5.4.1 Accessibility

Click one of the buttons to take you to that part of the video.

Accessibility 0:00-0:37

In this lesson, we're going to learn how to enable and configure accessibility options on Linux.

We'll explore how to configure several accessibility categories: Seeing, Hearing, Typing, and Pointing & Clicking.

As we discuss each setting, keep in mind that each Linux distribution is different, and the options we discuss aren't universal. The accessibility options are sometimes labeled Universal Access or Assistive Technologies. And even on the same distribution, different desktops display different options. But the concepts we cover will help you determine how to configure any Linux system's accessibility options.

Universal Access 0:38-1:13

On many modern end user systems, the Universal Access feature is enabled by default, and you can access it from the logon screen by clicking the accessibility icon, here.

Then you can set which accessibility options you want to turn on or off.

This menu is also available after you log on.

If the accessibility icon isn't available, you can often find accessibility options in the Settings dialog. You can also use the Search field to look for ‘Universal Access.'

After you open the Universal Access menu, you can enable or disable features using ON/OFF buttons.

The first category we're going to cover is Seeing.

Seeing – High Contrast 1:14-1:29

In this category, you can change the contrast of the windows and buttons so they're easier to see. This is not the same as changing the whole screen's brightness, since not all parts of the user interface will always change. On this distribution, you see that the display is set to black and white.

Seeing – Large Text 1:30-1:35

If you have difficulty reading the default font, you can increase the font size with the Large Text option.

Seeing – Cursor Size 1:36-1:39

The Cursor Size lets you pick a cursor size that's easy to see.

Seeing - Zoom 1:40-1:59

Next, we have the Zoom option.

This option is like having a magnifying glass that lets you enlarge part of the screen.

You can choose what to magnify and how much.

For example, you can have the magnification follow the mouse or constantly magnify one part of the screen.

The additional options let you add a crosshair and change color effects.

Screen Readers and Braille 2:00-3:10

Many of the distributions also include a screen reader. The screen reader translates text on the interface into audio.

Some screen readers can use your computer's sound interface card, but others require a special speech synthesizer.

The most commonly used screen reader is probably Orca. Unlike many of the other screen readers available on Linux, Orca reads text from command windows, the GNOME desktop, and other desktops.

Other readers, such as Emacspeak, usually only work from within a terminal session or a command window.

The Orca screen reader also has the ability to interface with a refreshable braille display, allowing a seeing-impaired person to read what is displayed on their electro-mechanical device.

You can still interface with a braille device without Orca by ensuring that the 'brltty' (braille tty) daemon is running.

The last option in the Seeing category is Sound Keys.

When this option is turned on, the user hears a beep when the Num Lock or Caps Lock key is turned on or off. Some distributions even let you choose different sound clips for alerts and allow you to set the alert volume independently of your system volume.

You can configure this setting by accessing your sound settings and then using the Sound Effects tab to change the sounds as needed.

Hearing – Visual Alerts 3:11-3:30

The next category is Hearing.

The only option in this category is Visual Alerts.

This option is closely related to the sound key option, meaning that if a person wants to be notified when an alert sound is played but can't hear the sound, a visual alert is shown. You can choose to flash the title of the window or to flash the entire screen.

Typing - Screen Keyboard 3:31-4:01

The next category is Typing.

For physically impaired users who aren't able to use a traditional keyboard, Linux provides several options for using an on-screen keyboard, which functions like the keyboard on a smartphone or tablet.

The on-screen keyboard allows users to use any pointing device, such as a mouse or touch screen, to select keys on a virtual keyboard.

Many distributions, such as this one, provide this feature as part of their accessibility settings. You can also download and install additional application like Onboard and Florence.

Repeat Keys 4:02-4:27

Next, we have Repeat Keys.

In a normal environment, if you hold down a key on your keyboard, such as the letter D, that letter is displayed or entered over and over again until you release the key.

The Repeat Keys option determines whether or not to continue typing a key that is pressed and held.

The features included with this option let you determine how long it takes before a key will start repeating and how quickly the key repeats the character.

Typing Assist – Sticky Keys 4:28-5:22

The last item we'll discuss in the Typing category is called Typing Assist.

As you see here, Typing Assist includes several options.

For example, there's Sticky Keys.

Sticky keys let you type keyboard shortcuts one key at a time rather than having to hold down all of the keys at once. For example, instead of needing to press and hold the 'Ctrl' key and then press the ‘C' key, with this feature enabled, you can instead press and release the ‘Ctrl' key and then press the ‘C' key.

The Sticky Keys function often includes additional options, as shown here.

Another Typing Assist option is Slow Keys.

This feature determines the delay, or the amount of time that will elapse between the time you press the key and when it is accepted. Additional features let you include auditable sounds to aid in this process.

The last Typing Assist option is Bounce Key.

This feature is useful for people whose hands shake because it ignores it when the same key is pressed rapidly over and over.

Pointing & Clicking – Mouse Keys 5:23-5:50

The last category we'll discuss is Pointing & Clicking.

The first option in this category is called Mouse Keys.

This feature lets you move you mouse with the numeric keypad. For example, if you needed to move you mouse to the left, you press the number 4. To move the mouse up, press 8. And to move down, press 2.

If the computer you're using doesn't have the traditional numeric keypad, you may need to first press a function key (Fn) and then use certain other keys on your keyboard as a keypad.

Pointing & Clicking - Click Assist 5:51-6:12

Click Assist has features that let you perform mouse clicks in several ways.

For example, rather than pressing a mouse button twice, you can configure your system so that when you press and then hold the mouse button down, it will automatically perform the second click for you.

You can also use this feature to perform a mouse click when you move your mouse over a button, or hover, and leave it there for a specified amount of time.

Pointing & Clicking – Double-Click Delay 6:13-6:35

The last option in Pointing & Clicking is the ability to adjust the double-click speed.

Double-clicking only happens when you rapidly press the mouse button twice. If the second press is too long after the first, you'll just get two separate clicks, not a double click.

By adjusting this setting, you change the amount of time that can elapse between the first click and the second click to still qualify as a double-click.

Summary 6:36-6:46

That's it for this lesson.

In this lesson, we discussed enabling and using the Universal Access options on Linux.

We talked about Seeing, Hearing, and Typing accessibilities, and then we ended this lesson by talking about the Pointing & Clicking accessibilities.
