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User Guide

Lenovo N20/N20p Chromebook

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User Guide

Lenovo N20/N20p Chromebook

First Edition (April 2014)

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Contents

Read this first v
Important safety information vi
Conditions that require immediate action . . . vi
Safety guidelines vii

Chapter 1. Account, login, and logout 1
Become your Chromebook's owner 1
What is a Google Account 1
Sign in with a Google Account other than the owner's 1
Browse as a guest 1
Lock your Chromebook 2
Sign out 2
Control who can use your Chromebook 2
Check a Chromebook's owner 2
Disable guest login 3
Reset your Chromebook 3
Shut down your Chromebook 3
Get help from Google 3

Chapter 2. Manage files and folders . . 5
What is Google Drive 5
Your local storage space 5
The Files app 5
Create folders using the Files app 5
Delete unused files 5
Check the amount of available storage 5

Chapter 3. Language settings 7
Change display language 7
Add an input method 7
Switch between input methods 7

Chapter 4. Add and manage apps . . . 9
What is Chrome Web Store 9
Add apps or extensions 9
Remove apps 9

Chapter 5. CRU service 11
What is CRU and CRU service 11
CRUs for Lenovo N20/N20p Chromebook 11
Replace the keyboard 11
Remove the keyboard 11
Install a new keyboard 12

Appendix A. Features and specifications 15
Specifications 15
Power and battery status indicators 16

Appendix B. ENERGY STAR model information 17

Appendix C. WEEE and recycling statements 19
China WEEE statement 19
Important WEEE information 19
Battery recycling information for Taiwan 19
Battery recycling information for the European Union 20

Appendix D. Restriction of Hazardous Substances Directive (RoHS) 21
India RoHS 21
China RoHS 21
Turkish RoHS 21
Ukraine RoHS 22
European Union RoHS 22

Appendix E. Notices 23
Trademarks 24

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Read this first

Be sure to follow the important tips given here to continue to get the most use and enjoyment out of your computer. Failure to do so might lead to discomfort or injury, or cause your computer to fail.

Protect yourself from the heat that your computer generates.

When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. The temperature they reach depends on the amount of system activity and the level of charge in the battery.

Extended contact with your body, even through clothing, could cause discomfort or even a skin burn.

- Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended time.
- Periodically take hands from using the keyboard by lifting your hands from the palm rest.

Protect yourself from the heat generated by the ac power adapter.

When the ac power adapter is connected to an electrical outlet and your computer, it generates heat.

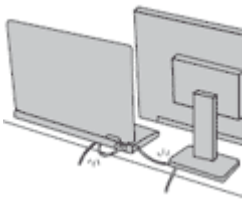
Extended contact with your body, even through clothing, may cause a skin burn.

- Do not place the ac power adapter in contact with any part of your body while it is in use.
- Never use it to warm your body.

Prevent your computer from getting wet.

To avoid spills and the danger of electrical shock, keep liquids away from your computer.

Protect the cables from being damaged.



Applying strong force to cables may damage or break them.

Route communication lines, or the cables of an ac power adapter, a mouse, a keyboard, a printer, or any other electronic device, so that they cannot be walked on, tripped over, pinched by your computer or other objects, or in any way subjected to treatment that could interfere with the operation of your computer.

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Handle your computer gently.

Do not drop, bump, scratch, twist, hit, vibrate, push, or place heavy objects on your computer, display, or external devices.

Carry your computer carefully.

- Use a quality carrying case that provides adequate cushioning and protection.
- Do not pack your computer in a tightly packed suitcase or bag.
- Before putting your computer in a carrying case, make sure that it is off, in sleep mode, or in hibernation mode. Do not put a computer in a carrying case while it is turned on.

Important safety information

This information can help you safely use your notebook personal computer. Follow and retain all information included with your computer. The information in this document does not alter the terms of your purchase agreement or the Lenovo® Limited Warranty.

Customer safety is important. Our products are developed to be safe and effective. However, personal computers are electronic devices. Power cords, power adapters, and other features can create potential safety risks that can result in physical injury or property damage, especially if misused. To reduce these risks, follow the instructions in this document carefully. By carefully following the information contained in this document and provided with your product, you can help protect yourself from hazards and create a safer computer work environment.

Conditions that require immediate action

Products can become damaged due to misuse or neglect. Some product damage is serious enough that the product should not be used again until it has been inspected and, if necessary, repaired by an authorized servicer.

As with any electronic device, pay close attention to the product when it is turned on. On very rare occasions, you might notice an odor or see a puff of smoke or sparks vent from your product. Or you might hear sounds like popping, cracking or hissing. These conditions might merely mean that an internal electronic component has failed in a safe and controlled manner. Or, they might indicate a potential safety issue. However, do not take risks or attempt to diagnose the situation yourself. Contact the Customer Support Center for further guidance. For a list of Service and Support phone numbers, go to the following Web site:
http://www.lenovo.com/support/phone

Frequently inspect your computer and its components for damage or wear or signs of danger. If you have any question about the condition of a component, do not use the product. Contact the Customer Support Center or the product manufacturer for instructions on how to inspect the product and have it repaired, if necessary.

