provide a solid display performance boost for hybrid systems that have both integrated and discrete GPUs.

REAL WORLD You can quickly determine how much graphics memory is available and whether a computer's display adapter supports WDDM by using System Information (Msinfo32.exe). You can access system information by tapping or clicking System Information on the Apps screen or by typing `msinfo32` into the Everywhere Search box, and then pressing Enter. In the Components list, select Display, and you'll find the display adapter type and the level of WDDM support (if applicable). The Adapter RAM value shows the amount of dedicated graphics memory.

On compliant systems, Windows 8.1 uses the Aero desktop by default to enable advanced display features and options, including Snap, which allows you to arrange windows side by side, and Shake, which allows you to temporarily hide all open windows except the one you are working with. To snap an active window to the side of the desktop by using the keyboard, press either the Windows key + Left Arrow or the Windows key + Right Arrow. To shake, drag the title bar of the window you want to keep open back and forth quickly. Then to restore the minimized windows, shake the open window again.

To configure color options for the display, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Tap or click the Color link to display the Color And Appearance page, as shown in Figure 3-8.
3. Change the color of windows by tapping or clicking one of the available colors. To make your own color, tap or click Show Color Mixer, and then use the Hue, Saturation, and Brightness sliders to create a custom color.

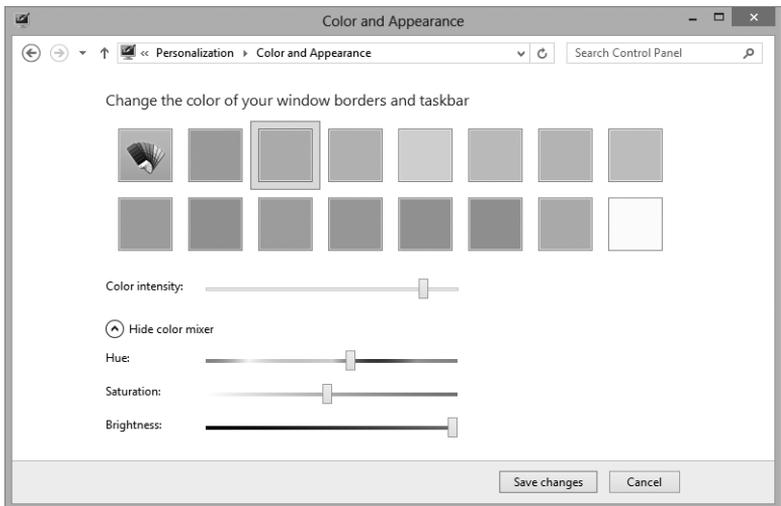


FIGURE 3-8 Configure the visual appearance of the display by using the options on the Color And Appearance page.

4. Use the Color Intensity slider to set the strength of the color and the level of transparency. Increase the intensity to make the color stronger and to reduce the transparency. Reduce the intensity to make the color dimmer and the transparency greater.
5. Tap or click Save Changes.

To better support the visually impaired, Windows 8.1 includes several Ease Of Access themes, including High Contrast #1, High Contrast #2, High Contrast White, and High Contrast Black. When you use these themes, the options of the Color And Appearance page change, and you can override the default color settings for individual graphical elements, such as the window background color, text color, and active window color. To do this, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Personalize.
2. Tap or click the Color link and then set the color to use for interface elements. For example, with active window titles, you can set foreground and background colors.
3. Tap or click OK, and then tap or click Save Changes.

Optimizing display readability

Regardless of whether users have 27-inch widescreens or 19-inch displays, you might find that users have difficulty reading text on the screen. Often, the readability of text on the screen decreases when you increase the display resolution, which results in the text on the screen becoming smaller. To understand why this happens, you need to understand how DPI works.

When you print documents on a printer, the number of dots per inch (DPI) determines the print quality. Generally, the higher the DPI, the better the quality of the printed document because images and text look crisper as you use more dots per inch. For example, a high-resolution picture printed at its normal size using 1,200 × 600 DPI generally looks much better than the same picture printed at 300 × 300 DPI. However, if you use scaling to print a 2 × 3-inch picture at 6 × 9 inches, you often get a poor result because the scaled image looks grainy.

