Cisco Technical Content Style Guide

Last Updated: 2019-10-10

The Style Team updates the *Cisco Technical Content Style Guide* in real time and republishes the guide after every update. You can access the always-up-to-date style guide online and download the full-book PDF anytime.

New and Changed Information

Change Summary

Table 1 Significant Changes in the Style Guide

Change	Chapter	Date
Added the term “app stack.”	A-Z Terms	2019-10-10
Updated guidelines at the Website References subsection.	Voice, Tone, and Language	2019-10-08
Added two examples for the serial comma guideline.	Core Writing Guidelines	2019-07-23
Added notes for the term “AAA” to indicate use of the correct indefinite article.	A-Z Terms	2019-04-24
Added the words “caveat” and “bug” as a comparative word pair.	A-Z Terms	2019-04-03
Added the “slide-in pane” entry in the Conventions for Fields, Titles, and Information Areas table.	Writing About GUIs	2018-12-07
Deprecated the term “on-premise” and added the alternate term “on-premises.”	A-Z Terms	2018-12-07

Change Summary

Preface

The *Cisco Technical Content Style Guide* provides writers and editors of Cisco's technical content with style guidelines. Adhering to the *Cisco Technical Content Style Guide* ensures that Cisco's technical content across all business units remains consistent in style, organization, and terminology.

This document is maintained by the Style Team, a cross-departmental team of writers and editors that is chartered to set and maintain standards of readability, usage, correctness, and consistency for Cisco's technical content.

Audience

The *Cisco Technical Content Style Guide* is for all Cisco employees, contractors, partners, and OEMs who prepare Cisco's technical content. It is primarily for the writers and editors in the writing groups.

Writers and editors are encouraged to work with engineers and product managers to incorporate *Cisco Technical Content Style Guide* conventions during software and hardware development. This kind of collaboration can help Cisco avoid errors and inconsistencies in product and feature naming, in prompts and displays, and in hardware labels.

Note: Some URLs in this style guide are not accessible outside the Cisco intranet. Inform external contract employees who use the style guide that they are to treat this document as they would any other information that may be covered under a nondisclosure agreement (NDA).

Integrating Publications from Cisco Acquisitions

Technical publications teams that join Cisco as part of an acquisition need to become familiar with the *Cisco Technical Content Style Guide* and should apply Cisco style to their publications. For assistance, contact the Cisco Style Team.

Related References

- Reference Material
- Style Team wiki
- Style Team email alias
- Latest version of the style guide

Note: To request a change to this style guide, follow the instructions provided at Style Team wiki.

Related References

Core Writing Guidelines

This chapter provides style standards for Cisco technical content. For style standards not covered in this guide, use *The Chicago Manual of Style* and *Merriam-Webster's Collegiate Dictionary* as primary sources for general style, diction, syntax, and spelling of U.S. English.

American English

Use American English in Cisco material, unless explicitly stated otherwise in this guide.

Date Format

Use the international standard date format YYYY-MM-DD (ISO 8601).

Example

2015-11-05 represents the date 5 November 2015.

Numbers

Abbreviations

In figures and tables

Use the number abbreviation *no.* in figures and tables.

In text

Do not use the number abbreviation *no.* in text.

Commas

In general, use commas for whole numbers containing five or more digits. Use a comma after every third digit from right to left.

Examples

Incorrect: The disk space must be adequately sized to allow the node to process 1000000 or more rows.

Incorrect: The disk space must be adequately sized to allow the node to process 10,00,000 or more rows.

Correct: The disk space must be adequately sized to allow the node to process 1,000,000 or more rows.

Exception If the number represents a value that the user enters and the value should not include a comma, do not include a comma.

Dimensions

For hardware

Use height x width x depth (H x W x D) as the standard for hardware dimensions. Clearly define the order in which the dimensions are presented.

In decimal fractions

Place a zero before the decimal point if the fraction is between zero and one.

Order of units

Use British units (in. and ft) followed by metric units (cm and m) in parentheses.

Example

Width between the two rack-mount posts: 17 in. (43.18 cm)

Fractions

Decimal fractions

For numbers that cannot be easily represented as fractions, use the decimal form. Place a zero before the decimal point if the fraction is between zero and one.

Example

1.727; 0.727

Numeric fractions

In general, use the numeric form of fractions in text, figures, and tables.

Example

The cable is 6 5/16 inches long. Connect the 6 5/16-inch cable.

Exceptions

- Spell out the following simple fractions in text: one-quarter, one-third, one-half, two-thirds, three-quarters.
- In text, use numeric fractions for screw sizes.

In figures and tables

Use Arabic numerals for all numbers in figures and tables.

In text

In text, spell out single-digit numbers (zero through nine) and use numerals for 10 or greater except in these cases:

Exception If a number begins a sentence, and the number does not refer to a year, spell out the number.

Examples

Ten tips for using network technology to help your business work more efficiently are listed in this section.

This document describes 10 primary criteria you should consider before investing in an application switching solution.

2016 was a leap year.

Exception If a number is rounded or estimated, spell it out. Rounded numbers over a million are written using a numeral and the word "million."

Examples

These networks can easily consist of hundreds or thousands of devices.

Unless there are hundreds of requests per minute or more, there typically is minimal impact on the performance.

All applicable licenses are scalable to 20 million routes.

Exception For adjacent numbers, spell out one for clarity (usually the shorter, more easily read one).

Examples

There are six 1/2-inch cables.

It recognizes only two of the four 10/100/1000M interfaces.

Mathematical signs

Use en dashes surrounded by spaces when plus, minus, or equal signs are used in an operation.

Example

10 – 9 = 1

Negative numbers

Use en dashes without spaces between the dashes and numbers.

Example

–64

Ordinal numbers

Use "first," "second," "third," and so on to indicate items in a series. Avoid "1st," "2nd," "3rd," and the like, as well as ordinals for relatively large numbers.

Example

Note the data in row 1414 (not "in the 1414st row").

Plus and minus symbol	Use the plus and minus symbol (±) to indicate plus or minus.
Variables	Generally, use lowercase italic *n* to represent missing numbers and lowercase italic *x* to represent missing letters. Use a lowercase *x* to represent a range of software version releases. Example Linux versions 2.6.x require this security patch.

See also Units of Measure and Phone Numbers.

Equations and Mathematical Notation

For examples of equations and mathematical notation, see the following:

- *The Chicago Manual of Style*, Part Two: “Style and Usage–Mathematics in Type”
- Wikipedia: Manual of Style/Mathematics

Ranges of Numbers

Use the word *to* for all ranges of numbers except in tables and job aids.

Text	Use the word *to* to represent a range of numbers in text. This includes text that is presented in tabular format, such as configuration task tables and command syntax tables. Example For the Cisco 2500 series, port values range from 0 to 2.
Figures	Use the word *to* to represent a range of numbers in figures.
Tables	Use an en dash to represent a range of numbers in a table, unless the table entry contains text; in that case, use the word *to*. Examples 10–20 Range is 0 to 232.
Job aids	Use an en dash to represent a range of numbers in a job aid if space is at a premium.

Parts of Speech

For parts of speech that are not listed in this section, Cisco style follows *The Chicago Manual of Style*.

Adjectives

The demonstrative adjectives are *this*, *that*, *these*, and *those*. They are used to point out specific people or things. The demonstrative pronouns are the same words as the demonstrative adjectives: *this*, *that*, *these*, and *those*. Do not confuse demonstrative pronouns with demonstrative adjectives. They are identical words, but a demonstrative pronoun stands alone, whereas a demonstrative adjective qualifies a noun.

Examples

The Open System Interconnection (OSI) reference model has become an international standard. This [demonstrative pronoun] is the most widely used guide to describe networking environments.

The Open System Interconnection (OSI) reference model has become an international standard. This model [demonstrative adjective + noun] is the most widely used guide to describe networking environments.

Avoid using demonstrative pronouns. Instead, use demonstrative adjectives to modify the nouns to which they refer.

Incorrect: Client/server application design lets the application provider mask the actual location of the application function. *This* enables system implementers to upgrade portions of a system over time.

Correct: Client/server application design lets the application provider mask the actual location of the application function. *This masking* enables system implementers to upgrade portions of a system over time.

Voice

Active voice

The active voice is usually more direct and vigorous than the passive. When you write a sentence in the active voice, it is also usually shorter than in the passive voice. Use the active voice whenever possible.

Correct: Fast EtherChannel establishes a high-bandwidth connection between two switch devices.

Incorrect: A high-bandwidth connection between two switch devices is established by the use of Fast EtherChannel.

Passive voice

The passive voice looks at an action from the point of view of the target or recipient, not the actor or agent. The passive voice is most appropriate when the originator or performer of an action is unimportant, unknown, or hard to identify.

Example

The document set was published on CDC.

Prepositions

In, On, and At

Use the preposition *in* to convey the notion of an enclosed space that is surrounded or closed off on all sides.

- Do something *in* a dialog box.
- Do something *in* a pane.
- Enter something *in* a window.
- Do something *in* a command mode.

In these examples, a dialog box, a pane, a window, and a command mode represent enclosed spaces *within* which users interact.

Use the preposition *on* to convey the notion of being on a surface of an entity.

- Do something *on* a page.
- Enter something *on* a worksheet.

In these examples, a page and a worksheet represent specific surfaces *on* which users interact.

Use the preposition *at* to convey the notion of an exact position.

- Do something *at* a command line.
- Do something *at* a prompt.

In these examples, a command line and a prompt represent exact positions *at* which users interact.

From

Use the preposition *from* to indicate origin of the noun.

- Choose something *from* a menu.

On, Off

When describing the action of turning a switch *on* or *off*, use lowercase for these words (in both text and step procedures).

Exception In warnings, use all capitals for ON and OFF.

Pronouns

Cisco style follows *The Chicago Manual of Style* for pronoun usage. See also Gender-Neutral Language.

Verbs

Abbreviations, Acronyms, and Initialisms

Do not use abbreviations, acronyms, or initialisms as verbs.

Incorrect: FTP the RFC.

Correct: Use the FTP facility to copy the RFC.

Commands

In general, do not use commands as verbs. Most of the time, you can easily avoid doing so by using simple English to explain what the command does.

Example

For the **cd** command, you say "Change directories to....."

Exception The exception is "ping" because there is no good English alternative.

Voice	Use active voice whenever possible. Correct: The project manager wrote the product brief (active voice). Incorrect: The product brief was written by the project manager (passive voice). Use passive voice only when you want to emphasize the result of an action rather than the subject, or when the subject is unknown or unimportant.
With adverbs	When an adverb is placed within a verb phrase, it should follow the first auxiliary, not precede it. Correct: The cards can also be changed. Incorrect: The cards also can be changed.

Punctuation

Cisco style follows the general punctuation rules that are summarized in this style guide and follows *The Chicago Manual of Style* for more detailed rules.

Braces, Brackets, and Vertical Bar

Use braces ({ }), brackets ([ ]), and the vertical bar (|) as described in Notational Conventions.

Colons

Lists

Use a colon to separate a list element from its run-in description. Add a space after the colon.

Example

Minimalism: content constructed as short task-oriented chunks

Follow these guidelines to decide whether to capitalize the first word after the colon:

- If each description consists of no more than one sentence fragment, lowercase the initial letter of the first word of the description.
- If one or more descriptions in the list begins with a complete sentence, initial-cap the first word of every description.
- If one or more descriptions in the list contains more than one complete sentence, even if the first statement is a fragment, initial-cap the first word of every description, as well as the first word of each sentence. Do this also if one or more descriptions contains two or more fragments that are separated by end punctuation.

Commas

Cisco style follows *The Chicago Manual of Style* with the following additions:

Numbers

In general, use commas for whole numbers containing five or more digits. See also Units of Measure.

Exceptions

- If the number represents a value that a user enters, and the value should not include a comma, do not include a comma in the text.
- If quotation marks are part of a literal string, place commas outside the quotation marks.

Example

The symbol has one of the following values: ABST, “ABST”, or %ABST.

Serial comma

The serial comma is used to delineate the last item in a series. In a series of three or more terms with a single conjunction, use a comma after each term.

Examples

Incorrect: Pay proper attention to the way you are holding the line card, RCB and SFB.

Without the final serial comma, it is unclear whether the instruction is about three elements, the line card *and* RCB *and* SFB, or whether it is about *only* one element, the line card named RCB and SFB.

Correct: Pay proper attention to the way you are holding the line card, RCB, and SFB.

With the final serial comma, it is clear that the instruction is about three elements.

Incorrect: This section covers the acquisition, recording, organizational control and dissemination of information.

Without the final serial comma, it is unclear whether the adjective “organizational” qualifies *only* “control,” and “dissemination” is the fourth element in the series, or that adjective qualifies “control and dissemination” and there are only three elements.

Correct: This section covers the acquisition, recording, organizational control, and dissemination of information.

With the final serial comma, it is clear that the section covers four elements.

Dashes

There are two kinds of dashes: em dashes (—) and en dashes (–). An em dash is as wide as an uppercase M, and an en dash is half the width of an em dash. Do not bold em dashes or en dashes unless the template paragraph tag contains bold style. See also Hyphens.

Em Dashes (—)

Cisco style follows *The Chicago Manual of Style* with the following additions:

In Text

Em dashes are used to set off an amplifying or explanatory element and in that sense can function as an alternative to parentheses. Use an em dash (—) to set off a parenthetical phrase with more emphasis than parentheses provide. Do not add a space before or after an em dash. Use lowercase for the first word that follows the em dash.

Example

With Cisco Webex, you can join a meeting in whatever way is most convenient for you—from your calendar invite, the app, or a room device.

When you use only one em dash in a sentence, do not use it to separate text that forms two complete sentences. In that case, the text on one side of the em dash or the other must be changed to a sentence fragment.

Not available or applicable

In tables, use em dashes to indicate that items are not available or not applicable. (Do not use hyphens or *N/A*.)

Example

Transceiver Speed	Cable Type	Maximum Speed
10/100 Mbps	—	—

En Dashes (–)

Minus signs

Use an en dash surrounded by spaces for a minus sign.

Example

10 – 9 = 1

Negative numbers

Use an en dash for negative numbers. Do not place a space between the en dash and the number.

Example

–64

Number ranges

Use an en dash for all ranges except in text and figures.

In job aids

Use en dashes to represent ranges of numbers in job aids.

In tables

Use en dashes to represent ranges of numbers in tables.

Exception When a numeric range occurs within running text that happens to appear in a table cell, use the word *to* to represent the range.

In text and figures

Use the word *to* to represent ranges of numbers in text and figures.

Spaces

Do not use spaces to separate the dash from the surrounding text.

Ellipses

In technical content, command output is often used in examples and usually shows the results of entering a command.

To indicate intentional omission of one or more lines of text, insert a vertical ellipsis after the last line of output shown. Periods should be flush left with the Example-tagged text that they follow.

Resume the output, if any, on the line following the third period.

Example

```
<command output>
.
.
.
<command output>
```

Hyphens

Use hyphens for the following purposes:

- To connect some prefixes and compound modifiers
- To connect numbers to units of measure that modify nouns

Examples

carrier-sensitive routing, dual-tone multifrequency

0.7-A circuit, 700-mA circuit, 300-Mohm resistor

See also Compound Modifiers and Units of Measure.

Parentheses

Cisco style follows *The Chicago Manual of Style* with the following additions:

Cross-references

References to entire sentences

If a *See* reference refers to an entire sentence, place the reference in parentheses following the sentence and place the period inside the closing parentheses.

Example

The Cisco 7513 router features a dual CyBus backplane. (See Figure 2.)

References to parts of sentences

If a sentence has more than one *See* reference or a single *See* reference that refers to only part of the sentence, place the reference in parentheses next to the information to which it refers and place the period ending the sentence outside the closing parentheses.

Example

Use the ejector levers (see Figure 5) to seat the bus connectors, and then tighten the captive installation screws (see Figure 6).

Incomplete sentences

When the information in parentheses is an incomplete sentence, place the punctuation outside the parentheses.

Example

Verify the interface numbers (also called port addresses).

Nested parentheses

When a parenthetical phrase contains another parenthetical phrase, use brackets for the inner phrase and parentheses for the outer phrase.

Example

Use the abbreviation *no.* for number (not the pound sign [#]).

Exception When a software release number that includes parentheses is embedded in another set of parentheses, leave the parentheses in the software release number; do not change the parentheses to brackets.

Correct: (Cisco IOS Release 12.1(2)T)

Incorrect: (Cisco IOS Release 12.1[2]T)

Periods

Cisco style follows *The Chicago Manual of Style*, with the following additions:

Abbreviations

Use periods with abbreviations.

Exceptions

- Do not use periods for unit-of-measure abbreviations unless the abbreviation might be mistaken for another word, such as *in.* (inch).
- Do not use periods for the abbreviation *USA*, but do use periods for the abbreviation *U.S.* when used as an adjective. For example, U.S. Post Office.

After items in lists

If any item in a list or column in a table is followed by a period (for instance, a complete sentence), use periods for all entries in that list or table column. For more information on lists, see Lists.

Footnotes

Use a period at the end of a footnote even if it is not a complete sentence.

Example

```
1. RFC 2616.
```

With quotation marks

Place periods inside quotation marks.

Exception If quotation marks are part of a literal string, place the period outside the quotation marks. For example, the symbol will have one of the following values: ABST, %ABST, or “ABST”.

Quotation Marks

Cisco style follows *The Chicago Manual of Style*, with the following additions:

Curly vs. Straight Quotation Marks

Curly quotation marks differ from straight quotation marks in that their orientation changes according to whether they precede or follow the quoted text.

Use the following guidelines when importing text that contains straight quotation marks:

Quotes in standard text

Use curly quotation marks in standard text.

Example

“These are curly quotation marks.”

Quotes in code or ASCII examples

Use straight quotation marks in code or in ASCII examples.

Example

```
"These are straight quotation marks."
```

Note: If you are pasting text from an ASCII source, such as a web page or similar text file, to a code or ASCII example, you do not need to do anything; straight quotation marks appear automatically.

Semicolons

Cisco style follows *The Chicago Manual of Style* for semicolons.

Slashes

The slash may be used when it is an element of a commonly recognized technical term.

Examples

- Client/server
- Add/drop multiplexer
- Router/hub
- Request/responses unit (RU)
- TCP/IP
- I/O

In text, the slash should not be used to mean “or” (just as we should not use & to mean “and” or @ to mean “at”).

Example

Incorrect: Using this feature, the meeting host can manually admit Cisco and/or external attendees into the meeting.

Correct: Using this feature, the meeting host can manually admit Cisco, external attendees, or both into the meeting.

Spelling

For general word usage, see *Merriam-Webster’s Collegiate Dictionary*. For technical terminology, see the resources in Reference Material.

See also Units of Measure and A-Z Terms.

Abbreviations, Acronyms, and Initialisms

Avoid two-letter abbreviations, acronyms, and initialisms unless they are standard industry terms that readers will recognize easily.

You should not create new abbreviations, acronyms, or initialisms without first conferring with the Style Team.

Never use an acronym or abbreviation in which Cisco is shortened to the letter C.

Because topic-based content (DITA authoring) can be used anywhere in a guide, you might be tempted to expand the acronym in every topic. However, we recommend that you don't do it because it goes against our minimalist strategy and might be distracting to the reader. Therefore, do not expand the acronym in every topic unless you think it's necessary in the context.

For information about networking-related abbreviations, acronyms, and initialisms, see the Networking Master Terminology List.

Abbreviations

An *abbreviation* is a shortened form of a word or phrase (for example, *cont*. for *continued*).

Consistency	After you introduce an abbreviation, use it consistently.
For the word number	In text, do not use the abbreviation *no.* to represent *number*. However, in figures and tables, use the number abbreviation *no*. Do not use the pound sign (#) to represent *number*.
Glossary	When appropriate, include both the abbreviation and the spelled-out form as glossary terms. Put the definition under the abbreviation and use a *See* reference under the spelled-out form.
In job aids	Because there is limited space in job aids, you can use abbreviations in text. For example, *in.* for *inch*.
Periods	Use periods with abbreviations. Exceptions ■ Do not use periods for the abbreviation *USA*, but do use periods for the abbreviation *U.S.* when used as an adjective. For example, U.S. Post Office. ■ Do not use periods for unit-of-measure abbreviations unless the abbreviation might be mistaken for another word that is not an abbreviation, such as *in.* (inch).
Spelling out	Do not spell out the abbreviation unless the reader might not know the meaning, and then spell out the abbreviation only on the first occurrence.
Verbs	Do not use abbreviations as verbs.

Acronyms and Initialisms

An *acronym* is an abbreviation formed by combining the first letter or letters of several words to create a term that can be pronounced as a word (for example, RIP for Routing Information Protocol).

An *initialism* is an abbreviation formed by combining the initial letter of each word in a multiword term with each letter pronounced separately (for example, PPP for Point-to-Point Protocol).

When you introduce an acronym or initialism that is not included in the Expansion exceptions list, provide the expansion first, followed by the short form in parentheses.

Example

Interior Gateway Routing Protocol (IGRP)

Exceptions

- If your audience is more familiar with the short form than the expansion, provide the short form first, followed by the expansion in parentheses.

  Example SCI (serial port communications interface)

- If the first occurrence of an expansion and its acronym is a part of a hyphenated phrase, provide the hyphenated phrase both with the expansion and with the acronym within parenthesis. In subsequent instances, provide only the hyphenated acronym.

  Example

  Incorrect: Interior Gateway Routing Protocol (IGRP)-enabled

  Correct: Interior Gateway Routing Protocol-enabled (IGRP-enabled)

  Subsequent occurrences—IGRP-enabled

See also A-Z Terms.

Beginning sentences

Avoid using an acronym or an initialism to start a sentence if you have not explained it fully in the preceding text. However, to avoid awkward sentences, use the acronym or initialism if necessary.

Capitalization

Capitalize the individual terms of an acronym or an initialism expansion only if capitalization is required. For the capitalization of frequently used acronyms and initialisms, see A-Z Terms.

Example

American National Standards Institute (ANSI); switched virtual circuit (SVC)

Creation of new acronyms

Do not create new acronyms by combining an existing acronym with another phrase or product name.

Examples

Incorrect: SPA interface processor (SIP)
Correct: SPA interface processor
Incorrect: Secure LDAP (SLDAP)
Correct: Secure LDAP
Incorrect: Secure NNTP (SNNTP)
Correct: Secure NNTP

First use in a table

If the first occurrence of an acronym or initialism is in a table, use a footnote to expand the acronym or initialism. In the footnote text, include the acronym or initialism, then an equal sign (=), and finally the expansion of the acronym or initialism. Do not capitalize the first letter of the first word after the equal sign unless it would ordinarily be capitalized.

Example

```
1. NMP = network management processor.
```

First use in text

Writers and editors should discuss the need to expand (spell out) acronyms and initialisms. These are general guidelines for making a decision.
Spell out acronyms and initialisms on first use in any of the following circumstances:

- Some members of the target audience may be unfamiliar with the term, or no one is familiar with it because it is new.
- The material refers to the term by both its short form and its expansion.

  Example

  An installation topic might refer to WAN interface cards in some places and WICs in others.

  Exception If an acronym or initialism is a trademark or service mark of Cisco or another company, such as Cisco IOS or IBM, do not spell it out.
- The term has several expansions, and context does not make it clear which is meant. See also Multiple expansions for the same term.

  Example

  STP can mean either Spanning Tree Protocol or shielded twisted pair.
- You need to expand the term in order to discuss it. For example, PROM and EPROM are commonly understood acronyms. An explanation of the difference between them might spell out the full forms, programmable read-only memory and erasable programmable read-only memory.

You do not generally need to spell out acronyms and initialisms on first use in any of the following circumstances:

- The term is included in the Expansion exceptions list or in your writing group's list of expansion exceptions.
- The term is included in the Units of Measure List.
- The target audience is familiar with the term, and usually employs the short form rather than the expansion.

  Example

  The Open Shortest Path First protocol is usually referred to as OSPF.

  The initialism PCI (a personal computer bus) is commonly understood, but the expansion Peripheral Component Interconnect may not be.
- The expansion is not informative even for those unfamiliar with the term.

  Example

  Personal computers store configuration information in an area called CMOS RAM.

  When discussing how to use the computer, it would not usually be helpful, even for a computer novice, to explain that these initials refer to the technology used to manufacture the memory circuit, complementary metal-oxide semiconductor. It would be more informative to explain how CMOS works and how to make changes to it.

Whether or not short forms are spelled out, it can be helpful for technical material to provide a glossary of abbreviations, acronyms, initialisms, and unfamiliar terms for reference.

Expansion exceptions

AC, ANSI, ASCII, ASIC, ATM, BIOS, BNC, BRI, CBR, CD, CDDI, CD-ROM, CLI, CPU, CRT, CSU, DC, DCE, DHCP, DIMM, DIN, DRAM, DSR, DTE, EEPROM, EIA/TIA, EMI, EPROM, ESD, FAQ, FCC, FDA, FDDI, FIFO, FTP, GIF, GUI, HTML, HTTP, IBM, ID, IEEE, IETF, I/O, IOS, IP, IPv4, IPv6, ISDN, ISO, ISP, ITU, ITU-T, JPEG, LAN, LED, LIFO, MAC, MIB, MPEG, NVRAM, PBX, PC, ping, PPP, PRI, PROM, RADIUS, RAM, RFC, ROM, SFTP, SIMM, SONET, SRAM, SSH, TACACS+, TCP, TCP/IP, TFTP, TIFF, tty, UDP, UI, URL, USB, VLAN, VoIP, VoD, VPN, vty, WAN, WWW, XML

For subsequent use

For subsequent use within the same chapter or section, use only the acronym or initialism. If the acronym or initialism is seldom used and you need to spell it out, do so the first time it is used in each chapter or major section, and whenever you think that the reader might find the reminder useful.

Multiple expansions for the same term

When an acronym or initialism has multiple expansions (for example, RP stands for both Route Processor and rendezvous point), and when both terms are used in the same topic, use only the expansions throughout the topic.

Plurals

Use a lowercase *s* to form the plural of an acronym or initialism.

Example

ATMs, EPROMs, LANs, MPLSs

Step lists

Do not spell out acronyms or initialisms in step lists.
If an acronym or initialism has not yet been spelled out in text, use the spelled-out version in the step. In the next text reference, use the spelled-out version, followed by the acronym in parentheses. After you have spelled out an acronym in text, you can use it in a step list.

Titles

Do not spell out an acronym or initialism in book titles, chapter titles, section titles, headings, captions, or figures. If an acronym or initialism has not yet been spelled out in these contexts, use either the spelled-out version or the acronym or initialism, depending on audience familiarity with the same. In the subsequent text reference, use the spelled-out version, followed by the acronym or initialism in parentheses. After you spell out an acronym or initialism in text, you can use it in a title, heading, caption, or figure.

Use of indefinite articles with

For initialisms, the article you use (*a* or *an*) depends on the pronunciation of the first letter of the initialism.

Example

a CPU; an ISDN line; an LED

For acronyms, the article you use depends on the pronunciation of the word created from the letters of the acronym.

Example

a DIMM; an ASCII terminal; a LAN

Verbs

Do not use acronyms or initialisms as verbs.

Correct: Use the FTP facility to copy the RFC.

Incorrect: FTP the RFC.

