English for Techies

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by Seth Kenlon and David O'Brien

Abstract

This class covers common grammar that all writers should be familiar with, some writing practices specific to Red Hat, and some specific to GLS. All are important for an effective technical writer.

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Writing in Active Voice

Writing in the active voice creates powerful and engaging content. The active voice suggests that the written word is "speaking" directly to the reader, enabling the reader to learn quickly, and to take action when an exercise requires it. For technical writing, the active voice is the clearest way to demonstrate action and result, or cause and effect.

Active voice

In the active voice, the subject of the sentence is also the person or thing performing an action.

I compiled the code.

Passive voice

The passive voice is the opposite of active voice. In the passive voice, the subject of the sentence is the person or thing receiving action:

The code was compiled by me.

While the passive voice is not grammatically incorrect, it is less efficient than the active voice and also tends to cause confusion about who is doing what.

Here is another sentence in the passive voice:

A key being pressed prompts the computer to continue.

Is this sentence an instruction telling you to press a key, or is it just a footnote about what happens when a key is pressed?

The active voice is both clearer and more concise:

Press any key to continue.

Writing in the Active Voice

To use the active voice, write as if you're composing a list of instructions for your reader. You are not writing a description of what the reader would see if the reader were sitting in front of your computer, seeing what you see as you write. The reader is seeing what is on the reader's own computer screen, and they are doing what you tell them to do.

The following examples demonstrate how to rewrite some sentences, written in the passive voice, into the active voice:

Table 1. Converting Passive Voice to Active Voice

Passive voice	Active voice
The values of the XML configuration can be found by parsing the file with the Xerces library in C++.	Parse the XML configuration file using the Xerces [https://xerces.apache.org/xerces-c/] C++ library.
Open XYZ Viewer by double-clicking the XYZ Tools icon from the `workstation` desktop.	Double-click the XYZ Tools icon on the `workstation` desktop to open XYZ Viewer.
It was presented earlier in this book the syntax for using XML configuration files with a Python module imported into the PyShadowman code base.	The steps to import the required module into PyShadowman were explained in the Importing the BeautifulSoup Module [#] section.

Exercise

Rewrite each paragraph in the active voice.

1. The server got rebooted.

2. The QTextEdit field should be placed in the right corner of the QMainWindow.

3. To begin the code compilation process, GCC is used.

4. The previous three steps should be repeated to complete RHSM registration on each machine.

5. The virtual machine should be started before attempting to ping it.

6. The open source Mumble audio chat application should be used to provide technical support to users.

Optimizing Sentences for Efficiency

"Minimalism", in the context of technical writing, is the art of writing more clearly by writing less.

That definition, rewritten the wrong way:

"Minimalism" is an artistic discipline that can appear in any medium, even technical writing. When writing technical documentation, you may want to use minimalism. You should write fewer words in order to reach your central point, but without the loss of useful or important information.

The first version, while terse, is better. It is simple, it states exactly the information the author wants to convey, it leaves no room for questions. This is typical of minimalism.

Advantages of minimalism are:

- Writing fewer words provide fewer opportunities for you to make writing mistakes.

- Readers are less likely to misinterpret the intent of a message when your writing is direct and concise.

- Maintenance and updates are easier when there is less to maintain and update.

- Translation of your writing to other languages is easier when the meaning of your writing is obvious.

- Tech editing is faster when there are fewer words to review.

- It is more efficient to write less to communicate more.

Implementing Minimalism

Humans tend to think verbosely, so minimalism does not usually occur in a first draft. That's expected, but during your self-edit, look for sentences that use idiomatic phrases, "filler" words, or that restate a point that has already been made, and rewrite them using fewer words.

Here are some examples of how to use minimalism by rewriting verbose sentences:

Convert Paragraphs to Minimalism

Bad (21 words):

A static IP address should be set on the server in order to log in to it remotely from the client.

Better (12 words):

Set a static IP address on the server to enable remote login.

Bad (47 words):

The standard XYZ solution for the granularity concern these concerns would be XYZ Bundle Repository (XBR), but XBR failed to get traction in the market. Another example of a popular software system that relies on XYZ but choose to not rely on XBR is the Emacs editor.

Better (20 words):

Emacs is an XYZ-compliant editor allowing developers to create and modify XYZ bundles without installing XYZ Bundle Repository.

Ideally, minimalism doesn't just shorten a sentence, but makes the point of the sentence clearer. It allows the reader to focus on what is important.

Exercise

Rewrite each paragraph, bearing minimalism in mind:

1. Click on the OK button to confirm the action and close the dialog box.

2. Look through each menu item to familiarize yourself with all the options available to you throughout the interface before attempting to utilize the API so that you have some idea of what functions users expect to have available to them.

