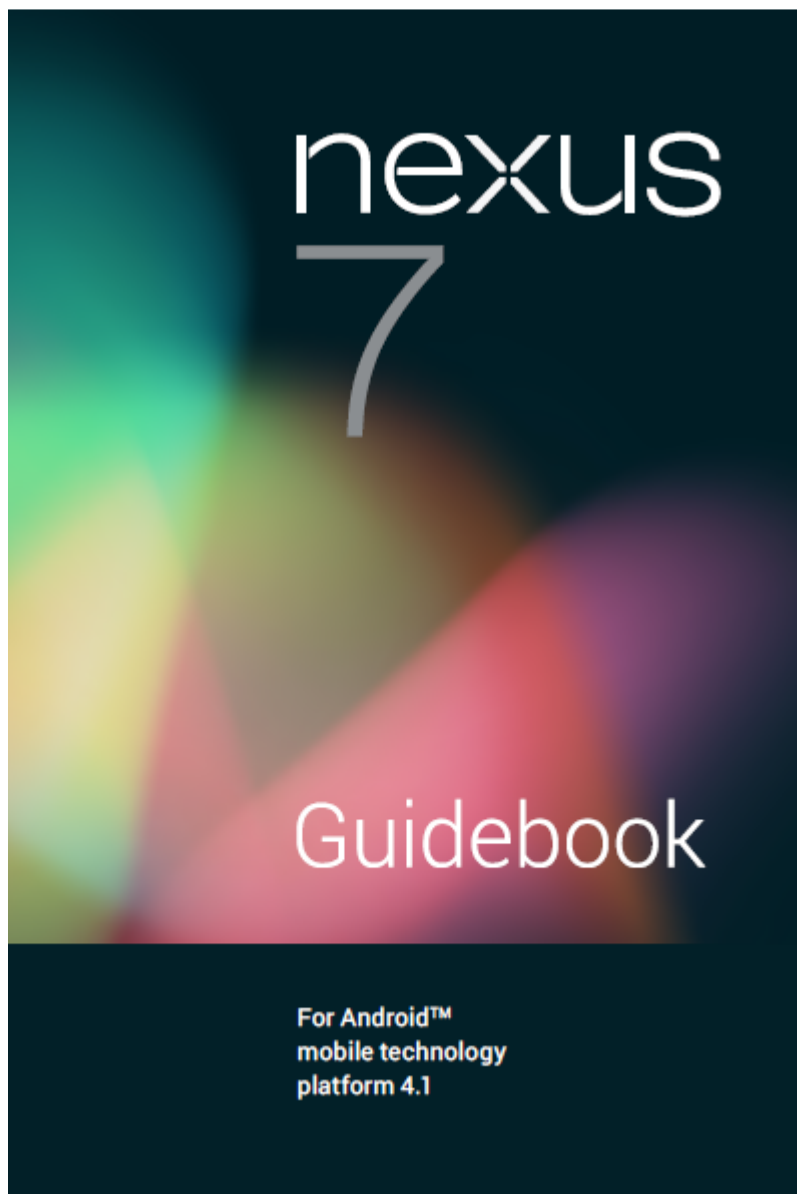


# Basic Guide to Android 4.1.1

(relevant pages from the Google Nexus 7 user guide)





### **Back**

Opens the previous screen you were working in, even if it was in a different app. Once you back up to the Home screen, you can't go back any further in your history.

---



### **Home**

Opens Home. If you're viewing a left or right Home screen, opens the central Home screen. To open Google Now, swipe up. Google Now gives just what you need to know, right when you need it.

---



### **Recent apps**

Opens a list of thumbnail images of apps you've worked with recently. To open an app, touch it. To remove a thumbnail from the list, swipe it left or right.

---

After a short time without getting used, these buttons may shrink to dots or fade away, depending on the current app. To bring them back, touch their location.




Settings

On the All Apps screen available from the Favorites tray, notice the Settings icon. This brings you to the Settings screens for your tablet, where you can adjust things like network, sound, and account settings, among many others.

# Tune performance

## Optimize battery life

You can extend your battery's life between charges by turning off features that you don't need. You can also monitor how apps and system resources consume battery power.

To control Battery settings, go to  **Settings > Device > Battery**.

## Extend the life of your battery

- If you aren't using Wi-Fi, Bluetooth, or GPS, use the Settings app to turn them off. The GPS setting is located in **Settings > Personal > Location services**.
- Don't leave the Maps or Navigation apps open on the screen when you're not using them. They use GPS (and thus more power) only when they're running.
- Turn down screen brightness and set a shorter Sleep timeout:

## **Settings > Device > Display.**

- If you don't need it, turn off automatic syncing for all apps: **Settings > Accounts > Google *account-name***. This means you need to sync manually to collect messages, email, and other recent information, and won't receive notifications when updates occur.
- If you know you won't be near a mobile or Wi-Fi network for a while, switch to Airplane mode: press and hold the Power button, or go to **Settings > Wireless & Networks > More > Airplane mode**.

## **Check battery level and usage details**

Open **Settings > Device > Battery**.