For Windows-based computers, 96 DPI is the default for most monitors, and Windows 8.1 displays all UI elements, including text, at 96 DPI by default. When you change the display resolution, you change the scaling at which UI elements are displayed. For example, if a monitor has an optimal resolution of 1,920 × 1,200 and you use a display resolution of 800 × 600, the UI elements will seem large and grainy because you've caused the display to scale 800 × 600 pixels into a space optimized for 1,920 × 1,200 pixels.

Generally, you can determine the optimal resolution by multiplying a monitor's screen width by 96 and a monitor's screen height by 96. For example, a 24-inch wide-screen monitor might have a screen that is 20 inches wide and 12.5 inches high. If so, the optimal display resolution is 1,920 × 1,200. However, at that size, text and UI elements on the screen might seem small, and you might need to make adjustments to improve readability. One way in which you can make adjustments is through an

application. For example, in Word, users can use the Zoom combo box to scale text to a readable size.

Windows allows you to change the size of text for specific UI elements, including the text for title bars in dialog boxes, menus, message boxes, palettes, icons, and tooltips. When you increase or decrease the size of text in a specific part of the UI, you can improve readability. Each account on a computer has a separate setting for text size. You can specify text size for UI elements by completing the following steps:

1. In Control Panel, tap or click Appearance And Personalization. Under the Display heading, tap or click Make Text And Other Items Larger Or Smaller.
2. Tap or click the selection list under Change Only The Text Size, and choose the UI element you want to work with, such as Menus.
3. Use the Font Size list to set the desired size for the text on the previously selected UI element. Optionally, select Bold to display bold text.
4. Repeat steps 2 and 3 to set the text size of additional UI elements. When you are finished, tap or click Apply.
5. You need to log off and then log on as the user again for the changes to take effect.

Windows also allows you to use scaling to increase the size of text and other items on the screen. When you use scaling in this way, Windows magnifies the size of text and UI elements to the scale you choose. Each account on a computer has a separate setting for scaling. You can specify the scaling to use for text and UI elements by following these steps:

1. In Control Panel, tap or click Appearance And Personalization. Under the Display heading, tap or click Make Text And Other Items Larger Or Smaller.
2. The default scaling options allow you to choose a 100-percent scale (the default), a 125-percent scale, or a 150-percent scale. To use one of these scaling options, select Let Me Choose One Scaling Level For All My Displays, make a selection, and then select Apply.
3. To choose a custom setting of between 100 percent and 500 percent, tap or click Custom Sizing Options, and then use the Scale combo box to select or specify a scale.
4. You need to log off as the user and then log on as the user again for the changes to take effect.

IMPORTANT If you choose a setting higher than 200 percent, UI elements and text might be scaled so large that you cannot work with the computer. You might even be unable to get back into Control Panel to restore the original scaling. If you have a scaling issue, enter **dpiscaling** at a command prompt or in the Everywhere Search box. This will open the Display page directly, and you can then reset the scaling.

REAL WORLD If you've enabled scaling and the text in an application is blurred or unreadable, you might want to disable display scaling for that application. To do this, press and hold or right-click the application shortcut, and then tap or click Properties. On the Compatibility tab, select Disable Display Scaling On High DPI Settings, and then tap or click OK.

Configuring video settings

Video settings control screen resolution, color quality, refresh rate, hardware acceleration, and color management. This section focuses on making sure that Windows 8.1 has correctly identified the video card and monitor, and on optimizing various video settings.

IMPORTANT You cannot change display settings from a remote session. Display options can only be configured when you are logged on locally.

Checking the current video adapter and monitor

Every computer has a monitor driver and a video adapter driver. The monitor driver tells Windows about the capabilities of the monitor. The video adapter (or display) driver tells Windows about the capabilities of the graphics card.