3. Click on the OX button to confirm the action and close the dialog box.

4. In the right panel, you should see that the XYZ view will show that the most recent task has been completed and is waiting for you to continue. In order to verify this, click the OK in the lower left corner of the interface in your web browser. This will display a verification message confirming that the test passed and that it is safe for you to continue to the next phase of the exercise.

5. As you will see later in this chapter, both the foo and bar applications work with a pipeline concept, which is sequential. However, you may want to use foo when it's available, since it also has the ability to trigger an exchange to multiple destinations simultaneously, utilizing parallel processing where possible.

Writing Nouns and Verbs that Agree with Each Other

Nouns, pronouns, and verbs all have singular and plural forms. The subject of a sentence and its verb must agree on whether they are each singular or plural. When you write a singular noun coupled with a singular verb, or a plural noun with a plural verb, they are in agreement.

For example, this sentence uses a subject and verb that are in agreement, because the subject hard drive is singular, and so is its verb is:

Your hard drive is in the laptop.

This sentence demonstrates a subject and verb that do not agree, because the subject hard drive is singular but its are is plural:

Your hard drive are in the laptop.

Here are the rules for subject and verb agreement:

Subject and Verb Agreement

Singular subject

Use a singular verb for a singular subject.

The httpd daemon is active and enabled.

The verb must agree with the noun, regardless of a noun's adjectives or clauses. For instance, the noun database is singular and gets a singular verb, even though there are plural modifiers describing the subject:

A database of customers and sales people is stored on the server.

Either or

Use a singular verb when giving a choice between singular subjects.

	Either IPv4 or IPv6 is supported by this project.
Compound singular subject	Use a plural verb for a sentence with more than one singular subjects. The httpd daemon and the rsync daemon are active and enabled.
Plural subject	Use a plural verb for a plural subject. The emails are encrypted. Ansible projects and their playbooks are key tools in DevOps.

Definite and Indefinite Articles

The word the is a definite article. Use it to:

- refer to a specific instance of something. For example:

  Click the OK button.

- refer to a all instances of something. For example:

  The `for` loop is a common programming construct.

The words a and an are indefinite articles. Use them to:

- refer to a classification of something, but not a specific instance of one. Two examples:

  Press a key to continue.

  Use a compiler to build this code.

- refer to something generically. For example:

  An image from the video is displayed.

  When the task is complete, a new window opens.

There are two indefinite articles. Which one you use depends on the object it precedes.

Use a when the object begins with a consonant, or sounds like it begins with a consonant when pronounced aloud:	a UNIX system a window a button a TCP port
Use an when the object begins with a vowel, or sounds like it begins with a vowel when pronounced aloud:	an MPEG stream an application an error message

Exercise

Identify the incorrect articles in these sentences:

1. Log in to the workstation VM and open the window to /home/student/code.

2. Click an Next button to continue.

3. By default, there are three windows on the desktop. Read a title bar of each window to find the window called Foo. In this window, enter your password in a text field.

Pronouns

Pronouns are pointers to a noun. These are some common singular pronouns:

- you
- it
- this
- that

These are some common plural pronouns:

- they
- these
- those

In technical writing, pronouns are simplified because English doesn't assign gender to inorganic things.

> Note
>
> If you are writing a use case and need to reference a fictional human, use generic terms such as a job title, like systems administrator or programmer, rather than an arbitrary name like "John" or "Jane". Use the pronoun "they" instead of "him" or "her".

How to Use Pronouns

For pronouns to work as designed, they require two things:

1. The reader must know what noun the pronoun references.
2. The tense of the pronoun and its noun and verb must match.

Here are some examples:

Singular noun

When referring back to a singular noun, use the pronoun it. For example:

The server is running RHEL 7, and it has 8 TB of storage.

Plural pronouns

When referring back to a plural noun, use the pronoun they. For example:

Desktop computers often get used for office tasks, but they can also be configured as servers.

Possessive pronouns

To indicate that a pronoun possesses something, use the possessive form of the appropriate pronoun. For example:

Emacs is a text editor, but its real power is its LISP interpreter.

The same applies for plural forms:

Open source programmers are brave to subject their code to the scrutiny of anyone who wants to look at it.

You may have both singular and plural in a sentence:

Your colleagues may run Windows or MacOS on their computers, but you should run Linux on yours.

Pronouns in context

Sometimes a pronoun is used in a separate sentence than the one establishing the noun being referenced. This relies on the reader to understand from context which noun the pronoun most likely refers to.