The list at the bottom of the screen shows the breakdown of battery usage for individual apps and services. Touch a graph for more details. The details screen for some apps includes buttons that allow you to adjust settings affecting power usage, or stop the app completely.

**WARNING:** If you stop some apps or services, your device may not work correctly.

Battery status (charging, discharging) and level (as a percentage of fully charged) are displayed at the top of the screen.


The discharge graph shows battery level over time since you last charged the device, and how long you've been running on battery power.

# Optimize data usage

*Data usage* refers to the amount of data uploaded or downloaded by your device during a given period. To monitor your data usage, go to  **Settings > Wireless & networks > Data usage**.

Data usage settings allow you to:

- View data usage by app and access app settings.
- Identify mobile hotspots and restrict background downloads that may result in extra charges.

To view mobile hotspot settings, touch  **Menu > Mobile hotspots**.

Near the top of the screen, note the data usage cycle. Touch it to choose a different cycle. This date range is the period of time for which the graph displays data usage.

The vertical white lines on the graph show a period of time within the data usage cycle. This range determines the usage amount displayed just below the graph. Drag lines to change the period.

## Set data usage warning


Drag the orange line by its right side to the level where you want to receive a warning. When your data usage reaches this level, you'll receive a notification.

## View data usage by app

Some apps transfer data in the background—that is, when you're

not actually using the app, it may download data for future reference. Some apps allow you to restrict background data usage from the app's own settings. Touch the graph for any app in the bottom part of the screen for more usage details and access to its settings.

## Set auto-sync

You can also conserve data usage by syncing your apps manually, only when you need the data, rather than relying on auto-sync. To turn auto-sync off or on, touch  **Menu > Auto-sync data**.

## Optimize memory usage

You typically don't need to worry about managing apps beyond installing, opening, and using them. But there may be times when you want to know more about what's happening behind the scenes.

Apps use two kinds of memory: internal storage and RAM. They use internal storage for themselves and any files, settings, and other data they use. They also use RAM (memory designed for temporary storage and fast access) when they're running.

Android manages and carefully guards the portion of internal storage where the system, apps, and most data for those apps are stored, because this area may contain your private information. It's not possible to view this portion of internal storage when you connect your device to a computer with a USB cable. The other portion of internal storage, where music, downloaded files, and so on are stored, remains visible for your convenience.

Android also manages how apps use RAM. It may cache some things you've been using recently, for quicker access if you need them again, but it will erase the cache if it needs the RAM for new activities.

You affect the way apps use internal storage directly and indirectly in many ways—for example, by:

- Installing or uninstalling apps.
- Downloading files in Chrome, Gmail, and other apps.
- Creating files (for example, by taking pictures).
- Deleting downloaded files or files you created.
- Copying files between your device and a computer via USB or Bluetooth.

You rarely need to manage the way apps use RAM. But you can monitor apps' RAM usage and stop them if they misbehave.

## Use the Apps screen



Settings


The Apps screen allows you to adjust several aspects of the way your device uses memory. To view these settings, go to **Settings > Wireless & networks > Data usage**.

You'll see three tabs at the top of the screen, each displaying a list of apps or their components:

- **Downloaded.** Displays apps you've downloaded on Google Play or other sources.
- **Running.** Displays all apps, processes, and services that are

currently running or that have cached processes, and how much RAM they are using.

- The graph at the bottom of the Running tab shows the total RAM in use and the amount free. At the top right of the screen, touch **Show cached processes** or **Show running services** to switch back and forth.
- **All**. Displays all apps that came with Android and all apps you downloaded on Google Play or other sources.

To switch the order of the lists displayed in the **Downloaded** or **All** tabs, touch  **Menu > Sort by name** or **Sort by size**.

To view details about an app or other item listed under any tab, touch its name. The information and controls available vary among different types of apps, but commonly include:

- **Force stop** button: Stops an app that is misbehaving. Stopping an app, process, or service may cause your device to stop working correctly. You may need to restart your device after doing this.
- **Uninstall** button: Deletes the app and all of its data and settings.
- **Disable** button: Prevents the app from running, but does not uninstall it. This option is available for some apps and services that can't be uninstalled.
- **Clear data** button: Delete an app's settings and other data without removing the app itself.
- **Clear cache**: If the app stores data in a temporary area of the tablet's memory, lists how much information is stored, and includes a button for clearing it.