Proper display is dependent on the computer using accurate information about the video adapter and the monitor. Different driver files are installed depending on which video adapter and monitor models Windows 8.1 detects on a system. These drivers are extremely important in determining which display resolutions, color depths, and refresh rates are available and appropriate for the system. If the adapter and monitor aren't detected and configured properly, Windows 8.1 won't be able to take advantage of their capabilities.

Current settings for the video adapter or monitor can be wrong for many reasons. Sometimes Plug and Play doesn't detect the device, and a generic device driver is used. Sometimes Windows Update installs an old driver. At other times, Windows 8.1 detects the wrong type of device, such as a different model. In this case, the device will probably work, but some features won't be available.

You can determine the current video adapter and monitor as configured for a computer in software settings by completing these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution.
2. On the Screen Resolution page, shown in Figure 3-9, the currently identified monitors are listed in the Display list. The resolution and orientation are listed in the Resolution and Orientation lists. If the correct monitor isn't displayed or you want to examine the monitor settings further, see the "Changing the monitor driver" section later in this chapter.
3. Select a monitor in the Display list, and then tap or click the Advanced Settings link. The video adapter for the monitor is listed. If the correct video adapter isn't displayed or you want to examine the driver settings further, see the next section, "Changing the video driver."
4. Tap or click OK twice.

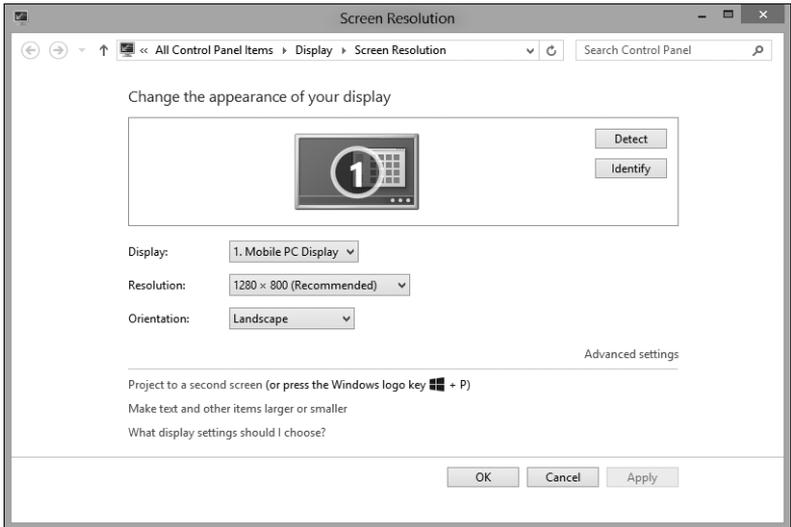


FIGURE 3-9 Check the monitor and video adapter configuration.

REAL WORLD Another way to determine the current video adapter and monitor as configured for a computer in software is to run the DirectX Diagnostic Tool by typing **dxdiag** in the Everywhere Search box and pressing Enter.

Both of the techniques discussed in this section assume that the correct drivers are installed, however. Neither of these techniques will tell you whether the correct information is being displayed. See “Changing the video driver” for details on how you can confirm that the correct drivers are installed.

Changing the video driver

If you followed the previous instructions and the video driver shown does not match the make and model installed on the computer, you might want to try to install a different driver. For example, if the computer has a generic S3 video driver configured and you are sure the computer has an NVIDIA GeForce video adapter, you should change the video driver.

To determine whether the video card make and model are correct, you need to know how the system is configured. The system documentation can tell you which video adapter is installed. Other administrators are also useful resources. Typically, someone else on the technology team will know immediately what video adapter is installed on a particular type of computer. If you can't figure out the make and model of the video adapter, you have several options. If the current settings are working, you can leave the display settings alone.