In the unlikely event that you notice any of the following conditions, or if you have any safety concerns with your product, stop using the product and unplug it from the power source and telecommunication lines until you can speak to the Customer Support Center for further guidance.

- Power cords, plugs, power adapters, extension cords, surge protectors, or power supplies that are cracked, broken, or damaged.
- Signs of overheating, smoke, sparks, or fire.
- Damage to a battery (such as cracks, dents, or creases), discharge from a battery, or a buildup of foreign substances on the battery.
- A cracking, hissing or popping sound, or strong odor that comes from the product.
- Signs that liquid has been spilled or an object has fallen onto the computer product, the power cord or power adapter.
- The computer product, power cord, or power adapter has been exposed to water.
- The product has been dropped or damaged in any way.
- The product does not operate normally when you follow the operating instructions.

Note: If you notice these conditions with a product (such as an extension cord) that is not manufactured for or by Lenovo, stop using that product until you can contact the product manufacturer for further instructions, or until you get a suitable replacement.

Safety guidelines

Always observe the following precautions to reduce the risk of injury and property damage.

Service and upgrades

Do not attempt to service a product yourself unless instructed to do so by the Customer Support Center or your documentation. Only use a Service Provider who is approved to repair your particular product.

Note: Some computer parts can be upgraded or replaced by the customer. Upgrades typically are referred to as options. Replacement parts approved for customer installation are referred to as Customer Replaceable Units, or CRUs. Lenovo provides documentation with instructions when it is appropriate for customers to install options or replace CRUs. You must closely follow all instructions when installing or replacing parts. The Off state of a power indicator does not necessarily mean that voltage levels inside a product are zero. Before you remove the covers from a product equipped with a power cord, always make sure that the power is turned off and that the product is unplugged from any power source. If you have any questions or concerns, contact the Customer Support Center.

CAUTION:

Before replacing any CRUs, turn off the computer and wait three to five minutes to let the computer cool before opening the cover.

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Power cords and power adapters

DANGER

Use only the power cords and power adapters supplied by the product manufacturer.

The power cords shall be safety approved. For Germany, it shall be H05VV-F, 3G, 0.75 mm^2, or better. For other countries, the suitable types shall be used accordingly.

Never wrap a power cord around a power adapter or other object. Doing so can stress the cord in ways that can cause the cord to fray, crack, or crimp. This can present a safety hazard.

Always route power cords so that they will not be walked on, tripped over, or pinched by objects.

Protect power cords and power adapters from liquids. For instance, do not leave your power cord or power adapter near sinks, tubs, toilets, or on floors that are cleaned with liquid cleansers. Liquids can cause a short circuit, particularly if the power cord or power adapter has been stressed by misuse. Liquids also can cause gradual corrosion of power cord terminals and/or the connector terminals on a power adapter, which can eventually result in overheating.

Ensure that all power cord connectors are securely and completely plugged into receptacles.

Do not use any power adapter that shows corrosion at the ac input pins or shows signs of overheating (such as deformed plastic) at the ac input pins or anywhere on the power adapter.

Do not use any power cords where the electrical contacts on either end show signs of corrosion or overheating or where the power cord appears to have been damaged in any way.

To prevent possible overheating, do not cover the power adapter with clothing or other objects when the power adapter is plugged into an electrical outlet.

Extension cords and related devices

Ensure that extension cords, surge protectors, uninterruptible power supplies, and power strips that you use are rated to handle the electrical requirements of the product. Never overload these devices. If power strips are used, the load should not exceed the power strip input rating. Consult an electrician for more information if you have questions about power loads, power requirements, and input ratings.

Plugs and outlets

DANGER

If a receptacle (power outlet) that you intend to use with your computer equipment appears to be damaged or corroded, do not use the outlet until it is replaced by a qualified electrician.

Do not bend or modify the plug. If the plug is damaged, contact the manufacturer to obtain a replacement.

Do not share an electrical outlet with other home or commercial appliances that draw large amounts of electricity; otherwise, unstable voltage might damage your computer, data, or attached devices.

Some products are equipped with a three-pronged plug. This plug fits only into a grounded electrical outlet. This is a safety feature. Do not defeat this safety feature by trying to insert it into a non-grounded outlet. If you cannot insert the plug into the outlet, contact an electrician for an approved outlet adapter or to replace the outlet with one that enables this safety feature. Never

overload an electrical outlet. The overall system load should not exceed 80 percent of the branch circuit rating. Consult an electrician for more information if you have questions about power loads and branch circuit ratings.

Be sure that the power outlet you are using is properly wired, easily accessible, and located close to the equipment. Do not fully extend power cords in a way that will stress the cords.

Be sure that the power outlet provides the correct voltage and current for the product you are installing.