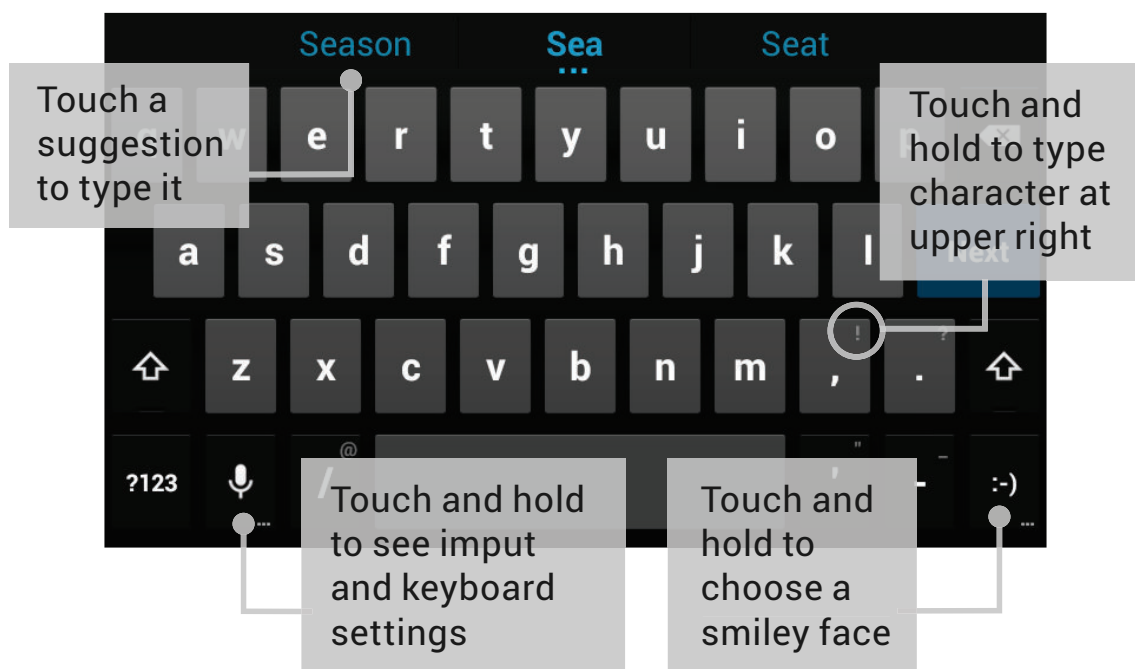



- **Launch by default:** If you have configured an app to launch certain file types by default, you can clear that setting here.
- **Permissions:** Lists the kinds of information about your tablet and data the app has access to.

# Enter & edit text

## Use the keyboard

You can enter text using the onscreen keyboard. Some apps open it automatically. In others, you open it by touching where you want to type.



To make the keyboard go away, touch the modified  Back button below it.

## Basic editing


- **Move the insertion point:** Touch where you want to type.


The cursor blinks in the new position, and a green tab appears below it. Drag the tab to move the cursor.







- **Select text:** Touch & hold or double-tap within the text.

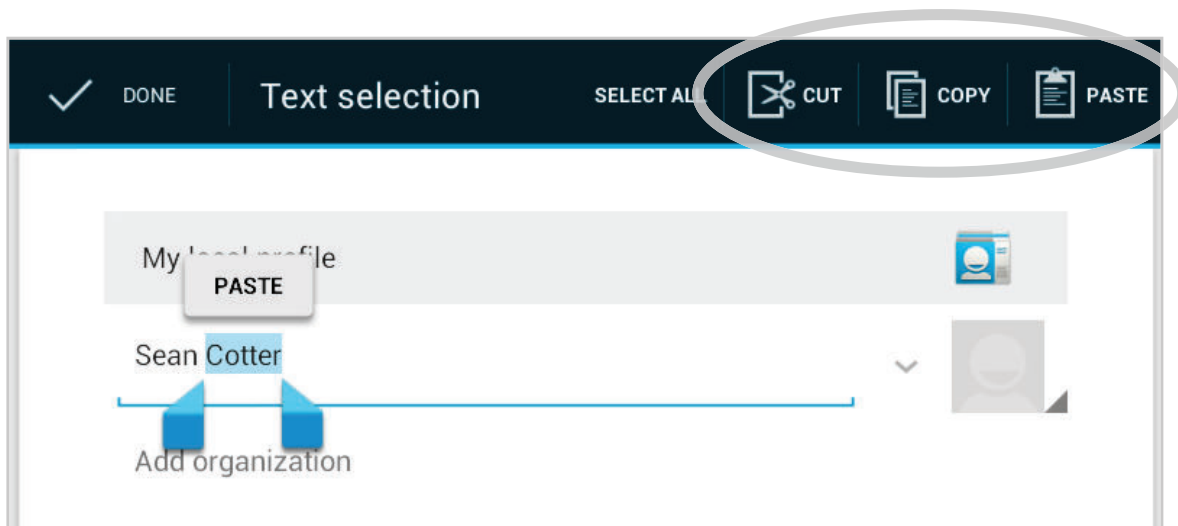
The nearest word highlights, with a tab at each end of the selection. Drag the tabs to change the selection.

The tab disappears after a few moments, to get out of your way. To make it reappear, touch the text again.

- **Delete text:** Touch  to delete selected text or the characters before the cursor.
- **Type capital letters:** Touch the Shift key once to switch to capital letters for one letter.

Or touch & hold  Shift key while you type. When you release the key, the lowercase letters reappear.

- **Turn caps lock on:** Double-tap or touch & hold  Shift key, so it changes to . Touch  Shift key again to return to lowercase.
- **Cut, copy, paste:** Select the text you want to manipulate. Then touch  Cut,  Copy or  Paste button:



Settings


To change your tablet's keyboard and input methods, go to **Settings > Personal > Language & input**.