Capitalization

In this section, capitalization refers to either initial capitalization or uppercase:

- Initial capitalization means capitalizing the first letter in a word.
- Uppercase means capitalizing all the letters in a word.

See also Numbers.

Acronyms

Do not capitalize the spelled-out form of an acronym unless it is capitalized in normal usage.

Example

American National Standards Institute (ANSI); switched virtual connection (SVC).

Appendixes, chapters, figures, parts, tables, and volumes

Use initial capitalization for the following words when used as specific references followed by numbers: Appendix, Chapter, Figure, Part, Table, and Volume.

Example

For a description of the fields, see the field description table in Chapter 3, "Configuring the Cisco 7513 Router."

Application notes, configuration notes, hardware releases, hardware models, microcode versions, part numbers, revisions, software releases

Use initial capitalization for terms such as the following when they precede a number: Application Note, Configuration Note, Hardware Release, Microcode Version, Part Number, Release, Revision, and Software Release, Version.

Example

Configuration Note 1077, Part Number 78-0966-01, Software Release 9.1, Revision 2, and Microcode Version 10

Do not capitalize terms such as release, version, or model when used generically. See also A-Z Terms.

Beginning sentences

Do not begin a sentence with a word whose first character must be lowercase, for example, a Cisco IOS command.

Callouts

Capitalize only the first word in the text unless there are proper nouns also requiring capitalization.

Columns, lines, levels, options, and slots

Use lowercase when referring to columns, lines, levels, options, and slots, even if they are followed by numbers.

Examples

The routers are listed in column 1.

Enter the port name on line 4.

Data transfer occurs in levels 2 and 3.

Select option 5.

Insert the card into slot 3.

Company name

Use initial capitalization for the company name, *Cisco Systems, Inc.*

Compound modifiers in titles, headings, and captions

Follow the rules in *The Chicago Manual of Style*.

Department names

General

Use lowercase for general department names.

Example

The writing department is located in San Jose, and the finance department is located in Santa Clara.

Specific

Use initial capitalization for specific department titles.

Example

Call the Cisco Technical Assistance Center.

Glossary

Capitalize terms in a glossary only if they are capitalized in the text.

Key names

Use initial capitalization for key names, regardless of how the keys are actually labeled, unless the case is important. Do not capitalize the word *key*.

Example

Ampersand key, **Backslash** key, **W** key, and the **Ctrl+C** (Windows) or **Command-C** (Mac) key combination

Labels on hardware or screens

Match the style of a switch label on the hardware when describing the switch. If the hardware uses the convention | (vertical bar) for on and 0 for off, put the appropriate symbols in parentheses after the words *on* and *off*.

Example

The LED labeled STATUS is on the front panel of the chassis.

Exception If the word *on* or *off* appears in a Warning, leave the spelling as is (usually uppercase).

Lists

Use initial capitalization for the first word of each item in a list.

Exception If the element is case sensitive, retain the case. For example, lists that begin with a command name must begin in lowercase.

Signal names

Use uppercase for ASCII signals and use initial capitalization for each term of a communications signal (signals from one device to another).

Example

BREAK signal, LINEFEED signal, Clear To Send signal, Request To Send signal.

Software and hardware products and manuals

General

Use lowercase for general references to software and hardware products or manuals.

Examples

Your Cisco IOS software release may not support all these features.

The university selected Cisco routers and communication servers.

See the appropriate hardware user guide or software configuration guide.

Specific	Use initial capitalization when referring to specific manuals or software products. When referring to specific hardware products, follow the capitalization as dictated by the product and marketing teams. Examples See the *Cisco IOS IP Routing Protocols Configuration Guide*. Upgrade to Cisco IOS Release 12.4(15)T. The Cisco Any Service, Any Port Solution supports data, voice, fax, and wireless services on a single universal gateway. This command was implemented on the Cisco 4451-X Integrated Services Router. This command was implemented on the Cisco 7200 series router.
Steps	Use initial capitalization for *Step* in cross-references to specific numbered steps in procedures. Always include *Step* and do not use the number by itself. Always use the singular (*Step* and not *Steps*). Examples Repeat Step 2 for each configuration; then proceed to Step 3. Repeat Step 1 and Step 2. Repeat Step 1 through Step 3. Repeat Step 1 through Step 3 and Step 6.
Table column titles	See Titles, headings, and captions.
Terminal displays	Use initial capitalization when you refer to a GUI element, even if it is spelled without initial capitalization in the GUI.

Titles, headings, and captions

Use initial capitalization for all words in titles, headings, and captions except for the following items:

Item	Examples
Articles	Specify a Default Route Install the Flash Memory Card
Coordinating conjunctions	Installation and Maintenance Tools for Installation Set Up RADIUS Profile for 2-Way Authentication
Prepositions of four or fewer letters that are not part of a verb	Operation with JavaScript *But* Operation Without JavaScript Exception Capitalize a preposition when it is used as part of a phrasal verb, for example, Set Up, Log In. (When the word *to* is part of an infinitive, do not treat it as a preposition. See the next bullet point.)
The word *to* in infinitives	When to Use the Authentication Proxy How to Power Up the Router
The names of commands	**`ls`** (the **`ls`** command in Linux)
Words that are case-sensitive	oXygen XML Editor iPhone

Always capitalize the last element, regardless of its part of speech.

Example

How to Use Either, Neither, Nor, and Or

Do not capitalize a second element attached to a prefix unless it is a proper noun or an adjective derived from a proper noun, for example, Anti-intellectual. See also Compound modifiers in titles, headings, and captions.

For technical content, the preferred format is title case (initial capitalization). However, when you have run-in headings (or headings in sections that have mostly images with not much text, such as in quick-start guides), then you may decide to use sentence case.

Compound Modifiers

A compound modifier is a string of two or more words that together modify a noun. To determine if terms form a compound modifier, try each modifier without the others. If each sensibly modifies the noun independently, the words do not form a compound modifier.

Many compound modifiers are hyphenated, but there are also many exceptions. See *The Chicago Manual of Style* and *Merriam-Webster's Collegiate Dictionary* for current spellings. See also Numbers, Hyphens, and Units of Measure.

For capitalization of compound modifiers in captions and headings, follow the rules in *The Chicago Manual of Style*. For examples, see Capitalization.

Contractions

If appropriate to the context, you may at your discretion use common contractions such as *you'll*, *that's*, *we've*, *can't*, and *don't*. Contractions can help writing to sound more natural and human. Do not overuse, and do not use contractions that are uncommon, or that have a double meaning or sound awkward (the Contractions section in The *Chicago Manual of Style* has examples of contractions that should not be used). If in doubt about a particular contraction, do not use it.

Possessives

Carefully consider using possessives because they can be difficult to translate and can also cause comprehension problems for readers whose native language is not English. See also Trademarks.

PREFERRED Connect the cable to the router port.

NONPREFERRED Connect the cable to the router's port.

Prefixes

Words that consist of a prefix and a root (like "nonprintable") are not compound words, so generally you should not hyphenate them. However, *do* hyphenate the words in these cases:

- With the prefixes *all-*, *half-*, *quasi-*, and *self-*
- If the root is a proper noun or an adjective derived from a proper noun, such as "non-NATO members" or "non-American Standard Code for Information Exchange"

These are examples of prefixes that are not hyphenated (except with proper nouns or adjectives derived from proper nouns):

anti	hyper	mid	post	sub
auto	infra	mini	pre	super
bi	inter	multi	pro	ultra
co	intra	non	pseudo	un
de	macro	out	re	under
extra	micro	over	semi	

Exception Hyphenate any prefix if the word is difficult to read or ambiguous without a hyphen. For example, *semiconductor* is fine with no hyphen, but *semi-infinite* requires a hyphen to separate the two *i*'s for ease of reading. *Recover*, meaning to recuperate, is fine with no hyphen, but *re-cover*, meaning to cover again, requires a hyphen to avoid ambiguity.

Typographic Conventions

Bold

Commands and keywords See Typographic Conventions for CLIs.

Graphical elements	See Typographic Conventions for Graphical Elements.
Keys or key sequences	See Keyboard Keys.

Italic

CLIs	See Typographic Conventions for CLIs.
Emphasis	Use italic (not bold, quotation marks, exclamation points, notes, underscore, or uppercase) to emphasize text, but do so sparingly. Example Use this method *only* for upgrades, not for re-installations.
New terms	Use italic to introduce new significant terms, but do so sparingly.
Titles	Use italic for content titles, including release notes, quick reference cards, and RFCs. Examples *Cisco 7500 Series Installation and Configuration Guide*; RFC 2091, *Triggered Extensions to RIP to Support Demand Circuits* Exception Use plain font and initial capitalization for the titles of media such as DVDs, CD-ROMs, or floppy disks.

Units of Measure

For a list of common units of measure and their abbreviations, see Units of Measure List. For a list of units that you might not need to spell out in text, see Abbreviations, Acronyms, and Initialisms.

Abbreviations

Adjacent numbers	For adjacent numbers, spell out one of them for clarity (usually the shorter, more easily read number). Example six 1/2-inch cables
In figures and tables	Use unit-of-measure abbreviations in figures and tables. Use the singular form for plurals of unit-of-measure abbreviations. Examples 1 lb, 5 lb, 1 in., 6 in., 1 min, 20 min
In text	The first time you use a unit of measure that might be unfamiliar to readers, spell out the term, and follow it by the abbreviation in parentheses. For subsequent uses within that section, use just the abbreviation. Give the spelled-out version of the unit the first time you use it in each chapter or major section, or if it has been some time since you last used it. **Note:** The units of measure in Units of Measure List are assumed to be commonly understood and generally need not be spelled out. Exception In text, always spell out the following simple units of measure: inch, inches, foot, feet, percent, degrees.

Micro

Spell out all occurrences of *micro*. Do not use the Greek letter mu (symbol μ) because it does not always appear correctly online.

Example

200 microseconds

Periods

Do not use periods for unit-of-measure abbreviations.

Exception Use a period for a unit-of-measure abbreviation if the abbreviation might be mistaken for another word, such as *in.* (inch). However, do not use a period with in-lb (inch-pounds).

Quantity

Use the same unit-of-measure abbreviation for all quantities, whether less than one, one, or greater than one.

Examples

0.5 V, 1 V, 5 V

1 MB, 12 MB

0.5 kg, 1 kg, 5 kg

1 cm, 6.5 cm

1 ms, 200 ms

Context

Use unit-of-measure abbreviations only when they are preceded by numbers.

Correct: The card has 15 MB of RAM.

Correct: RAM is measured in megabytes.

Incorrect: RAM is measured in MB.

British and metric measurements

When applicable, include both the British (Imperial) and metric units of measure. List the British unit of measure first, followed by the metric unit in parentheses.

Example

32 to 104°F (0 to 40°C)

Hyphenation

When a unit of measure modifies a noun and precedes that noun, place a hyphen between the number and the unit of measure.

Examples

0.5-inch-diameter opening; 60-Hz power supply; 10-A circuit

Do not use a hyphen if the unit of measure follows the noun.

Example

The cable length is 20 feet.

Ranges of numbers

Place the unit of measure after the final number, not after each number.

Example

56 or 64 kbps; 56 to 64 kbps (not 56 kbps to 64 kbps)

Use an en dash for all ranges except in text and figures.

Example

56–64 kbps

Spacing

Insert a nonbreaking space between the number and the unit of measure or symbol.

Example

64 Gbps, 900 Hz, 44 kbps, 0.3 V, 0.95 A

Exception Do not use spaces to separate the following unit-of-measure abbreviations and symbols (used in figures and tables) from their values:
°C, °F, %.

Example

104°F

Symbols

Use unit-of-measure symbols (in figures and tables) only when they are preceded by numbers.

Example

88°F

Text reference

In text, write numbers used with units of measurement as Arabic numerals (including numbers less than ten).

Example

The CSC/4 processor card has 16 MB of RAM. The CSC/3 processor card has 4 MB of RAM.

Time

Use Arabic numerals when referring to amounts of time. Because a length of time is considered a unit of measure, do not spell out any numbers.

Example

5 minutes (not five minutes)

Exception If the unit of time (less than ten) is being used more descriptively and precision is not critical, spell it out. For example, Change the battery every six months.

Units of Measure List

For additional guidelines, see Units of Measure.

Note:

- Unless otherwise indicated, insert a nonbreaking space between a word or number and a unit of measure.
- Use the same unit-of-measure abbreviation for all quantities, whether less than one, one, or greater than one.

A

alternating current	AC	–
ampere	A	–

B

bit	b	–
bits per second	bps	–
British thermal unit	BTU	–
byte	B	–
bytes per second	Bps	–

C

Celsius	C	No space: 32°C. (For use in figures and tables.)
centimeter	cm	–
cubic feet per minute	cfm	–

D

decibel	dB	–
decibel referenced to 1 milliwatt	dBm	–
decibel referenced to 1 watt	dBW	–
degree (geometry)	degree	Write out in text. Examples Rotate the chassis 90 degrees to the right. A 90-degree bend is essential.
degree (temperature)	°	No space: 78°F. For use in figures and tables. Write out in text. Example 78 degrees
direct current	DC	–

F

Fahrenheit	F	No space: 32°F. (For use in figures and tables.)
foot	ft	Write out in text. Example 11 feet
foot-pound	ft-lb	–
frames per second	fps	–

G

giga	G	Metric billion—1,000,000,000.
gigabit	Gb	–
gigabits per second	Gbps	–
gigabyte	GB	1,073,741,824 (2 to the 30th power) bytes.
gigabytes per second	GBps	–
gigahertz	GHz	–
gram	g	–

H

hertz	Hz	–

I

inch	in.	Use a period with the abbreviation. Write out in text. Example 6 inches
inch-pound	in-lb	Do not use periods.

K

kilo	k	Metric thousand—1000.
kilobit	kb	–
kilobits per second	kbps	–
kilobyte	KB	1024 (2 to the 10th power) bytes.
kilobytes per second	KBps	–
kilogram	kg	–
kilohertz	kHz	–
kilometer	km	–

M

mega	M	Metric million—1,000,000.
megabit	Mb	–
megabits per second	Mbps	–
megabyte	MB	1,048,576 (2 to the 20th power) bytes.
megabytes per second	MBps	–
megahertz	MHz	–
megohm	Mohm	–
meter	m	–

micro	micro	0.000001 (10 to the minus 6th power). Do not use the Greek letter mu (symbol μ) because it does not always appear correctly online.
milli	m	0.001 (10 to the minus 3rd power).
milligram	mg	–
millimeter	mm	–
millions of instructions per second	mips	–
millisecond	ms	–
minute	min	–

N

nano	n	0.000000001 (10 to the minus 9th power).
nanometer	nm	–
nanosecond	ns	–

O

ohm	ohm	–

P

packets per second	pps	–
percent	%	No space: 11%. Write out in text. Example 11 percent
picosecond	ps	–
pound	lb	–

S

second	sec	–

V

volt	V	–
volt alternating current	VAC	–
volt-ampere	VA	–
volt direct current	VDC	–

W

watt	W	–

Phone Numbers

Format

Inside the USA and Canada

The format for phone numbers in the United States and Canada is area code (space), group of first three numbers (space), and group of last four numbers. Do not use hyphens.

Example

Cisco Americas Headquarters: 1 408 526 4000

Outside the USA and Canada

The format for phone numbers outside the United States and Canada is the + symbol, first group of numbers (space), second group of numbers (space), third group of numbers (space), and so on. Do not use hyphens.

Note: Individual digits that are dialed when calling within the country but not when calling from outside the country appear in ().

Example

Cisco UK Headquarters: +44 (0)20 8824 1000

Fax numbers

When you list phone or fax numbers, use initial case for the label and follow it with a colon.

Example

Phone: 1 408 526 4000.

Extensions

Extensions are formatted by adding a comma, (space), and extension number.

Example

1 408 526 4000, ext. 111.

Terminology

Use *toll-free number*, not *800 number*, to refer to phone numbers that have no calling fee.

Voice, Tone, and Language

This chapter provides guidelines for using appropriate language in Cisco technical content.

Cisco Voice and Tone

Be brief and aim for a clear, professional tone in Cisco technical publications. Here are some pointers:

- Cut nonessential text ruthlessly.
- Avoid jargon.
- Avoid idioms (figures of speech). Use literal, concrete words and phrases that mean exactly what they say.
- Use the present tense.
- Avoid the passive voice.
- Use “you,” not “the customer,” and use “we,” not “Cisco.”
- Avoid using all caps and exclamation marks, which are the written equivalents of shouting.

The Cisco Brand Language Guidelines provide details and examples about voice and tone, and tips on how to cut text. Some brand language guidelines are inappropriate for technical content, so carefully consider them before applying them. When in doubt, this style guide takes priority. Here are some examples of technical content requirements that override the brand language approach:

- Use a verb in every sentence.
- Do not omit the pronoun “that.”

- Do not use "this" without clarifying what "this" is modifying. (Avoid demonstrative pronouns.)

  Example

  Incorrect: Client/server application design lets the application provider mask the actual location of the appliance. This enables system implementers to upgrade portions of a system over time.

  Correct: Client/server application design lets the application provider mask the actual location of the appliance. This masking enables system implementers to upgrade portions of a system over time.

- Never write anything that might create a future obligation on Cisco (relates to “future possibilities” in the brand language guidelines).
- Short sentences are good. But don’t go too far and sound like marketing material.

Accessibility Features

If a Cisco product contains accessibility features for use by people with disabilities or requires the use of assistive technologies, the associated content must describe those features in a prominent location.

Even if there are no accessibility features, all content, whether it is in the form of HTML, PDF, ePub, Mobi, or online help, should be accessible to people with physical or mental disabilities, or those whose first language is not English.

As of February 17, 2014, Cisco requires all web-based products and websites to meet Web Content Accessibility Guidelines (WCAG) 2.0 Level AA requirements. This includes technical content. For more information, see Accessibility Center.

Guidelines

- Apply the guidelines for writing for international audiences.
- Apply the principles of minimalism. Verbose text causes delays when a document is accessed via a screen reader.
- Keep reference material separate from task material.
- Put the most important information at the start of the topic.
- Use bullet lists.
- Keep paragraphs short.
- Minimize the number of steps in a task.
- When possible, limit sentences to a single clause.
- Provide descriptions that do not require graphics. If the document refers to graphics as part of the instructions, you must provide alternative text for graphics. If the instructions do not work without reference to the graphic, rewrite the instructions.
- Run the accessibility report on generated PDFs in Acrobat Pro (**View > Tools > Accessibility**). Because PDFs are autogenerated, you may need to work with the tools team to resolve some issues in the accessibility report.
- Do not use directional terms (left, right, up, down) as the only indicator of location.
- Document all keyboard shortcuts.
- Do not rely on color to distinguish elements in graphics.

- Use inclusive terminology:

Write	Instead of
without disabilities	able-bodied

Bias-Free Documentation Policy

It is a policy of Cisco to treat all persons with respect—regardless of race, color, ancestry, national origin, age, sex, citizenship, veteran status, marital status, sexual orientation, physical or mental ability, religious creed, or medical condition. Language or graphic elements that offend others violate our business philosophy and our company policy.

Our philosophy toward our customers extends to our indirect relationship with them through documentation and other written and online material that we deliver.

All material that is written or developed for internal or external use and that is prepared for online delivery or hard copy must be free of offensive or suggestive language, graphics, and scenarios. If you see questionable terms, you can insist on their removal if necessary. When terms that can cause offense are used in the UI, consult with your manager, and if necessary, contact the Cisco Ethics and Integrity Office for guidance.

As professional communicators, we must judiciously scrutinize material for appropriateness. We must exercise our best judgment in the use of questionable or obscure terms and must flag as inappropriate any language, graphic, or scenario that can damage or otherwise compromise the reputation, good name, or profitability of the company. Writers, editors, and managers must work together to ensure that our online information and publications are free of any potential for embarrassment or grounds for claims of harassment.

Guidelines

- Avoid using gender pronouns (he, his, himself, she, her, and herself).
- In hypothetical examples, use a variety of first names, female and male, that reflect different cultural backgrounds.

  Example

  When Yuvika wants to phone Brett, she clicks the phone icon next to Brett's name in her Webex contacts list.

- In examples, do not use real usernames. Instead, use *username1*, *username2*, *username3*, and so on.
- Do not equate people with their disabilities. Use *Customers who are blind*. Not *blind customers*.
- Avoid terms that may show bias with regard to gender, race, culture, ability, age, sexual orientation, or socioeconomic class.

Write	Instead of
blocked list	blacklist
allowed list	whitelist
primary	master
subordinate	slave

Gender-Neutral Language

Avoid sexist or gender-specific language.

Articles	Use articles instead of gender-specific pronouns. Correct: The system administrator maintains the network for all users in the group. Incorrect: The system administration maintains the network for all users in his group.
Gender-specific terms	Use gender-neutral or all-inclusive terms to refer to human beings, rather than using "man" and similar gender-specific terms. For example, use *Chair* instead of *Chairman*; use *sales representative* instead of *salesman*; use *operates* or *staffs* instead of *mans*.
Plurals	Use the plural form and maintain parallel structure.
Pronouns	Do not use the following conventions: he/she, his/her, him/her. Use *the* instead of *his* or rewrite the material in the second person (you) or in the plural. Do not use gender-specific pronouns.
Second person	Use the second person. Correct: Specify the transmission rate for the modem that you are using. Incorrect: The sender must specify the transmission rate for the modem.

Human Characteristics Attributed to Technology

Attributing human motivation, characteristics, or behavior to technology or other inanimate objects is anthropomorphism.

Avoid using anthropomorphisms in technical writing because they can be ambiguous and can confuse readers. Anthropomorphism in technical writing is often the result of an imprecise or incomplete understanding of the topic at hand. Do not use words or phrases that convey intention or desire (such as *refuses*, *wants*, or *is interested in*), intellect (*thinks*, *knows*, or *realizes*), or emotion (*likes*).

However, inanimate objects such as hardware and software can perform actions, and some verbs are appropriate for both people and things. For example, a program can search for a text string, or an application can read data from a file.

The following table lists common anthropomorphic verbs and suggested alternatives.

Anthropomorphism	Suggested Alternatives
Be interested in	Access, check
Know	Record, store, detect
Look at	Check, search
Need	Require
Remember	Store, maintain, save, retain
See	Check, calculate
Think	Detect, calculate (or reword)
Understand	Interpret, process, handle

If, however, an anthropomorphism is an industry standard, you do not have to avoid using it. For example, the verb "listen" is commonly used in the industry in the following way:

The system listens to a network to determine when the network is free.

Also, the attribution of awareness to software has become common: “cluster-aware software,” “network-aware software,” and “upgrade-aware software.” If these terms must be used, define them at first use.

Focusing technical information on users and the actions that they perform, instead of the product and the actions that it performs, helps in avoiding anthropomorphism.

Examples

Incorrect: These two sentences, written with a product focus, contain anthropomorphisms.

The installation script expects JRE to be in the search path.

This Watch List menu enables you to create a watch list and keep track of SMUs.

Correct: Rewriting the sentences with a user focus removes the anthropomorphisms.

Before you run the installation script, ensure that JRE is in the search path.

Use the Watch List menu to create a watch list and keep track of SMUs.

Jargon and Slang

Jargon is the technical terminology of a special activity or group. Jargon can be difficult to translate clearly and meaningfully to an international audience. Avoid using jargon unless it is technical terminology that is defined in your content.

Slang and colloquialisms use informal, nonstandard vocabulary. Do not use slang or colloquialisms in your writing.

See also Writing for an International Audience.

Minimalism

Good writing applies the principles of minimalism. See the following resources:

- Continuous Learning Program: *Minimalist Doc Writing Style*
- *Understanding and Applying Minimalism*
- Continuous Learning Program Recordings

Note: Minimalism does not mean eliminating words at the expense of clarity or completeness. See Omitting the Pronoun That and Telegraphic Writing Style.

Names and Passwords

Do not use the full names of real people in examples. Additionally, do not use valid usernames or passwords, including forms of “Cisco,” in examples. Instead, use *username1*, *username2*, *password1*, and *password2*.

Past, Present, and Future Tense

Present tense

Use the present tense whenever possible. This tense is direct and active and helps readers scan the material quickly.

Example

> Perform system management tasks to monitor and improve router performance.

Past and future tense

Use the past and future tenses only when it is confusing to use the present tense—for example, when it is essential to describe events in terms of the past or future, as when a future event will be caused by a present action.

Example

> If you want to use the macro in your network, you will want that macro to play back at the same speed at which it was recorded.

URL and Website References

URL References

Use the following guidelines when referencing URLs in technical content, regardless of where the URLs appear (including text, procedural steps, and tables):

- Include the name of the protocol (for example, http://) in all URLs.

  Note: In the FrameMaker Marker Text field, you cannot enter more than 255 characters.

- You can include a URL in running text or place it on a separate line.
- If you include several URLs in a row in running text, use normal punctuation between the URLs (for example, commas) and at the end of a sentence (a period).
- If you place a URL on a separate line, provide an introductory phrase or clause and end it with the appropriate punctuation.
- If a URL is very long, place it on a separate line. If it does not fit on one line, format it by inserting a forced return (Shift-Return) between elements, following these guidelines:
  - Break a URL immediately after a colon, slash, or double slash.
  - Break a URL immediately before a period, hyphen, underscore, question mark, pound sign, or percent sign.
  - Break a URL either before or after an equal sign or ampersand.
  - Do not break a URL that contains a hyphen immediately after the hyphen.
  - Do not insert a hyphen to break a URL.

Website References

Verify any live website references before including them in Cisco technical content. In addition, keep the following points in mind:

- Do not use any references to the Cisco intranet (wwwin.cisco.com).
- Because of liability issues, do not include live links in Cisco technical content to websites of other companies. Instead, you can refer to a resource and the website (but not the URL) where it can be found—for example, “Cisco ACI Virtual Edge is compatible with any server hardware listed in the *VMware Hardware Compatibility Guide* on the VMware website.”
- However, you can include live links in the following circumstances:
  - You can provide live links for Cisco customers to download software that is required for using a Cisco product. (These links are different from links to websites for other purposes that might imply affiliation with, sponsorship by, or endorsement by Cisco of the third-party website, or even endorsement of Cisco by the third party.) This guideline applies to open-source websites as well as to commercial companies. For example, it is permissible to use a live link to refer customers to an Amazon Web Services marketplace page where they can download the Cisco Cloud Services Router.
  - You can provide live links if you first obtain permission from the Cisco legal department.

Writing for an International Audience

Because Cisco documentation is distributed worldwide, you must consider certain globalization and localization issues. Use the following guidelines to write appropriately to readers around the globe.

Cisco is a global company with offices and sales forces throughout the world. In many nondomestic markets, Cisco faces fierce competition from local and international competitors. In these markets, the accessibility and comprehensiveness of user content are critical to our success. Some of Cisco user content is translated, some is not; but with the internet, users from around the world can easily access all public Cisco content. Therefore, it is particularly important to our globalization efforts to develop all user documentation for an international audience.

Writing for an international audience requires clarity, consistency, and awareness of international variables, such as different conventions to express time, speed, temperature, and length. Also keep in mind that not every reader or translator is necessarily network literate.

For information about the Cisco Translation Services team or its projects, contact the translation coordinator by sending an email to the doc-translation alias.