Sometimes it is very obvious:

I like drinking coffee while I sit and type at my computer. Sometimes, I even dunk a doughnut into it.

In that phrase, the reader knows what "it" means from contextual clues. The writer means "Sometimes, I dunk a doughnut into my coffee", not "Sometimes, I dunk a doughnut into my computer."

Sometimes it is less obvious:

The foo command is being developed to replace the bar command. It is installed by default, and it has a bug in it that erases all of your data permanently.

In that paragraph, the reader cannot know definitively which command, foo or bar, erases all of their data and which command is safe to use. Sometimes, using a pronoun is not as effective as being explicit.

Try rewriting the sample paragraph, assuming that foo is the dangerous command and that bar is the safe command.

Verifying pronouns

To verify that a pronoun makes sense, reread a sentence or paragraph, replacing the pronoun you chose with the subject: For example:

Desktop computers often get used for office tasks, but they can also be configured as servers for a small network.

Desktop computers often get used for office tasks, but desktop computers can also be configured as servers for a small network.

If it does not make sense, or if it impossible to read back with its subject replaced because there is no indication of what the correct subject is, then the pronoun has not been used correctly.

The foo command is being developed to replace the bar command. It is installed by default, and it has a bug in it that erases all of your data permanently.

The foo command is being developed to replace the bar command. Foo? Bar? is installed by default, and foo? bar? has a bug in foo? bar? that erases all of your data permanently.

If it still says what you meant to say, then you have placed the pronoun in the correct place. Here is an example using a plural pronoun:

Pronouns are like variables. They hold whatever information the author places into them.

Pronouns are like variables. Pronouns and variables hold whatever information the author places into pronouns and variables.

Exercise

Correct these pronouns as needed:

1. The systems administrators imaged the computers so that its host names followed a logical naming scheme.
2. Return the laptop to the store and get refunded for them.
3. Okular is the best PDF viewer on the market. Admittedly, it's not the best format for digital releases compared to EPUB, but it's great for printing.

4. The systems administrators imaged each computer so that its host name followed a logical naming scheme.

Prepositions

Prepositions answer the question "which one?", "what kind?", "how much?", or "how many?" about a noun. A preposition is a helper word for nouns, explaining which noun is being written about in a sentence.

Common prepositions include:

- on
- in
- from
- to
- at

For example, in these sentences, the prepositions are emphasized:

Each Linux user is mapped to an SELinux user by an SELinux policy.

After configuring the guest NUMA node topology, specify the huge page size and the guest NUMA nodeset in the <memoryBacking> element in the guest XML.

A prepositional phrase contains the object that relates to the noun being helped by the preposition. In the following examples, the prepositional phrases are in brackets ([and]):

Each Linux user is mapped [to an SELinux user] [by an SELinux policy].

After configuring the guest NUMA node topology, specify the huge page size and the guest NUMA nodeset [in the <memoryBacking> element] [in the guest XML].

Identifying Prepositional Phrases

To find a prepositional phrase, locate the preposition and then ask "what?". For example:

Each Linux user is mapped to what?

Each Linux user is mapped to an SELinux user by what?

Each Linux user is mapped to an SELinux user by an SELinux policy.

Choosing the Correct Preposition

In English, each preposition has a specific meaning. Using the wrong preposition confuses a reader, or even changes the meaning of a sentence. Choosing the right one to lead your prepositional phase is important.

on

Literally, "on top of", as when a cat sits on a mat. In tech writing, "on" is used to express an action performed at a computer you have logged in to, and some GUI actions. For example:

Click the icon on the desktop.

Run the setup script on the `workstation` virtual machine.

in

Literally, "inside", as when a cat sits inside of a box, or when a number is found in a mathematical set. In tech writing, "in" is used to express an action performed to a non-binary file, or to show membership to a group or system or network or framework. For example:

Click the icon in the upper-right corner of the desktop.

Log in to the `workstation` virtual machine.

The user managing the foo service must be in the wheel group.

to

Literally, "toward", as when a cat walks to its food. The word "to" implies that you are moving in the direction of something not yet reached. For example:

Drag the file to the trash icon.

Upload the file to the server.

from

Literally, "away", as when a cat comes indoors from the garden. The word "from" implies that you have been in one place, and are now leaving that place behind. For example:

If you do not want to delete the file, move the file icon from the trash.

Download the file from the server so you can edit it.

Exercise

Identify the prepositions and prepositional phrases, if they exist, in each sentence:

1. The configuration file is installed in the `/etc` directory.
2. Set the required parameters in the fields under the Performance options panel.
3. The foo command instructs the kernel to pipe the core dump to the abrt-hook-ccpp program.
4. In Red Hat Enterprise Linux 7, the systemctl utility replaces a number of power management commands used in previous versions of the Red Hat Enterprise Linux system.
5. Log in to the `workstation` virtual machine.