Carefully connect and disconnect the equipment from the electrical outlet.

Power supply statement

DANGER

Never remove the cover on a power supply or any part that has the following label attached.

Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components. If you suspect a problem with one of these parts, contact a service technician.

External devices

Attention: Do not connect or disconnect any external device cables other than Universal Serial Bus **(USB)** cable while the computer power is on; otherwise, you might damage your computer. To avoid possible damage to attached devices, wait at least five seconds after the computer is shut down to disconnect external devices.

General battery notice

DANGER

Personal computers manufactured by Lenovo contain a coin cell battery to provide power to the system clock. In addition, many mobile products, such as notebook computers, utilize a rechargeable battery pack to provide system power when in portable mode. Batteries supplied by Lenovo for use with your product have been tested for compatibility and should only be replaced with approved parts.

Never attempt to open or service any battery. Do not crush, puncture, or incinerate batteries or short circuit the metal contacts. Do not expose the battery to water or other liquids. Only recharge the battery pack strictly according to instructions included in the product documentation.

Battery abuse or mishandling can cause the battery to overheat, which can cause gasses or flame to “vent” from the battery pack or coin cell. If your battery is damaged, or if you notice any discharge from your battery or the buildup of foreign materials on the battery leads, stop using the battery and obtain a replacement from the battery manufacturer.

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Batteries can degrade when they are left unused for long periods of time. For some rechargeable batteries (particularly Lithium Ion batteries), leaving a battery unused in a discharged state could increase the risk of a battery short circuit, which could shorten the life of the battery and also can pose a safety hazard. Do not let rechargeable Lithium-Ion batteries completely discharge or store these batteries in a discharged state.

Rechargeable battery notice

DANGER

Do not attempt to disassemble or modify the battery pack. Attempting to do so can cause an explosion, or liquid leakage from the battery pack. A battery pack other than the one specified by Lenovo, or a disassembled or modified battery pack is not covered by the warranty.

If the rechargeable battery pack is incorrectly replaced, there is danger of an explosion. The battery pack contains a small amount of harmful substances. To avoid possible injury:

- **Replace only with a battery of the type recommended by Lenovo.**
- **Keep the battery pack away from fire.**
- **Do not expose it to water or rain.**
- **Do not attempt to disassemble it.**
- **Do not short-circuit it.**
- **Keep it away from children.**
- **Do not drop the battery pack.**

Do not put the battery pack in trash that is disposed of in landfills. When disposing of the battery, comply with local ordinances or regulations.

The battery pack should be stored at room temperature, charged to approximately 30 to 50% of capacity. We recommend that battery pack be charged about once per year to prevent overdischarge.

Lithium coin cell battery notice

DANGER

Danger of explosion if battery is incorrectly replaced.

When replacing the lithium coin cell battery, use only the same or an equivalent type that is recommended by the manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

Do not:

- **Throw or immerse into water**
- **Heat to more than 100°C (212°F)**
- **Repair or disassemble**

Dispose of the battery as required by local ordinances or regulations.

The following statement applies to users in the state of California, U.S.A.

California Perchlorate Information:

Products containing manganese dioxide lithium coin cell batteries may contain perchlorate.

Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate

Heat and product ventilation

DANGER

Computers, ac power adapters, and many accessories can generate heat when turned on and when batteries are charging. Notebook computers can generate a significant amount of heat due to their compact size. Always follow these basic precautions:

- **When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended length of time. When you use the keyboard, avoid keeping your palms on the palm rest for a prolonged period of time. Your computer generates some heat during normal operation. The amount of heat depends on the amount of system activity and the battery charge level. Extended contact with your body, even through clothing, could cause discomfort or even a skin burn. Periodically take breaks from using the keyboard by lifting your hands from the palm rest; and be careful not to use the keyboard for any extended length of time.**
- **Do not operate your computer or charge the battery near flammable materials or in explosive environments.**
- **Ventilation slots, fans and/or heat sinks are provided with the product for safety, comfort, and reliable operation. These features might inadvertently become blocked by placing the product on a bed, sofa, carpet, or other flexible surface. Never block, cover, or disable these features.**
- **When the ac power adapter is connected to an electrical outlet and your computer, it generates heat. Do not place the adapter in contact with any part of your body while using it. Never use the ac power adapter to warm your body. Extended contact with your body, even through clothing, may cause a skin burn.**

For your safety, always follow these basic precautions with your computer:

- **Keep the cover closed whenever the computer is plugged in.**
- **Regularly inspect the outside of the computer for dust accumulation.**
- **Do not operate your computer inside furniture, as this might increase the risk of overheating.**

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- **Airflow temperatures into the computer should not exceed 35°C (95°F).**

Electrical current safety information

DANGER

Electric current from power, telephone, and communication cables is hazardous.