## Type text by speaking

You can use voice input to type text by speaking. This feature uses Google's speech-recognition service, so your tablet must be connected to a Wi-Fi network to use it.

Text that you enter by speaking is underlined. You can continue entering text to keep it, or delete it.

You can speak to enter text in most places that you can enter text with the onscreen keyboard.

- Touch a text field, or a location in text you've already entered in a text field.
- Touch  Microphone key on the onscreen keyboard.

- When you see the microphone image, speak what you want to type.

Say “comma,” “period,” “question mark,” “exclamation mark,” or “exclamation point” to enter punctuation.

When you pause, what you spoke is transcribed by the speech-recognition service and entered in the text field, underlined. You can touch the Delete key to erase the underlined text. If you start typing or entering more text by speaking, the underline disappears.

To improve processing of your voice input, Google may record a few seconds of ambient background noise in temporary memory at any time. This recording remains on the device only fleetingly and is not sent to Google.



Settings

To change your tablet’s speech settings, go to **Settings > Personal > Language & input**.


# Connect to networks

## Connect to Wi-Fi networks

Wi-Fi is a wireless networking technology that can provide Internet access at distances of up to 100 meters, depending on the Wi-Fi router and your surroundings.


To use Wi-Fi, you connect to a wireless access point, or “hotspot.” Some hotspots are open and you can simply connect to them. Others implement security features that require other steps to set up, such as digital certificates or other ways to ensure that only authorized users can connect.

To extend the life of your battery between charges, turn off Wi-Fi when you’re not using it. You can also set your device to disconnect automatically from Wi-Fi networks when it’s sleeping.

To work with Wi-Fi settings, go to  **Settings > Wireless & networks > Wi-Fi.**

## Turn Wi-Fi on & connect to a Wi-Fi network

If you're adding a Wi-Fi network when first setting up your device, Wi-Fi is turned on automatically.

1. Touch  **Settings > Wireless & networks > Wi-Fi**.
2. Slide the Wi-Fi switch to the **On** position.
3. The device scans for available Wi-Fi networks and displays the names of those it finds. Secured networks are indicated with a Lock icon. If the device finds a network that you connected to previously, it connects to it.
4. Touch a network name to see more details or connect to it, and type a password if necessary.
5. Or, if your Wi-Fi router supports Wi-Fi Protected Setup, touch the WPS icon on your tablet, and then touch the same button on your router.


To modify a network's settings, touch & hold the network name.

## Add a Wi-Fi network

You can add a Wi-Fi network so your device will remember it, along with any security credentials, and connect to it automatically when it's in range. You must also add a Wi-Fi network if the network does not broadcast its name (SSID), or to add a Wi-Fi network when you are out of range.

To join a secured network, you first need to learn security details from the network's administrator.

1. Turn on Wi-Fi, if it's not already on.

2. Touch the  Plus icon at the top of the screen.
3. Enter the SSID (name) of the network. If necessary, enter security or other network configuration details.
4. Touch **Save**.

The information about the network is saved. Your device will connect to this network automatically the next time you come within range.

## Forget a Wi-Fi network

You can make the tablet forget about the details of a Wi-Fi network that you added—for example, if you don't want the tablet to connect to it automatically or if it's a network that you no longer use.

1. Turn on Wi-Fi, if it's not already on.
2. In the Wi-Fi settings screen, touch the name of the network.
3. Touch **Forget** in the dialog that opens.

## Configure proxy settings for a Wi-Fi network

Some network administrators require you to connect to internal or external network resources via a proxy server. By default, the Wi-Fi networks you add are not configured to connect via a proxy, but you can change that for each Wi-Fi network you've added.

Proxy settings are used by Browser but may not be used by other apps.




1. Touch & hold a network in the list of Wi-Fi networks you've added.
2. Touch **Modify network** in the dialog that opens.
3. Select **Show advanced options**.
4. If the network has no proxy settings, touch **None** under Proxy Settings, then touch **Manual** in the menu that opens.
5. Enter the proxy settings supplied by your network administrator.
6. Touch **Save**.

The proxy settings apply only to the Wi-Fi network you modified. To change the proxy settings for other Wi-Fi networks, modify them individually.

## Set Wi-Fi notifications, disconnect policy, & other advanced options

To work with advanced Wi-Fi settings:

1. Turn on Wi-Fi, if it's not already on.
2. In the Wi-Fi settings screen, touch  Menu icon > **Advanced**.

These are the settings you can adjust:

- **Network notification:** By default, when Wi-Fi is on, you receive notifications in the Status bar when your device detects an open Wi-Fi network. Uncheck this option to turn off notifications.
- **Keep Wi-Fi during sleep:** To conserve mobile data usage, your device stays connected to Wi-Fi when the screen goes

to sleep.


Touch this option to change this default behavior: either to stay connected to Wi-Fi only when the device is connected to a charger (when battery life isn't a problem), or never to stay connected to Wi-Fi during sleep. The latter choice is likely to increase mobile data usage. You may want to revisit this setting if you receive a notification that you're approaching your specified mobile data limit.