Guidelines

- Avoid complex and figurative language that is usually untranslatable.
- Keep sentences short and to the point, ideally no more than 25 words.
- Avoid very short sentences and sentence fragments.
- Whenever possible, write sentences as statements of fact (the indicative mood.)
- Whenever possible, replace complicated sentence-paragraph structures with lists and tables.
- When using words with multiple meanings, use the word to mean only one thing and use it with that meaning consistently.
- Avoid ambiguity by using relative pronouns (*that*, *who*) and articles (*a*, *the*).
- Include optional punctuation.

- Avoid long chains of nouns or adjectives.
- Avoid phrasal verbs (multi-word verbs) such as ‘carry on’ and replace them with one-word verbs such as ‘continue.’
- Keep adjectives and adverbs close to the word they modify and far from other words they might be mistakenly associated with.
- Whenever possible, use Simplified Technical English (https://en.wikipedia.org/wiki/Simplified_English). This controlled form of English makes documents much easier to understand for non-native English speakers and is a prerequisite for machine translation.
- Avoid the ambiguity of verb-like words ending in –ing and –ed.
- Avoid linking more than three clauses or phrases with *and*, *or*, or *but*.
- Use only industry-standard abbreviations.
- Use correct capitalization.
- Avoid jargon (see Jargon and Slang).
- Use international time and date formats.
- Write out names of months in full.
- Consider requirements of specific markets (for example, Cisco policy is to provide French translations in Canada).
- Do not use Latin.

Write	Instead of
that is	i.e.
for example	e.g.
every	per
and so on	etc.

- Be aware that in some target languages, text pieces, such as callouts in graphics, headers or footers, can expand drastically and affect the layout. In such cases, reorganize and rewrite to keep these text pieces short.
- Be aware that some cultures interpret certain colors in a specific way in a certain context.
- Use universally acceptable examples and scenarios, keeping cultural diversity in mind.
- Be aware that some symbols or graphics may not be recognized in other cultures and can even be offensive in some cultures.

For more details about these guidelines, download and read Lionbridge’s white paper: Why and How to Write for Localization.

Document Organization

Visually structuring written content by using clearly defined headings and text, illustrations, tables, bulleted lists, and numbered steps helps to organize and clarify information. When information is presented in a clearly defined format and broken into chunks, it is easy for an international audience to read and understand. The process of localization is also simplified.

In text, use few words and write brief paragraphs when possible. A lengthy, dense paragraph in English can cause a non-native speaker to feel discouraged. Breaking up long or complex paragraphs into visually more palatable chunks helps make the information easily accessible.

Clear Writing

When writing for an international audience, be clear in structure and wording. Ambiguities in grammar or terminology cause misunderstanding and frustration for all readers and for international readers in particular.

The English language allows grammatical constructions and word creations that cannot—without cumbersome attempts to approximate the intended meaning—be mirrored in foreign languages. Therefore, clarity in writing for an international audience not only requires strict adherence to the rules of the English language, but also places additional demands on the writer. Examples of common linguistic ambiguities are described in the following sections.

Ambiguous Modifier Strings

Modifier strings are phrases with two or more nouns or adjectives strung together. In such strings, sometimes it is difficult to determine which word is modified by which adjective and which nouns form a standalone phrase.

Example

New Cisco virtual private dialup network session counting software...

A translator could interpret this sentence in at least two ways:

New Cisco virtual private dialup counting software for network sessions...

or

New Cisco software for a new virtual private dialup network session counting...

A possible solution follows:

New Cisco software for counting sessions of virtual private dialup networks...

Avoid ambiguous modifier strings by breaking them into several smaller phrases, limiting the number of adjectives to no more than three, or adding hyphens to clarify compound adjectives.

Words with Multiple Meanings

Many words have multiple meanings. Eliminate ambiguities whenever possible.

Words that can be used as different parts of speech can be misinterpreted. Try to keep the use of such words, at least within the same paragraph, to one part of speech only.

Gerunds (verb forms ending in “-ing” that are used as nouns) and *participles* (verb forms ending in “-ing” that are used as adjectives) are often difficult to distinguish.

Example

Searching the database.

This phrase could mean either “How to search the database” or “Database search is in progress.”

When using gerunds and participles, make sure that your meaning is clear.

Ambiguous Conjunctions

The conjunctions *and* and *or* can create ambiguities when it is unclear which text elements are being joined by the conjunction.

Incorrect: No translation is attempted between frame header bits and ATM layer EFCI bits and DE bits.

Correct: No translation is attempted between the bits of the frame header and the EFCI and DE bits in the ATM layer.

To avoid confusion, use parallel construction and break up long or very complex sentences into simple sentences.

Abbreviations, Acronyms, Initialisms, and Blend Words

An abbreviation, acronym, initialism, or blend word is often jargon or a term used only in a restricted language community.

- An abbreviation is a shortened version of a word or phrase that replaces the word or phrase (for example, ft [feet]).
- An acronym is a word that is formed from the initial letters of a compound term (for example, RAM for random-access memory). Acronyms do not travel well across language boundaries, especially when the words or phrases that they represent occur in a different sequence in the other language.
- An initialism is an abbreviation that is formed by combining the initial letter of each word in a multiword term, with each letter being pronounced separately (for example, PPP for Point-to-Point Protocol).
- A blend word is a word that is made from parts of the words it represents (for example, TELEX).

Avoid any abbreviations, acronyms, initialisms, or blend words that are not standard usage within a well-established technical community. For example, RAM (random-access memory) is generally accepted, but NFAS (nonfacility-associated signaling) is not standard. Use your best judgment. When in doubt, spell out the word or phrase at first mention in the text.

Invisible Plurals

An invisible plural can occur when a noun is used as an adjective in such a way that the reader has difficulty telling whether the noun or nouns being modified are singular or plural.

Example

...the switch and router settings.

This phrase could mean “the settings for one switch and one router,” “the settings for many switches and many routers,” or “the on/off switch and the router settings.”

The adjectives in this example are not inflected and do not show whether the noun is plural or singular. If you think that there is any possibility of confusion, rewrite the sentence.

Example

...the settings for switches and routers.

Precise Punctuation

Precise punctuation is essential for translators and the international audience to correctly parse a sentence. In fact, what might be considered over punctuation is encouraged to help clarify the structure of a phrase or a sentence. The use of hyphens is especially recommended to clarify ambiguous modifier strings. See Ambiguous Modifier Strings.

Long Sentences

Sentences that are too long are not only stylistically cumbersome, but also can cause problems for international readers and for translation. Long sentences are difficult to follow, which makes them apt to be misinterpreted.

Example

Each Fast Ethernet port can be configured for half- and full-duplex operation and includes a Media Independent Interface (MII) that can be used in back-to-back MII applications or with external, customer-supplied transceivers for connection to 100BASE-T4.

The simplest way of fixing an overly long sentence is to break it up into small ones.

Example

Each Fast Ethernet port can be configured for half- and full-duplex operation. The port includes a Media Independent Interface (MII) that can be used in back-to-back MII applications or with external, customer-supplied transceivers. Fast Ethernet ports support connection to 100BASE-T4.

In some cases, breaking up a long, complex sentence into a bulleted list is the best solution.

Example

With the support of FUNI, Frame Relay-to-ATM network internetworking, and Frame Relay-to-ATM service internetworking, you can make virtual connections between the following endpoints:

- Frame Relay
- FUNI
- Frame Relay and FUNI
- Frame Relay and ATM cell-based
- FUNI and ATM cell-based

Dangling Modifiers

A dangling modifier is a word, phrase, or clause that does not clearly modify an element in a sentence.

Incorrect: Also provided through web links, customers can perform basic troubleshooting operations, such as verifying software versions.

(It is not the customers who are provided through web links, but the troubleshooting operations.)

Correct: Customers can perform basic troubleshooting operations, such as verifying software versions, which Cisco provides through web links.

To test whether a phrase is a dangling modifier, turn the phrase into a clause with a subject and a verb. If the expanded phrase and the independent clause do not have the same subject, the phrase is dangling.

Omitting the Pronoun *That*

Sometimes the relative pronoun *that* is dropped from sentences. In speech this omission is almost idiomatic, but in writing it can create problems for readers who are less familiar with English idioms. Do not omit *that*, especially in a sentence with a past-participle or present-participle construction.

Incorrect: AccessPath Manager is a web-based access management system designed to deploy and manage complex, distributed dial pools.

Correct: AccessPath Manager is a web-based access management system that is designed to deploy and manage complex, distributed dial pools.

Telegraphic Writing Style

Telegraphic writing is a highly abbreviated, terse way of writing. Characteristically, this style omits the articles *a*, *an*, and *the*, and the words *is*, *are*, *of*, *this*, and *these*. Avoid writing in a telegraphic style because reading such text requires expertise in both the technical subject and English. Telegraphic sentences also lend themselves to mistranslation.

Incorrect: No translation attempted between frame header bits and ATM layer EFCI bits and DE bits.

Correct: No translation is attempted between the bits of the frame header and the EFCI and DE bits in the ATM layer.

Units of Measure and Time Notation

Units of measure

Because many countries use the metric system, always give both the British measurement unit and the metric system measurement. The following units are the most common:

- Length
  - 1 mile (1.6 kilometers)
  - 1 foot (0.3 meter)
  - 1 inch (2.54 centimeters)
- Weight
  - 1 pound (0.45 kilogram)
- Temperature
  - 50° Fahrenheit (10° Celsius)

Time

Many countries use 24-hour notation to express time. Always express time by showing the U.S. time notation followed by the 24-hour notation in parentheses.

Example

8:00 a.m. to 5:00 p.m. (0800 to 1700)

In the 24-hour notation system, no punctuation or abbreviations are used.

Example

Breakfast was at 0645; our first meeting was at 0800.

Additional Guidelines

Government names

Do not generalize names of specific government agencies, institutions, or organizations. Because many of our readers are in other countries, generalization can be misleading. If you are referring to a specific U.S. government agency, say so. Some of the terms to watch out for are *federal*, *national*, *government*, and *Department of Defense*.

Correct: This project was funded by the U.S. government.

Incorrect: This project was funded by the federal government.

Correct: July 4 is a U.S. holiday.

Incorrect: July 4 is a national holiday.

Graphics

Use figures, icons, and symbols that are universally recognizable. For example, do not use a dollar sign as an icon for a bank. What is considered appropriate in images and colors varies widely among cultures.

Names

Do not use names in examples. Use the title of the role instead (for example, administrator, technician, and so on).

National-centric phrases

Avoid the use of the word *domestic* to refer to the United States because it is U.S.-centric. For the same reason, do not use *non-U.S.* Instead, use terms such as *within the United States*, *outside the United States*, *global*, *worldwide*, and *international*.

Nouns and adjectives	Use U.S. and U.K. as adjectives; use United States and United Kingdom as nouns.
Safety warnings	The regulatory agencies of other countries require that translated safety warnings ship with Cisco products. These warnings are translated into multiple languages and must be included in your documentation set. **Note:** If you edit any safety warnings, they must be retranslated.
Seasons	Do not refer to seasons of the year to specify time because seasons vary around the world. If possible, refer to specific months. If you must refer to a period of time, refer to calendar quarters. Correct: The new router will be available in the fourth quarter of 2000. Incorrect: The new router will be available in the winter of 2000.
Toll-free numbers	Use *toll-free number*, not *800 number*, to refer to phone numbers that have no calling fee.

Content Elements

This chapter discusses the elements that you might use in Cisco technical content.

Copyright and Trademark

All publications from Cisco must include a copyright notice and a trademark block. Use the latest boilerplate material in your documentation tool set for copyright and trademark content. See page 2 of this guide for an example of a copyright and trademark page.

Copyright year: If a document contains original content, and does not include copyrighted published documents or portions of any such documents, use the year the document is first made publicly available in the copyright notice.

If the development of a document began in a previous year, but the document is to be published in the current year, use the current year in the copyright notice.

If any portion of a new document contains, or is based on, a previously copyrighted published document, use consecutive copyright dates or a range of copyright dates, as follows:

- Published dates are in consecutive years: Use a range of copyright dates, beginning with the year the original document was published in, and ending with the latest published date; for example, 2015–2017. Use an en dash between the years.
- Published dates are not in consecutive years: Use commas to separate the years that the book was published in; for example, 2015, 2017.

For more information, see Cisco Trademarks under Branding, Trademarks, and Domain Names and IP Addresses.

Notes, Cautions, and Warnings

Notes, cautions, and warnings highlight important material within the text. Notes provide optional, nonessential information, such as an explanation or a usage tip. Cautions provide essential information about risks to things—data loss or equipment damage. Warnings provide essential safety information about risks to people—bodily injury.

Conciseness	Avoid using more words than necessary.
Limited use	Do not overuse notes, cautions, and warnings; overuse diminishes their impact.
Proximity	Avoid placing one message immediately after another. Doing so creates clutter on the page and reduces the impact of the messages.
Purpose	To keep readers fully informed, provide the reasons for cautions and warnings—in addition to telling them what to do, tell them why they should do it.
Translated warnings	The regulatory agencies of other countries require that safety warnings be translated into multiple languages and shipped with Cisco products. These translated warnings are included in a standalone document called *Regulatory Compliance and Safety Information* or in an appendix in some publications. ■ For Information on translated warnings, see Translated Safety Warnings. ■ For general information on warnings, see Warnings. ■ For information on writing for translation, see Writing for an International Audience.

Notes

Definition

Note: Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the manual.

Example

> **Note:** If your system requires a future upgrade, the appropriate publication will be shipped with the parts.

Additional Information

Avoid stacked notes. They look cluttered. However, if you must include multiple notes one after the other, use the following style:

Note:

■

■

■

■

Avoid the inclusion of a note immediately after a lead-in sentence or paragraph. Reconstruct the lead-in sentence or paragraph to include the contents of the note.

Examples

Incorrect: The **show call admission statistics detailed** command displays the CAC statistics in detail. It also provides packet drop statistics for each CAC type.

Note: The **show call admission statistics detailed** command displays only the details of platform resources that are already configured.

```
Router# show call admission statistics detailed
CAC New Model (SRSM) is ACTIVE
CAC statistics duration: 1873(seconds)
Total calls rejected 29, accepted 1749
Current hardware CAC status is: Not Dropping
```

Correct: The **show call admission statistics detailed** command displays the CAC statistics in detail. It also provides packet drop statistics for each CAC type. This command displays only the details of platform resources that are already configured. This is a sample output of the command:

```
Router# show call admission statistics detailed
CAC New Model (SRSM) is ACTIVE
CAC statistics duration: 1873(seconds)
Total calls rejected 29, accepted 1749
Current hardware CAC status is: Not Dropping
```

Cautions

Definition

Caution: Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Example

Caution: To prevent damage to the chassis and components, never attempt to lift or tilt the chassis with the handle on the interface processors. This handle is not designed to support the weight of the chassis.

Warnings

The following warning statement (Statement 1071 in the `TR_Warns_1060-1085.fm` file of the Core translated warnings) is the latest definition for warnings as of the publication of this version of the *Style Guide*.

Warning: IMPORTANT SAFETY INSTRUCTIONS

Means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

When you define warnings in your “Conventions” section, access the latest version of the `PrefOrgCon.fm` file and use the exact wording, without modification. The most recent version is available in WEM at `en\us\td\templates\boilerplate\Preface`.

When you include a warning, use one of the standard warning statements that have already been approved and translated.

If you are including the warning in a hardware installation guide, copy the English warning and the statement number from the file as in the example below.

Warning: Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001

If you are creating an RCSI or another translated warning publication, copy the warning title, number, and the entire warning (English and other languages) from the file. Delete the statement number that follows the English warning (in the preceding example, you would delete Statement 1001).

If a suitable warning statement does not exist, contact your safety and compliance engineer for assistance in creating and approving a statement.

Translated Warnings

WEM (http://www-author.cisco.com/damadmin) under
`Digital Assets/en/us/td/templates/boilerplate/warnings`

Submitting Requests to Translate Safety Warnings

After the statement is approved, submit it for translation. (See Translated Safety Warnings.)

For Questions About Translating Safety Warnings

doc-translation@cisco.com

Cross-References

Use cross-references carefully. Excessive use of cross-references can be as disturbing to the reader as insufficient cross-referencing. In general, use cross-references in the following circumstances:

- Identical or similar information pertains to different sections or tasks.
- An idea is compared with another idea.

Chapters, appendixes, and parts	Cross-references that use chapter numbers are available in the templates. The chapter numbers are stripped out when the publication goes through the HTML filter. Example See Chapter 2, “Appropriate Use of Language.”
Figures and tables	When you refer to specific figures and tables, include the element label (*Figure* or *Table*) and the number of the element. Use your own judgment about including the title itself. If you include the title, place it inside quotation marks. Example See Figure 1, “Configuration Process Overview.”
Following and preceding	Generally, when you make a cross-reference use *following* and *preceding*. Use *above* and *below* with discretion.
Job aids	When you refer to a job aid both in other job aids and in product content, use the following convention: “See items x and y in the (*title of job aid*) quick reference card (or booklet).” Example See the cabling instructions in the *Cisco 7206 Installation* quick reference card.

Other publications

Generic

When you refer to a generic type of publication, use lowercase Times Roman, plain type style, or body paragraph tag (not initial capitalization or italic).

Example

See the related hardware installation and maintenance publication.

Specific title of a printed publication

When you refer to a specific publication, list only the title of the publication. (Do not include headings or volume numbers because they might change.)

Exception Cisco IOS software content that has several parts uses the number of the part in cross-references.

Example

"Network Protocols Configuration Guide, Part 3."

For the title of a printed publication, use italic and initial capitalization. Use plain type style and initial capitalization for the titles of other media, such as DVDs, CD-ROMs, or floppy disks.

Example

For more information, see the Cisco Documentation DVD.

Worksheets

Use initial capitalization when referring to titled worksheets.

Example

Fill in the Interface Configuration Worksheet.

Page numbers

Cross-references that use page numbers are available in the templates. The page numbers are stripped out when the document goes through the HTML filter.

See references

Use *See* for references both within a book and to another book.

References to entire sentences

If a *See* reference refers to the entire sentence, place the reference in parentheses following the sentence and place the period inside the closing parentheses.

Example

Check the processor slots and verify that slot 6 or 7 contains an RSP2. (See Figure 2.)

References to parts of sentences

If a sentence has more than one *See* reference, or a single *See* reference that refers to only part of the sentence, place the reference in parentheses next to the information to which it refers and place the period ending the sentence outside the closing parenthesis.

Example

Use the ejector levers (see Figure 5) to seat the bus connectors, and then tighten the captive installation screws (see Figure 6).

Syntax Description Tables

The syntax description table is a two-column list with a term in the left column and its definition or description in the right column. Definition lists are used most often to describe keywords and arguments in Cisco IOS software commands.

Examples

number	Number from 400 to 499.
deny	Disallows access.
host-address	Decimal XNS number and hexadecimal host number separated by a dot.

Guidelines

Capitalization	Use initial capitalization for the first word in a definition or description.
End punctuation	Use end punctuation with each definition or description.
Table captions and column headings	Do not include table captions or column headings.
Verbs	In general, keyword descriptions begin with verbs and argument definitions begin with nouns. Use verbs in the present-tense, third-person-singular (-s) form.

System Messages

System messages appear in a system console window or in a system log to indicate conditions that might require user attention. For each message, the publication provides an explanation of the message and a recommended action.

Example

Error Message: %IMP-4-DATERR Interface [chars], PSN data error

Explanation: The interface message processor (IMP) has received corrupted data. This situation might be caused by cable problems, a hardware problem in the IMP, or a malfunctioning IMP interface.

Recommended Action: Repair or replace the controller.

Guidelines

Placement	You can usually place complete descriptions of system messages in an appendix. Cisco IOS system messages, however, are described in separate publications.
Text references	When referring to a system message in text, start the message on a new line. As a general rule, include the entire message. Example If system power usage returns to the permitted operating range, the scheduled shutdown is canceled, and this message appears on the console or in the system log: `C6KPWR-2-MAJORPOWERALARMRECOVER: System power usage has returned to allowed operating range.`

Software Command Field Descriptions

When describing the fields in a software command example, use a table similar to Table 1 on page 55.

Table 1 show interface Command Field Descriptions

Field	Description
Protocol	Protocol for the network address in the Address field.
Address	Network address that corresponds to the hardware address.
Age (min.)	Age, in minutes, of the cache entry.
Hardware Addr	LAN hardware address that corresponds to the network address.
Type	Type of ARP.

Use the following guidelines for field description tables:

Captions	Assign a table caption to the table.
Field labels	Use plain type style for field labels. Capitalize and abbreviate exactly as the label appears on the screen.
Headings	Use the singular form for the column heads Field and Description.

Headings

Writing meaningful topic headings is important. Take time to make sure that your headings are accurate, easy to read, concise, and consistent.

In topic-based authoring, chunks of information have a greater need to be self-supporting or standalone. This means that topics should be able to be read on their own, without reliance on what comes before or after. In addition to helping the reader understand what a topic is about, headings should also help the reader identify *what kind of topic* it is. From the heading, readers should know whether the topic will help them:

- Understand something (a concept)
- Help them do something (a task)
- Provide supporting information (a reference)

A meaningful, complete heading removes the need to add an introductory sentence or two at the beginning of a topic, describing what the topic contains.

When you compose headings, also remember their role in returning accurate search results. Search engines rely on keywords to return focused results. Therefore, headings not only need to be meaningful to humans, but also need to have high information value for a keyword search.

Guidelines

- Do not start a heading with an article (*a*, *an*, *the*).
- Do not start titles with generalized phrases that don't describe what the topic is about, such as “Overview,” “About Security,” or “Introduction to Maintenance.”
- Do not use these punctuation marks: The period, semicolon, and exclamation mark. When required, make judicious use of the comma, colon, em dash, question mark, and parentheses.
- Do not use symbols, such as the ampersand character, or at sign, unless they form part of a proper name.

- Do not spell out an acronym or initialism in headings. See Titles under Acronyms and Initialisms.
- Do not create “lone” headings: Any heading by itself within a section without another heading at the same level in that same section. For example, avoid having a first-level heading followed by only one second-level heading and then by another first-level heading. (The second-level heading is the lone heading.)
- Do not “stack” headings: Stacked headings are two consecutive headings without intervening text.
- Whenever possible, use the singular form, not the plural. (For example, use “Configure a Cisco Catalyst 2960 Switch,” not “Configure Cisco Catalyst 2960 Switches.”) For certain headings, the plural form is appropriate. (For example, “Built-in Operational Mode Commands" or “Additional Network Script Service Parameters.”)
- When using the singular form, use articles prudently:
  - Use indefinite articles (*a*, *an*) to refer to a single entity that represents a category. (For example, “Connect an Optical Drive" describes the steps for connecting any optical drive.)
  - Use the definite article (*the*) to refer to an entity that is unique. (For example, “Configure the Optical Plug-In” describes the steps for configuring the only existing optical plug-in made available for this system.)
- Whenever appropriate, use the second person possessive adjective (*your*) to achieve a direct, conversational tone. (For example, “Start Your Webex Meeting on Your Mobile Device” or “Customize Support Settings for Your Customers.”)
- To help readers formulate an accurate opinion as to a topic’s content, use different phrasing or syntax for topic headings of different information types, as described in Table 2 on page 56.

Table 2 Heading Syntax with Examples for Different Information Types

Information Type	Syntax	Examples
Concept	Begin with a noun or adjective.	Network Model Configuration—Expert Mode Cisco WAN Automation Engine Architecture
Task	Begin with a verb in the imperative form.	Configure a Network Model by Using the Expert Mode Back Up and Restore Operational Data
Reference	Begin with a noun or adjective, and include the reference construct. (For example, "list," "table," and so on.)	Expert Mode Interface Callout List Private IPv4 Addresses Table

A useful technique is to write or refine a heading *after* you complete writing the content of the topic.

Figures

Figures are incorporated into and referenced within the content. Figures include these three types:

- Hardware drawings
- Network diagrams
- Screen captures

Do not treat these as figures: lines of code, system messages, and formulas.

Working with Illustrators

For the latest information and instructions on preparing illustrations, see the Tech Comms Illustrators community page.

Note: For information on making figures universally accessible, see Writing for an International Audience.

Managing Figures

Introductory text	In the text that precedes a figure, introduce the figure in a way that helps the reader relate the figure to the text. Use the cross-reference format that displays only the figure number, without title. Capitalize *Figure* when it is used as a specific reference in text and followed by a number. Correct: Figure 1 shows the back panel. Incorrect: Figure 1, "Standoff Screw Location in a Cisco 3745," shows the back panel.
Captions	Captions are figure titles. As a general rule, each figure should have a caption. You need not use a caption with a screen shot within a procedure when the screen shot simply illustrates a window or page already named in the preceding step. Capitalize words as described in Capitalization. Do not start a caption with an article (*a*, *an*, *the*). Do not end a caption or heading with a period. Make captions concise and descriptive. Make sure that no two captions are identical.
Callouts	Callouts are references, typically numeric, that are embedded within a figure and indicate either parts or actions.
Callout numbers	In new content, use numeric callouts. Textual callouts may remain in previously used illustrations. A figure can contain as few as one callout number. By using numeric callouts in figures, you could help to save on translation costs because additional time and resources aren't needed to open, translate, and change text in the illustrations themselves.

Callout tables

If callouts are to parts, list the parts in an accompanying FigureCallout or FigureCalloutWide callout table.
Note the following guidelines:

- Placement: Place the table immediately after the figure. In the table, list callout numbers from top to bottom, then left to right. If there are only two callouts, list them from left to right.
- Captions: Do not use a table caption.
- Style: Within the table, use nouns or noun phrases only, not sentences. Match the capitalization on the actual product label; otherwise, capitalize only the first letter of the first word in each cell entry and any proper nouns. Do not use a period at the end of a table entry. See Callout Example 1: Callouts to Parts.

If callouts are to actions, do not use a callout table. Instead, refer to the figure or numbered location in the figure in the appropriate procedure step. See Callout Example 2: Callouts to Actions.

Textual references to callouts

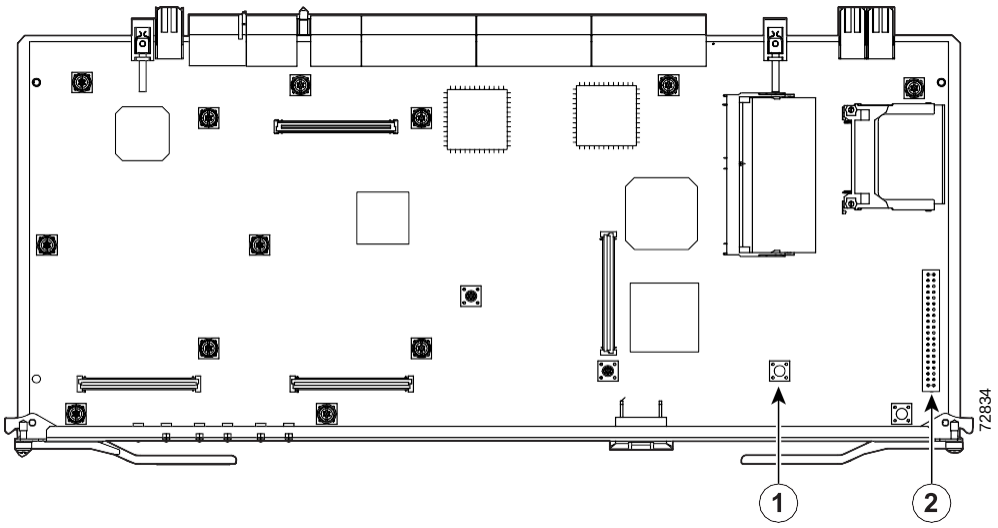
Use references to parts callouts as in the example below. References to action callouts need no special treatment.