To avoid a shock hazard:

- **Do not use your computer during a lightning storm.**
- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **Connect all power cords to a properly wired and grounded electrical outlet.**
- **Connect to properly wired outlets any equipment that will be attached to this product.**
- **Whenever possible, use one hand only to connect or disconnect signal cables.**
- **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
- **Disconnect the attached power cords, battery pack, and all the cables before you open the device covers, unless instructed otherwise in the installation and configuration procedures.**
- **Do not use your computer until all internal parts enclosures are fastened into place. Never use the computer when internal parts and circuits are exposed.**

DANGER

Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To connect:

1. **Turn everything OFF.**
2. **First, attach all cables to devices.**
3. **Attach signal cables to connectors.**
4. **Attach power cords to outlets.**
5. **Turn devices ON.**

To disconnect:

1. **Turn everything OFF.**
2. **First, remove power cords from outlets.**
3. **Remove signal cables from connectors.**
4. **Remove all cables from devices.**

The power cord must be disconnected from the wall outlet or receptacle before installing all other electrical cables connected to the computer.

The power cord may be reconnected to the wall outlet or receptacle only after all other electrical cables have been connected to the computer.

Liquid crystal display (LCD) notice

CAUTION:
For products with mercury-containing fluorescent lamps (for example, non-LED)

- **The fluorescent lamp in the liquid crystal display contains mercury; dispose of according to local, state, or federal laws.**
- **The LCD is made of glass, and rough handling or dropping the computer can cause the LCD to break. If the LCD breaks and the internal fluid gets into your eyes or on your hands, immediately**

wash the affected areas with water for at least 15 minutes; if any symptoms are present after washing, get medical care.

Using headphones or earphones

CAUTION:
Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphone and headphone output voltage and the sound pressure level. Therefore, to protect your hearing, adjust the equalizer to an appropriate level.

Excessive use of headphones or earphones for a long period of time at high volume can be dangerous if the output of the headphone or earphone connectors do not comply with specifications of EN 50332-2. The headphone output connector of your computer complies with EN 50332-2 Sub clause 7. This specification limits the computer's maximum wide band true RMS output voltage to 150 mV. To help protect against hearing loss, ensure that the headphones or earphones you use also comply with EN 50332-2 (Clause 7 limits) for a wide band characteristic voltage of 75 mV. Using headphones that do not comply with EN 50332-2 can be dangerous due to excessive sound pressure levels.

If your Lenovo computer came with headphones or earphones in the package, as a set, the combination of the headphones or earphones and the computer already complies with the specifications of EN 50332-1. If different headphones or earphones are used, ensure that they comply with EN 50332-1 (Clause 6.5 Limitation Values). Using headphones that do not comply with EN 50332-1 can be dangerous due to excessive sound pressure levels.

Additional safety information

DANGER

Plastic bags can be dangerous. Keep plastic bags away from babies and children to avoid danger of suffocation.

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Chapter 1. Account, login, and logout

Become your Chromebook's owner

When starting your Chromebook™ for the first time, you need to set the operating system language and keyboard, the Internet connection, and sign in with your Google® Account. The user of the first Google Account signed in to a Chromebook becomes the device's owner.

Note: The owner of a Chromebook has permissions to add users, enable (or disable) guest account login, and restrict login of certain Google Accounts.

Step 1. Start the Chromebook by lifting up the LCD cover.

Step 2. Select your local language and keyboard when prompted.

Step 3. Set up connection to your wireless router (or a wireless LAN) that has Internet access.

Note: This step cannot be skipped. You must have an Internet connection when starting your Chromebook for the first time.

Step 4. Sign in with your Google Account. If you don't have a Google Account, select **Create a Google Account** and follow the on-screen instructions to create one.

You're now your Chromebook's owner. To verify this, refer to "Check a Chromebook's owner" on page 2.

What is a Google Account

A Google Account is a user account that has access to a variety of Google Web services, including Gmail™, Google Drive, and Google Docs. Typically a Google Account is created when you apply for a Gmail account.

If you don't have a Google Account, you can create one at http://www.google.com/accounts/NewAccount.

Sign in with a Google Account other than the owner's

As the device owner, you may share your Chromebook with other people. They can use their Google Accounts to sign in and use your Chromebook.

Step 1. Start the Chromebook by lifting up the LCD cover.

Step 2. On the login screen, click **Add Users**.

Step 3. Type the Google Account user name and password to sign in.

Note: An Internet connection is required when signing in for the first time.

If you cannot sign in with your Google Account, your account may be restricted by the Chromebook owner. For details, refer to "Control who can use your Chromebook" on page 2.

Browse as a guest

You may share your Chromebook with people who do not have a Google Account. They can use your Chromebook with a special guest account.

Note: Some operations such as installing apps are disabled if you log in as a guest.

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Step 1. Start the Chromebook by lifting up the LCD cover.

Step 2. On the login screen, click **Browse as Guest**.

Note: If you cannot sign in, guest browsing may be disabled by the Chromebook owner.

Lock your Chromebook

If you need to temporarily leave your Chromebook, lock it so others cannot tamper with your settings or files.