This screen also displays the following information:

- **MAC address:** The Media Access Control (MAC) address of your device when connected to a Wi-Fi network.
- **IP address:** The Internet Protocol (IP) address assigned to the device by the Wi-Fi network you are connected to (unless you used the IP settings to assign it a static IP address).



Settings

To turn Wi-Fi on or off, go to  **Settings > Wireless & networks > Wi-Fi.**

To manage mobile data options, go to  **Settings > Wireless & networks > Data usage.**

## Connect to virtual private networks

Virtual private networks (VPNs) allow you to connect to the resources inside a secured local network, from outside that network. VPNs are commonly deployed by corporations, schools, and other institutions to let people access local network resources when not on campus, or when connected to a wireless network.

To configure VPN access, you must first obtain the details from your network administrator. Depending on your organization's solution, you may need to obtain a VPN app, either from your administrator or on Google Play.



Settings

The VPN settings screen allows you to add VPN networks and adjust their settings. To view this screen and perform the tasks described here, go to **Settings > Wireless & networks > More > VPN**.

## Add a VPN

1. From the VPN screen, touch **Add VPN profile**.
2. In the form that appears, fill in the information provided by your network administrator
3. Touch **Save**.

The VPN is added to the list on the VPN screen.

## Connect to a VPN

1. From the VPN screen, touch the name of the VPN.
2. In the dialog that opens, enter any requested credentials.
3. Touch **Connect**.

When you're connected to a VPN, a Status icon and notification are displayed continuously. To disconnect, touch the notification for the VPN connection.

## Edit a VPN

1. From the VPN screen, touch & hold the name of the VPN profile.
2. In the dialog that opens, touch **Edit profile**.
3. Edit the VPN settings you want.
4. Touch **Save**.

## Delete a VPN

1. From the VPN screen, touch & hold the name of the VPN profile.
2. Touch & hold the VPN you want to delete.
3. In the dialog that opens, touch **Delete profile**.

## Control airplane mode & other network settings

These settings are available under **Settings > Wireless & networks > More**. Follow the links for detailed instructions:

- **Airplane mode.** Check to turn off all data transmission from the device.
- **VPN.** Touch to adjust settings that allow you to connect to websites and other resources within a secured local network from outside that network. See “Connect to virtual private networks” on page 59.
- **NFC.** Check to turn on Near Frequency Communication (NFC) feature (required for Android Beam)
- **Android Beam.** Touch to turn Android Beam off or on. When

**NFC** is checked and Android Beam is on, you can touch your tablet to other devices to exchange web pages, contact info, and other data. See “Beam screen content” on page 63.

# Connect to devices

## Beam screen content

You can beam a web page, a video, or other content from your screen to another device by bringing the devices together (typically back to back).

**Before you begin:** Make sure both devices are unlocked, support Near Field Communication (NFC), and have both NFC and Android Beam turned on.

Follow these steps:

1. Open a screen that contains something you'd like to share, such as a Browser page, YouTube video, or place page in Maps.
2. Move the back of your phone toward the back of the other device.

When the devices connect, you hear a sound, the image on your screen reduces in size, and you see the message **Touch**

**to beam.**

3. Touch your screen anywhere.

Your friend's device displays the transferred content. Or, if the necessary app isn't installed, Google Play opens to a screen where your friend can download the app.



Settings

To turn on NFC, go to **Settings > Wireless & networks > More > NFC**.

To turn on Android Beam, go to **Settings > Wireless & networks > More > Android Beam**.

## Connect to Bluetooth devices

Bluetooth is a short-range wireless communications technology used to communicate between devices over a distance of about 8 meters. The most common Bluetooth devices are headsets for making calls or listening to music, hands-free kits for cars, and other portable devices, including laptops.

There are several Bluetooth profiles that define the features and communications standards for Bluetooth devices. For a list of the profiles supported by your device, read the owner's guide.


To connect to a Bluetooth device, first turn on your tablet's Bluetooth. Then, the first time you use a new Bluetooth device, you need to "pair" it with your tablet so that both devices know how to connect securely to each other. After that, they connect automatically.

To extend the life of your battery between charges, turn off Blue-

tooth when you're not using it. You may also be required to turn Bluetooth off in some locations. Bluetooth is turned off when you switch to Airplane mode.


System bar icons indicate Bluetooth status.

## Turn Bluetooth on or off

1. Touch  **Settings > Wireless & networks**.
2. Slide the Bluetooth switch on or off.

## Change your tablet's Bluetooth name

Your tablet has a generic Bluetooth name by default, which is visible to other Bluetooth devices when you connect them. You can change the name so that it is more recognizable.

1. Under **Settings > Wireless & networks**, make sure Bluetooth is turned on.
2. Touch **Bluetooth**.
3. In the Bluetooth screen, touch  **Menu icon > Rename tablet**.
4. Type a new name and touch **Rename**.

## Pair your tablet with a Bluetooth device

You must pair your tablet with a device before you can connect to it. Once you pair your tablet with a device, they stay paired unless you unpair them.

If the device you want to pair with isn't in the list, ensure that the it's turned on and set to be discoverable. See the documentation



that came with your device to learn how to make it discoverable.