You can also try the following techniques to determine the video adapter's make and model:

- Shut down the computer, and then turn it back on (but don't use the Restart option to do this, because some computers might not fully initialize when you select Restart). Watch the screen when the computer first turns on. The name of the video card might appear briefly before Windows 8.1 begins loading.
- Shut down the computer, and then remove the computer cover. Locate the name and model number on the video adapter itself. If the monitor is still attached to the rear of the computer, the video adapter is the card to which the monitor cable is connected.
- If the video adapter is built into the computer's motherboard (meaning that there isn't a separate card), check the motherboard to determine whether you can find a chip that lists the video information on it, or write down the motherboard model number and visit the manufacturer's website to determine whether the information is available.
- If you think the computer has an NVIDIA graphics card, you can use NVIDIA Smart Scan to identify the correct model and drivers. Currently, this program is located at <http://www.nvidia.com/Download/Scan.aspx>.
- If you think the computer has an AMD graphics card, you can use AMD Driver Autodetect to identify the correct model and drivers. Currently, this program is located at http://support.amd.com/us/gpudownload/windows/Pages/auto_detect.aspx.

After you determine the video adapter's make and model, find out whether you can locate the necessary drivers on the manufacturer's website. Some video adapters come with installation discs. On the disc, you might find a setup program. Run this program to install the video driver. If the installation disc contains the drivers but no setup program, you need to install the drivers manually.

IMPORTANT The drivers on the installation disc that came with a video adapter might not be the most current drivers. They will, however, be the correct drivers for the computer. After the correct drivers are installed, rather than generic or other drivers, you can update to the most current drivers by following the procedure I discuss in this section.

When you are ready to install the video adapter driver, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution.
2. On a system with multiple monitors or video cards, use the Display list to select the monitor with which you want to work.
3. Tap or click Advanced Settings. On the Adapter tab, shown in Figure 3-10, note the current information in the Adapter Type and Adapter Information panels. Tap or click Properties.

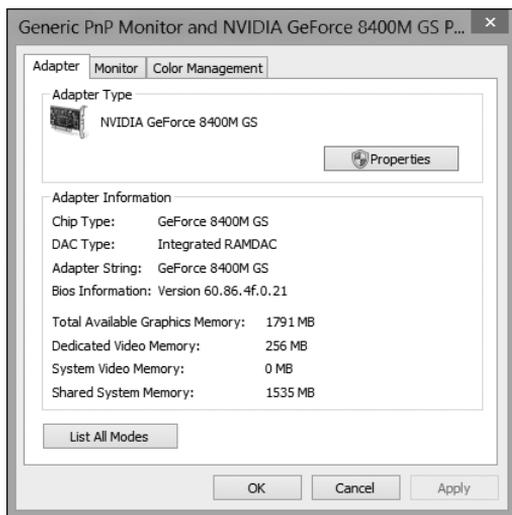


FIGURE 3-10 Note the current adapter information.

4. On the Driver tab, tap or click Update Driver. This starts the Update Driver Software Wizard.
5. Specify whether you want to search for the driver automatically or browse for the driver.
6. If you elect to search for the driver automatically, Windows 8.1 looks for a more recent version of the device driver and installs the driver if it is found. If a more recent version of the driver is not found, Windows 8.1 keeps the current driver. In either case, tap or click Close to complete the process, and then skip the remaining steps.
7. If you choose to browse for the driver, you can do so in either of the following ways:
 - **Search for the driver** If you want to search for the driver, tap or click Browse to select a search location. Use the Browse For Folder dialog box to select the start folder for the search, and then tap or click OK. Because all subfolders of the selected folder are searched automatically by default, you can select the drive root path, such as C, to search an entire drive. If you don't want to search all subfolders, clear the Search All Subfolders option.
 - **Choose the driver to install** If you want to choose the driver to install, tap or click Let Me Pick From A List Of Device Drivers On My Computer. The wizard then displays a list of compatible hardware. Tap or click the device that matches your video card. To view a wider array of choices, clear the Show Compatible Hardware check box. You'll then get a list of all video card manufacturers. Scroll through the list of manufacturers to find the manufacturer of the device, and then choose the appropriate device in the right pane.