Step 1. Click the status bar.

Step 2. Click the lock icon.

Note: As a shortcut, press and hold the Lock button (located on the far upper-right of your Chromebook keyboard) for more than two seconds and then release the button.

Sign out

If you or others need to sign in with another account, sign out of current login session.

Step 1. Click the status bar.

Step 2. Click **Sign out**.

Control who can use your Chromebook

By default, anyone with a valid Google Account can sign in to a Chromebook. However, as a Chromebook owner, you can set up permissions to only allow people with certain accounts to sign in.

Step 1. Start the Chromebook by lifting up the LCD cover.

Step 2. Sign in with the owner's Google Account.

Note: If you're not sure who is the Chromebook's owner, refer to "Check a Chromebook's owner" on page 2.

Step 3. Click the status bar in the lower-right corner and then click **Settings**.

Step 4. Under **Users**, click **Manage other users**.

Step 5. Check **Restrict sign-in to the following users** and add the Google Accounts that you want to give permission.

Check a Chromebook's owner

Typically, the user of the first Google Account signed in is set as a Chromebook's owner. However, if you're not sure whether you're the owner, you can follow the steps below to check a Chromebook's owner.

Step 1. Sign in with your Google Account.

Step 2. Click the status bar in the lower-right corner and then click **Settings**.

Step 3. Under **Users**, click **Manage other users**.

If you're not the owner of the Chromebook, you will get a warning message that the settings may only be modified by the device owner. The user name of the owner is also displayed.

Disable guest login

As a Chromebook's owner, you can disable guest login to only allow people with a Google Account to use your Chromebook.

Step 1. Sign in with the owner's Google Account.

Step 2. Click the status bar in the lower-right corner and then click **Settings**.

Step 3. Under **Users**, click **Manage other users**.

Step 4. De-select **Enable Guest browsing**.

Reset your Chromebook

If you need to transfer ownership of your Chromebook or if you experienced problems with the operating system, you might need to reset your Chromebook.

Important: After resetting your Chromebook, user data for all accounts stored locally will be deleted. Back up important data to Google Drive or external storage devices before resetting your Chromebook.

Step 1. Click the status bar in the lower-right corner.

Step 2. Click **Settings** and then click **Show advanced settings**.

Step 3. Under **Powerwash**, click **Reset** and then click **Restart**.

Shut down your Chromebook

When you finish working with your Chromebook, shut it down to save power.

Step 1. Click the status bar.

Step 2. Click the shutdown button.

Get help from Google

After signing in to your Chromebook, click **Get Help** from the Apps launcher. The **Get Help** app provides comprehensive instructions on using a Chromebook.

In addition, Google provides an online community for Chromebook users. If you're interested, go to http://chromebook.com/community.

Chapter 2. Manage files and folders

What is Google Drive

Google Drive is a server-based file storage and sharing service provided by Google. By creating a Google Account, you get an initial free storage space where you can save files of various formats. From your Chromebook, you can use the Google Drive app or the Files app to create and manage files on your online storage space.

Note: The Google Drive client software is available for Windows®, Android™, and iOS. If you have devices running those operating systems, you can download and install Google Drive on these devices. Google Drive provides a convenient way of sharing files between devices.

Your local storage space

Each Google Account signed in to a Chromebook is assigned a local storage space, in a folder named `Downloads`. Each Google Account has its own `Downloads`. You can only view and edit files in your own `Downloads` folder.

The Files app

Your Chromebook has a Files app for you to manage files and folders on your local storage device, a connected external storage device, or Google Drive. The Files app can be started from the Apps Launcher.

Create folders using the Files app

You can create folders and sub-folders for better management of files.

Step 1. Start the Files app from the Apps launcher.

Step 2. On the left pane, select a storage space where your want to save files.

Note: A storage space may reside on your local storage device, a connected external storage device, or Google Drive.

Step 3. Click the settings button ( ) in the upper right corner and then click **New folder**.

Delete unused files

In some cases, you may need to delete unused files to free storage space.

Step 1. Start the Files app from the Apps launcher.

Step 2. On the left pane, select the storage space and then navigate to the folder where unused files are stored.

Step 3. Select unused files and then click the delete button ( ) in the lower right corner.

Check the amount of available storage

If you have failed saving a large-size file, you may need to check the amount of available storage and then decide if you need to delete unused files to free more storage.

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Step 1. Start the Files app from the Apps launcher.

Step 2. On the left pane, select a storage space.

Step 3. Click the settings button ( ) in the upper right corner. The amount of available storage is displayed.

Chapter 3. Language settings

Change display language

When starting your Chromebook for the first time, you're prompted to select the display language. This setting can be changed at a later time if you need to use a different language.

Step 1. Sign in to your Chromebook with your Google Account.

Step 2. Click the status bar in the lower-right corner and then click **Settings**.

Step 3. Click **Show advanced settings** and then click **Language and input settings**.

Step 4. Select the language you want to use and then click **Display Google Chrome in this language**.