1. Under **Settings > Wireless & networks**, make sure Bluetooth is turned on.
2. Touch **Bluetooth**. Your tablet scans for and displays the IDs of all available Bluetooth devices in range.
3. If your mobile device stops scanning before your Bluetooth device is ready, touch **Search for devices**.
4. Touch the ID of the Bluetooth device in the list to pair with it.

Follow the instructions to complete the pairing. If you're prompted to enter a passcode, try entering 0000 or 1234 (the most common passcodes), or consult the documentation that came with the device.

If the pairing is successful, your tablet connects to the device.

## Connect to a Bluetooth device


Once you've paired with a Bluetooth device, you can connect to it manually—for example, to switch devices or to reconnect after it is back in range.

- Under **Settings > Wireless & networks > Bluetooth**, make sure Bluetooth is turned on.
- In the list of devices, touch a paired but unconnected device.

When the tablet and the device are connected, the device is displayed as connected in the list.

## Configure or unpair a Bluetooth device

Some Bluetooth devices have multiple profiles. Profiles can include the ability to transmit your conversations, play music in stereo, or transfer files or other data. You can select which profiles you want to use with your tablet. You can also change the name of the Bluetooth device as it appears on your tablet.

1. Under  **Settings > Wireless & networks > Bluetooth**, make sure Bluetooth is turned on.
2. In the Bluetooth settings, touch the Settings icon beside the connected Bluetooth device you want to configure.

A screen opens that allows you to change the device's name, unpair it, or select profiles. Touch the Back button when you're finished.

## Connect to keyboards, mice, & other devices

You can connect a keyboard, mouse, or even a joystick or other input device to your tablet via USB or Bluetooth and use it just as you would with a PC.

You may need an adapter to connect the keyboard or other device to your tablet's USB port. To connect more than one USB device at a time, use a powered USB hub to reduce the drain on your tablet's battery.

You pair and connect Bluetooth input devices to your tablet in the same way as any other Bluetooth device.

## Keyboards

In addition to entering text, you can use your keyboard to navigate your tablet's features:

- Use the arrow keys to select items on screen.
- Pressing Return when an item is selected is equivalent to touching that item.
- Pressing Escape is equivalent to touching Back.
- Press Tab or Shift-Tab to move from field to field in a form or other screen with multiple text fields.

## Mice

When you connect a mouse to your tablet and move the mouse, an arrow-shaped cursor appears, just as on a computer:

- Use the mouse to move the cursor.
- Clicking, pressing, and dragging with the mouse button is equivalent to touching, touching & holding, and dragging with your finger.
- Only one mouse button is supported.
- If your mouse has a trackball or scroll wheel, you can use it to scroll both vertically and horizontally.

## Other input devices

You can connect joysticks, gamepads, and other input devices to your tablet. If they work without special drivers or adapters on your PC, they will likely work with your tablet. However, games

and other apps must be designed to support any special features of an input device, such as dedicated buttons or other controls, to take full advantage of them.

## Connect to a Windows computer via USB

You can use a USB cable to connect your tablet to a Windows computer and transfer music, pictures, and other files in both directions. This connection uses the MTP protocol, which is supported by most recent versions of Windows.

If you are using USB tethering, you must turn that off before you can use USB to transfer files between your tablet and computer.

When you connect your tablet to the USB port on your computer, its USB storage is mounted as a drive and appears on your computer screen. You can now copy files back and forth as you would using any other external device.

When you're finished, simply disconnect the tablet by unplugging the USB cable.



Settings

To turn USB tethering on or off, go to **Settings > Wireless & networks > More > Tethering & portable hotspot**.

To change your tablet's USB connection options, go to **Settings > Device > Storage > Menu > USB computer connection**.

## Connect to a Macintosh computer via USB

You can use a USB cable to connect your tablet to a computer running Mac OS X with a USB cable and transfer music, pictures, and other files in both directions.

This connection uses the MTP protocol, which is not supported by Mac OS X natively. Therefore, you first need to install the free Android File Transfer application on your Macintosh. It's available from [www.android.com/filetransfer](http://www.android.com/filetransfer), along with instructions on how to install it.

After you install Android File Transfer, follow these steps:

1. If you are using Android File Transfer for the first time, double-click it to open it.

After you start Android File Transfer once, it opens automatically whenever you connect your device to your computer.

2. Connect your device to your computer with a USB cable.

Android File Transfer starts, if it's not already running, and opens a window that displays the contents of your device, along with storage space details at the bottom of the window.

You work with this window much as if it were a Finder window: opening and closing folders, creating new folders, and dragging files to or from it and other Finder windows. Disconnect the USB cable when you're finished.



Settings


To turn USB tethering on or off, go to **Settings > Wireless & networks > More > Tethering & portable hotspot**.

To change your tablet's USB connection options, go to **Settings > Device > Storage > Menu > USB computer connection**.

# Manage accounts

## Add or remove accounts

You can use multiple Google Accounts and Microsoft Exchange ActiveSync accounts on your device. You may also be able to add other kinds of accounts, depending on your apps. Some you can add in the Accounts section of Settings, as described here. Others you add using an app that works with those kinds of accounts. For example, you can add IMAP and POP3 email accounts with the Email app.