8. After selecting a device driver, continue through the installation process by tapping or clicking Next. Tap or click Close when the driver installation is complete. If the wizard can't find an appropriate driver, you need to obtain one and then repeat this procedure. Keep in mind that in some cases, you need to restart the system to activate the newly installed or updated device driver.

IMPORTANT To use custom display drivers with Windows 8.1, the display hardware must support WDDM 1.2 or later. If the display hardware doesn't support WDDM 1.2 or later, the display driver is set as Microsoft Basic Display Driver and you won't be able to select another driver.

Changing the monitor driver

The overall display quality is controlled by the combined capabilities of a computer's monitor and video adapter. Most computers have at least one monitor connection available. The type of connections supported might include the following:

- High-Definition Multimedia Interface (HDMI) is the current digital standard for connecting video devices. HDMI can be used for computer displays, but it is better suited to other high-end video devices. Although HDMI can be adapted to a Digital Video Interface (DVI) connection, most computers that have an HDMI connector also have at least one DVI connector.
- Digital Video Interface (DVI) is the digital standard for computer-generated text and graphics. There are several formats for DVI. DVI-I and DVI-A can be adapted to Video Graphics Array (VGA); however, DVI-D cannot be adapted to VGA. Dual-Link DVI supports high-resolution monitors and is required on some very large displays for optimum picture quality. Because DVI cables can support one or more of these types at the same time, you should check your cables carefully to be sure you're using the correct ones.
- The 15-pin Video Graphics Array (VGA) is the analog standard for connecting monitors to computers. There are 9-pin VGA cables, and they are compatible with the 15-pin connector. It is still very common for monitors to have this connector, but newer connections such as DVI and HDMI are recommended if they are available.

NOTE A computer's monitor might have shipped with a VGA cable connected to it. If it is not the optimal connection type and the cable is designed to be removed, remove the VGA cable.

TIP Many computers have inputs for DisplayPort adapters. A DisplayPort adapter supports automatic adaptation to VGA, DVI, or HDMI depending on what type of display is connected to the port and what type of adapter is used between the display connector and the input connector on the back of the computer.

If a computer has a Plug and Play monitor, Windows 8.1 might have detected it and installed it properly, or it might have installed a similar driver, but not the one that matches the monitor's make and model. For the best quality, Windows 8.1 should use the driver designed for the applicable monitor. Otherwise, the display mode, color depth, refresh rate, and color-matching options might not be appropriate for the monitor.

To change the monitor setup, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution.
2. On a system with multiple monitors or video cards, use the Display list to select the monitor with which you want to work.
3. Tap or click Advanced Settings. On the Monitor tab, tap or click Properties.
4. On the Driver tab, tap or click Update Driver. This starts the Update Driver Software Wizard.
5. Continue with the driver update, as described in steps 5–8 of the previous procedure.

Configuring multiple monitor support

Most laptops and tablets designed for Windows 8 and later can use docking hubs that allow you to dock the laptop or tablet to a large display or set up your workspace with several monitors. Most modern desktop PCs come with a video adapter that supports multiple monitors. You'll know this because the adapter will have multiple monitor connection ports. On these computers, you can connect multiple monitors and then extend a user's desktop across those monitors so that the user can view more information at one time. If you've connected multiple monitors to a computer, the Screen Resolution page will show one box for each monitor. The first monitor is labeled 1, the second is labeled 2, and so on. If you tap or click the monitor box, you can work with the monitor in the same way you would if you had selected the monitor from the Display list.

If a monitor you've connected doesn't have its own box, check the monitor connection and then turn the monitor on. Then, when you tap or click Detect, Windows should automatically detect the monitor.

If you've connected multiple monitors and are unsure which monitor is which, you can tap or click Identify to display the numeric identifier of each monitor on the monitor's screen. The numeric identifier appears as a large white numeral. If you find that the screens are represented in a different position than they are configured, you can drag the monitor boxes on the Screen Resolution page so that their position matches the physical layout of the monitors.