Conjunctions

A conjunction is a word that joins other words, phrases, parts of sentences, or sentences together.

Common Conjunctions:

and	Usually joins two positive or two negative ideas.
but	Used to connect two opposing statements.
or	Provides a choice between ideas.
so	Demonstrates an effect or a result, similar to then in an `if/then` statement.

Transforming Conjunctions into Simple Sentences

Conjunctions are an important part of effective writing, but they add complexity to sentence structure. When writing technical documentation, analyze whether a conjunction makes a sentence more or less clear than two separate statements.

This sentence can be understood, eventually, but it's confusing:

Foo2Bar is a framework that makes it easy to create application images, and takes application source code as an input, and produces a new image that runs the assembled application in an isolated sandbox.

See how much clearer it is when written as three separate sentences:

Foo2Bar is a framework that makes it easy to create application images. It takes application source code to produce an executable image. Foo2Bar images run in an isolated sandbox for increased security.

Another example:

To distribute your modifications, gather the configuration files, documentation files, all build materials, including build scripts and scripts needed to dynamically generate makefiles, and compiled binaries, and create a tar archive, or use the foopkg command on the parent directory.

This becomes much clearer when rewritten with fewer conjunctions:

There are two ways to distribute your modifications. You can create a tar archive manually or you can use the foopkg command. For each, you must include all compiled binaries, configuration files, documentation, build scripts, and scripts to dynamically generate makefiles.

Choosing the Right Conjunctions

Sometimes conjunctions are the right choice, and in those cases you must choose the correct conjunction.

But

The but conjunction is very inflexible. It is appropriate when the two statements being connected are exclusive of one another, These two examples have very different meanings:

A car can drive but it cannot fly.

Most importantly, but implies that two statements are opposed even if they are not. Using but incorrectly confuses readers. For example, if you write:

Linux is open source but it is a stable, Enterprise-ready platform.

A reader probably interprets it to mean that Linux is Enterprise-ready in spite of it being open source. What you actually mean is that Linux is both open source and Enterprise-ready.

Linux is open source and is a stable, Enterprise-ready platform.

And

The and conjunction connects two equally true or equally false statements into one:

That hat is not red and it is not mine.

This fedora is red and it is mine.

Or

The or conjunction implies a choice between the two statements it connects:

Run the DHCP daemon embedded on the router or run your own on a server.

In the preceding statement, it's significant that you can use either the embedded DHCP server or your own, because using both could cause conflicts severe enough to bring down your network. It would be inaccurate to use a different conjunction:

Run the DHCP daemon embedded on the router and run your own on a server.

In fact, for added emphasis, you can use either:

Run either the DHCP daemon embedded on the router or run your own on a server.

So

The so conjunction connects causes and effects:

RHEL 8; is the latest release. This server is running RHEL 6, so it needs to be updated.

This server is not running firewalld or SELinux, so it does not pass my security audit.

Exercise

Practice using the correct conjunction, or rewrite to use no conjunction:

1. Linux is an excellent platform for development, but it is an excellent platform for deployment.

2. Security-enhanced Linux (SELinux) is an implementation of a mandatory access control mechanism in the Linux kernel. It is an important part of system security. Do not disable SELinux, so use the setenforce command to put SELinux into permissive mode temporarily.

3. Click the OK button to proceed to the next screen, and then click the Name link in the upper-left corner of the page or the Name selection in the Navigation drop-down menu in the upper-right corner of the page, and click the arrow icon to continue.

Punctuating Sentences Correctly

Punctuation is important because it defines the scope of sentences and clauses. Using punctuation incorrectly can confuse the reader or even change the meaning of a sentence.

Example

In the interest of clarity, this is a simple example:

Let's program everyone.

Taken as written, that sentence means "let us take everyone and program them with code" but probably what the writer intended is "Hey, everybody, let's go write code!"

Period, Full-stop, Dot

The most basic punctuation mark is the period or dot, sometimes called a full-stop. The period signals the end of a complete sentence. It gives the reader a chance to process whatever information was contained in a sentence.

A common misuse of a period is ending a sentence before it is complete. A complete sentence in English requires a subject and a verb in an independent clause.

This is a complete sentence because it has a subject and a verb:

Computers calculate.

This is not a complete sentence because, while it does include a subject and a verb, it is not an independent clause:

Boot the computer and then.