Note: If the language you want to use isn't shown in the list, click **Add**.

You need to sign out and then sign in for the changes to take effect.

Note: Each signed-in user may set their own display language.

Add an input method

You may need to add an input method to type text in a particular language.

Step 1. Sign in to your Chromebook with your Google Account.

Step 2. Click the status bar in the lower-right corner and then click **Settings**.

Step 3. Click **Show advanced settings** and then click **Language and input settings**.

Step 4. From the **Languages** list, select the language for which you want to add an input method. Available input methods are displayed to the right.

Note: If the language you want to use isn't shown in the list, click **Add**.

Step 5. Select the check box preceding the input method you want to add.

Switch between input methods

If you have added input methods, you may need to switch between them.

Step 1. Click the status bar in the lower-right corner and then click the name of the current input method. The list of available input methods is displayed. If you don't find your desired input method in the list, refer to "Add an input method" on page 7.

Step 2. Click the name of your desired input method.

Notes: As a shortcut, use key combinations to switch between input methods.

- Alt + Shift to switch between available input methods.
- Ctrl + Space to switch to your previous input method.

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Chapter 4. Add and manage apps

What is Chrome Web Store

Chrome™ Web Store is a Web resource that provides apps and extensions dedicated for your Chromebook and the Chrome browser.

Note: Extensions are add-on features for the Chrome browser. Most of the apps and extension available on the Chrome Web Store are free but some may require payment.

You can access the Chrome Web Store by either of the following ways:

- Click the Store icon from the Apps launcher.
- Visit `http://chrome.google.com/webstore` directly using the Chrome browser.

Add apps or extensions

Step 1. Click the Apps launcher in the lower left corner and then click **Store**.

Step 2. Within the store, find your app or extension by typing keywords or searching the list by category.

Step 3. If an item is free, click the add icon and then click **Add**.

Most of the apps for your Chromebook are Web based and do not require installation. After adding apps, shortcuts to the apps are pinned to the Apps launcher.

Note: If you sign in to different Chromebooks with the same Google Account, apps you added on one Chromebook are synchronized on other Chromebooks.

Remove apps

If you find that you no longer need a particular app, you can remove it from your Chromebook.

Step 1. Click the Apps launcher icon in the lower left corner.

Step 2. Find the app and right-click on it.

Step 3. Click **Remove from Chrome**.

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Chapter 5. CRU service

What is CRU and CRU service

A CRU (customer replaceable unit) is a service part that can be replaced by the customer in order to fix a computer problem. There are two types of CRUs:

Self-service CRUs	Customers are responsible for removing and replacing CRUs.
Optional-service CRUs	Customers may either replace CRUs on their own or request Lenovo or its Service Provider to do it for them.

CRU service is a service provided by Lenovo or its Service Provider. Under CRU service, Lenovo or its Service Provider ships CRUs to the customer. The customer is responsible for removing and then installing CRUs according to instructions provided here or the instructions accompanying the CRUs. The customer may be required to return the defective part that is replaced by the replacement. When return is required:

- return instructions, a prepaid return shipping label, and a container will be included with the replacement CRU.
- the customer may be charged for the replacement CRU if the Service Provider does not receive the defective CRU within thirty days of the customer's receipt of the replacement CRU.

Note: CRU service is not available for all countries or regions.

CRUs for Lenovo N20/N20p Chromebook

This section lists CRUs for Lenovo N20/N20p Chromebook and where you can find instructions for replacing the CRUs.

CRUs	Types	Publication containing instructions
Power cord	Self-service	*Safety, warranty, and setup guide*
ac power adapter	Self-service	*Safety, warranty, and setup guide*
Keyboard	Optional-service	This manual

Note: *Safety, warranty, and setup guide* is a printed publication accompanying your Chromebook.

Replace the keyboard

Remove the keyboard

Step 1. Shut down your Chromebook.

Step 2. Turn over the Chromebook and remove the two screws (1).

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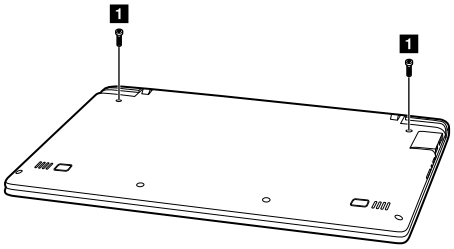
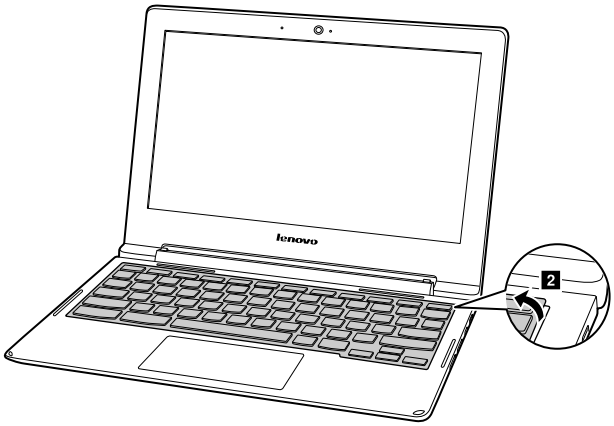