After you configure the monitors, you might want to extend the display across their screens. To do this, tap or click the box representing the second monitor (or select the second monitor in the Display list), and then select Extend Desktop To This Display from the Multiple Displays list. Generally, you will want screen 1 to be marked This Is Currently Your Main Display.

After you've configured your monitors, you'll find that pressing the Windows key + P is a convenient way to change the monitor configuration quickly. After pressing the Windows key + P, you can use any of the following options:

- Select PC Screen Only to use only the main computer monitor or the built-in screen on a laptop.
- Select Duplicate to display the main computer monitor or the built-in screen on a laptop to a second monitor.
- Select Extend to extend the display across two monitors.
- Select Second Screen Only to display only on an external monitor or projector.

With touch UI, you can access similar options by sliding in from the right, tapping Devices, and then tapping Second Screen.

Customizing display appearance

Screen resolution, color quality, and refresh rate are key factors that affect display appearance. *Screen resolution* is the number of pixels that make up the display. *Color quality* is the number of colors that can be displayed simultaneously on the screen. *Refresh rate* is the rate at which the screen is repainted.

Windows 8.1 automatically optimizes display settings for each of your monitors by selecting a screen resolution, color quality, and refresh rate that seem most appropriate based on its testing. Normally, the settings that Windows selects work well, but they might not be the optimal settings for your computer.

The best resolution to use depends on the size of the monitor and what the user plans to do with the computer. Designers and developers who need a large screen area will appreciate a higher resolution, such as 1,920 × 1,200. They can then view more of what they're working with on the screen. Users who spend most of their time reading email or working with Word documents might prefer a lower resolution, such as 1,280 × 1,024. At that resolution, screen elements are easier to see, and users will have less eyestrain. On a widescreen monitor, be sure to select a resolution that is appropriate for widescreen viewing.

Color quality depends greatly on screen resolution settings. Even though most current video cards display 32-bit color at a variety of screen resolutions, some video cards might not be capable of displaying 32-bit color at their maximum screen resolution. Video cards might display fewer colors when you set the screen resolution higher. In most cases, the higher the color quality that you can set, the better. Keep in mind that the amount of video memory required to maintain the video display is determined by multiplying the number of pixels on the screen (based on screen resolution) by the number of bits per pixel (determined by color quality). Furthermore, the maximum combination of resolution and color quality allowed is a function of the video memory on the video adapter.

You can set the screen resolution and color quality by completing the following steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution.
2. On a system with multiple monitors or video cards, use the Display list to select the monitor with which you want to work.
3. Tap or click Resolution, and then use the Resolution slider to set the display size, such as 1,024 × 768 pixels. Note that if the Resolution option is unavailable, you cannot change the resolution.
4. To view the display modes available for 32-bit color, tap or click Advanced Settings. On the Adapter tab, tap or click List All Modes. Note the screen resolutions that support 32-bit color.
5. Tap or click OK twice.

Your eyes can't perceive the display refresh, but a low refresh rate (under 72 Hz) can sometimes make your eyes tired if you look at the display too long. To view or set the refresh rate for a video card, follow these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution.
2. On a system with multiple monitors or video cards, use the Display list to select the monitor with which you want to work.
3. Tap or click Advanced Settings. On the Adapter tab, tap or click List All Modes. The resolution sizes and refresh rates supported by the monitor are listed.
4. On the Monitor tab, use the Screen Refresh Rate list box to set the refresh rate.

CAUTION In many cases, the Hide Modes That This Monitor Cannot Display check box is disabled so that it cannot be selected. If you are able to clear this check box, keep in mind that if the refresh rate exceeds the capabilities of the monitor or the video card, the screen can become distorted. Additionally, running the computer at a higher refresh rate than it supports can damage the monitor and video adapter.