Periods are more than just technical requirements to end a sentence, though. They help simplify complex concepts by breaking them down into small chunks of information that are easier for the reader to process.

This sentence is complex:

Before launching the Foo service, you must ensure that your user is a member of the `foo` group by opening a terminal and using the usermod command to append the group to your user's group membership (see the usermod man page for more information) and then logging out so that the new group list is loaded, then start the service with the systemctl command or with the included startup script.

It is much easier to understand when broken into smaller sentences:

Before launching the Foo service, you must ensure that your user is a member of the `foo` group. To add your user to the foo group, open a terminal. In your terminal window, use the usermod command to append the group to your user's group membership. If you are unfamiliar with usermod, refer to its man page. After you have added your user to the group, you must log out and then log back in so that your group membership is refreshed. To confirm membership, use the groups command. To start the service, use the systemctl command, or the included startup script.

It is a lot of information, and probably ought to be made formally numbered steps, but replacing commas and conjunctions with periods is an important first step toward simplification.

Comma

The comma is used to separate items in a list, or to separate independent sentence clauses.

Lists

A list is a series of individual words meant to be taken as a group. For clarity, use a comma between each unique item in a list, even the final item.

For this project, you must use Emacs, XML, and xsltproc.

Intentionally omitting a comma implies an association within a list. For example:

For this project, you must use Emacs, XML and the Docbook schema, and FOP.

In this example, not using a comma between XML and the Docbook schema implies to the reader that they will only be using XML by using Docbook, but won't need a deep understanding of how XML works in general.

Clauses

Commas are also used to separate sentence clauses. A sentence clause is some segment of a complete sentence. A clause might be a complete sentence, or it might be dependent on the rest of the sentence to make sense.

Tip

Dependent clauses are artifacts of complex sentences. If you write with minimalism in mind, you write fewer dependent clauses. If you write fewer dependent clauses, you have fewer commas to worry about.

This sentence consists of two clauses. One is independent and the other dependent:

I use the open source Mumble audio chat application to provide technical support to my users.

To know where to place a comma, you must identify sentence clauses. The easiest way to identify a clause is to find the essential parts of the sentence. In the example, "I use the open source Mumble audio chat application" is a complete sentence on its own. It is an independent clause.

The clause "to provide technical support to my users" is meaningless alone, because it is not a complete sentence.

The sentence can be rewritten with a comma separating the two clauses:

To provide technical support to my users, I use the open source Mumble audio chat application.

The same is true for very small clauses:

POSIX operating systems, such as Linux and BSD, are the only ones that support the `nproc` resource limit.

The dependent clause "such as Linux and BSD" is surrounded by commas to isolate it from the independent clause it interrupts.

Colon

The colon expands on a sentence by introducing a list. Think of it like a period, but with an addendum, because the sentence a colon finishes is an independent clause.

There are many advantages to Linux: stability, rapid development, open source code, and an innovative, global user base.

Semicolon

Semicolons also introduce a list, but they can also be used like a comma to separate two independent clauses.

Semicolons are usually unnecessary and add complexity to your sentences. If you can, avoid them. They are often indicative that a sentence can be rewritten more elegantly and clearly.

For example, this simple sentence is correct:

You should use Linux; it's a good operating system.

But for it isn't actually as clear as it could be:

You should use Linux because it's a good operating system.

Semicolons are often used to introduce lists:

The Internet relies on several open source technologies; TCP/IP, DHCP, and DNS.

Parentheses, Rounded Brackets

Parentheses serve the same function as commas, with the implication that they are commenting on a sentence without adding to the sentence.

Like semicolons, parentheses are often unnecessary and are best when used as an inline bibliography or reference.

In this example, parentheses are intended to bring clarity to a sentence without interrupting the flow of the sentence:

Before launching the Foo service, you must ensure that your user is a member of the `foo` group by opening a terminal and using the usermod command to append the group to your user's group membership (see the usermod man page for more information) and then logging out (so that the new group list is loaded). Then start the service with the systemctl command (or with the included startup script).

The paragraph can be rewritten without parentheses for greater clarity:

Before launching the Foo service, you must ensure that your user is a member of the `foo` group. Open a terminal and use the usermod command to append the group to your user's group membership. See the usermod man page for more information on the command. Log out and the log back in. Start the service with the systemctl command or, if you are not using `systemd`, with the included startup script.

However, as a bibliographic reference, the parentheses are acceptable:

Open a terminal and use the usermod command to append the group to your user's group membership (see "Usermod Pocket Guide").

Parentheses are also appropriate when identifying initialisms and acronyms:

Use Alpha Bravo Charlie (ABC) for secure connections.