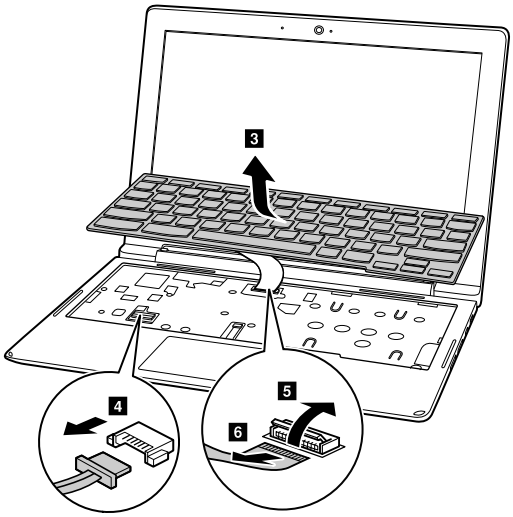
Step 3. Turn over the Chromebook again and then lift up the LCD cover.

Step 4. Lift the keyboard by its upper edge (2) and then slowly lift it up until the keyboard socket appears (3).



Step 5. Detach the battery pack connector (4).

Step 6. Open the keyboard socket (5), detach the connector (6), and then remove the keyboard.



Install a new keyboard

Step 1. Align the lower edge of the new keyboard with that of the keyboard compartment.

Step 2. Insert the connector of the keyboard firmly into the keyboard socket.

Step 3. Close the socket.

Step 4. Attach the battery pack connector.

Step 5. Pivot down the keyboard.
Make sure the keyboard is completely installed in the compartment.

Step 6. Close and LCD cover and then turn over the Chromebook.

Step 7. Reinstall the two screws.

Appendix A. Features and specifications

Features and specifications are subject to change without notice.

Specifications

	Lenovo N20 Chromebook	Lenovo N20p Chromebook
MTM	80G1, 20419	80G2, 20425
Dimensions	295 mm x 212 mm x 5 — 17.9 mm	
Weights	1.2 Kg	1.3 Kg
CPU	Intel Baytrail-M	
Camera	640 x 480 pixels/1280 x 720 pixels	
LCD		
Size	11.6 inch	
Resolutions	1366 x 768 pixels	
Backlight type	LED	
Memory		
Type/speed	DDR3L, 1066 MHz/1333 MHz	
Capacity	2 GB/4 GB	
Expandable	No	
Storage		
Type	SSD	
Form factor	eMMC	
Capacity	16 GB	
Battery pack		
Type	Lithium-ion	
Cells and capacity	6 cells, 34.8 Wh	
ac adapter		
Input	100 — 240 V ac, 50 — 60 Hz	
Output	20 V dc	
Power	45 W	
I/O ports		
Video/audio	HDMI (Type D) x 1	
Audio	Combo audio jack x 1, speakers x 2, microphone hole x 1	
USB	USB 3.0 x 1, USB 2.0 x 1	
Memory card	SD/SDHC/MMC reader x 1	
Others	SIM card reader x 1 (optional)	

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Power and battery status indicators

The table below shows available status of the power and battery indicators and what they indicate.

Symbol	Status	Meaning
	On (solid white)	The computer is powered on.
	Blinking	The computer is in sleep mode.
	Off	The computer is powered off.
	Solid white	The battery than 20% charge.
	Solid amber	The battery has between 5% and 20 % charge.
	Slow blinking amber	The battery is being charged. When battery charge reaches 20%, the blinking color changes to white.
	Slow blinking white	The battery has between 20% and 80% change and is still charging. When the battery reaches 80% charge, the indicator stops blinking, but charging continues until the battery is fully charged.

Appendix B. ENERGY STAR model information

ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy aimed at saving money and protecting the environment through energy efficient products and practices.

Lenovo is proud to offer our customers products with the ENERGY STAR qualified designation. Lenovo computers of the following machine types, if the ENERGY STAR mark is affixed, have been designed and tested to conform to the ENERGY STAR program requirements for computers.

80G1

80G2

20419

20425

By using ENERGY STAR qualified products and taking advantage of the power-management features of your computer, you can help reduce the consumption of electricity. Reduced electrical consumption can contribute to potential financial savings, a cleaner environment, and the reduction of greenhouse gas emissions.

For more information about ENERGY STAR, go to:
http://www.energystar.gov

Lenovo encourages you to make efficient use of energy an integral part of your day-to-day operations. To help in this endeavor, Lenovo has preset the following power-management features to take effect when your computer has been inactive for a specified length of time:

Table 1. ENERGY STAR power-management features

Default power saving settings (on ac power)
• Turn off the display: After 8 minutes • Put the computer to sleep: After 30 minutes

To awaken your computer from Sleep mode, press the Power button or any key on your keyboard.