Example

See location 1 in the figure in Callout Example 1: Callouts to Parts.

Callout Example 1: Callouts to Parts

1. Remove the screw from the mainboard as shown in the following figure.

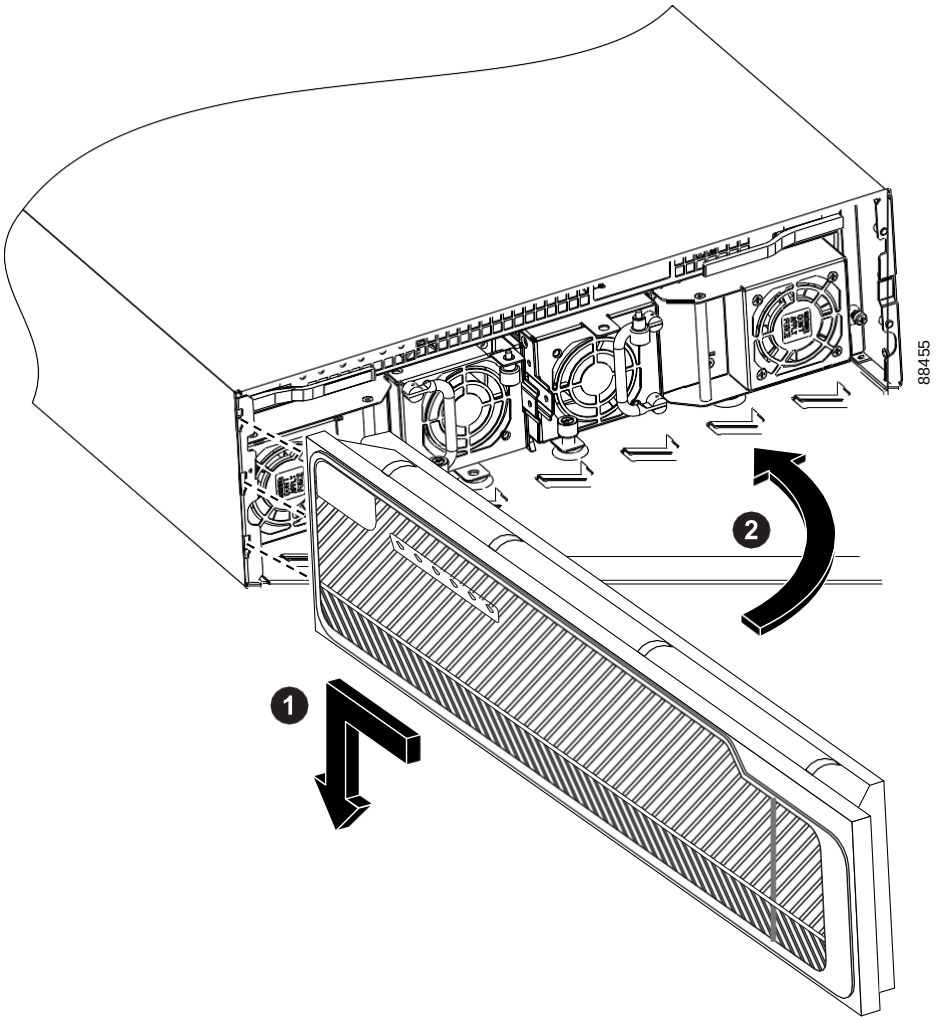


1	Standoff location	2	ETM connector

2. Install the standoff in place of the screw that you removed. Use a 1/4-inch wrench to tighten the standoff carefully.

Callout Example 2: Callouts to Actions

1. Hold the front panel straight out from the chassis.
2. Engage the hinges and close the front panel. (See the following figure.)



Cisco Icon Library

An icon library containing the available images and their names in a variety of formats is available for you to use in preparing draft artwork for the illustrators. You can access an HTML version of the icon library and associated tools at http://www.cisco.com/web/about/ac50/ac47/2.html.

Footnotes

A footnote is a note placed at the bottom of a page or text element to give additional information. A footnote consists of a reference mark and the footnote text. Use footnotes in text only to cite sources. Explanations or discussions of material can be presented in text. Use table footnotes to explain table entries.

Table Footnote Example
Memory test time is 11 minutes[1]

1.All time values are approximate.

Guidelines

Footnote text	
Numbering	The paragraph tags number footnote text automatically with Arabic numerals.
Placement	The paragraph tags place footnotes automatically.
Reference marks	
Numbering	The paragraph tags number footnote reference marks automatically with superscript Arabic numerals.
Placement	Place the reference mark immediately after the referenced item.
Acronyms in tables	If the first occurrence of an acronym is in a table, use a footnote to give the expanded version of the acronym. In the footnote text, include the acronym, followed by an equal sign (=) surrounded by spaces, the expansion of the acronym, and a period. Do not capitalize the first word after the equal sign unless it would ordinarily be capitalized. Example `1. NMP = network management processor.`

Lists

Lists help clarify, emphasize, and organize information. A well-formatted vertical list can improve the visual impact of content and enhance comprehension. The content of a vertical list can be categorical (bulleted lists), sequential (numbered lists), or procedural (step lists). See also Syntax Description Tables.

Alphabetization	The two methods of alphabetizing are letter by letter and word by word.
Capitalization	Capitalize only the first word of a list element. Exception If the element is case sensitive, retain the case. For example, lists that begin with Cisco IOS software command names must begin in lowercase.
Colons	If an introductory phrase contains *as follows*, *the following*, or the like, use a colon after the phrase.
Conjunctions	Do not connect list items with conjunctions, such as *and*.
Consistency	
Articles	Avoid using articles (*a*, *an*, *the*) to start list elements.
Complete and incomplete sentences	Avoid mixing complete and incomplete sentences.
Parallel construction	Use parallel grammar and sentence construction for all list items. Begin each list item with the same part of speech. For example, in a procedural list, begin each list item with a verb.
Periods	If any item in the list requires a period, add periods to all the items.
Voice and punctuation	Use the same voice and punctuation for each list item.

Explanations or clarifications

Long or complicated explanations	If a list item requires immediate explanation or clarification, and the explanation is more than a sentence or is complicated, place the explanation in a separate paragraph aligned with the text in the list element.

Short explanations	If a list item requires immediate explanation or clarification, and the explanation is short, follow the list item with a colon and then the explanation. Add a space after the colon. To decide whether to capitalize the first word in the run-in description that follows the colon, see Colons.
Introduction	To put the information in a list in context, include a short introduction to each list. Make sure this introduction is a complete sentence.
Nesting	Avoid nesting more than two list levels.
Page breaks	Do not leave a one-line list element at the bottom or top of a page.

Bulleted Lists

Use bulleted lists for categorized data. Use en dashes for categorized lists nested within bulleted lists.

Example

The X.25 switching subsystem supports the following facilities and parameters:

- Variable-length interrupt data
- Flow control parameter negotiation
  - Window size up to 7
  - Packet size up to 2048
- Basic closed user group
- Throughput class negotiation

Numbered Lists

Use numbered lists when sequence is important, or when you are taking the user through a step-by-step procedural task.

Example

Before you use the **setup** command facility, complete the following steps:

1. Attach an EIA/TIA-232 ASCII terminal to the system console port located on the network server rear panel.

   Refer to the appropriate hardware installation and reference publication for details about cabling considerations.
2. Configure the terminal to operate at 9600 bps, 8 bits, no parity, and 1 stop bit.
3. Turn on the power to the network server.

Acronyms	Do not give an acronym and its expansion in a step list. If an acronym has not yet been spelled out in text, use the spelled-out version in the step. In the next text reference, give the spelled-out version, followed by the acronym in parentheses. After you spell out an acronym in text, you can use it in a step list.
Actions	Depending on the product you are documenting and your end user, you may find that you need to handle actions in step lists in different ways. There is no one best way to present procedural steps—the method that is most helpful to the user for that particular product or task is the best method. This section presents three methods from which you can choose.

Steps with choices	When the user can or must make a choice among actions, introduce the step by presenting the reason for taking the action, followed by the action itself. This orients the user to the task before action is taken and also allows the user to bypass the current step quickly if the action is not pertinent. Examples To accept the displayed directory, press **Enter**. To specify another directory, enter the complete path for the directory where you want the software installed.
Steps without choices	When users must take a particular step to accomplish a task, and you are confident that users would know why they are taking the action, you can present the action before the reason. This allows experienced users who want to proceed quickly through the procedure to do so. Example Enter the **quit** command at the ftp> prompt to exit the FTP utility.
Optional steps	For optional steps, place the word Optional in parentheses before the action. Example Step 2. (Optional) Enter a comment about the URL.
Cross-references	When cross-referencing steps, capitalize the word *Step*. Example If you are replacing the EPROM, go to Step 2.
Introduction	To prepare users so that they know exactly what the procedure accomplishes, introduce the procedure with a sentence or short paragraph.
Mood	To express a command or give a direction, use the imperative mood. Example Connect a console terminal.
Single-step tasks	Use paragraphs for single-step tasks, without any step numbers.
Tasks per step	Make each task a specific step.

Tables

Tables provide an effective way to present large amounts of detailed material in a matrix that shows relationships among categories. Tables are not vertical lists in table format.

Table Designs

Table designs are described and documented in the *FrameMaker Templates Handbook*. The handbook (TEMPHAND.pdf) is located in WEM (http://www-author.cisco.com/damadmin) under `Digital Assets\en\us\td\templates\2014_frame11` (see the “Table Designs” chapter).

Table Guidelines

Acronyms	See Acronyms in tables.
Alignment	Align the table with the main body of the text. If a table does not fit, align it with the left margin.
Available or applicable	To indicate that an item is available or applicable in a table, use a check mark symbol (✓).
Brevity	Keep entries brief.
Captions	
Articles	Do not start a caption with an article (*a*, *an*, *the*).
Capitalization	Capitalize captions according to the guidelines in Capitalization.
Periods	Do not end captions with periods.
Phrasing	Make captions concise and descriptive.
Use	In general, use captions for all tables (except definition lists and Cisco IOS software task tables).
Columns	
Capitalization	In column headings, capitalize all words except articles, coordinating conjunctions, prepositions (except when part of a verb), the word *to* in infinitives, the names of commands, and words that are case sensitive. See Capitalization. In cells, capitalize only the first word (except for proper names) unless the word is normally written all lowercase.
Headings	If some column headings use more lines than others, “bottom out” (align on baseline) all column headings. Use equal spacing between column headings.
Consistency	Be consistent within column entries.
Parallel construction	Use parallel construction for each column entry. If possible, begin each column entry with the same part of speech.
Punctuation, verb tense, and voice	Use the same punctuation, verb tense, and voice for each column entry.
Cross-references	Capitalize *Table* when it is used as a specific reference in text and followed by a number.
Footnotes	For guidelines on using table footnotes, see Footnotes.
Introduction	Introduce formal tables (tables with captions and numbers assigned to them) in the text preceding the table, so that users can relate the text to the table.
Not available or applicable	To indicate that an item is not available or not applicable in a table, use an em dash (—). (Do not use a hyphen or N/A.)
Numbers	Use Arabic numerals for numbers in a table. (Do not spell them out, even when they are less than 10.) Do not use the pound sign (#) as an abbreviation for *number*, but use *no.* instead.
Page breaks	Do not leave one table row at the top or bottom of a page.
Ranges of numbers	See Ranges of Numbers.
Units of measure	Use abbreviations for units of measure in tables. See Units of Measure.

Glossaries

A glossary is an alphabetical list with brief definitions of the specialized terms and abbreviations used in a publication. Glossaries are optional in Cisco technical content.

Abbreviations and acronyms	You can include an abbreviation or acronym and its spelled-out form as glossary terms. If you include both, put the definition with the abbreviation or acronym and use a *See* reference with the spelled-out form. If you use only one, choose the form that is likely to be more familiar to your readers. In a short glossary (fewer than two pages), one form of the expression is usually adequate.
New terms	In the glossary, list any term that is treated as a new term (italicized) in the text of a publication.
Placement	Place the glossary at the end of the publication.
Related terms	To refer to a related term, use a *See also* reference.
Standard capitalization	Capitalize glossary terms only if they are normally capitalized.

Part Numbers

Customer-facing technical publications are assigned unique 78- part numbers to facilitate customer ordering and product kitting. All customer-facing technical publications that ship with a product (on paper, on CD, or by email), that is, all customer-facing technical publications that are structured in a manufacturing bill of materials (BOM), require a 78- part number. Work with your product engineer for all part number requests.

Note: OL- part numbers are no longer used on documents that are published online only. Instead, online-only documents should have a “First Published” date and a “Last Updated” date on the title page for a book or immediately after the title for a single-file document.

Part Numbers

Writing About Commands and CLIs

This chapter describes the command syntax, punctuation, and typographic conventions that are used in documenting commands. These conventions apply to the command syntax used by most writing groups at Cisco. If the products that you write about have very different software command syntax than what is outlined here, different conventions for syntax and style tagging may apply.

This chapter also includes links to the IWG (*Guidelines for Writing Single-Sourced Cisco IOS Documentation*) and the XWG (*Cisco XML Writing Guidelines*).

Command Syntax Conventions

Command syntax includes the following elements:

- Name of the command
- Keywords: characters that a user enters
- Arguments: placeholders for user-supplied values
- Notational conventions: conventions used to indicate choices that the user must make

Notational Conventions

Braces ({ })

Usage

Use braces to group alternative, mutually exclusive elements that are part of a required choice.

Format

Use plain font (not bold or italic) for braces in command syntax. Do not add spaces immediately inside the braces.

Example

{in | out}

Common Usage Problems

- Failing to have the number of opening braces match the number of closing braces
- Using braces around just a single element

Brackets

Angle Brackets (< >)

Usage

- In contexts that do not allow italic, such as ASCII output, use angle brackets for arguments.
- In examples, use angle brackets to indicate a character string that the user enters but that does not appear on the screen, such as a password.

Format

Use plain font (not bold or italic) for angle brackets in command syntax. Do not add spaces immediately inside the brackets.

Example

```
<host-ip-address> <hostname> <domain> <hostname>
login: root
Password: <root-password>
```

Common Usage Problems

Failing to have the number of opening brackets match the number of closing brackets.

Square Brackets ([ ])

Usage

Use square brackets to present optional elements.

Format

Use plain font (not bold or italic) for square brackets in command syntax. Do not add spaces immediately inside the brackets.

Example

ip route-cache [cbus]

Common Usage Problems

Failing to have the number of opening brackets match the number of closing brackets.

Vertical Bar (|)

Usage	Use a vertical bar to separate alternative, mutually exclusive elements of a choice. Use a vertical bar in conjunction with braces or brackets; the braces or brackets bound the choice and identify it as required or optional.
Format	Use plain font (not bold or italic) for a vertical bar in command syntax. Add one space on either side of a bar. Example {**best-effort** | **controlled-load** | **guaranteed-delay**}
Common Usage Problems	Failing to bound the elements of a choice with braces or brackets

Ellipsis (...)

Usage	Use an ellipsis after a syntax element to indicate that the element can be repeated.
Format	Use plain font (not bold or italic) for an ellipsis in command syntax. Use three consecutive nonbolded periods without spaces to form the ellipsis. Example **x25 pvc** *protocol address* [*protocol2 address2* [... [*protocol9 address9*]]]

References to Commands in Text

As a general rule, Times font is used for text.

Command modes	Use plain font (not bold or italic), lowercase for command modes (for example, privileged EXEC mode, global configuration mode, and interface configuration mode). Example To display entries in the BGP routing table, use the **show ip bgp** command in privileged EXEC mode.
Command names, keywords, and arguments	Render command names in bold. Render keywords and punctuation that is part of a command in bold. Render arguments in italic. Examples **controller t1** *dial-shelf/slot/t3-port*:*t1-num* Use the **show running-config** command to display the results. Router(config)# **dial-peer voice** *tag* **pots** **Note:** For command-syntax tagging instructions, see the Command Reference Tagging Guidelines for the Cisco IOS Doc Set.
Indenting lines	On a command reference page, if command syntax, when it is formally presented above the syntax-description table, wraps onto more than one line, indent all lines after the first line 0.25 inch.
Introductory sentences	Do not leave a sentence that introduces command syntax or an example at the bottom of one page when the syntax or example is at the top of the next page.

Listing the "no" form of a command

When describing the syntax of a command on a command-reference page (including the syntax of a **debug** command), list the command and the **no** form of the command on separate lines.

Example

debug ip mrouting [*group*]
no debug ip mrouting [*group*]

Punctuation

Render punctuation that is part of a command in bold. Such punctuation typically includes slashes, colons, and periods.

Example

controller t1 *dial-shelf/slot/t3-port*:*t1-num*

Using as verbs

In general, do not use commands as verbs.

Correct: Use the **cd** command to change to the xxx directory.

Incorrect: CD to the xxx directory.

Exception You can use *ping* (from the **ping** command) as a verb because there is no good English alternative.

Example

If you need to boot from a server over the network, first ping the server from the ROM software.

Examples of Command Elements Within the Command Syntax

Command Elements	Meaning
access-list-number	You must provide a value for the *access-list-number* argument.
voip	You must enter **voip**. **Note:** Because there is only one keyword, it is not enclosed in braces.
[*seconds*]	You have two choices: ■ Choose no option. ■ Provide a value for the *seconds* argument.
{**permit** | **deny**}	You have two choices: ■ Enter permit. ■ Enter **deny**. **Note:** The keywords are mutually exclusive; you must enter one or the other, but not both.
{**aurp** | **eigrp** | **rtmp**}	You have three choices: ■ Enter **aurp**. ■ Enter **eigrp**. ■ Enter **rtmp**.

Command Elements	Meaning
[**in** | **out**]	You have three choices: ■ Choose no option. ■ Enter **in**. ■ Enter **out**.
[**timeout** *minutes*]	You have two choices: ■ Choose no option. ■ Enter **timeout** and provide a value for the *minutes* argument.
[*port*] [*source*]	You have four choices: ■ Choose no option. ■ Provide a value for the *port* argument. ■ Provide a value for the *source* argument. ■ Provide values for both the *port* and *source* arguments.
[**pvc**] [*type number*]	You have four choices: ■ Choose no option. ■ Enter **pvc**. ■ Provide values for both the *type* and *number* arguments. ■ Enter **pvc** and provide values for both the *type* and *number* arguments.
[*type number* | **cisco**]	You have three choices: ■ Choose no option. ■ Provide values for both the *type* and *number* arguments. ■ Enter **cisco**. **Note:** Because the vertical bar represents an exclusive OR, you cannot choose both **cisco** and values for the *type* and *number* arguments.
[**speed** {**56** | **64**}]	You have three choices: ■ Choose no option. ■ Enter **speed 56**. ■ Enter **speed 64**. **Note:** If you enter **speed**, you must also enter either **56** or **64**. Because the vertical bar represents an exclusive OR, you cannot choose both **56** and **64**.

Command Elements	Meaning
[**appletalk** [*network*]]	You have three choices: ■ Choose no option. ■ Enter **appletalk**. ■ Enter **appletalk** and provide a value for the *network* argument. **Note:** You cannot provide a value for the *network* argument without first entering the **appletalk** keyword.
[**appletalk** [*network*] [*group-address*]]	You have five choices: ■ Choose no option. ■ Enter **appletalk**. ■ Enter **appletalk** and provide a value for the *network* argument. ■ Enter **appletalk** and provide a value for the *group-address* argument. ■ Enter **appletalk** and provide values for both the *network* and *group-address* arguments.
method1 [...[*method6*]]	You must provide a value for the *method1* argument. You have the option of providing values for the *method2* through *method6* arguments.

Interactive Examples

Interactive examples show dialog between the system and the user: the system displays a prompt, and the user enters something in response. Installation scripts are examples of interactive examples. The following is a simple interactive example:

```
hostname# pkgadd -d software.pkg

Select the packages that you wish to add (or 'all' to add all packages). all
```

Courier (monospace, fixed-width) font is used for interactive examples.

Render screen displays, prompts, and scripts in a monospace (fixed-width) font. Insert one space between the prompt and the text that the user enters. Insert a blank line between the command and the output.

Example

```
Router# show running-config interface serial 1

Building configuration...
Current configuration:
!
interface Serial1
no ip address
no ip directed-broadcast
no ip route-cache
no ip mroute-cache
shutdown
end
```

Keyboard Keys

As a general rule, Times font is used for keyboard keys.

Simultaneous use of keys

To indicate that different keys are to be pressed simultaneously (as in a keyboard shortcut), use the plus sign (+) or the hyphen (-) according to the operating system or application in question, without spaces. Use the plus (+) sign for Windows and hyphen (-) for Mac.

Examples

If the screen freezes, press **Ctrl+Alt+Delete** (Windows).

To empty the trash, press **Option-Shift-Command-Delete** (Mac).

Bold

Render names of keys or key sequences in bold.

Example

Paste copied text with **Ctrl+V** (Windows) or **Command-V** (Mac) key combination.

Capitalization

Use initial capitalization for key names, regardless of how they are actually labeled, unless the case is important. Do not capitalize the word *key*.

Example

Ampersand key, **Backslash** key, **W** key, and the **Ctrl+C** (Windows) or **Command-C** (Mac) key combination.

Generic references

Use a lowercase italic **x** to refer to a generic letter key.

Use a lowercase italic ***n*** to refer to a generic number key.

Use as nouns or adjectives

Use key names as either nouns or adjectives. Do not use them as verbs.

Examples

Press **Return**. (noun)

Press the **Shift** key. (adjective)

For other Mac key combinations, see the Reference Material section.

Punctuation Formatting Conventions

Commands

Use bold for punctuation that the user enters as part of a command.

Example

tftp-server flash device:*filename*

Nested parentheses

When a parenthetical phrase contains another parenthetical phrase, use brackets for the inner phrase and parentheses for the outer phrase.

Example

Use the abbreviation *no.* for number (not the pound sign [#]).

Exception When a software release number that includes parentheses is embedded in another set of parentheses, leave the parentheses in the software release number; do not change the parentheses to brackets.

Correct: (Cisco IOS Release 12.1(2)T)

Incorrect: (Cisco IOS Release 12.1[2]T)

Typographic Conventions for CLIs

This section describes the typographic conventions to use when writing about CLIs.

For information about conventions to use when writing about GUIs, see Typographic Conventions for Graphical Elements.

Bold

Commands and keywords

Render command names and keywords in bold.

User entries within interactive examples

Use bold for text references to user entries that are part of an instruction.

Example

Enter **setup** at the prompt.

Italic

Arguments

Render argument names in italic.

Additional Guidelines for Command Reference Material

- Guidelines for Writing Single-Sourced Cisco IOS Documentation

  The document, *Guidelines for Writing Single-Sourced Cisco IOS Documentation* (also known as the IWG), is intended for use by writers and editors of Cisco IOS documentation. It describes how to develop Cisco IOS documentation for a single-sourced authoring environment. The guidelines apply to documentation such as new-feature modules, configuration modules, software configuration guides, master command pages, and command references.

- Cisco XML Writing Guidelines

  The document, *Cisco XML Writing Guidelines* (also known as the XWG) provides guidelines about documenting commands in command reference material, including information about the XML tags that are to be used.

Note: There is a certain amount of overlap in the content of the IWG and the XWG. However, because both these guides contain sections with unique information, we recommend that you refer to both of them.

Writing About GUIs

Changes have been made to element font styles throughout this chapter so that they align to the current XMART element rendering. Previously, only elements in user actions were in bold font; now elements in descriptive text also appear in bold font. Previously, filenames, directory names, and folder names were in plain text; now these elements appear in courier font. To achieve the correct element font style, apply the semantically correct tag for the element (depends on your authoring platform). For example, for directory names, filenames, and pathnames, use the <filepath> tag in a DITA authoring system.

This chapter addresses software applications that use a GUI. This chapter also includes guidelines for online help.

Because Cisco technical writers and editors require clear definitions for application terms and typographic conventions, and methods for writing and presenting this information, this chapter describes all elements in the Windows and UNIX graphical software applications (referred to hereafter simply as “applications”) that Cisco technical writers document and provides guidelines for writing about them.

Documenting Applications

Users of Cisco applications are familiar with Windows or UNIX operating systems. Therefore, you do not need to explain basic operations, such as using a mouse or choosing options from menus. Explain such operations only if they are unusual or nonstandard.

As in all technical content, provide only the details that the user needs to understand the process or to complete the operation. (For example, say “Click **Close**” rather than “Click the **Close** button.”)

Note: Always ensure consistency in the way procedures are documented across a book. If possible, ensure consistency across the entire document set of a given platform or product.

Using Common GUI Verbs

Table 1 on page 78 shows the preferred usage and examples for the most common verbs used to describe GUI operations.

Table 1 Common GUI Verbs

Verb	Usage	Examples
Check Uncheck	When activating or deactivating a check box, use *check* and *uncheck*. **Note:** Always include the words "the" and "check box."	You can check or uncheck the check box to activate or deactivate an option. To add a new entry, check the **Insert** check box. To clear the entry, uncheck the **Insert** check box.
Choose	When guiding a user through menu options or drop-down lists, use *choose*. To separate options in a menu path, use right-angle brackets (>) surrounded by spaces. Make sure that line breaks occur after an angle bracket—not before (that is, a right-angle bracket should not be the first character on a line). Do not use *select* to mean *choose*. **Note:** Right-angle brackets are in bold to minimize the time spent formatting.	Use the **Default Properties** window to choose your default settings. Choose **Start > Programs**. From the **File** menu, choose **Save As**. Choose **File > Save As**. From the **Replication** drop-down list, choose **Server1**. Choose **Replication > Server1**.
Click Double-click Right-click	For actions involving the left mouse button, use *click* and *double-click*. Do not specify the left mouse button and do not use the term *left-click* unless the context makes it necessary. For actions involving the right mouse button, use *right-click*. **Note:** If an item can be selected by clicking it—for example, an icon, radio button, tab, folder, table entry, or row—use *click* to emphasize the process of selecting it. ■ The object of *click* is the window object being clicked—not the mouse button. ■ Do not use *click on*. But *click in* is acceptable to mean clicking anywhere in a window to activate it. ■ Do not use *point and click* as a verb. ■ When referring to command buttons, use *click* rather than *press*. ■ When documenting procedures for handheld devices that use a pen or stylus instead of a mouse, use *tap* and *double-tap* instead of *click* and *double-click*.	To activate a window, click in that window. Click the **Local network only** radio button. Click **Next**. Click **OK**. Right-click the **Edge_router_5** icon. To view the parameters for the current network, click the **Passwords** tab. Click in the **Provider Network** window to activate the window. Double-click an entry in the table to open the **Add Virtual Link** dialog box.
Close	To dismiss a window or document, use *close*. To quit an application, use *exit*.	You must close the **Default Properties** window for the new settings to take effect. To close this window, click **Close**.