Color profiles allow you to get truer colors for specific uses. For example, you might need to more accurately match on-screen colors to print colors, and a color profile designed for this purpose can help you do that. After you obtain the color profile, you must install it on each monitor separately by following these steps:

1. Press and hold or right-click an open area of the desktop, and then tap or click Screen Resolution. Display 1 is selected by default. Tap or click 2 to configure settings for the second monitor.
2. Tap or click Advanced Settings. On the Color Management tab, tap or click Color Management.
3. In the Color Management dialog box, select the All Profiles tab to get information about currently installed color profiles. Tap or click Add.

4. In the Install Profile dialog box, find the color profile that you want to use and then tap or click Add.
5. In the Color Management dialog box, select the Devices tab. Tap or click the new profile, and then tap or click Set As Default Profile.

If you don't have a color profile and still would like the benefits of one, use the Display Color Calibration tool to fine-tune display colors to your liking. You can access this tool by typing **Dccw.exe** in the Everywhere Search box and pressing Enter.

Troubleshooting display problems

As I stated previously, every computer has a monitor driver and a video adapter driver. The monitor driver tells Windows about the capabilities of the monitor. The video adapter (or display) driver tells Windows about the capabilities of the graphics card.

Clearly, the monitor driver and video adapter driver have important roles on a computer. When you are installing video components or updating a computer, you should be sure that the computer has drivers that have been tested in your environment and proven to be reliable. If you suspect a problem with the drivers, update the drivers if possible. If you suspect the problem is due to the configuration of the computer, start the computer in safe mode and then modify the default settings.

Before you start detailed diagnostics and troubleshooting, determine what programs the user has been running. Programs created for early versions of Windows might cause compatibility issues. Close all running programs and check questionable programs to find out what display mode they are using. If a program requires an alternative display mode and switching into and out of this display mode is causing problems, you might be able to configure compatibility settings to resolve the problem. Press and hold or right-click the application shortcut, and then tap or click Properties. In the Properties dialog box, select the Compatibility tab. On the Settings panel, choose the appropriate option, such as Run In 640 x 480 Screen Resolution. If you are unsure which compatibility settings to use, press and hold or right-click the application shortcut, tap or click Troubleshoot Compatibility, and then follow the prompts in the Program Compatibility Wizard.

Many problems with monitors have to do with the connection between the monitor and the computer. If the monitor displays blotches, color spots, diagonal lines, or horizontal bars, or has other similar display problems, you'll want to check the monitor connection first. After you are sure the connections are all right, turn the monitor off for at least 10 seconds, and then turn the monitor back on. If you still are experiencing a problem and think that the problem has to do with the monitor itself, you can try to resolve it through additional troubleshooting.

Monitor flicker or jitter or a shaky image can be caused by configuration issues in addition to positional issues. If the monitor refresh rate is causing the problem, you can resolve it by changing the refresh rate settings, as discussed in the “Customizing display appearance” section earlier in this chapter. If a positional issue is causing the problem, you can resolve the problem by moving the cables and devices that might be causing electromagnetic interference, including power cables for other devices, large speakers, or desk lamps. If the problem persists, make sure the monitor has a shielded cable and that it is positioned away from air-conditioning units, large fluorescent lights, and so on.

If the monitor has built-in controls, check for an auto-tuning setting. Often, this will be a separate button, and when you press this button, the monitor will automatically adjust itself.

If blotches of color, color spots, or lines are the problem and resetting the connections doesn’t work, you might need to perform a monitor degauss. This operation removes the buildup of stray magnetic fields around the monitor, which can distort the video image. Some monitors autodegauss by turning the monitor off and then on, some have a manual control only, and some combine both of these features. You might find a control labeled Degauss, or there might be a menu option within the monitor’s software controls. While the monitor is degaussing, the screen might become distorted temporarily. This is normal behavior during the degauss process. If you manually degauss, wait 15 to 20 minutes before attempting a second degauss.