Question Marks

Question marks are specific to sentences that pose a question. In technical writing, they are usually only used in quizzes or discussions.

You should not pose questions to the reader in an attempt to prompt a silent answer, the way you might in personal conversations:

Incorrect

Before you are able to set up your computer for remote login, you must know its IP address. And how do we find that out? We use the ip command, of course!

Correct

Before you are able to configure your computer for remote login, you must know its IP address. Obtain your local IP address with the ip command.

Quotation Marks

Quotation marks represent something someone has said, or in some cases, something that people often say.

In technical writing, there are few instances when quotation marks are required outside of configuration files or commands. The typical use case for quotes in technical writing is when you want to refer to an unofficial but widespread term.

The image has been preconfigured, or "pre-baked", with all the options you need for this exercise.

Exercise

Add missing punctuation where necessary.

1. If all of the file's data has been deleted the file can be reclaimed and reused by the broker.

2. This controls the application's behavior on transaction boundaries such as commit, or rollback.

3. One major concern for administrators when considering data integrity of a broker's persistent data is whether or not the disk that is backing the broker is using a write cache.

4. The broker creates as many files as needed but when it is reclaiming space it shrinks the number of journal files back to the `journal-pool=files` number.

5. Notice that this time the error message is made available to the application, even after foo was restarted.

6. Use the mysql command-line interface to log in and select the log data from the `foo` database.

Using the Correct Possessive

The possessive form indicates ownership. Nouns and pronouns have possessive forms.

Converting Nouns into Possessive Nouns

These are the different rules for converting nouns into their possessive forms:

Add 's to singular nouns:	An administrators's computer. A software project's blog.
Add a lone ' to the end of a plural noun that all ready ends in s:	Update all of the students' computers. Email each of the projects' reports to the project manager.
Treat plural nouns that do not end in s the same as a singular noun:	Install Linux on all of the children's computers. Bring those people's laptops in for repair.
If a noun is compound, convert only the final noun to its possessive form:	Install Linux on admin and manager's computers. Bring the student and teachers' laptops in for repair.

Converting Pronouns into Possessive Pronouns

Pronouns have their own special possessive forms, separate from their root words. In technical writing, the gender neutral ones are the most common:

For personal ownership in the third person, use their, whether it refers to a singular or plural noun:

Give your user a GPG key so that their email can be encrypted.

Give all of your users GPG keys so that their emails can be encrypted.

For personal ownership in the second person, use your:

Do not give your password to anyone.

If a pronoun refers to a nonhuman, use its:

Post the checksum of an RPM so its integrity is verifiable by users.

The plural form of its is also their:

Post the checksums of all your RPM packages so that their integrity is verifiable.

Using *Its* and *It's*

The words its and it's notoriously get confused for one another in writing. You don't think about the words when you speak, because they're pronounced exactly the same way, but when you write them, it matters which one you use.

There are two simple rules you can use to remember which to use:

1. The word it's, like all contractions, is a combination of two words: it and is. Whenever you see it's in a sentence, replace it with it is. If it does not make sense, then it is not used correctly. For example:

   Open the computer and re-seat it's RAM.

   Open the computer and re-seat it is RAM.

   In this example, it makes no sense to say "re-seat it is RAM." Obviously, the writer intended to use its.

2. In technical documentation, contractions are generally avoided. Use its as a possessive pronoun, and use it is instead of it's.

The following grep statement checks for it's in a file:

```
& grep -iE "it's" filename.xml
```

Using *Your* and *You're*

The words your and you're also get confused for one another in writing.

The same rules about its and it's apply to your and you're. To reiterate:

1. The word you're, like all contractions, is a combination of two words: you and are. Whenever you see you're in a sentence, replace it with you are. If it does not make sense, then it is not used correctly:

   To get the most out of a Linux desktop, replace you're single-button mouse with a three-button mouse.

   To get the most out of a Linux desktop, replace you are single-button mouse with a three-button mouse.

   In this example, it makes no sense to say "you are single-button mouse." Obviously, the writer intended to use your.

2. In technical documentation, contractions are generally avoided. Use your as a possessive pronoun, and use you are instead of you're.

The following grep statement checks for you're in a file:

```
& grep -iE "you're" filename.xml
```

Exercise

Rewrite these sentences, as needed, using the correct possessive forms:

1. Press the Enter key to convert the file and view it on its screen.
2. Linux and BSD both use monolithic kernels as its basis.
3. The library's and binary's maintainer forgot to upload the packages.
4. Have each user activate two-factor authentication on his account.
5. You must use mutt as the email client.

Lists and Tables

There is no single standard for writing a list. The style of each list depends on the contents of the list, but the style should remain consistent within each list.