Table 1 Common GUI Verbs (continued)

Verb	Usage	Examples
Drag Drag and drop	To move the mouse pointer while holding down the mouse button, use *drag*. This process is often used to move objects or to select text. To drag and release an object to move text or initiate an action, use *drag and drop*, or just *drag*.	You can also drag files from the desktop or the **File Browser** window. Dragging and dropping a file icon onto the **Printer** icon prints the file. Drag the **Router** icon to the left pane.
Enter	To insert information or data from the keyboard, use *enter*.	You can use the **Comments** field to enter descriptive information about the router. Enter additional device information in the **Comments** field. Enter a value in the **List** field, or click the drop-down arrow to view defined settings.
Exit	To quit an application, use *exit*. To dismiss a window or document, use *close*.	You must exit all the applications before continuing with the product installation. To exit this application, click **Exit**.
Hover	To move the mouse pointer over a clickable object, such as icons, windows, hyperlinks, or other objects on the screen, but not actually clicking the left or right mouse button. The action of moving the mouse pointer over the item triggers events such as pop-up windows or description boxes.	Hover the mouse pointer over the graph to view detailed device information. Hover the mouse pointer over a thumbnail image in the grid to view the image in its original size.
Open	For displaying a window, loading a document, or starting an application, use *open*. **Note:** You do not need to specify the method of opening, such as double-clicking or choosing **File > Open**, unless one method is preferred or the method is not clear from the context.	You must open the **Default Properties** window to choose your default settings.
Press	For keystrokes or keystroke sequences, use *press*. ■ Do not use *tap*, *hit*, *strike, depress*, or *touch*. ■ Do not use *press* for window objects. When referring to command buttons, use *click* rather than *press*. ■ Do not use *press* for mouse buttons.	Press **Alt+F** (Windows) or **Command-G** (Mac) to find the next occurrence of the item previously found.

Table 1 Common GUI Verbs (continued)

Verb	Usage	Examples
Resize	Use *resize* rather than *drag the resize corner*.	To display more characters per line, resize the **Text Editor** window.
Select Deselect	To mark or unmark text or other elements that are copied or cut, use *select* or *deselect.* ■ Do not use *select* for command buttons. Use *click* instead. ■ Do not use *select* for menu options or drop-down lists. Use *choose* instead.	To complete the product configuration, you must select and copy the list of routers in the configuration file to the `Properties` file. From the **Routers** drop-down list, choose **AR1** and then click **Copy Configuration**. Choose **Routers > AR1** and then click **Copy Configuration**.
Tap	Use *tap* and *double-tap* instead of *click* and *double-click* when documenting procedures for handheld devices that use a pen or stylus instead of a mouse. Tap means to press the screen and then lift the pen or stylus.	To make a selection, tap the screen.

Writing About Windows, Pages, Menus, and Dialog Boxes

This section defines the standards for writing about windows, pages, menus, and dialog boxes in Cisco technical content. If the GUI elements that you are writing about are not described in this section, you can also see Reference Material for useful resources that might help you define elements that are more difficult to describe.

Note: Ensure that you maintain consistency between the names of the elements in the application and the names of those elements that you use in your technical content. However, use initial capitalization when you refer to a graphical element, even if it is spelled without initial capitalization in the application. For example, if the application element is **Sign in**, do not use another term, such as **Log in**, in your technical content. Instead, use **Sign In**.

Windows and Pages

A window is the main area in which Cisco application elements appear. We recommend that you use the word *window*, rather than *screen*, to refer to a window. Use the word *screen* to describe screens for only hand-held devices.

A page is one of a collection of web documents that make up a website. In a wizard, use the word *page* instead of *screen* to refer to an individual screen.

Window elements include, but are not limited to, the following:

- Fields, Titles, and Information Areas
- Status Bar
- Control Tools
- Toolbars
- Icons

Fields, Titles, and Information Areas

Figure 1 on page 80 shows a typical UNIX CDE window with fields, window and area titles, and information areas.

Figure 1 Window with Fields, Area Titles, and Information Areas

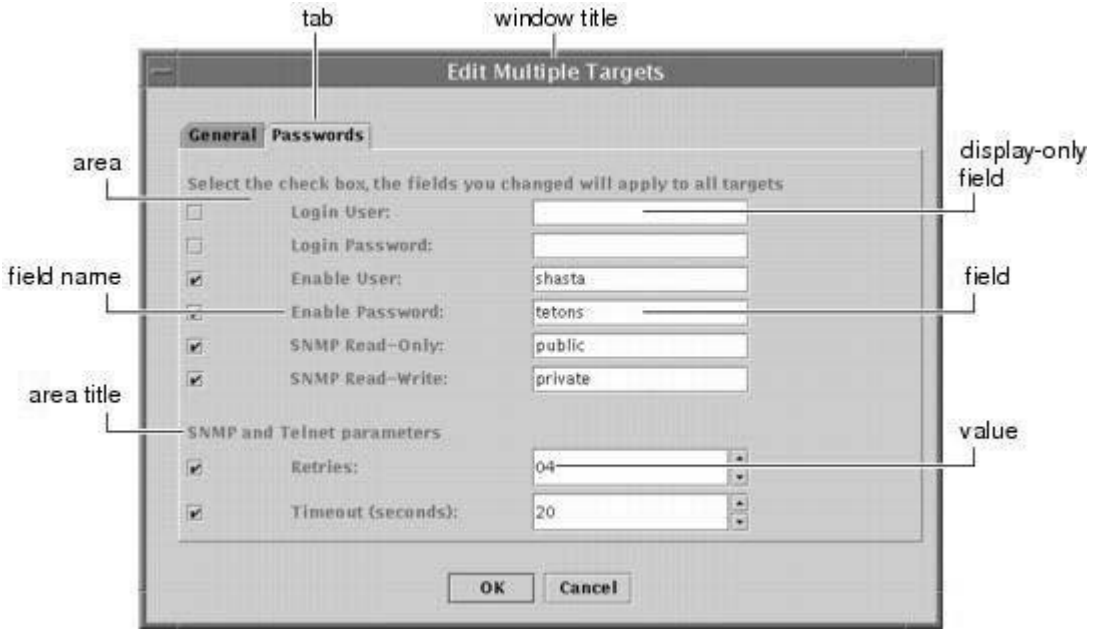


Table 2 on page 81 defines the fields, titles, and information areas shown in Figure 1 on page 80 and indicates how to use them in Cisco technical content.

Table 2 Conventions for Fields, Titles, and Information Areas

Window Element	Usage	Examples
area	A group of related options (often surrounded by borders) that separate it from other areas in a window. ■ Use initial capitalization when you refer to the area title. ■ Use lowercase for the term *area*.	The **Edit Multiple Targets** window contains the **SNMP and Telnet Parameters** area.
display-only field	A field that cannot be defined by the user, but whose value is visible in the window. ■ Following the field name and a colon, type *Display only* (use italic, and follow the words with a period); then include the field description. Add a space after the colon.	**Login User**: *Display only*. This field shows the name of the user currently logged in to the network.
drop-down list	■ Use lowercase for *drop-down list*. ■ Use initial capitalization for the drop-down list name.	The **Replication** drop-down list displays all secondary servers. From the **Replication** drop-down list, choose the server that you want to replicate. From the **Replication** drop-down list, choose **Server1**.

Table 2 Conventions for Fields, Titles, and Information Areas (continued)

Window Element	Usage	Examples
field	■ Use lowercase for the term *field*. ■ Use initial capitalization for the field name. ■ Use a colon to separate the field name from its description. Add a space after the colon.	The valid values for the **Timeout** field are the numbers in the range from 4 to 30. **Timeout**: A valid value for this field is a number in the range from 4 to 30. In the **Timeout** field, enter a value from 4 to 30.
pane	A pane is a window within a window or one part of a window that is divided into separate parts. Figure 3 on page 83 shows an example of a window that includes a pane. ■ Use initial capitalization for the name of the pane. ■ Use lowercase for the term *pane*.	All PVC paths are listed in the pane in the **PVC Path Configuration** window. To view available PVC paths, double-click the PVC Path folder in the **Hierarchy** pane.
slide-in pane	A pane that slides over an open window from the side. Used in scenarios where you want to display additional content (a notification, a user's profile information, and so on) that does not fit into a tooltip. ■ Use initial capitalization for the name, if any, of the pane. ■ Use lowercase for the term *slide-in pane*.	To view each application's metrics in a slide-in pane, click the radio button next to the application. Click a hyperlinked device category to view additional details in the **Device Health Summary** slide-in pane.
tab	■ Use initial capitalization for the name of the tab. ■ Use lowercase for the term *tab*. ■ Do not use *tab* to refer to the entire area that appears when the tab is clicked.	When you click the **Passwords** tab, you can view the password parameters that are assigned to the current network. To view the parameters for the current network, click the **Passwords** tab.
window title	■ Use initial capitalization for the window title. ■ Use lowercase for the term *window*.	Use the **Edit Multiple Targets** window to change general and password parameters.

Status Bar

A status bar usually appears at the bottom of the window and keeps you informed of the current state of the application. Use lowercase for the term *status bar*.

Figure 2 on page 82 shows a status bar that appears at the bottom of a window.

Figure 2 Status Bar

Control Tools

Figure 3 on page 83 shows a window with control tools. The control tools allow a user to manipulate a window, choose an option, or perform an action in the window.

Figure 3 Control Tools

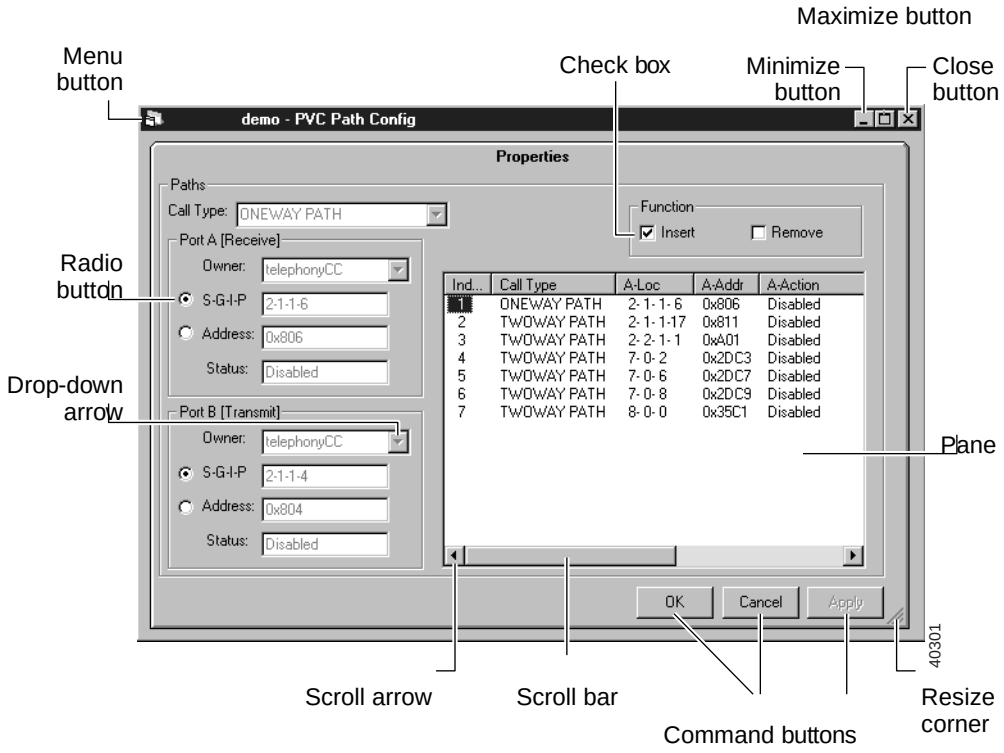


Table 3 on page 84 defines each control tool in a window and indicates how to refer to it in Cisco technical content.

Table 3 Control Tool Conventions

Control Tool	Usage	Examples
Check box	■ Use initial capitalization for the name of the check box. ■ Use two words for the term *check box*. ■ Use lowercase for the term *check box*.	The **Insert Text** check box allows you to add a new entry. To add a new entry, check the **Insert Text** check box. To clear the entry, uncheck the **Insert Text** check box.
Close button	■ Use initial capitalization for the name of the button. ■ Use lowercase for the term *button*.	The **Close** button allows you to exit the active window. To exit the **Path Config** window, click **Close**.
Command button	■ Use initial capitalization for the name of the button, even if it is spelled without initial capitalization. ■ Use lowercase for the term *button*. ■ Do not use the term *command* in the user action.	The **Cancel** button allows you to discard any changes you made to the database. To discard any changes you made to the database, click **Cancel**.
Maximize button	■ Use initial capitalization for the name of the button. ■ Use lowercase for the term *button*.	The **Maximize** button allows you to enlarge the window. To enlarge the window, click **Maximize**.
Minimize button	■ Use initial capitalization for the name of the button. ■ Use lowercase for the term *button*.	The **Minimize** button places the window in the background. To place the window in the background, click **Minimize**.
Radio button	■ Only one radio button in a set of two or more radio buttons can be active at one time. Unlike check boxes, radio buttons are mutually exclusive. ■ Use initial capitalization for the name of the radio button. ■ Use lowercase for the term *radio button*.	The **IPv6 Only** radio button allows you to determine the type of IP addressing used. To determine the type of IP addressing used, click the **IPv6 Only** radio button.
Resize corner	Use *resize* rather than *drag the resize corner*.	To display more characters per line, resize the **Text Editor** window.
Scroll arrow	■ Use two words for the term *scroll arrow*. ■ Use lowercase for the term *scroll arrow*.	The scroll arrow allows you to view options that do not appear in the list. To view all the options in the list, click the scroll arrow.
Scroll bar	■ Use two words for the term *scroll bar*. ■ Use lowercase for the term *scroll bar*.	The scroll bar allows you to view all the fields in the window. To view all the fields in the window, drag the scroll bar.

Toolbars

A toolbar contains a series of icons referred to as *icons*. Each icon represents a common task within the software application. The toolbar is usually located directly below the menu bar. (Multiple toolbars are available in some applications.)

The active window determines which icons are available to users. Icons that do not apply to the active window are normally disabled, and appear dimmed. When the user points to an active icon, a tooltip appears that describes the function of the icon.

Figure 4 on page 85 shows an example of icons that typically appear in a toolbar and an example of a tooltip.

Figure 4 Toolbar

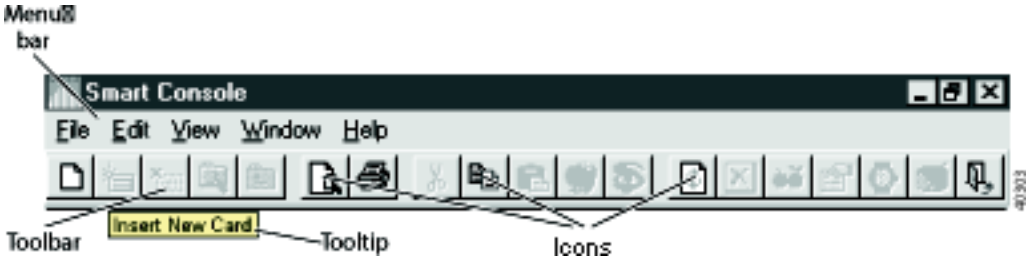


Table 4 on page 85 shows how toolbar elements are used in Cisco technical content.

Table 4 Toolbar Conventions

Window Element	Usage	Examples
Icon	■ Use initial capitalization for the name of a icon. ■ Use lowercase for the term *icon*.	To print the selected report, click the **Print** icon.
Toolbar	■ Use one word for the term *toolbar*. ■ Use lowercase for the term *toolbar*.	The toolbar contains a series of icons.
Tooltip	■ Use one word for the term *tooltip*. ■ Use lowercase for the term *tooltip*.	When you point to an active icon, a tooltip appears.

Icons

When documenting GUI windows containing icons, follow this procedure:

1. Ensure that all the icons have a name or label. Typically, this name is available as a tooltip or a label above or below the icon. If, however, an icon is not labeled in a GUI, talk to developers or marketing, use industry standards, or ask other writers or editors to come up with the best label for the icon. You can also refer to the *Prime UX Evolution Style Guide* listed in Reference Material.
2. After you have the names of all the icons, define them for your users in one of the following ways:
   - If you have more than one icon to define, create a table where you list each icon, an image of the icon, and its name.
   - If you only have only one icon to define, you can define it within the text at the first reference, by including an image of the icon, the label within parentheses, followed by the word “icon.”

Examples

From the **Topology** map, click the <*Image*> (**Filter**) icon. In subsequent references, refer to the icon by its label.
From the **Topology** map, click the **Filter** icon.

Menus

A menu is a list of options in an application. A menu can contain one or more of the following:

- Submenu: a second- or third-level menu that contains additional submenus or options
- Option: an entry in a menu or submenu, including commands

When you write Cisco technical content, use the terms *menu* and *submenu*. Do not use the term *subsubmenu*.

Figure 5 on page 86 shows a menu hierarchy: the **Insert** menu and its submenus and options. The **AutoText** submenu shows a list of options: **Attention Line**, **Closing**, and so forth.

Figure 5 Menu Hierarchy

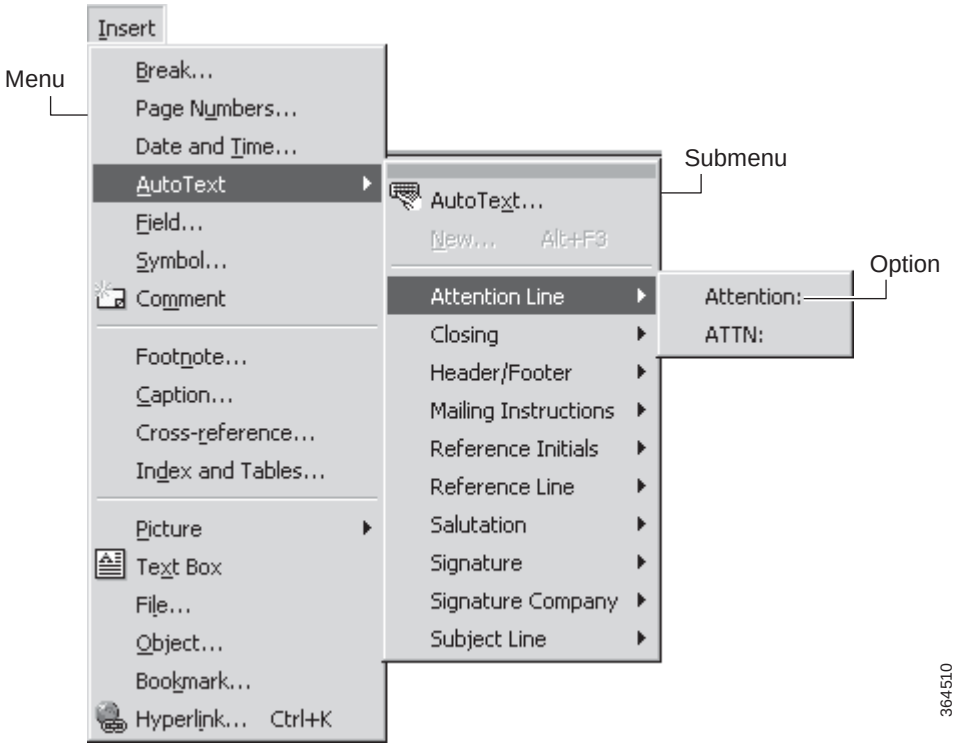


Table 5 on page 87 shows how menu elements are used in Cisco technical content.

Table 5 Menu Conventions

Window Element	Usage	Examples
Menu and submenu	■ Use initial capitalization for the names of a menu and submenus. ■ Use lowercase for the term *menu* or *submenu*. ■ Do not use the term *cascading menu*. ■ When referring to a menu that appears when you click a button, use the term *drop-down* rather than *pull-down*, which is a term specific to Apple. ■ If you refer to a menu or submenu and its options, use bold for the menu names, their options, and the right-angle brackets that separate them. ■ At a line break, use a nonbreaking space to prevent an angle bracket from moving to the beginning of the next line.	You can set the document page layout by choosing the **Page Layout** option from the **Format** menu. When you navigate to a menu option that is a single step from the top-level menu, use one of the following methods: From the **Graphics** menu, choose **Object Properties**. or To change the column width, choose **Graphics > Object Properties**. When you navigate to a menu option that requires stepping through more than two menu levels, use the following method: To change the column layout, choose **Format > Page Layout > Column Layout**.
Option	■ Use initial capitalization for the name of the option. ■ Use lowercase for the term *option*.	The **AutoText** option allows you to change the numbering properties. From the **AutoText** option, choose **Attention Line**.

Dialog Boxes

A dialog box is a pop-up window that generally appears in the active window. In most cases, the user cannot continue navigating or entering data without first performing an action within the dialog box.

This section defines the standards to follow when you write about dialog boxes in Cisco technical content.

Figure 6 on page 87 shows a typical dialog box that appears in Cisco software.

Figure 6 Typical Dialog Box

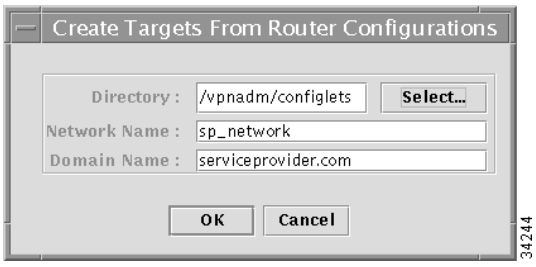


Table 6 on page 88 provides conventions for using the term *dialog box* in Cisco technical content.

Table 6 Dialog Box Conventions

Window Element	Usage	Examples
Dialog box	■ Use lowercase for the term *dialog box*. ■ Use initial capitalization for the name of the dialog box. ■ Do not use *dialog* to mean *dialog box*.	You can specify the configuration file directory in the **Create Targets from Router Configurations** dialog box. In the **Create Targets from Router Configurations** dialog box, enter the directory path and network name, and then click **OK**.

Tips and Examples

This section provides writing tips and examples associated with the conventions described in Writing About Windows, Pages, Menus, and Dialog Boxes.

Do not tell a user how to access each field in a window. Instead, provide the basic steps on how the user navigates to the window, and then define each field and its parameters.

■ Guiding a User Through Window Elements, page 88

■ Documenting Field Definitions, page 89

Guiding a User Through Window Elements

- When you guide a user through a window, we recommend that you organize the tasks into discrete steps.
- Separate the steps the user must take from the informational text. The user can then move quickly through the procedure without having to sort out the task steps from supplementary information.
- Make each task a separate step.
- When you describe a menu sequence, present the sequence *in the order in which it occurs*. For example, write “From the **File** menu, choose **Save As**” instead of “Choose **Save As** from the **File** menu.”
- If there are multiple ways to complete a specific task, we recommend that you describe the method commonly used by most customers; then provide the alternate methods in a different location. (Be sure to include a cross-reference to the location of the alternate methods.)

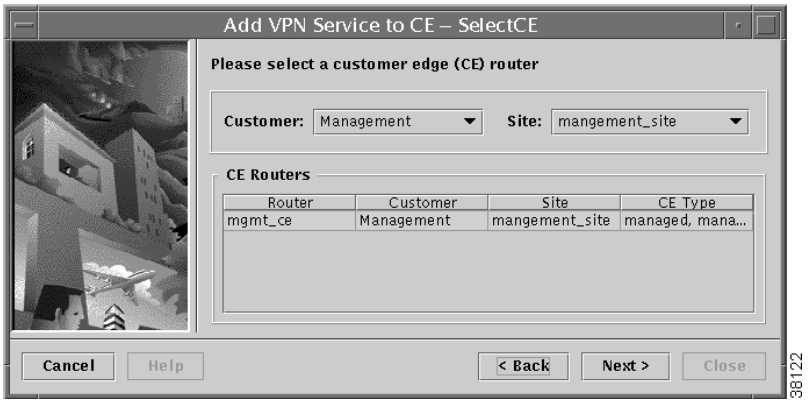
The following example guides a user through the elements in a particular window.

Selecting the Management Customer Router in the Service Provider Network

1. From the VPN Console, choose **Provisioning > Add VPN Service**.

   The **Add VPN Service to CE—SelectCE** window appears.

   Use this window to choose the router designated as the management CE.



2. From the **Customer** drop-down list, choose the name of the customer.
3. From the **Site** drop-down list, choose the name of the site.

   The name of the router designated as the management CE appears in the **CE Routers** area.
4. When you complete the selections in this window, click **Next**.

Documenting Field Definitions

This section provides a suggested method for describing reference content, such as field names, field parameters, default values, and so forth. When you define a field in Cisco technical content, use one of the following formats:

- Text format
- Table format

Text Format

In text format, use a colon to separate a field name or valid value from its description. Add a space after the colon. Note that the table format is the more appropriate format for reference content.

Table Format

When you write about window elements by using the table format, all conventions listed in Table 2 on page 81 apply, except that it is not necessary to use a colon to separate a field name and the definition, because the table cells are the separators.

Table 7 on page 89 shows an example of how to present field definitions when you use the table format.

Table 7 Field Definitions in Table Format

Field Name	Definitions
Password Parameters	
Login User	*Display only*. Shows the name of the valid system user.
Login Password	*Display only*. Shows the password associated with the login user.

Table 7 Field Definitions in Table Format (continued)

Field Name	Definitions
SNMP and Telnet Parameters	
Retries	The number of times the system attempts to connect by means of SNMP or Telnet. The default value is 4.
Timeout (seconds)	The number of seconds the device attempts to connect remotely before it times out. Valid values are as follows: ■ 4 to 30 ■ 0: The device continues its attempt to connect remotely, without timing out. This is the default value.

Typographic Conventions for Graphical Elements

This section defines the typographic conventions to follow when writing about applications: when you include the names of windows, panes, areas, dialog boxes, tabs, filenames, and other graphical elements in Cisco technical content.

Note: For information about conventions to use when writing about CLIs, see Typographic Conventions for CLIs.

Capitalization

Use initial capitalization for the proper names of graphical elements (such as windows, panes, dialog boxes, tabs, and menus), even if it is spelled without initial capitalization in the application.

For generic terms, such as *window*, *pane*, *dialog box*, *tab*, or *menu*, use lowercase.

Example

To change the routing properties for the device, open the **Default Properties** window.

Some terms, such as *open*, *close*, *file*, or *format*, can be used in either a generic sense or a proper sense. If the term refers to the name of a graphical element, use initial capitalization. But if the term is used in descriptive text, use lowercase.

Examples

Click the **Open** window.
In the left pane, open the Addresses folder.

For more information, see Writing About Windows, Pages, Menus, and Dialog Boxes.

Punctuation

When you document menu options, field names, or other graphical elements that appear with punctuation, do not include the punctuation that is used in the window. The following are examples:

- An ellipsis (…) following a menu option indicates that choosing that option opens a dialog box (for example, **File > Preferences...**). Do not include the ellipsis as part of the menu option.

  Example

  From the **File** menu, choose **Preferences**.

- A colon (:) following a field name (for example, **Login:**) indicates that a response is to be typed. Do not include the colon as part of the field name.

  Example

  Enter the network administrator name in the **Login** field.

Font Style

Bold

Use bold font for keystrokes, menu options, menu and submenu names, window titles, wizard names, tab names, button names, icon names, and dashboard names.

If a command or menu option includes punctuation, such as a hyphen or right angle bracket, bold the entire command, including the punctuation. Do not bold the punctuation that follows the command or menu option (such as a period or comma).