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Appendix C. WEEE and recycling statements

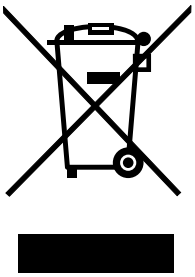
Lenovo encourages owners of information technology equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. Information on product recycling offerings can be found on Lenovo's Internet site at http://www.lenovo.com/recycling.

China WEEE statement

《废弃电器电子产品回收处理管理条例》提示性说明

联想鼓励拥有联想品牌产品的用户当不再需要此类产品时，遵守国家废弃电器电子产品回收处理相关法律法规，将其交给当地具有国家认可的回收处理资质的厂商进行回收处理。更多回收服务信息，请点击进入http://support.lenovo.com.cn/activity/551.htm

Important WEEE information



The WEEE marking on Lenovo products applies to countries with WEEE and e-waste regulations (for example, European Directive 2002/96/EC, India E-Waste Management & Handling Rules, 2011). Appliances are labeled in accordance with local regulations concerning waste electrical and electronic equipment (WEEE). These regulations determine the framework for the return and recycling of used appliances as applicable within each geography. This label is applied to various products to indicate that the product is not to be thrown away, but rather put in the established collective systems for reclaiming these end of life products.

Users of electrical and electronic equipment (EEE) with the WEEE marking must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to them for the return, recycle, and recovery of WEEE and to minimize any potential effects of EEE on the environment and human health due to the presence of hazardous substances. For additional WEEE information go to: http://www.lenovo.com/recycling

Battery recycling information for Taiwan

廢電池請回收

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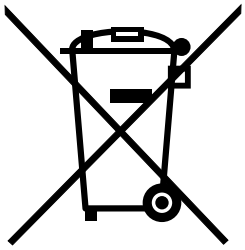
Battery recycling information for the European Union

EU



Notice: This mark applies only to countries within the European Union (EU).

Batteries or packaging for batteries are labeled in accordance with European Directive 2006/66/EC concerning batteries and accumulators and waste batteries and accumulators. The Directive determines the framework for the return and recycling of used batteries and accumulators as applicable throughout the European Union. This label is applied to various batteries to indicate that the battery is not to be thrown away, but rather reclaimed upon end of life per this Directive.

In accordance with the European Directive 2006/66/EC, batteries and accumulators are labeled to indicate that they are to be collected separately and recycled at end of life. The label on the battery may also include a chemical symbol for the metal concerned in the battery (Pb for lead, Hg for mercury, and Cd for cadmium). Users of batteries and accumulators must not dispose of batteries and accumulators as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and treatment of batteries and accumulators. Customer participation is important to minimize any potential effects of batteries and accumulators on the environment and human health due to the potential presence of hazardous substances. For proper collection and treatment, go to:
http://www.lenovo.com/lenovo/environment

Appendix D. Restriction of Hazardous Substances Directive (RoHS)

India RoHS

RoHS compliant as per E-Waste (Management & Handling) Rules, 2011.

China RoHS

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬 (Cr(VI))	多溴连苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板组件*	X	O	O	O	O	O
硬盘	X	O	O	O	O	O
光驱	X	O	O	O	O	O
内存	X	O	O	O	O	O
电脑I/O 附件	X	O	O	O	O	O
电源	X	O	O	O	O	O
键盘	X	O	O	O	O	O
鼠标	X	O	O	O	O	O
机箱/ 附件	X	O	O	O	O	O

○:表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下
×:表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求
表中标有"×"的所有部件都符合欧盟RoHS 法规.

印刷电路板组件*: 包括印刷电路板及其零部件、电容和连接器
根据型号的不同，可能不会含有以上的所有部件，请以实际购买机型为准

在中华人民共和国境内销售的电子信息产品必须标识此标志，标志内的数字代表在正常使用状态下的产品的环保使用期限

Turkish RoHS

The Lenovo product meets the requirements of the Republic of Turkey Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (EEE).

Tьrkiye EEE Yцnetmelipine Uygunluk Beyanэ

Bu Lenovo ьrьnь, T.C. Зevre ve Orman Bakanlэрэ'nэn “Elektrik ve Elektronik Eюyalarda Bazэ Zararlэ Maddelerin Kullanэmэnэn Sэnэrlandэrэlmasэna Dair Yцnetmelik (EEE)” direktiflerine uygundur.

EEE Yцnetmelipine Uygundur.

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Ukraine RoHS

Цим підтверджуємо, що продукція Леново відповідає вимогам нормативних актів України, які обмежують вміст небезпечних речовин

European Union RoHS

Lenovo products sold in the European Union, on or after 3 January 2013 meet the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (“RoHS recast” or “RoHS 2”).

For more information about Lenovo progress on RoHS, go to:
http://www.lenovo.com/social_responsibility/us/en/RoHS_Communication.pdf

Appendix E. Notices

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