To reach the settings described here, start from  **Settings > Accounts**.

## Add an account

To add some accounts, you may need to obtain details from system administrator about the service to which the account connects. For example, you may need to know the account's domain

or server address.

1. Go to **Settings > Accounts > Add account**.
2. Touch the kind of account to add.
3. Follow the on-screen instructions.
4. Most accounts require a username and password, but the details depend on the kind of account and the configuration of the service you're connecting to.

Depending on the kind of account, you may be asked to configure what kinds of data you want to sync, name the account, and other details.

When you're finished, the account is added in one of two places:

- Google Accounts show up under **Settings > Accounts > Google**.
- Other accounts show up under **Accounts** on the main Settings screen.

## Remove an account

You can remove any account and all information associated with it from your device, including email, contacts, settings, and so on.


To remove a Google account, touch  **Menu > Remove account**.

For any other type of account go, to **Settings > Accounts > account-name** and look for the Remove option.




## Configure sync options


You can configure synchronization options for any of your apps. You can also decide what kinds of data to synchronize for each account.

To reach settings for Google accounts, start from  **Settings > Accounts > Google**.

For some accounts, syncing is two-directional; changes that you make to the information on your device are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync: the information on your mobile device is read-only.

Some apps, such as Gmail and Calendar, have separate synchronization settings that provide more fine-grained control. For example, to control message syncing in the Gmail app, touch  **Menu > Label settings > Sync messages**. In such cases, the settings you select at the account level are still valid.

## Configure auto-sync for all apps

To control Auto-sync for all apps that use it, open **Settings > Data usage >  Menu** and check or uncheck **Auto-sync data**.

If you turn off Auto-sync, you need to sync manually to collect messages, email, and other recent information, and won't receive notifications when updates occur. For example, changes that you make in your People app are automatically made to your Google contacts on the web.

If this option is not checked, you may be able to use an app's tools to sync data manually. You can also sync manually to collect messages, email, and other recent information. Leaving Auto-sync off can help extend your battery life, but will prevent you from receiving notifications when updates occur.

## Configure Google Account sync settings

To adjust a single Google Account's sync settings:

1. Go to **Settings > Personal > Accounts > Google**.



indicates that some or all of an account's information is configured to sync automatically.




indicates that none of an account's information is configured to sync automatically.

2. Touch the account whose sync settings you want to change.
3. The Sync Settings screen opens, displaying a list of the kinds of information the account can sync.
4. Check or uncheck items as needed.


Unchecking an option does not remove the information from your device; it simply stops it from being kept in sync with the version on the web.

## Sync a Google account manually

1. Go to **Settings > Accounts > Google**.
2. Touch the account whose data you want to sync.
3. Touch  **Menu > Sync now**.

## Change backup & reset options

You can back up settings and other data associated with one or more of your Google Accounts. If you need to replace or factory reset your device, you can restore your data for any accounts that were previously backed up.

To view the settings described here, go to  **Settings > Backup & reset**.

These options are available:

- **Back up my data.** If you check this option, a wide variety of your personal data is backed up automatically, including your Wi-Fi passwords, Browser bookmarks, a list of the apps you've installed on Google Play, the words you've added to the dictionary used by the onscreen keyboard, and most of your customized settings. Some third-party apps may also take advantage of this feature, so you can restore your data if you reinstall an app.

If you uncheck this option, your data stops getting backed up, and any existing backups are deleted from Google servers.

- **Backup account.** Displays the Google Accounts whose information gets backed up. You must sign in with one or more of these accounts on a new or reset device to retrieve the associated information.

To add a new account, touch **Backup account > Add account**.

- **Automatic restore.** Check this option to restore settings and other data when you reinstall an app. This feature requires that you are backing up your data with your Google Account and

that the app is using the backup service.

- **Factory data reset.** Touch this option, then **Reset tablet** to erase all your personal data from internal storage, including information about your Google Account, any other accounts, your system and app settings, any downloaded applications, and your music, photos, videos, and other files.
- After resetting your tablet, you'll need to re-enter the same information requested when you first set up your tablet. If you've been backing up your data to a Google account, an option during the setup process allows you to restore it.

Some third-party apps also make use of the backup service, so if you reinstall one, its settings and data are restored.


# Secure your tablet

## Set screen lock

Depending how you use your phone, you may want to set some form of automatic screen lock to prevent unauthorized access. If a screen lock has been set, the screen locks when your tablet's display goes to sleep.

If your tablet's playing music when the screen locks, you can continue listening or pause the selection without unlocking.

To adjust your lock settings:

1. Go to  **Settings > Personal > Security > Screen lock.**
2. Touch the type of lock you want and follow the onscreen instructions.

If you have previously set a lock, you must enter the pattern, PIN, or password to unlock the lock settings.

You can choose among these lock options, listed in approximate order of strength:

- Slide provides no protection, but lets you get to the Home screen quickly, or open Camera and start taking pictures immediately.
- Face Unlock lets you unlock your phone by looking at it. This is the least secure lock option.