Italics

There are no specific usages for italics in GUIs.

Conventions Usage and Examples

Table 8 on page 91 lists usage and examples of typographic conventions for graphical elements and related items.

Table 8 Typographic Conventions for Graphical Elements and Related Text

Graphical Element	Usage	Examples
Arrow keys	Use initial capitalization for the names of arrow keys.	You can use the **Up Arrow** key to scroll up. To move to the next field, press the **Up Arrow** key. To navigate to the previous menu option, press the **Left Arrow** key.
Command names or command options	Use lowercase for command names and their options.	To create a new file, use the **make** command.

Code examples (or lines of code)	Use the font appropriate for examples.
	
	Reflect the use of uppercase or lowercase as shown in the actual code.
		`#include "winnt.h"`
		`#define INSTALL`
		`char make_prog_open`

Directory names, filenames, and pathnames	Use the default font. Capitalize directories, files, and paths as named in the operating system. Separate the elements in a directory path with slashes.	Forward slashes (for UNIX and URLs): Go to `/usr/bin/tmp`. Backslashes (for DOS or Windows): Go to the `Program Files\Windows NT\Accessories` directory.

Table 8 Typographic Conventions for Graphical Elements and Related Text (continued)

Graphical Element	Usage	Examples
Keys or key names	Use initial capitalization for full names and abbreviations. Do not use the ^ symbol to represent the **Control** key.	The **Delete** key is a special function key. The **Page Up** key is a special function key. Depending on the preference in your business unit, you can use the word “key” or not, as shown in these examples: Press **Delete**. Press the **Delete** key. Press **Page Up**. Press the **Page Up** key. We do not recommend using the word “key” with the Spacebar: Press **Spacebar**.
Keystrokes, consecutive	Separate consecutive keystrokes with a comma. (The commas between the keys are also in bold to minimize formatting time.) Use initial capitalization or, for an individual letter, match the case.	You can exit the FrameMaker application by pressing the **Alt**, **f**, and **x** keys consecutively. To exit FrameMaker, press **Alt, f, x**.
Keystrokes, simultaneous	Join simultaneous key names with a plus (+) sign in Windows, and with a hyphen (-) in Mac. (The symbols between key names are in bold to minimize formatting time.)	**Ctrl+P** (Windows) or **Command-P** (Mac) means to hold down the **Ctrl** key or **Command** key and press **P**. To print the current document, press **Ctrl+P** (Windows) or press **Command-P** (Mac).
Menu options, menu name, submenu	Use initial capitalization for menu names. Lowercase the terms *menu* and *submenu.* (The right-angle brackets between menu options are in bold to minimize formatting time.)	You can set the document page numbering attributes by choosing the **Numbering** option from the **Edit** menu. From the **Edit** menu, choose **Links**. Choose **Edit > Document > Numbering**.
Tab titles	Use initial capitalization for tab titles. Lowercase the term *tab.*	When you click the **Passwords** tab, you can view the parameters assigned to the current network. To view the parameters for the current network, click the **Passwords** tab.
Dashboard titles	Use initial capitalization for dashboard titles. Lowercase the term *dashboard*.	The **CMX** dashboard contains multiple tabs.
Window titles	Use initial capitalization for window titles. Lowercase the term *window.*	The **Host** window contains the parameters for the network host.
Wizard names	Use initial capitalization for the name of the wizard application. Lowercase the term *wizard*.	The **IP Repair** wizard contains instructions for setup.

Terms for Touchscreen and Mobile Devices

Use these terms to describe user actions for mobile devices, and for touchscreens such as consoles, tablets, and smartphones.

Term	Definition	Examples
Drag	Refers to the act of moving one finger across the touchscreen of a mobile device. Users can drag to scroll through items or *drag* items such as photos and web pages. Do not use *drag your finger*.	Correct: ■ *Drag* up or down to scroll through your contacts. ■ *Drag* the **Start** icon to the location on the screen where you want it to appear. ■ *Drag* across the text. Incorrect: ■ *Drag your finger* across the text.
Flick	Refers to the act of quickly brushing the finger across a touchscreen to scroll through a list or group of items. Flicking is similar to dragging, but quicker: dragging lets users control how far they scroll in a single motion, whereas flicking relies on momentum, not precise start and end points.	Correct: ■ *Flick* up or down to scroll quickly through your contacts. ■ You can quickly browse your album with a simple *flick*.
Pinch, pinch in, pinch out	Refers to the act of placing two fingers on a touchscreen and then moving them closer together or farther apart. In most cases, you can use *pinch*. If you need to describe the motion in more detail, you can use *pinch out* to describe moving the fingers apart and *pinch in* for moving the fingers together. Do not use *spread* to mean *pinch out*.	Correct: ■ *Pinch* the photo to zoom in or out. ■ *Pinch* the screen to zoom in or out.
Press, press and hold	Refers to the act of pressing and quickly releasing keys on a computer keyboard and mechanical buttons and switches, such as those on a mobile device. Do not use *click*, *hit*, *push*, *tap*, or *type*. Do not use *press* or *long press* when you mean "hold down." Use *touch and hold* (for touchscreens) or *press and hold* (for mechanical buttons). Do not use *press and drag*; use drag.	Correct: ■ *Press* the **Home** button on the iPhone. Incorrect: ■ Tap the **Home** button on the iPhone.
Rotate	Refers to the act of using the thumb and index finger to rotate images and other items on the screen.	Correct: ■ *Rotate* to change the photo's orientation.

Term	Definition	Examples
Swipe	Refers to the act of quickly sliding one or more fingers across a touchscreen to reveal controls or to scroll through documents, lists, or groups of items. Implies a less controlled motion than *dragging*.	Correct: ■ *Swipe* left or right to move between dates. ■ *Swipe* with two fingers to rapidly browse through documents.
Tap, double-tap	Refers to the act of quickly touching and releasing the touchscreen of a mobile device. You can tap with one or more fingers, depending on the device and the action that you are performing. Do not use *tap on*.	Correct: ■ A simple *double tap* lets you zoom in. ■ *Tap* the field and enter your username. ■ *Tap* **Return** to move from one field to another. ■ *Tap* the **video** icon to turn on video. ■ *Double-tap* the photo to zoom in or out. ■ You can zoom in by *double-tapping*.
Touch and hold	Refers to the act of touching a touchscreen and leaving the finger motionless until something happens. Do not use *tap and hold*.	Correct: ■ *Touch and hold* to see a magnified view, and then drag to position the insertion point.
Gestures	Do not refer to touchscreen gestures as finger gestures; use *touchscreen gestures* or simply *gestures*. When you write instructions that include gestures, in general, do not include the word *finger*. However, you can refer to fingers if the gesture involves multiple fingers or is complex. You can also refer to fingers to provide greater detail when you first define or describe a gesture; other occurrences can omit finger. When describing the act of scrolling or navigating through documents and other items, it is often preferable to simply use scroll instead of specific gestures such as *drag*, *flick*, or *swipe*.	Correct: ■ *Flick* left or right. ■ *Touch and hold* the object with one finger, and use another finger to *swipe* in the direction that you want the object to move. ■ *Pinch two fingers* together or apart to zoom out or in. Incorrect: ■ *Flick your finger* left or right.

Branding, Trademarks, and Domain Names and IP Addresses

This chapter describes corporate style guidelines for Cisco technical content.

Cisco Name and Corporate Address

Acronyms

Corporate Marketing policy is not to use the abbreviation “C” for Cisco. For details on this policy, see the “Naming Policies” section of the *Cisco Marketing and Communications Style Guide*.

(Log in to Cisco Brand Exchange, click **Guidelines & Policies**, followed by **Brand Guides**, and then search for the style guide in the page listing.)

In accordance with this policy, either spell out the entire name or use “Cisco” and then form an acronym with the remaining words. As appropriate, insert the phrase “formerly known as [acronym]” in the first reference.

Examples

> Cisco Discovery Protocol (formerly known as CDP)
>
> Cisco Express Forwarding (formerly known as CEF)

Note: Many acronyms that include “C” for Cisco remain in common use. Handle these as follows:

- If the acronym appears in the A-Z Terms, consult with your product marketing manager, and, as appropriate, with your Customer Advocacy (CA) representative on whether to use the acronym.
- If the acronym appears in a GUI or other product label, make any direct references to the label match the label.

Capitalization

Use initial capitalization for the full company name: Cisco Systems, Inc.

Full name	Use the full name, Cisco Systems, Inc., when you want to prominently identify the company (for example, in addresses, on covers of manuals, and in headers or footers). Treat the words *Cisco Systems, Inc*. as a single entity by using a nonbreaking space between words if your authoring tool allows you to do so; do not hyphenate or separate the elements from each other.
General use	For the first use in any chapter or section, use Cisco, *not* Cisco Systems. For subsequent uses within that chapter or section, continue to use Cisco. Minimize the use of the company name to accommodate third-party partners who use Cisco source files to create their own documentation. For additional information, see OEM Guidelines.
Possessive	Avoid using Cisco in the possessive.
Titles of documents	Do not include the word *Cisco* in document titles unless it is part of the product name (for example, Cisco 7500 series). Exception Use the construction *Cisco MIB User Quick Reference* to distinguish the Cisco MIB from other MIBs.

The current corporate address block is maintained in the most recent release of the Title templates for all template suites, which are available in WEM at the following location:

```
Digital Assets/en/us/td/templates
```

Cisco IOS Branding

The Cisco IOS brand is important to Cisco and to its position in the market. It is also important to our partners who want to refer to the brand name to distinguish our products. The name Cisco IOS is trademarked, so it is important to use it properly to protect its trademark status.

Adjectives	Always use Cisco IOS as an adjective followed by a noun (for example, Cisco IOS software).
Releases	Refer to software releases before Cisco IOS Release 10.0 as *system software* in general and *Software Release x.x* if you are referring to a particular release.

Cisco IOS Software Release Naming Convention

When referring to a specific Cisco IOS software release, write “Cisco IOS Release 1*x.x*” or “Cisco IOS XE Release 1.*x.x*.” (The release number increments with each future release.) The words “Cisco” and “Release” are required—do not write “IOS 1*x.x*” or “Cisco IOS 1*x.x*.”

When three or more instances of a Cisco IOS release are used in a sentence, use, for example, “Cisco IOS Release 12.2, Release 12.2(4)T, and Release 15.2(2)T.” Otherwise, use the complete product name, for example, “Cisco IOS Release 12.2 and Cisco IOS Release 15.2(2)T.”

When referring to a previous release, write “earlier than Cisco IOS Release 1*x.x*.” When referring to a subsequent release, write “later than Cisco IOS Release 1*x.x*.”

Company Names, Product Names, and Project Code Names

- Treat company names, product names, and trademarks as single entities. To keep these terms together, place a nonbreaking space between the words if your authoring tool allows you to do so. Do not hyphenate the words or separate the terms from each other.

  Incorrect: This easy-to-deploy desktop integration lets you extend the instant messaging functionality of Microsoft Skype with proven Cisco Unified
  Communications services.

Correct: This easy-to-deploy desktop integration lets you extend the instant messaging functionality of Microsoft Skype with proven Cisco Unified Communications services.

- Use of “Cisco” when two or more models that belong to the same product family are used one after the other in a sentence:
  - When a sentence specifies two models of the same product family, for example, the Cisco ASR 1002 Router and the Cisco ASR 1003 Router, use “the Cisco ASR 1002 Router and the Cisco ASR 1003 Router,” not “the Cisco ASR 1002 and 1003 Routers” or “the Cisco ASR 1002 and 1003.”
  - When multiple series or models of the same family appear in a list, it is acceptable to use the family name once, as in “Catalyst 6500 Series, 4500 Series, 3650 Series, and 2960 Series Switches.”
- Project code names are words used internally to identify Cisco projects. Do not use project code names in public documents. Confirm that code names do not appear in filenames, configuration files, or other published software examples.

  Incorrect: Humperdinck Route Processor

  Correct: Cisco Performance Routing Engine 2 (PRE2) Route Processor

Trademarks

Trademark is the legal word for a name given to a product or service.

Trademarks permit a customer to easily differentiate among competing and related products. A trademark symbolizes a company’s reputation and the goodwill that the company has earned in the marketplace as a result of providing high-quality goods and services; therefore, trademarks are valuable assets. To ensure that Cisco maintains ownership of its trademarks and to protect against diminution in the value of these assets, it is important that these trademarks be used properly in all written materials.

Cisco Trademarks

The current trademark blocks are available in WEM at `Digital Assets/en/us/td/templates/boilerplate/Trademarks`. The number at the end of the trademark block indicates the version.

Follow these guidelines for trademarks.

Acronyms	If a trademark is an acronym, do not spell out the acronym.
Adjectives	Use trademarks as adjectives, not as nouns. When a trademark is used as a noun, it may lose its status as a protectable trademark. For example, aspirin was once a trademark but has become the generic name for a type of product. Correct: The Cisco IOS software provides many performance benefits. Incorrect: Cisco IOS provides many performance benefits.

Cisco name

The Cisco name serves both as a trademark and as a company name. In technical content, do not use any trademark symbols with the Cisco name.

Example

The corporate headquarters of Cisco Systems, Inc., is in San Jose, California.

Do not add “Cisco” to another trademarked name.

Example

Incorrect: Cisco Microsoft Windows 7 USB drive

Cisco Microsoft Windows USB device drivers

Cisco Red Hat

Preferred: Use the Cisco USB console driver for the Microsoft Windows 7 OS.

Use the Cisco USB console driver when using Microsoft Windows 7.

Possessives and verbs

Do not use trademarks as verbs or in the possessive.

Example

Correct: AccessPath shelves can be configured remotely.

Incorrect: AccessPath’s shelves can be configured remotely.

Original form

Always use trademarks in their original form. Maintain the correct capitalization.
If a trademark is one word, avoid hyphenating it or breaking it into two words. If the trademark is more than one word, use a nonbreaking space between words to keep them together. (Use your best judgment when you must break a long trademark name, especially in job-aid templates that have a small page size.)

Example

Incorrect: Cisco Meet-
ingPlace uses your organization’s existing telephony infrastructure to provide voice conferencing over standard PSTN and IP phones.

Correct: Cisco MeetingPlace
uses your organization’s existing telephony infrastructure to provide voice conferencing over standard PSTN and IP phones.

Symbols

Do not use registered trademark or service mark symbols within Cisco technical publications—not for the Cisco name, and not for Cisco products, not even on first instance.

For more information, see Copyright and Trademark under Content Elements.

Third-Party Trademarks

At Cisco, we do not mark another company’s trademarks in our external communications unless the company has specifically requested it or unless both Cisco and the other company own the copyrights to the material.

For a list of companies or agencies that have requested that Cisco mark their respective trademarks, see the Trademark Guidelines section of Cisco Marketing and Communications Style Guide.

Domain Names and IP Addresses in Public Documentation

Although Cisco customer facing material has a disclaimer regarding the “unintentional and coincidental” use of “actual” IP addresses and phone numbers, all who are involved in the documentation process must prevent such actual information from being released to the public domain. Among the consequences of the use of actual domain names or IP addresses in public customer facing material, including examples, command output, and sample configurations, are the following:

- Interference with network operation, including malicious purposes such as denial of service (DoS) attacks
- The compromising of network security and privacy
- Conflicts with intellectual property rights
- Potential legal action
- The need to open doc bugs to replace “noncompliant” addresses, domain names, and phone numbers with compliant data, as described in this section

Note: Cisco provides internal material tailored to specific networks under a nondisclosure agreement (NDA). The guidelines in this section do not apply to internal material that may be made available to customers.

The following sections describe domain names and IP addresses that are safe to use in Cisco technical content:

- Domain Names Reserved for Public Documentation
- IPv4 Addresses Reserved for Public Documentation
- IPv6 Addresses Reserved for Public Documentation

Note: Ask your illustrator to change any valid domain names or IP addresses in screen captures, network diagrams, or other graphics to the safe values described in the following sections.

Note: Be sure to use approved IP addresses and domain names in examples for public distribution. These are referred to as “compliant” addresses. Use the information in *Using Compliant IP Addresses, Domain Names, and Telephone Numbers in Networks and Software Development Documentation* (EDCS-609990). Use these guidelines and share them with your development colleagues.

Domain Names Reserved for Public Documentation

RFC 2606, *Reserved Top Level DNS Names*, reserves the top-level domain *example* for use in technical content or examples of code. The second-level domain names *example.com*, *example.org*, and *example.net* are also reserved for use as examples.

IPv4 Addresses Reserved for Public Documentation

IPv4 Unicast Addresses

RFC 5737, *IPv4 Address Blocks Reserved for Documentation*, references previous RFCs (including RFC 1918, *Address Allocation for Private Internets*, and RFC 3330, *Special-Use IPv4 Addresses*) and assigns the following IPv4 address blocks for use in technical content and examples of code:

Address Block	Host Starting Address	Host Ending Address	Broadcast Address	Subnet Mask
192.0.2.0/24	192.0.2.1	192.0.2.254	192.0.2.255	255.255.255.0
198.51.100.0/24	198.51.100.1	198.51.100.254	198.51.100.255	255.255.255.0
203.0.113.0/24	203.0.113.1	203.0.113.254	203.0.113.255	255.255.255.0

IPv4 Addresses Reserved by Cisco

Cisco has acquired three blocks of IPv4 addresses that are reserved for documentation. These addresses allow writers to show complex network configurations. Each block includes a subnet. If you use the following IPv4 addresses in documentation, you must also include the subnet mask:

Address Block	Host Starting Address	Host Ending Address	Broadcast Address	Subnet Mask
209.165.200.224/27	209.165.200.225	209.165.200.254	209.165.200.255	255.255.255.224
209.165.201.0/27	209.165.201.1	209.165.201.30	209.165.201.31	255.255.255.224
209.165.202.128/27	209.165.202.129	209.165.202.158	209.165.202.159	255.255.255.224

Private IPv4 Addresses

RFC 1918 provides a group of IPv4 addresses that are never assigned publicly and are not routed through the public internet, as listed in the following table. The same pool of addresses can be used within any private network (a network that does not communicate with the internet or with other private networks, or communicates only through gateways that translate the address).

Address Block	Host Starting Address	Host Ending Address	Broadcast Address	Subnet Mask
10.0.0.0/8	10.0.0.1	10.255.255.254	10.255.255.255	255.0.0.0
172.16.0.0/12	172.16.0.1	172.31.255.254	172.31.255.255	255.240.0.0
192.168.0.0/16	192.168.0.1	192.168.255.254	192.168.255.255	255.255.0.0

Note: Automatic Private IP Addressing (APIPA) uses addresses that range from 169.254.0.0 through 169.254.255.255. Although these addresses are safe, their use in Cisco documentation is not recommended.

IPv4 Loopback (or Localhost) Address

By convention, most systems assign the IP address 127.0.0.1 and the name *localhost* to the loopback interface that allows a client and server on the same host to communicate with each other over TCP/IP. You can use the 127.0.0.1 localhost address in Cisco documentation.

IPv4 Multicast Addresses

RFC 1112, *Host Extensions for IP Multicasting*, defines the address space for IPv4 multicast addresses, which are generally safe to use when writing IPv4 multicast features; they should not be used for other purposes. IPv4 multicast group addresses range from 224.0.0.0/8 to 239.0.0.0/8.

IPv4 Link-Local Addresses

All IPv4 link-local addresses are compliant. The IPv4 link-local prefix is 169.254.0.0/16.

IPv6 Addresses Reserved for Public Documentation

IPv6 Unicast Addresses

RFC 3849, *IPv6 Address Prefix Reserved for Documentation*, sets aside the IPv6 address prefix 2001:DB8::/32 for use in technical documentation. Addresses within this prefix are not routed through the public internet.

To allow you to show complex network configurations, the IPv6 prefix allows many different networks, subnetworks, and hosts. The following table shows examples of networks within this prefix and a host address on each network.

Network Prefix	Host Starting Address	Host Ending Address	Example Host
2001:DB8::/32	2001:DB8::1	2001:DB8:FFFF:FFFF:FFFF:FFFE:FFFF:FFFF	2001:DB8:1::1
2001:DB8::/48	2001:DB8:0000: 0000:0000:0000: 0000:0001 through 2001:DB8:FFFF:0000:0000:0000:0001	2001:DB8:0000:FFFF:FFFF:FFFF:FFFF:FFFF through 2001:DB8:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	2001:DB8:0:ABCD::1

The addresses use the following standard notation:

- An IPv6 address consists of eight blocks, separated by colons.
- Each block contains four hexadecimal numbers (16 bits).
- Leading zeros within a block can be omitted.
- A double colon (::) means that two or more consecutive blocks of 0000 have been omitted. This notation can be used only once per IPv6 address. The number of blocks omitted can be calculated from the number remaining.
- A slash followed by a number (/*n*) indicates the number of bits in the prefix. For example, /48 indicates a prefix length of 48 bits.
- The minimum prefix that can be used is /32, which represents a single network (2001:DB8:). When writing IPv6 addresses on physical interfaces, use a 64-bit prefix length (for example, 2001:DB8:A:B::1/64). When writing prefixes in the context of IPv6 routing, use the prefix length specified by your SME (which must be at least /32).

Note: At the time of this writing, Cisco has not applied for IPv6 reserved addresses.

For NAT addressing, you can use the following prefixes:

- For NAT64, 2001:DB8::/96
- For NAT46, 2001:DB8:46::/48

IPv6 Loopback (or Localhost) Address

By convention, most systems assign the IPv6 address 0:0:0:0:0:0:0:1 and the name *localhost* to the loopback interface that allows a client and server on the same host to communicate with each other over TCP/IP. You can use the IPv6 localhost address (abbreviated as ::1) in Cisco technical content.

IPv6 Multicast Addresses

RFC 4291, *IP Version 6 Addressing Architecture*, defines the address space for IPv6 addresses. RFC 4291 explains what the IPv6 multicast addresses are. IPv6 multicast addresses are safe to use in documentation for IPv6 multicast features, but they should not be used for other purposes.

IPv6 multicast addresses start with FF00.

IPv6 Link-Local Addresses

All IPv6 link-local addresses are compliant. It is acceptable to use link-local addresses starting with FE80::/10.

IPv6 Addresses Not Referenced in RFC 3849

There are some well-known prefixes that are not referenced in RFC 3849 but that must be documented in examples. For example, when writing 6to4, you can use the 2002::/16 prefix.

When writing a unique local address (ULA), you can use FC00::/7 as defined in RFC 4193, “Unique Local IPv6 Unicast Addresses.” Unique local addresses are the IPv6 counterpart to IPv4 private addresses.

OEM Guidelines

Cisco has established partnerships with many companies that resell Cisco equipment. In standard industry terminology, these partners are called original equipment manufacturers or OEMs (even though Cisco and not the partner is the original manufacturer of the equipment). OEMs either customize our content or use it as is. Content for products that have an existing or potential OEM relationship should minimize Cisco-specific references.

Generic references

Instead of using specific Cisco references, use generic references or use personal pronouns, as in the following examples.

Incorrect	Correct
See the *Cisco 1005 User Guide*.	See the appropriate hardware manual.
Connect the cable to the module at the back of the Cisco 7000 router.	Connect the cable to the module at the back of the router.
Contact the Cisco Technical Assistance Center.	Contact a customer service representative.
See Table 1-2 for a list of non-Cisco SIMMs.	See Table 1-2 for a list of SIMMs from other vendors.
Cisco recommends that you follow the ESD guidelines.	We recommend that you follow the ESD guidelines.
The Cisco implementation of AppleTalk is compatible.	Our implementation of AppleTalk is compatible.
Configure the Cisco Token Ring interface.	Configure the Token Ring interface.

Exception When referring to Cisco in combination with other companies, you might need to use Cisco to distinguish us from them.

Notes

In configuration notes, release notes, and updates, place the appropriate Cisco.com and service and support information at the end by copying it from the reference page.

Part numbers

Do not include Cisco part numbers in text. If it is necessary to refer to part numbers, use a generic reference in the text and list the part numbers in an appendix.

Specific terms

Continue to use specific terms for the following:

- Screen displays such as *CS Software (LCS-L), Cisco IOS Release 12.1,* and *© 1997–2000 by Cisco Systems, Inc*.
- Default boot filenames, such as *cisco2-csc4*
- Names printed on hardware components, such as the Cisco name on chassis and EPROM labels
- List of approved equipment vendors
- Cisco product names such as *Cisco Extended Bus (CxBus)*
- Cisco product names on the title and copyright pages and in footers, such as *Cisco 7206 Installation and Configuration Guide*

A–Z Terms

The terms in this section are arranged in Characters and Symbols, Numeric, and Alphabetic tables.

Characters and Symbols | Numeric | A-B | C-D | E-F | G-H | I-J-K | L-M | N-O | P-Q-R | S-T | U-V | W-X-Y-Z

Note: All terms that are listed in this A-Z Terms section are included in the Tech Doc Style Guide domain of the Acrolinx tool. For more information about Acrolinx, contact the Style Team.

Characters and Symbols

Term or Phrase	Alternate/Preferred	Definition	Notes
# [do not use]	no.	–	–
& [do not use] See Notes.	and	–	Do not use within running text or headings. Acceptable within code or URLs.
@ [do not use] See Notes.	at	–	Do not use within running text or headings. Acceptable within code, URLs, email addresses, or as part of proper names. Example: The @mention feature of the Cisco Spark app gets a team member's attention and flags important messages.
(s) [do not use]	Either the singular or plural form or, if necessary for meaning, both (for example, router, routers, router or routers, or one or more routers)	Indicates that a noun might be either singular or plural. Example: router(s)	–
µ [do not use]	micro or mu	The Greek letter mu.	Avoid because it does not always appear correctly online.

Numeric

Term or Phrase	Alternate/Preferred	Definition	Notes
24/7 [do not use]	24 hours a day, 7 days a week	–	–
24/7/365 [do not use]	all year	–	–
24 hours a day, 7 days a week	–	–	Avoid 24/7.
3Com 3+Open [protocol]	–	–	–
3Com NETBuilder II	–	–	–
3Com XNS	–	–	–
3rd party [do not use]	third party [noun]; third-party [adj.]	–	–
56K modem	–	–	–
10Broad36	–	–	–
10BASE2; 10BASE5; 10BASE-F; 10BASE-FB; 10BASE-FL; 10BASE-T	–	–	–
100BASE-FX; 100BASE-FP; 100BASE-T4; 100BASE-T; 100BASE-TX	–	–	–
1000BASE-LX; 1000BASE-SX; 1000BASE-T	–	–	–

Alphabetic

A

Term or Phrase	Alternate/Preferred	Definition	Notes
AAA	–	authentication, authorization, and accounting	The term *AAA* is typically pronounced “triple A” in the networking industry. Therefore, use the article *a* (not *an*) before *AAA*, and include the pronunciation within parentheses at the first occurrence of the term. Example: The client ID is sent in an authentication request to a AAA (pronounced “triple A”) server.
AAL	–	ATM adaptation layer	–
AAL1; AAL2	–	–	–
AAL3/4	–	–	–
AARP	–	AppleTalk Address Resolution Protocol	–
ABR	–	Area Border Router; also available bit rate	–
abort [do not use]	cancel or terminate	–	–
about	–	–	Avoid c., ca., circa. Avoid regarding, with regard to, with respect to.
AC	–	–	Do not spell out.
access list [noun, adj.]	–	–	–
access server	–	–	Avoid communication server.
A chassis; A+ chassis	–	–	–
acknowledgment	–	–	–
AC power receptacle	–	–	–
active/active	–	–	Avoid active:active, active-active.
active:active, active-active [do not use]	active/active		
active/standby	–	–	Avoid active:standby, active-standby.