There are, broadly, three different types of lists: the ordered list, the itemized list, and the variable list. When a reader must follow the items in a list sequentially, use an ordered list. If sequence is not important, use an itemized list. When defining a list of terms, use the variable list.

Stems

Avoid using bullet point lists to format a single sentence. Some translation tools, for example Zanata, display list items and the introductory sentence (or sentence stem) as individual sentences for translation. If these are not complete sentences, they are difficult to translate.

Table 2.

Example	Improvement
Before you start the installation, make sure you have • enough free storage on your system • backed up any data that you want to keep to ensure a smooth installation.	Before you start the installation, follow these steps to ensure a smooth installation: • Ensure you have enough free storage on your system. • Back up any data that you want to keep.

Punctuation

If you place a period at the end of one list item in a list, then use a period at the end of each list item in that list.

Use punctuation when a list item completes an introductory sentence.

Before removing your USB hard drive from your computer, you may need to:

- close any open files located on the drive.
- close any terminal open to a directory on the drive.

Use punctuation when a list item contains more than one complete sentence.

Before removing your USB hard drive from your computer, there are two tasks you may need to take.

- If you are running an application with a files from the drive open, you must close the file. Alternately, save a new copy of the file to some other location. If you are not sure whether you have any files from the drive open, use the lsof command.

- If you have a terminal open to a directory on the drive, either close the terminal or change directory to a directory not located on the drive.

Do not use punctuation for:

- sentence fragments

- single words or short terms

Most of all, strive for consistency. If a list contains two list items that are complete sentences, and a third that is just a single word, you should restructure your list. For example, change the single word list item into a simple sentence so that it matches the other items. Alternately, review whether the items in your list belong in a list together.

Tense

Retain the same verb tense for each list item.

For example, this is incorrect:

- Students gain an understanding of the Linux init system.

- All students will learn how to use systemctl.

- Students create a simple chroot for testing.

The second list item uses the future tense, while the other two are present tense.

This is correct:

- Gain an understanding of the Linux init system.

- Learn how to use the systemctl command to start, stop, and monitor services.

- Create a simple chroot for testing.

This is called parallelism, and should be applied across all lists within the same book.

A list that constantly changes sentence structure is confusing:

- Use to specify the X variable.
- Specifies which value to apply to Y.
- You can use this to change the config from a POSIX shell.

It is easier to understand when a list maintains the same voice throughout. A reader might refer to several lists or tables within a book, so ensuring a consistent voice in every list or table helps readers quickly parse important information.

Key-Value Lists

If you are writing a list that exists only to define terms, use a variable list.

example.com	A domain reserved as a safe example URL. This is the correct way to define a term in a list.
example.local	A domain that exists only within a local network.
cat	The concatenate command.

Sometimes your list definitions do not contain exclusively simple terms to be defined, so you have to use an itemized list to allow for mixed list items. Delimiters separating a term from its definition can be confused as being a part of the term, so it is best to define terms in complete sentences, and with appropriate Docbook tags.

- example.com is a domain reserved as a safe example URL. This is the correct way to define a term in a list.
- example.local: a domain that exists only within a local network. This is not as clean, since the colon (:) could be interpreted as part of the term being defined.
- cat - the concatenate command. This is also unclear, since the dash (`-`) could represent shorthand for POSIX `stdin`.

Tables

Tables are, essentially, lists rendered horizontally as well as vertically.

The same rules apply for tables as for lists, with the primary goal being internal consistency. This table is not consistent:

Server	OS	Function
servera	RHEL 7	DNS
serverb	RHEL 7	DNS fallback
serverc	Fedora 26	This is only a testing server.

This is a consistent table:

Server	OS	Function
servera	RHEL 7	DNS
serverb	RHEL 7	DNS fallback
serverc	Fedora 26	This is only a testing server

Even though the final entry in the table is a complete sentence, it has no period at the end of the sentence to better match the convention established by previous entries.

Creating Reference Sections

Referencing internal and external content is common in technical documentation. To avoid linking to dead links or outdated content, you must create reference links carefully.