**TIP:** Face Unlock lets you unlock your phone by looking at the screen. After you set it up, look under **Settings > Personal > Security** for two additional settings: **Improve face matching** and **Liveness check**. Use these to make Face Unlock more reliable and secure.

- Pattern lets you draw a simple pattern with your finger to unlock the phone. This is slightly more secure than Face Unlock.
- PIN requires four or more numbers. Longer PINs tend to be more secure.
- Password requires four or more letters or numbers. This is the most secure option, as long as you create a strong password.

**Password tips:** For best security, specify a password that is

- A least 8 characters long.
- Contains a mixture of numbers, letters, and special symbols.
- Doesn't contain any recognizable words or phrases.



Settings

To change when your phone goes to sleep, go to **Settings > Device > Display > Sleep**.

To see your passwords when you input them, go to **Settings > Personal > Security > Make passwords visible**.

## Encrypt your tablet

You can encrypt all the data on your tablet: Google Accounts, app data, music and other media, downloaded information, and so on. If you do, you must enter a numeric PIN or password each time you turn on your tablet. Note that this is the same PIN or password that you use to unlock your tablet without encryption, and cannot be set independently.

**WARNING:** Encryption is irreversible. The only way to revert to an unencrypted tablet is to perform a factory data reset, which erases all your data.

Encryption provides additional protection in case your tablet is stolen, and may be required or recommended in some organizations. Consult your system administrator before turning it on. In many cases the PIN or password you set for encryption is controlled by the system administrator.

Before turning on encryption, prepare as follows:

1. Set a lock screen PIN or password.

2. Charge the battery.
3. Plug in your tablet.
4. Schedule an hour or more for the encryption process: you must not interrupt it or you will lose some or all of your data.

When you're ready to turn on encryption:

1. Touch **Settings > Personal > Security > Encryption > Encrypt tablet.**
2. Read the information about encryption carefully.

The **Encrypt tablet** button is dimmed if your battery's not charged or your tablet's not plugged in. If you change your mind about encrypting your tablet, touch the Back button.

**WARNING:** If you interrupt the encryption process, you will lose data.

3. Touch **Encrypt tablet.**
4. Enter your lock screen PIN or password and touch **Continue.**
5. Touch **Encrypt tablet** again.

The encryption process starts and displays its progress. Encryption can take an hour or more, during which time your tablet may restart several times.

When encryption is complete, you're prompted to enter your PIN or password.

Subsequently, you must enter your PIN or password each time



you power on your tablet, to decrypt it.

## Work with certificates


You can use digital certificates to identify your device for a variety of purposes, including VPN or Wi-Fi network access as well as authentication to servers by apps such as Email or Browser. To use a certificate to identify your device, you must obtain it with help from your system administrator, and install it in your device's trusted credential storage .

Android supports DER-encoded X.509 certificates, saved in files with a .crt or .cer file extension. If your certificate file has a .der or other extension, you must change it to .crt or .cer or you won't be able to install it.

Android also supports X.509 certificates saved in PKCS#12 key store files with a .p12 or .pfx extension. If your key store has some other extension, you must change it to .p12 or .pfx or you won't be able to install it. When you install a certificate from a PKCS#12 key store, Android also installs any accompanying private key or certificate authority certificates.

### Install client & CA certificates

To install a certificate from your tablet's internal storage:

1. Copy the certificate or key store from your computer to the root of your device's internal storage (that is, not in a folder).
2. Touch  **Settings > Personal > Security > Credential storage > Install from storage.**

3. Touch the filename of the certificate or keystore to install. Only certificates that you haven't already installed are displayed.
4. If prompted, enter the key store password and touch **OK**.
5. Enter a name for the certificate and touch **OK**.

Typically, a CA certificate included with a client certificate is installed at the same time. You can also install separate CA certificates using the same steps.


If you have not already set a pattern, PIN, or password for your device, you're prompted to set one up. The type of lock that's acceptable may be predetermined by your system administrator.

You can now use the certificate that you installed when connecting to a secure network or for client authentication with Email, Browser, and third-party apps. After a certificate is installed successfully, the copy in storage is deleted.

**WARNING:** Apps such as Email and Browser that support certificates allow you to install certificates directly from within the app. For details, see the Help or other instructions that come with each app.

## Work with CA certificates

If a certificate authority (CA) certificate gets compromised, or for some other reason your organization doesn't want to trust it, you can disable or remove it. To do so, follow these steps:

1. Touch  **Settings > Personal > Security > Credential storage > Trusted credentials**. The trusted credentials screen has two tabs:

**System** displays certificate authority (CA) certificates that are permanently installed in the ROM of your tablet.

**User** displays any CA certificates that you have installed yourself, for example in the process of installing a client certificate.

2. To examine the details of CA certificate, touch its name.

A scrolling screen displays the details.

3. To remove or disable a CA certificate, scroll down to the bottom of the details screen and touch either **Disable** for system certificates or **Remove** for user certificates.

When you disable a system CA certificate, the button at the bottom of its details screen changes to **Enable**, so you can enable the certificate again if necessary. When you remove a user-installed CA certificate, it is gone permanently and must be re-installed if you want it back.

In the confirmation dialog that appears, click **OK**.