Term or Phrase	Alternate/Preferred	Definition	Notes
active:standby, active-standby [do not use]	active/standby		
Active Directory	–	–	–
adapter	–	–	–
ADC/Kentrox	–	–	–
Address Resolution Protocol (ARP)	–	–	–
address translation gateway (ATG)	–	–	–
Advanced Gateway Server (AGS)	–	–	–
Advanced Peer-to-Peer Internetworking (APPI)	–	–	–
Advanced Peer-to-Peer Networking (APPN)	–	–	–
Advanced Program-to-Program Communications (APPC)	–	–	–
Advanced Research Projects Agency (ARPA)	–	–	–
AESO	–	Auxiliary Extended Security Option	–
affect	–	*Affect* (verb) means to change or to influence. Example: The revision will affect the release date.	Compare with effect.
AFI	–	Authority and Format Identifier—Field name	–
after	–	Use *after* to emphasize that completion of an action or series of steps is necessary before proceeding. Example: After you enter the command, press **Return**.	Compare with once and when. Also, see post [do not use].
AGS	–	Advanced Gateway Server	–
AGS+	–	Cisco AGS with a ciscoBus switching complex	Obsolete product but not obsolete term.
AGS+ chassis	–	–	Obsolete product but not obsolete term.
AGS+/3; AGS+/4	–	Cisco 9-slot modular router systems	Obsolete products but not obsolete terms.
AIP	–	ATM Interface Processor	–
airflow [noun, adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
A-law	–	–	–
all	–	–	Avoid all of.
all of [do not use]	all	–	–
allowed list	–	–	Avoid whitelist.
alphanumeric	–	–	–
although	–	Use *although* to indicate contrast. If you can substitute the phrase *even though*, you can safely use *although*. Example: Although [Even though] routers are more expensive than bridges, the increase in power and efficiency is worth the price.	Compare with while.
all year	–	–	Avoid 24/7/365.
a.m.	–	–	–
AMER	–	US, Canada, and LatAm	Include the word “region” with this term when it is used as an adjective. Example: There's a process for the countries in the AMER region, and there's a process for the countries in the EMEA region.
among	–	Use *among* for three or more items. (Do not use *amongst*.) Example: Four writers discussed the new style among themselves.	Compare with between.
and/or [do not use]	and or	–	
and or	–	–	Avoid and/or.
and others	–	–	Avoid et al. (in places other than bibliographies).
and so forth	–	–	Avoid etc.
and so on	–	–	Avoid etc.
ANI	–	asynchronous network interface	–
ANSI	–	–	Do not spell out.

Term or Phrase	Alternate/Preferred	Definition	Notes
a number of [do not use]	several	–	–
APaRT	–	automatic packet recognition and translation	–
API	–	application programming interface	–
APJC	–	Asia Pacific, Japan, and China	Include the word “region” with this term when it is used as an adjective. Example: There's a process for the countries in the APJC region, and there's a process for the countries in the EMEA region.
Apollo Domain [protocol]	–	–	–
app stack	–	An abbreviation for “application stack.” An application stack is a suite or set of application programs that help in performing a certain task.	Do not use the following abbreviations: App Stack App stack AppStack Appstack appstack app-stack If the GUI in an application uses one of these abbreviations, to maintain consistency, use that abbreviation only when referring to that element in the GUI.
APPC	–	Advanced Program-to-Program Communications	–
appendixes	–	–	–
APPI	–	Advanced Peer-to-Peer Internetworking	–
APPI Forum	–	–	–
AppleTalk (Phase 1, Phase 2)	–	–	–
AppleTalk Address Resolution Protocol (AARP)	–	–	–
AppleTalk Remote Access	–	–	–
AppleTalk Remote Access Protocol (ARA Protocol)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
AppleTalk Transaction Protocol (ATP)	–	–	–
AppleTalk Update-Based Routing Protocol (AURP)	–	–	–
application layer	–	Layer 7 of the OSI reference model	–
application note [general reference]; Application Note [specific reference]	–	–	–
application programming interface (API)	–	–	–
applique	–	–	–
APPN	–	Advanced Peer-to-Peer Networking	–
approximately	–	–	Avoid c., ca., circa.
Area Border Router (ABR)	–	–	–
ARP	–	Address Resolution Protocol	–
ARPA	–	Advanced Research Projects Agency	–
ARPANET	–	–	–
as	–	To avoid ambiguity or vagueness, do not use *as* to mean because, since, for, while, whether, or who.	Compare with because, for, and since.
as a result of [do not use]	because of	–	–
ASBR	–	Autonomous System Boundary Router	–
ASCII	–	–	Do not spell out.
ASIC	–	–	Do not spell out. The plural form is ASICs.
ASM/3	–	Cisco A chassis-based communication server	Obsolete product but not obsolete term.
ASM-CS	–	–	Obsolete product but not obsolete term.
ASP	–	ATM switch processor Cisco LightStream 1010—ATM switch processor (ASP) module	–

Term or Phrase	Alternate/Preferred	Definition	Notes
assure	–	*Assure* means to promise. Example: The reviewers assured me that they would return their edits today.	Compare with ensure and insure.
async	–	Subset of tty.	–
asynchronous network interface (ANI)	–	–	–
at	–	–	–
ATM	–	–	Do not spell out.
ATG	–	address translation gateway	–
ATM Address Resolution Protocol (ATMARP)	–	–	–
ATM Forum	–	–	–
ATM Interface Processor (AIP)	–	–	–
ATMARP	–	ATM Address Resolution Protocol	–
ATP	–	AppleTalk Transaction Protocol	–
attachment unit interface (AUI)	–	–	–
A-type chassis	–	–	–
AUI	–	attachment unit interface	–
AURP	–	AppleTalk Update-Based Routing Protocol	–
authentication, authorization, and accounting (AAA)	–	–	–
AutoInstall	–	–	–
automatic packet recognition and translation (APaRT)	–	–	–
autonomous system	–	–	Do not use the initialism AS; use the spelled-out version.
Autonomous System Boundary Router (ASBR)	–	–	–
autoranging power supply	–	–	–
Auxiliary Extended Security Option (AESO)	–	–	–
available bit rate (ABR)	–	–	–

B

Term or Phrase	Alternate/Preferred	Definition	Notes
backbone network	–	–	–
back door [noun]; backdoor [adj.]	–	–	–
back end [noun]; back-end [adj.]	–	–	–
backoff [noun]; back off [verb];	–	–	–
back panel	–	–	–
backplane	–	–	–
back plate	–	–	–
backup [noun]; back up [verb]	–	–	–
backward	–	–	Not backwards.
bandwidth	–	–	–
Banyan VINES	–	–	–
baseband	–	–	–
B channel [noun]; B-channel [adj.]	–	–	–
baud	–	–	Do not use to mean bps.
because	–	Use *because* to express cause or reason. For causal relationships, *because* is the strongest, most specific choice. Example: I was late because I had a flat tire.	Compare with as, for, and since.
because of	–	*Because of* introduces a phrase that acts as an adverb, which means it can only modify verbs, but not nouns. *Because of* states the reason for an action (verb). Example: The router failed because of a short circuit.	Avoid as a result of. Compare with due to.
before	–	–	Avoid prior to.
begin	–	–	Avoid initiate.
Beginning of Message (BOM)	–	Bit in the ATM frame format.	–
Bellcore [do not use]	Telcordia	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
between	–	Use *between* for two items. Example: The choice was between a router and a bridge.	Compare with among.
BGP	–	Border Gateway Protocol	–
B-ICI	–	broadband intercarrier interface	–
BIDI, Bidir, BiDir, BIDI [do not use]	bidirectional	–	–
bidirectional	–	–	Avoid BIDI, Bidir, BiDir, BIDI.
Binary Synchronous Communications Protocol	–	–	Use Bisync, not BSC, on subsequent occurrences.
BIOS	–	–	Do not spell out.
bipolar	–	–	–
BISDN	–	Broadband Integrated Services Digital Network	–
Bisync	–	Binary Synchronous Communications Protocol	–
bit-oriented protocol	–	–	–
bit-slice processor	–	–	–
blacklist [do not use]	blocked list	–	–
Blacker Emergency Mode	–	–	–
Blacker Front End	–	–	–
blocked list	–	–	Avoid blacklist.
B-LLI	–	broadband low-layer information	–
BNC	–	–	Do not spell out.
board [do not use]	card	–	Do not use this term unless you are referring to a motherboard.
BOM	–	Beginning of Message. Bit in the ATM frame format.	–
Boolean operator	–	–	–
boot [verb]	–	To load and initialize an operating system.	Avoid “boot up.” Use “run” or “start” for applications; use “open” for GUI applications.
boot flash memory	–	–	–
boot from a network (TFTP) server	–	–	Avoid netboot.
boot helper image			Avoid rxboot.
boothelper	–	–	–
bootloader	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
BOOTP	–	–	–
bootup [noun, adj.];	–	–	–
boot up [verb] [do not use]	boot [verb]	–	–
Border Gateway Protocol (BGP)	–	–	–
Bourne Shell	–	–	–
box [do not use]	device	–	Do not use “box” when referring to a physical unit. However, “box” is admitted as part of the common noun in an entity name, for example, a set-top box (STB), a cable TV box. You can also use “Box” with initial capitalization when referring to the cloud file-sharing service.
BPDU	–	bridge protocol data unit	–
braille	–	–	–
break-even [adj.]	–	–	–
BRF	–	Bridge Relay Function	–
BRI	–	–	Do not spell out.
BRI interface	–	–	BRI used as an adjective.
Bridge-Group Virtual Interface (BVI)	–	–	–
bridge protocol data unit (BPDU)	–	–	–
Bridge Relay Function (BRF)	–	–	–
British spelling of terms (for example, colour, centre, fibre) [do not use]	U.S. spelling of terms (for example, color, center, fiber)	–	–
broadband	–	–	–
Broadband Integrated Services Digital Network (BISDN)	–	–	–
broadcast address	–	–	–
browse	–	–	–
built-up [noun, adj.]	–	–	–
bug	–	A *bug* is a defect or difficulty on a system or design.	Compare with caveat.
burn-in [noun, adj.]; burn in [verb]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
bus [singular]; buses [plural]	–	–	–
BVI	–	Bridge-Group Virtual Interface	–
by	–	–	Avoid by means of.
by means of [do not use]	by	–	–
bypass [noun, verb]	–	–	–
by-product	–	–	–
byte-oriented protocol	–	–	–

C

Term or Phrase	Alternate/Preferred	Definition	Notes
c., ca., circa [do not use]	about or approximately	–	–
CAC	–	connection admission control	–
caller ID	–	caller identification	–
calling line identification (caller ID)	–	–	–
call setup time	–	–	–
Call User Data (CUD)	–	–	–
cancel	terminate	–	Avoid abort.
canceled; canceling; cancellation	–	–	–
card	–	–	Avoid board, except in motherboard.
cardslot	–	–	–
Carrier Detect (CD) signal	–	–	–
carrier sense multiple access with collision detection (CSMA/CD)	–	–	–
carryover [noun, adj.]; carry over [verb]	–	–	–
CAS	–	channel-associated signaling	–
case sensitive [noun, predicate adj.]; case-sensitive [adj.]	–	–	–
Category *x*	–	Example: Category 5	–
caveat	–	A *caveat* is a warning or caution, which is given for a product. It includes limitations, restrictions, warnings, and cautionary notes.	Compare with bug.
CBR	–	–	Do not spell out.
CCIE	–	Cisco Certified Internetwork Expert	–

Term or Phrase	Alternate/Preferred	Definition	Notes
CCITT [do not use]	ITU-T	Consultative Committee for International Telegraph and Telephone	–
CCO [do not use]	cisco.com	Cisco Connection Online	–
cco.cisco.com	–	Hostname for public access of files	–
CCS	–	Common Channel Signaling	–
CD	–	–	Do not spell out.
CD (Carrier Detect) signal	–	–	–
CDDI	–	–	Do not spell out.
CDP	–	Cisco Discovery Protocol	–
CDRH	–	Center for Devices and Radiological Health	–
CD-ROM	–	–	Do not spell out.
CDT	–	cell delay tolerance	–
CDV	–	cell delay variation	–
CEF	–	Cisco Express Forwarding	–
cell delay tolerance (CDT)	–	–	–
cell delay variation (CDV)	–	–	–
cell error ratio (CER)	–	–	–
cell loss ratio (CLR)	–	–	–
cell relay	–	–	–
cell tolerance variation (CTV)	–	–	–
cell transfer delay (CTD)	–	–	–
Celsius (C)	–	–	–
Center for Devices and Radiological Health (CDRH)	–	–	–
centers around [do not use]	centers on or revolves around	–	–
centers on	–	–	Avoid centers around.
central office FRAD (CO FRAD)	–	–	–
CEPT	–	European Conference of Posts and Telecommunication Administrations	–
CER	–	cell error ratio	–
CLR	–	cell loss ratio	–
CTD	–	cell transfer delay	–
CTV	–	cell tolerance variation	–

Term or Phrase	Alternate/Preferred	Definition	Notes
cf. [do not use]	compare	–	–
Challenge Handshake Authentication Protocol (CHAP)	–	–	–
Champ connector	–	–	–
channel-associated signaling (CAS)	–	–	–
channel-attached [adj.]	–	–	–
Channel Interface Processor (CIP)	–	–	–
Channelized T3 Interface Processor (CT3IP)	–	–	–
Channel Port Adapter (CPA)	–	–	–
channel service unit (CSU)	–	–	–
CHAOSnet [protocol]	–	–	–
CHAP	–	Challenge Handshake Authentication Protocol	–
chassis [singular, plural]	–	–	–
checklist	–	–	–
checkout [noun, adj.]; check out [verb]	–	–	–
checkpoint [noun, adj.]	–	–	–
checksum	–	–	–
chipset	–	–	–
CIDR	–	classless interdomain routing	–
CIP	–	Channel Interface Processor	–
circuit-switched network	–	–	–
Cisco	–	–	Avoid Cisco Systems.
Cisco Certified Internetwork Expert (CCIE)	–	–	–
cisco.com	–	–	–
Cisco Connection Online (CCO) [do not use]	cisco.com	–	–
Cisco Discovery Protocol (CDP)	–	–	–
Cisco Document Assembly Number [specific reference]	–	–	–
Cisco Documentation CD-ROM	–	–	Formerly Cisco Connection Documentation CD, Enterprise series
Cisco Express Forwarding (CEF)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Cisco Extended Bus (CxBus)	–	–	–
Cisco Internetwork Operating System [do not use]	Cisco IOS	–	–
Cisco IOS	–	–	Do not spell out.
Cisco IOS XE	–	–	–
Cisco IOS XR	–	–	–
Cisco IOX [do not use]	Cisco IOS XR	–	–
Cisco Part Number [specific reference]	–	–	–
Cisco Systems [do not use]	Cisco	–	–
Cisco TrustSec	–	–	Do not use CTS as an abbreviation for this term.
Cisco TelePresence System	–	–	Do not use CTS as an abbreviation for this term.
Cisco Umbrella	–	–	Do not use OpenDNS.
Cisco *xxxx* Example: Cisco 7010	–	–	Avoid Model (when referring to Cisco products).
classless interdomain routing (CIDR)	–	–	–
class of service (CoS)	–	–	–
Class of Service (COS)	–	–	For IBM references.
CLAW	–	Common Link Access for Workstations	–
Clear to Send (CTS) signal	–	–	–
clear-to-send [adj.]	–	–	–
CLI	–	*CLI* (command-line interface) describes a text-based user interface found in operating systems such as DOS, UNIX, and Cisco IOS software. Do not use CLI to mean a Cisco IOS command. Example: You can configure the system by using a GUI or by entering Cisco IOS commands in the CLI.	Do not spell out. Do not use to mean a Cisco IOS command. Compare with command.
click the **xxx** icon or click *word*	–	–	Avoid “click on the **xxx** icon.”

Term or Phrase	Alternate/Preferred	Definition	Notes
click on the **xxx** icon [do not use]	click the xxx icon or click word	–	–
client	–	Node or software program that requests services from a server.	–
client end node	–	–	–
client/server model	–	–	–
CLNS	–	Connectionless Network Service	–
CLR	–	cell loss ratio	–
CLSF	–	connectionless server function	–
cluster controller	–	–	–
CmBus	–	–	–
CMNS	–	Connection Mode Network Service	–
CMT	–	connection management	–
coarse wavelength-division multiplexing (CWDM)	–	–	–
coaxial	–	–	–
codec	–	–	–
CO FRAD	–	central office FRAD	–
COM	–	Continuation of Message—bit in the ATM frame format	–
Combinet Packet Protocol (CPP)	–	–	–
command	–	You enter a *command* in the CLI. Example: Enter the **ip subscriber timer clear-dangling 0** command to end a hung session.	Compare with CLI.
common channel signaling (CCS)	–	–	–
Common Link Access for Workstations (CLAW)	–	–	–
common part indicator (CPI)	–	–	–
communication server [do not use]	access server	–	–
CompactFlash memory	–	–	Use only as part of a specific product name; otherwise use the more general term “flash memory.”
compare	–	–	Avoid cf.

Term or Phrase	Alternate/Preferred	Definition	Notes
compose	–	*Compose* means make up or constitute the parts of.	Compare with comprise and consists of.
comprise	–	*Comprise* means include. The whole comprises the parts—not the other way around. Never use *is comprised of*; use *comprises*, *is composed of*, or *consists of*.	Compare with compose and consists of. Avoid is comprised of.
Concentrator Relay Function (CRF)	–	–	–
concurrent routing and bridging	–	–	No acronym.
configurable	–	–	–
connection admission control (CAC)	–	–	–
Connectionless Network Service (CLNS)	–	–	–
connectionless server function (CLSF)	–	–	–
connectionless service	–	–	–
connection management (CMT)	–	–	–
Connection Mode Network Service (CMNS)	–	–	–
connection-oriented service	–	–	–
connector plate	–	–	–
consists of	–	*Consists of* means is made up of or composed of. Example: The United States comprises 50 states. The United States consists of (or is composed of) 50 states.	Compare with compose and comprise. Avoid is comprised of.
Consultative Committee for International Telegraph and Telephone (CCITT) [do not use]	ITU-T	–	–
continual	–	Use *continual* when referring to something that is repeated often. Example: Hiring new staff is a continual activity.	Compare with continuous.

Term or Phrase	Alternate/Preferred	Definition	Notes
continuous	–	Use *continuous* when referring to something that continues without stopping. Example: A continuous stream of water rushed down the slope.	Compare with continual.
Continuation of Message (COM)	–	Bit in the ATM frame format.	–
control point (CP)	–	–	–
convergence sublayer (CS)	–	–	–
CoS	–	class of service	–
COS	–	Class of Service—for IBM references	–
cost-effective [adj.]; cost effective [predicate adj.]	–	–	–
counterclockwise	–	–	–
CP	–	control point	–
CPA	–	Channel Port Adapter	–
CpBus	–	–	–
CPE	–	customer premises equipment	–
CPI	–	common part indicator	–
CPP	–	Combined Packet Protocol	–
CPU	–	–	Do not spell out.
crash	–	Refers to an unexpected termination of a process.	–
CRC	–	cyclic redundancy check	–
CRF	–	Concentrator Relay Function	–
CRT	–	–	Do not spell out.
crosstalk	–	–	–
CS	–	convergence sublayer	–
CSC-ENVM	–	Cisco Environmental Monitor Card	–
C shell	–	–	–
CSMA/CD	–	Carrier sense multiple access with collision detection	–
CSU	–	–	Do not spell out.
CT3IP	–	Channelized T3 Interface Processor	–
CSV	.csv	Use CSV (uppercase) when you are referring to a comma-separated (CSV) file.	–

Term or Phrase	Alternate/Preferred	Definition	Notes
.csv	CSV	Use when you are specifically referring to the .csv file extension or showing an example of a particular file that has this extension; use the lowercase form with a period before it.	–
CTD	–	cell transfer delay	–
CTS (Clear to Send) signal	–	–	–
CTS [do not use]	Cisco TrustSec or Cisco TelePresence System	–	Never use an acronym or abbreviation in which Cisco is shortened to the letter C.
CTV	–	cell tolerance variation	–
CUD	–	Call User Data	–
customer premises equipment (CPE)	–	–	–
CWDM	–	coarse wavelength-division multiplexing	–
CxBus	–	Cisco Extended Bus	–
cyclic redundancy check (CRC)	–	–	–

D

Term or Phrase	Alternate/Preferred	Definition	Notes
DARPA	–	Defense Advanced Research Projects Agency	–
DAS	–	dual attachment station	–
database	–	–	–
data are [do not use]	data is	–	–
datacenter [do not use]	data center	–	–
data center	–	–	Avoid datacenter.
data circuit-terminating equipment	–	–	DCE—when it is an X.25 link-level device.
data communications equipment	–	–	DCE—described by the IEEE EIA/TIA-232-C Standard.
Data Country Code (DCC)	–	–	–
Data Exchange Interface (DXI)	–	–	–
data flow control	–	–	–
datagram	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Datagram Delivery Protocol (DDP)	–	–	–
data is	–	–	Avoid data are.
data link [noun]; data-link [adj.]	–	–	–
data-link connection identifier (DLCI)	–	–	–
data-link control	–	–	–
data link layer	–	Layer 2 of the OSI reference model	Don't hyphenate OSI layer names, even if you use them as adjectives. Correct: Layer 3. Incorrect: Layer-3
data-link switching [process]	–	–	–
data-link switching (DLSw) [standard]	–	–	–
data-link switching plus (DLSw+)	–	Cisco implementation of DLSw standard	–
Data over Voice (DOV)	–	–	–
data service unit (DSU)	–	–	–
data set	–	–	–
data store	–	–	–
Data Terminal Ready (DTR)	–	–	–
daughter card	–	–	–
daylight saving time	–	–	–
DC	–	–	Do not spell out.
DCC	–	Data Country Code	–
DCE	–	data circuit-terminating equipment when it is an X.25 link-level device; data communications equipment described by the IEEE EIA/TIA-232-C Standard	Do not spell out.
dCEF	–	distributed Cisco Express Forwarding	–
D channel [noun]; D-channel [adj.]	–	–	–
DDP	–	Datagram Delivery Protocol	–
DDR	–	dial-on-demand routing	–
DDS	–	digital data service—a 64-kbps digital private-line channel	–
DECnet [Phase IV, Phase V]	–	–	–
Dedicated Token Ring (DTR)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
defect [do not use]	bug	–	–
Defense Advanced Research Projects Agency (DARPA)	–	–	–
dense wavelength-division multiplexing (DWDM)	–	–	–
Department of Defense (DoD)	–	–	–
Department of Defense Intelligence Information System Network Security for Information Exchange (DNSIX)	–	–	–
Department of Energy (DoE)	–	–	–
depress [do not use]	press [verb]	–	–
designated router	–	–	–
desire/desired [do not use]	need or want	–	–
destination address field	–	–	–
deterministic load distribution	–	–	–
device	–	–	Avoid box.
DFT (Distributed Function Terminal) Protocol	–	–	–
DHCP	–	–	Do not spell out.
dial-in [noun, adj.]; dial in [verb]	–	–	–
dialog	–	–	–
dial-on-demand routing (DDR)	–	–	–
dialup line	–	–	–
digital data service (DDS)	–	a 64-kbps digital private-line channel	–
digital service unit (DSU)	–	–	–
digital subscriber line (DSL)	–	–	–
DIMM	–	–	Do not spell out.
dimmed (to indicate appearance)	–	–	Avoid grayed out (or unavailable).
DIN	–	–	Do not spell out.