Referencing Red Hat Docs within an Admonition

Red Hat documentation published on docs.redhat.com does not have permanent URLs with chapter and section titles. For this reason, do not imply that you are directly quoting a chapter title in your reference, but give some indication of the chapter or topic that the reader needs to look for.

```
<note role="References">
  <para>
      See the chapter on Kickstart installation in the <ulink url="ht
  </para>
</note>
```

Note

See the chapter on Kickstart installation in the Red Hat Enterprise Linux 7 Installation Guide [https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/7/html/Installation_Guide/index.html]

Generic Referencing within an Admonition

For links pointing to documentation external of Red Hat, link to the documentation directly as possible. Use the <ulink> tag instead of the <uri> tag if you are including a URL in a reference.

```
   <note role="References">
     <para>
<ulink url="http://docs.fedoraproject.org/en-US/
     Fedora_Contributor_Documentation/1/html/Users_Guide/">Publican
     </para>
```

```
</note>
```

Note

Publican Users Guide [http://docs.fedoraproject.org/en-US/Fedora_Contributor_Documentation/1/html/Users_Guide/]

Combining Multiple Reference Types

When combining more than one reference type, list them in one reference note at the end of a section.

There are many sources you might use as reference. According to the type of material, place them in the following order of priority:

1. Info nodes
2. man pages
3. yelp references (RARE)
4. Knowledgebase or Customer Portal references
5. Third-party URLs
6. Red Hat Documentation

Info nodes

Info nodes are referenced first.

```
     <note role="References">
<para>
  <command>info libc</command> (<emphasis>GNU C Library Reference Ma
  <itemizedlist>
    <listitem>
      <para>Section 29.2: The Persona of a Process</para>
    </listitem>
  </itemizedlist>
</para>
     </note>
```

Note

info libc (GNU C Library Reference Manual)

- Section 29.2: The Persona of a Process

man pages

Man pages should be listed as a single comma-separated list of items. The order of the man pages is at your discretion. The section of the manual for the man page must always be listed in parentheses after the man page title, even if there's no man page of the same name in any other section of the online manual. The section number must be outside the <command> element.

```
   <note role="References">
     <para>
<command>ls</command>(1), <command>mv</command>(1), and <command>su<
man pages
     </para>
   </note>
```

Note

ls(1), mv(1), and su(1) man pages

Yelp (GNOME help)

When referencing a page from GNOME help, try to reference a command that can be used to bring up the exact page. Deep links to individual pages can be determined by looking at the `*.page` files in `/usr/share/help/C` in the `gnome-help` directory.

```
     <note role="References"> <para> GNOME Help: <emphasis>Getting S
     <itemizedlist>
<listitem>
  <para>
    <command>yelp help:gnome-help/getting-started</command>
  </para>
</listitem>
     </itemizedlist>
   </para>
     </note>
```

Note

GNOME Help: Getting Started with GNOME

- yelp help:gnome-help/getting-started

Local documentation

URLs pointing to documentation on web pages served by the local machine. This is rare, but two significant examples are the CUPS help pages and the httpd-manual pages.

```
     <note role="References">
<para>
  <ulink url="http://localhost:631/help/">CUPS Online Help</ulink>
</para>
     </note>
```

Note

CUPS Online Help [http://localhost:631/help/]

Knowledgebase

Knowledgebase articles are stable. Reference them with a <ulink> directly to the article. Titles should be verified. If the article title doesn't match and seems wildly different, the author must validate that the article reference is correct.

```
     <note role="References">
<para>
  <ulink url="https://access.redhat.com/site/solutions/253273"> Know
  &quot;How to register and subscribe a system using Red Hat Subscri
  </ulink>
</para>
     </note>
```

Note

Knowledgebase: "How to register and subscribe a system using Red Hat Subscription Manager" [https://access.redhat.com/site/solutions/253273]

External docs

External (non-Red Hat) URL references go last. These should be used sparingly, and only when the site is truly an authority.

```
     <note role="References"> <para>
<ulink url="http://www.rfc-editor.org/rfcs/rfc2460.txt"> RFC 2460: I
Protocol,
Version 6 (IPv6) Specification</ulink>
     </para>
     <para>
<ulink url="http://www.ntp.org/">NTP: Network Time Protocol</ulink>
     </para>
     <para>
<ulink url="http://www.pool.ntp.org/en/use.html">NTP Pool Project: H
pool.ntp.org?</ulink>
     </para></note>
```

Note

RFC 2460: Internet Protocol, Version 6 (IPv6) Specification [http://www.rfc-editor.org/rfcs/rfc2460.txt]

NTP: Network Time Protocol [http://www.ntp.org/]

NTP Pool Project: How do I use pool.ntp.org? [http://www.pool.ntp.org/en/use.html]

Appendix A. Revision History

Revision History

Revision 1.0-0	Wed Aug 25 2021	DavidO'Brien<daobrien@redhat.com
Updated to use RedHat brand. Removed unused files. Fix typos, minor reorganization.		
Revision 0.0-0	Thu Mar 9 2017	Seth Kenlon < skenlon@redhat.com >
Initial creation by publican		

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