If problems persist, connect the monitor directly to the computer. Remove any extension cables connected between the monitor and the video adapter. Also, remove any antiglare screens or other similar devices that cover the monitor’s screen. Check the video data cable for bent, broken, or missing pins. Although some pins are missing as part of the design, other pins that are missing or bent will cause display problems. If there are bent pins and the pins are repairable, turn the monitor off, unplug the monitor from the power source, and use tweezers or pliers to straighten the pins.

Optimizing corner and Start navigation

Windows 8.1 allows you to customize the way you navigate corners and the way you navigate between the Start screen, apps, and the desktop. For example, you can display the desktop instead of Start when you log on. You can display apps instead of Start, and more. Most of the related corner and Start options are in the Taskbar And Navigation Properties dialog box shown in Figure 3-11.

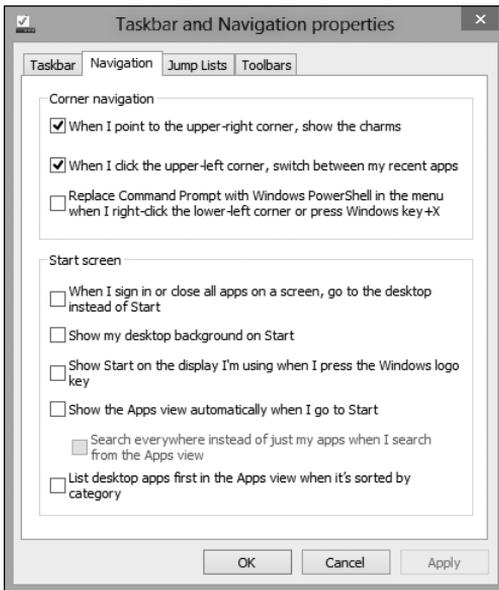


FIGURE 3-11 Configure navigation options.

You can configure corner navigation options by completing the following steps:

1. On the desktop, press and hold or right-click the taskbar and then select Properties.
2. In the Taskbar And Navigation Properties dialog box, on the Navigation tab, you can configure the following corner navigation options:
 - **When I Point To The Upper-Right Corner, Show The Charms** Displays the Charms panel when you point to the upper-right corner of the screen. If you disable this option, the Charms panel is only displayed when you slide in from the right or when you point to the lower-right corner of the screen.
 - **When I Click The Upper-Left Corner, Switch Between My Recent Apps** Allows you to switch between recent apps when you point to the upper-left corner of the screen. If you disable this option, the Recent Apps panel is only displayed when you slide in from the left.
 - **Replace Command Prompt With fWindows PowerShell...** Displays options for Windows PowerShell rather than the command prompt on the shortcut menu that is displayed when you right-click in the lower left corner or press Windows key + X. If you disable this option, the shortcut menu has Command Prompt and command prompt (Admin) options instead of Windows PowerShell and Windows PowerShell (Admin) options.
3. Select Apply to apply any changes.

You can configure navigation options for the Start screen by completing the following steps:

1. On the desktop, press and hold or right-click the taskbar, and then select Properties.
2. In the Taskbar And Navigation Properties dialog box, on the Navigation tab, you can configure the following navigation options for Start:
 - **When I Sign In Or Close All Apps On A Screen, Go To The Desktop Instead Of Start** Displays the desktop by default instead of Start whenever you log on or close all apps on a screen. If this option is disabled, Start is displayed by default when you log on, and you don't change screens when you close all apps.
 - **Show My Desktop Background On Start** Displays the desktop background on start instead of the Start screen's background color. If this option is disabled, the default background color is displayed on the Start screen.
 - **Show Start On The Display I'm Using...** When a computer has multiple displays, this option ensures that the Start screen is always displayed on the display with which you are actively working. If this option is disabled and a computer has multiple displays, Start normally is displayed only on the main display.
 - **Show The Apps View Automatically When I Go To Start** Displays the Apps screen instead of the Start screen. If this option is enabled, you can use the Windows key to switch between the Apps screen and the desktop. To get to Start, you must then swipe down or click the Up arrow (in the lower-right portion of the display).
3. Select Apply to apply any changes.

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