Term or Phrase	Alternate/Preferred	Definition	Notes
DIN connector	–	–	Not necessary to spell out; the words *Deutsche Industrie Norm* are not likely to be meaningful to our audience.
DIP switch	–	–	–
direct memory access (DMA)	–	–	–
disabled (to indicate state or status)	–	–	Avoid grayed out (or unavailable).
disc	–	–	For CD-ROM discs.
Discrete Multi-Tone (DMT)	–	–	–
disk	–	–	For hard disks and magnetic storage media disks.
displays (with an object)	–	Example: The window displays the requested data.	Avoid displays (without an object)
displays (without an object) [do not use]	displays (with an object)	–	–
distance vector algorithm	–	–	–
distributed Cisco Express Forwarding (dCEF)	–	–	–
distributed directory database	–	–	–
Distributed Function Terminal (DFT) Protocol	–	–	–
Distributed Queue Dual Bus (DQDB) Protocol	–	–	–
DLCI	–	data-link connection identifier	–
DLSw	–	data-link switching (standard)	–
DLSw+	–	data-link switching plus—Cisco implementation of DLSw standard	–
DMA	–	direct memory access	–
DMT	–	Discrete Multi-Tone	–
DNS	–	Domain Name System	–
DNSIX	–	Department of Defense Intelligence Information System Network Security for Information Exchange	–
DoD	–	Department of Defense	–
DoE	–	Department of Energy	–
domain name	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
domain name server	–	–	–
Domain Name System (DNS)	–	–	–
Domain-Specific Part (DSP)	–	–	ATM address field
double-check [verb]	–	–	–
double-click [verb]	–	–	–
DOV	–	data over voice	–
Downstream Physical Unit (DSPU)	–	–	–
downtime	–	–	–
DQDB (Distributed Queue Dual Bus) Protocol	–	–	–
DRAM	–	–	Do not spell out.
DSL	–	digital subscriber line	–
DSP	–	Domain Specific Part	ATM address field
DSPU	–	downstream physical unit	–
DSR	–	–	Do not spell out.
DSU	–	digital service unit or data service unit	–
DS*x*	–	Digital Signal Example: DS4	–
DTE	–	–	Do not spell out.
DTR	–	data terminal ready or dedicated Token Ring	–
D-type connector	–	–	–
Dual Attachment Station (DAS)	–	–	–
dual-bank flash	–	–	–
dual flash bank	–	–	–
dual homing device	–	–	–
dual in-line memory module (DIMM)	–	–	–
dual serial network processor module	–	–	–
dual stack [noun]; dual-stack [adj.]	–	–	–
dual-tone multifrequency (DTMF)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
due to	–	*Due to* introduces a phrase that acts as an adjective, which means it can only modify nouns. *Due to* states the reason why an entity (noun) exists. Example: The network failure was due to an incorrect configuration. **Tip**: Substitute “due to” with “caused by.” If the substitution works, the usage is correct.	Compare with because of.
DWDM	–	dense wavelength division multiplexing	–
DXI	–	Data Exchange Interface	–
dynamic address resolution	–	–	–
Dynamic Host Configuration Protocol (DHCP)	–	–	–
dynamic routing	–	–	–

E

Term or Phrase	Alternate/Preferred	Definition	Notes
earlier than <prodname> release x	–	–	Avoid lower than <prodname> release x.
ebook	–	–	Avoid using eBook or e-book.
ECA	–	ESCON Channel Adapter	–
EDI	–	electronic data interchange	–
EEPROM	–	–	Do not spell out.
EFCI	–	explicit forward congestion indication	–
effect	–	*Effect* (n) means result or outcome. For clarity, avoid using *effect* as a verb; use something like *to bring about* or *to cause*. Example: The effect of the change is a postponement of the release date.	Compare with affect.
e.g. [do not use]	for example or for instance	–	–
EGP	–	Exterior Gateway Protocol	–

Term or Phrase	Alternate/Preferred	Definition	Notes
EIA	–	Electronic Industries Association	–
EIA/TIA-*x*	–	–	Do not spell out. Example: EIA/TIA-232. Avoid RS-*x*.
EIP	–	Ethernet Interface Processor	–
ELAN	–	emulated LAN	–
electronic data interchange (EDI)	–	–	–
Electronic Industries Association (EIA)	–	–	–
E&M	–	Ear & Mouth (phone signaling)	–
Emacs	–	–	–
e-mail [do not use]	email	–	–
email	–	–	For use both as a noun and as a verb. Avoid e-mail.
EMEA	–	Europe, Middle East, and Africa	Include the word “region” with this term when it is used as an adjective. Example: There's a process for the countries in the AMER region, and there's a process for the countries in the EMEA region.
EMEAR	–	Europe, Middle East, Africa, and Russia	Include the word “region” with this term when it is used as an adjective. Example: There's a process for the countries in the AMER region, and there's a process for the countries in the EMEAR region.
EMI	–	–	Do not spell out.
emoji	–	–	Use either “emoji” or “emojis” as the plural form.
emoticon	–	–	Use “emoticons” as the plural form.
emulated LAN (ELAN)	–	–	–
end node	–	–	–
end node domain	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
End of Message (EOM)	–	bit in the ATM frame format	–
endpoint	–	–	–
end system	–	–	–
end system identifier (ESI)	–	–	–
End System-to-Intermediate System (ES-IS) Protocol	–	–	–
end user [noun]; end-user [adj.]	–	–	–
Enhanced IGRP	–	–	–
ensure	–	*Ensure* means to make sure of something. Example: Return your edits today to ensure that the publication stays on schedule.	Compare with assure and insure.
enter (data)	–	–	Avoid type.
environmental monitor card (CSC-ENVM)	–	–	–
EOM	–	End of Message—bit in the ATM frame format	–
EPROM	–	–	Do not spell out.
equal-sized [do not use]	the same size	–	–
ERPDU	–	error protocol data unit	–
error control	–	–	–
error-correcting code	–	–	–
error-detecting code	–	–	–
errored [do not use]	error occurred	–	–
error occurred	–	–	Avoid errored.
error protocol data unit (ERPDU)	–	–	–
ESCON Channel Adapter (ECA)	–	–	–
ESD	–	–	Do not spell out.
ESI	–	end-system identifier	–
ES-IS (End System-to-Intermediate System) Protocol	–	–	–
ESO	–	Extended Security Option	–
et al. (in places other than bibliographies) [do not use]	and others	–	–
etc. [do not use]	and so forth or and so on	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Ethernet	–	–	–
Ethernet Interface Processor (EIP)	–	–	–
EtherSwitch	–	–	–
European Conference of Posts and Telecommunication Administrations (CEPT)	–	–	–
even-numbered [adj.]	–	–	–
exchange identification (XID)	–	–	–
expedited delivery	–	–	–
explicit forward congestion indication (EFCI)	–	–	–
extended AppleTalk	–	–	–
Extended Security Option (ESO)	–	–	–
extended TACACS	–	–	–
Exterior Gateway Protocol (EGP)	–	–	–

F

Term or Phrase	Alternate/Preferred	Definition	Notes
faceplate	–	–	–
Fahrenheit (F)	–	–	–
failover [noun, adj.]; fail over [verb]	–	–	–
fail-safe [adj.]	–	–	–
fan-out unit	–	–	–
FAQ	–	–	Do not spell out.
far-end receive failure (FERF)	–	–	–
far left; far right	–	–	Avoid left-most, right-most.
farther	–	Use *farther* when referring to physical distances. Example: The new lab is farther away than the old one.	Compare with further and furthermore.
Fast Ethernet (FE)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Fast Ethernet Interface Processor (FEIP)	–	■ Use Fast Ethernet when referring to the type of Ethernet used by the FEIP. ■ Use FastEthernet in CLI displays. ■ Use fastethernet in a software command. Example: show interface fastethernet 1/0	Spell out unless space is at a premium.
fast packet switching	–	–	–
Fast-Sequenced Transport (FST)	–	–	–
Fast Serial Interface Processor (FSIP)	–	–	–
fault tolerance [noun]; fault-tolerant [adj.]	–	–	–
favorite [verb] [do not use]	–	–	–
fax	–	facsimile	–
FCC	–	–	Do not spell out.
FCS	–	frame check sequence	–
FDA	–	–	Do not spell out.
FDDI	–	–	Do not spell out.
FDDI interface	–	–	–
FDM	–	frequency-division multiplexing	–
FE (Fast Ethernet)	–	–	Spell out unless space is at a premium.
FEED signal	–	–	–
FEIP	–	Fast Ethernet Interface Processor	–
FEP	–	front-end processor	–
FERF	–	far-end receive failure	–
fewer	–	*Fewer* refers to individual countable items. Example: Fewer routers were returned.	Compare with less.
FDDI Processor (FIP)	–	–	–
fiber optics [noun]; fiber-optic [adj.]	–	–	–
fiber-optic interrepeater link (FOIRL)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
field-replaceable unit (FRU)	–	–	–
field test [noun]; field-test [adj.]; fieldtest [verb]	–	–	–
FIFO [adj., adv.]	–	–	Do not spell out.
filename	–	–	–
file system	–	–	–
filesystem	–	–	In UNIX environment.
find	–	–	–
fine-tune	–	–	–
FIP	–	Fiber Distributed Data Interface (FDDI) Processor	–
firewall	–	–	–
firmware	–	–	–
first-come, first-served [adj., adv.]	–	–	–
flash EEPROM	–	–	Avoid flash ROM.
flash memory	–	–	Avoid flash ROM. Do not capitalize “flash” unless it is part of a specific product name such as CompactFlash memory, FlashDisk memory, or FlashWare memory.
flash ROM [do not use]	flash EEPROM or flash memory	–	–
flat-blade screwdriver	–	–	–
flow control	–	–	–
FOIRL	–	fiber-optic interrepeater link	–
Following, Preceding	–	To refer to the location of material in a document, use *following* or *preceding.* Use *above* or *below* when space is a consideration (for example, in job aids), but with discretion. Example: See the preceding instructions. This procedure is described in the sections that follow.	–
follow-up [noun, adj.]; follow up [verb]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
for	–	Use *for* to express cause and effect with less emphasis than *because*.	Compare with as, because, and since.
for example	–	–	Avoid e.g.
for instance	–	–	Avoid e.g.
frame check sequence (FCS)	–	–	–
FrameReader; FrameViewer	–	–	–
Frame Relay [noun, adj.]	–	–	–
Frame User-Network Interface (FUNI)	–	–	–
freestanding [adj.]	–	–	–
frequency-division multiplexing (FDM)	–	–	–
front end [noun]; front-end [adj.]	–	–	–
front-end processor (FEP)	–	–	–
front panel	–	–	–
FRU	–	field-replaceable unit	–
FSIP	–	Fast Serial Interface Processor	–
FST	–	Fast-Sequenced Transport	–
FTP	–	–	Do not spell out.
full duplex [noun]; full-duplex [adj.]	–	–	–
FUNI	–	Frame User-Network Interface	–
further	–	Use *further* when referring to additional degree, quality, or time. Example: The meeting concluded without further discord.	Compare with farther and furthermore.
furthermore	–	Use *furthermore* when you mean *moreover*, *besides*, or *in addition to what precedes*. Example: Furthermore, the test site will be closed.	Compare with farther and further.

G

Term or Phrase	Alternate/Preferred	Definition	Notes
GAL	–	gate-array logic—device that performs above Layer 3 in the OSI reference model	–
gate-array logic (GAL)	–	–	–
gateway	–	device in the OSI reference model	–
GCRA	–	generic cell-rate algorithm	–
GE	–	Gigabit Ethernet	Spell out unless space is at a premium.
generic cell-rate algorithm (GCRA)	–	–	–
Generic Flow Control (GFC)	–	field in the ATM cell header	–
generic routing encapsulation (GRE)	–	–	–
Get Nearest Server (GNS)	–	a Novell request	–
GetZoneList (GZL)	–	an AppleTalk command	–
GFC	–	Generic Flow Control—field in the ATM cell header	–
GIF	–	–	Do not spell out.
Gigabit Ethernet (GE)	–	–	Spell out unless space is at a premium.
GNS	–	Get Nearest Server—a Novell request	–
Gold-certified partner	–	Gold partner on subsequent occurrences	–
gray	–	–	Not grey.
grayed out (or unavailable) [do not use]	dimmed (to indicate appearance) or disabled (to indicate state or status)	–	–
GRE	–	generic routing encapsulation	–
group address [noun]	–	–	–
GUI	–	–	Do not spell out.
GZL	–	GetZoneList—an AppleTalk command	–

H

Term or Phrase	Alternate/Preferred	Definition	Notes
half duplex [noun]; half-duplex [adj.]	–	–	–
handshake [noun]	–	–	–
hang [do not use]	pause or suspend operation	–	–
hangs [do not use]	not responding	–	–
hard copy [noun]; hard-copy [adj.]	–	–	–
H channel [noun]; H-channel [adj.]	–	–	–
HDLC	–	High-Level Data Link Control	–
headend [noun, adj.]	–	–	–
Header Error Control (HEC)	–	field in the ATM cell header	–
head of line (HOL)	–	–	–
heat sink	–	–	–
HEC	–	Header Error Control—field in the ATM cell header	–
hello [generic packet or message]; Hello [OSPF]; HELLO [NSFnet]	–	–	–
hierarchical routing [noun]	–	–	–
higher than <prodname> release x [do not use]	later than <prodname> release x	–	–
High-Level Data Link Control (HDLC)	–	–	–
High Order Domain Specific Part (HO-DSP)	–	ATM address field	–
High-Performance Parallel Interface (HIPPI)	–	–	–
High Sierra standard	–	–	–
High-Speed Communications Interface (HSCI)	–	–	–
High-Speed Serial Interface (HSSI)	–	–	–
HIP	–	HSSI Interface Processor	–
HIPPI	–	High-Performance Parallel Interface	–
HO-DSP	–	High Order Domain Specific Part—ATM address field	–
HOL	–	head of line	–

Term or Phrase	Alternate/Preferred	Definition	Notes
holddown [noun]; hold-down [adj.]	–	–	–
home page	–	–	–
homologation	–	–	–
hop count	–	–	–
hostname	–	–	–
host node	–	–	–
hotline	–	–	–
hot plug	–	Hot-pluggable devices are those devices that you can remove and install while the server is running. However, you must perform administrative tasks before or after installing the hardware, for example, mounting a hard drive. The following is an example of hot-pluggable devices: ■ Hard drives	hot plug (noun), hot plugging (noun), hot-pluggable devices (adjective)
hotspot	–	–	Avoid hot spot.
hot spot [do not use]	hotspot	–	–
Hot Standby Router Protocol (HSRP)	–	–	–
hot swap	online insertion and removal (OIR)	Hot-swappable devices are those devices that can be removed and installed while the server is running without affecting the rest of the server's capabilities. The following devices are hot-swappable: ■ Fan trays ■ Power Supplies (only when the router is backed up with the optional PSU) The difference between hot swapping and OIR is that OIR requires you to run Cisco IOS commands before and after the OIR. Hot swapping is strictly a hardware function and requires no commands.	hot swap (noun), hot swapping (noun), hot-swappable devices (adjective)
HP Advancenet	–	–	Refers to networking products, not a protocol.
HP Probe	–	Hewlett Packard proprietary Probe protocol	–
HP Probe Proxy	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
HSCI	–	High-Speed Communications Interface	–
HSRP	–	Hot Standby Router Protocol	–
HSSI	–	High-Speed Serial Interface	–
HSSI Interface Processor (HIP)	–	–	–
HTML	–	–	Do not spell out.
html-based interface [do not use]	web-based interface	–	–
HTTP	–	–	Do not spell out.

I

Term or Phrase	Alternate/Preferred	Definition	Notes
IAM	–	initial address message	–
IANA	–	Internet Assigned Numbers Authority	–
IBM	–	–	Do not spell out.
ICD	–	International Code Designator; a component of an NSAP-format address.	–
ICMP	–	Internet Control Message Protocol	–
ICMP Router Discovery Protocol (IRDP)	–	–	–
ICR	–	initial cell rate	–
ID	–	–	Do not spell out.
identity provider (IdP)	–	–	–
identity service (IdS)	–	–	–
IDI	–	initial domain identifier	–
IDN	–	international data number	–
IdP	–	identity provider	–
IDP	–	Initial Domain Part; component of an NSAP-format address.	–
IdS	–	identity service	–
IDSL	–	ISDN digital subscriber line	–
i.e. [do not use]	in other words or that is	–	–
IE	–	information element	–
IEEE	–	–	Do not spell out.
IETF	–	–	Do not spell out.
if	–	–	Avoid if . . . then. Avoid in the event of.

Term or Phrase	Alternate/Preferred	Definition	Notes
if . . . then [do not use]	if	–	–
IGP	–	Interior Gateway Protocol	–
IGRP	–	Interior Gateway Routing Protocol	–
IGS	–	Integrated Gateway Server	Obsolete product but not obsolete term.
IGS/L	–	Cisco local Ethernet-to-Ethernet router system	Obsolete product but not obsolete term.
IGS/R	–	Cisco remote Ethernet-to-serial router system	Obsolete product but not obsolete term.
IGS/TR	–	Cisco remote Token Ring router system	Obsolete product but not obsolete term.
IISP	–	Interim Interswitch Signaling Protocol	–
ILMI	–	Integrated Local Management Interface	–
in-band signaling	–	–	–
indices	–	–	Used as a mathematical term.
information element (IE)	–	–	–
information technology (IT)	–	–	–
in-house [adj.]	–	–	–
initial address message (IAM)	–	–	–
initial cell rate (ICR)	–	–	–
initial domain identifier (IDI)	–	–	–
Initial Domain Part (IDP)	–	Component of an NSAP-format address	–
initiate [do not use]	begin or start	–	Use of the term “initiate” is permitted in cases where the terms “begin” and “start” are not accurate. Example: Only the real host can *initiate* traffic.
in order to [do not use]	to	–	–
in other words	–	–	Avoid i.e.
insure	–	*Insure* means to take out an insurance policy. Example: We insured our home against fire damage.	Compare with assure and ensure.

Term or Phrase	Alternate/Preferred	Definition	Notes
Integrated Gateway Server (IGS)	–	–	Obsolete product but not obsolete term.
Integrated Local Management Interface (ILMI)	–	–	–
interarea	–	–	–
interface processor [noun, adj.]	–	–	Do not use the abbreviation IP for this term.
Interim Interswitch Signaling Protocol (IISP)	–	–	–
Interior Gateway Protocol (IGP)	–	–	–
Interior Gateway Routing Protocol (IGRP)	–	–	–
intermediate network node	–	–	–
intermediate session routing (ISR)	–	–	–
Intermediate System-to-Intermediate System (IS-IS) Protocol	–	–	–
International Code Designator (ICD)	–	component of an NSAP-format address	–
international data number (IDN)	–	–	–
internet	–	–	You should lowercase the term “internet” unless it is part of an abbreviation expansion, such as Internet Protocol for IP, or a proper name, such as Internet Explorer.
Internet Assigned Numbers Authority (IANA)	–	–	–
Internet Control Message Protocol (ICMP)	–	–	–
Internet Network Information Center (InterNIC)	–	–	–
internetwork	–	–	Generic reference to network of networks.
Internetwork Packet Exchange (IPX)	–	–	–
InterNIC	–	Internet Network Information Center	–
internode routing	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Interprocess Protocol	–	–	Do not use the abbreviation IP for this term.
Inter-Switch Link (ISL)	–	–	–
interworking function (IWF)	–	–	–
interworking unit (IWU)	–	–	–
in the event of [do not use]	if	–	–
intra-area routing	–	–	–
intranet	–	–	–
Inverse Address Resolution Protocol (Inverse ARP)	–	–	–
Inverse ARP	–	Inverse Address Resolution Protocol	–
I/O	–	–	Do not spell out.
IOS [do not use]	Cisco IOS	–	–
IOX [do not use]	Cisco IOS XR	–	–
IP	–	–	Do not spell out.
IP (as an acronym for interface processor) [do not use]	interface processor [noun, adj.]	–	–
IP address	–	–	Not Internet address.
IP Control Protocol (IPCP)	–	–	–
IPCP	–	IP Control Protocol	–
IP multicast	–	–	–
IPsec	–	–	–
IP Security Option (IPSO)	–	–	–
IPSO	–	IP Security Option	–
IPv4	–	–	Do not spell out.
IPv6	–	–	Do not spell out.
IPX	–	Internetwork Packet Exchange	–
IPX RIP	–	Internet Packet eXchange Routing Information Protocol	–
IPX WAN	–	–	Refers to the general concept of passing IPX packets over a WAN.
IPXWAN Protocol	–	–	Refers to the specific IPX WAN protocol defined in RFC 1362.
IRDP	–	ICMP Router Discovery Protocol	–
is comprised of [do not use]	comprises, consists of, or is composed of	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
is composed of	–	–	Avoid is comprised of.
ISDN	–	–	Do not spell out.
ISDN BRI	–	–	–
ISDN digital subscriber line (IDSL)	–	–	–
ISDN PRI	–	–	–
IS-IS (Intermediate System-to-Intermediate System) Protocol	–	–	–
ISL	–	Inter-Switch Link	–
ISO	–	–	Do not spell out.
ISP	–	–	Do not spell out.
ISR	–	intermediate session routing	–
IT	–	information technology	–
ITU	–	–	Do not spell out.
ITU-T	–	–	Do not spell out. Avoid CCITT or Consultative Committee for International Telegraph and Telephone.
IWF	–	interworking function	–
IWU	–	interworking unit	–

J

Term or Phrase	Alternate/Preferred	Definition	Notes
jackscrew	–	–	–
JPEG	–	–	Do not spell out.

K

Term or Phrase	Alternate/Preferred	Definition	Notes
keepalive interval	–	–	–
Kerberos Protocol	–	–	–
Kermit	–	–	–
keystroke	–	–	–
keyword	–	–	–

L

Term or Phrase	Alternate/Preferred	Definition	Notes
labeled; labeling	–	–	labelling is used only in the actual syntax of a software command.
LAN	–	–	Do not spell out.
LANE	–	LAN Emulation	–
LANE Address Resolution Protocol (LE_ARP)	–	–	–
LANE Client (LEC)	–	–	–
LANE Client Identifier (LECID)	–	–	–
LANE Configuration Server (LECS)	–	–	–
LAN Emulation (LANE)	–	–	–
LANE NNI (LNNI)	–	–	–
LANE server (LES)	–	–	–
LANE UNI (LUNI)	–	–	–
LANE User-Network Interface (LANE UNI)	–	–	–
LAN Extender	–	–	Refers to the product.
LAN extension	–	–	Refers to the architecture.
LAN Network Manager (LNM)	–	–	–
LAPD	–	Link Access Procedure on the D channel	–
large	–	–	Avoid large-sized.
large-sized [do not use]	large	–	–
LAT	–	local-area transport	–
later than <prodname> release x	–	–	Avoid higher than <prodname> release x.
latest	–	–	Avoid up-to-the-minute.
launch [do not use]	start	–	–
Layer *n* [noun, adj.]	–	–	Don't hyphenate OSI layer names, even if you use them as adjectives. Correct: Layer 3. Incorrect: Layer-3
LCN	–	logical channel number	–
leaf-initiated join parameter (LIJP)	–	–	–
leaf-initiated join parameter (LIJP)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
leaf switches (the plural of leaf switch)	–	–	–
learned [verb, adj.]	–	–	–
learnt [do not use]	learned	–	–
leaves (as the plural of leaf switch) [do not use]	leaf switches (the plural of leaf switch)	–	–
LE_ARP	–	LANE Address Resolution Protocol	–
LEC	–	LANE Client	–
LECID	–	LANE Client Identifier	–
LECS	–	LANE Configuration Server	–
LED	–	–	Do not spell out.
left	–	–	Avoid left-hand.
left-hand [do not use]	left	–	–
left-justify	–	–	–
left-most, right-most [do not use]	far left; far right	–	–
LES	–	LANE server	–
less	–	*Less* refers to quantities of mass, bulk, or volume. Example: Arizona has less water than Michigan, and it has fewer lakes.	Compare with fewer.
leverage (as a synonym for use) [do not use]	use	–	–
lifecycle	–	–	–
LIFO	–	–	Do not spell out.
LIJP	–	leaf-initiated join parameter	–
like	–	Use *like* to compare the example to the thing mentioned. Example: The Cisco 7000 router, like the Cisco 1004, is used in internetworks.	Compare with such as.
limited resource link	–	–	–
LINE signal	–	–	–
Link Access Procedure on the D channel (LAPD)	–	–	–
link layer [noun]; link-layer [adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
link-state [adj.]	–	Example: including link-state algorithm	–
lit/not lit (referring to LEDs) [do not use]	on or off [referring to LEDs]	–	–
LLC	–	Logical Link Control Protocol	–
LLC2	–	Logical Link Control, type 2 Protocol	–
LMI	–	Local Management Interface	–
LNM	–	LAN Network Manager	–
LNNI	–	LANE NNI	–
local ack or local ACK (except in command syntax) [do not use]	local acknowledgment	–	–
local acknowledgment	–	–	Avoid local ack or local ACK (except in command syntax).
local-area transport (LAT)	–	–	–
Local Management Interface (LMI)	–	–	–
LocalTalk	–	–	–
logical channel number (LCN)	–	–	–
logical link control (LLC)	–	–	–
Logical Link Control (LLC) Protocol	–	–	–
Logical Link Control, type 2 (LLC2) Protocol	–	–	–
logical unit (LU)	–	–	–
Logical Unit 6.2 (LU 6.2)	–	–	–
login [noun, adj.]; log in [verb]	–	–	–
logoff [noun, adj.]; log off [verb]	logout [noun, adj.]; log out [verb]	–	Avoid except to be consistent with software interface.
logon [noun, adj.]; log on [verb]	login [noun, adj.]; log in [verb]	–	Avoid except to be consistent with software interface.
logout [noun, adj.]; log out [verb]	–	–	–
long-haul network	–	–	–
look up [verb] [do not use]	browse or find	–	–
lookup [noun, adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
loopback test	–	–	–
lower than <prodname> release x [do not use]	earlier than <prodname> release x	–	–
lowercase	–	–	–
LU	–	logical unit	–
LU 6.2	–	Logical Unit 6.2	–
LUNI	–	LANE UNI	–

M

Term or Phrase	Alternate/Preferred	Definition	Notes
MAC	–	–	Do not spell out.
MAC layer	–	–	–
Madge microcode	–	–	–
mainframe	–	–	–
Maintenance Operation Protocol (MOP)	–	–	–
Maintenance Release *x.x*	–	–	–
MAN	–	metropolitan-area network	–
manageability	–	–	–
master [do not use]	primary	–	–
MAU	–	media attachment unit	–
maximum transmission unit (MTU)	–	–	–
MBRI	–	Multi-BRI	–
M chassis	–	–	–
MCI	–	Multiport Communications Interface	–
MCI Version	–	–	Specific reference.
MD5	–	message digest algorithm 5	–
media attachment unit (MAU)	–	–	–
media-independent interface (MII)	–	–	–
media interface connector (MIC)	–	–	–
media interface controller	–	–	–
message digest algorithm 5 (MD5)	–	–	–
message switching [noun]; message-switching [adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
metropolitan-area network (MAN)	–	–	–
MGS	–	Cisco Midsize Gateway Server system	Obsolete product but not obsolete term.
MGS/3; MGS/4	–	Cisco 4-slot modular router systems	Obsolete product but not obsolete term.
MIB	–	–	Do not spell out.
MIC	–	media interface connector	–
MICA	–	–	Use with “technologies” at first reference.
micro	–	–	Avoid μ.
microsegmentation	–	–	–
midsize [adj.]	–	–	–
MII	–	media-independent interface	–
MIME	–	Multipurpose Internet Mail Extensions	–
minicomputer	–	–	–
MIP	–	MultiChannel Interface Processor	–
model	–	Use *model* to refer generically to a variant of hardware. Capitalize *model* when referring to specific hardware. Examples: Two models of the DOCSIS 3.0 cable modem are available. The Cisco Model DPC3000 DOCSIS 3.0 Cable Modem is backward compatible with DOCSIS 2.0.	Compare with release and version.
Model (when referring to Cisco products) [do not use]	Cisco xxxx	–	–
MOP	–	Maintenance Operation Protocol	–
motherboard	–	–	–
MPEG	–	–	Do not spell out.
MPOA	–	multiprotocol over ATM	–
MSM/3	–	Cisco terminal server system	Obsolete product but not obsolete term.
MTU	–	maximum transmission unit	–

Term or Phrase	Alternate/Preferred	Definition	Notes
mu-law	–	–	Do not use u-law or the Greek letter mu, which does not always display correctly online.
Multi-BRI (MBRI)	–	–	–
Multibus	–	–	–
MultiChannel Interface Processor (MIP)	–	–	–
multimedia	–	–	–
multimode	–	–	–
multiple logical IP subnetworks	–	–	No acronym.
multiplexer; multiplexing	–	–	–
multiport	–	–	–
Multiport Communications Interface (MCI)	–	–	–
multiprotocol	–	–	–
multiprotocol over ATM (MPOA)	–	–	–
Multipurpose Internet Mail Extensions (MIME)	–	–	–
multiring	–	–	–
multivendor	–	–	–

N

Term or Phrase	Alternate/Preferred	Definition	Notes
namely	–	–	Avoid viz.
narrowband	–	–	–
NAS	–	network access server	–
NASI	–	NetWare Access Server Interface	–
National Fire Protection Association (NFPA)	–	–	–
National ISDN-1 (NI1)	–	–	–
nationwide [adj.]	–	–	–
native client interface architecture (NCIA)	–	–	–
NAU	–	network addressable unit	–
NCIA	–	native client interface architecture	–
NCP	–	Network Control Program	–
need	–	–	Avoid desire/desired.

Term or Phrase	Alternate/Preferred	Definition	Notes
needlenose pliers	–	–	–
NetBIOS	–	–	–
netboot [do not use]	boot from a network (TFTP) server	–	–
NetFlow Collector	–	–	–
NetView	–	–	–
NetWare	–	–	–
NetWare Access Server Interface (NASI)	–	–	–
network access server (NAS)	–	–	–
Network Address Translation (NAT)	–	–	–
network addressable unit (NAU)	–	–	–
Network Control Program (NCP)	–	–	–
network interface card	–	–	–
network interface device	–	–	–
network interface module (NIM)	–	–	–
network layer	–	Layer 3 of the OSI reference model	–
Network Layer Reachability Information (NLRI)	–	–	–
Network-Level Extended Security Option (NLESO)	–	–	–
network management vector transport	–	–	–
network-node domain	–	–	–
Network Node Interface (NNI)	–	–	for ATM
network-node server	–	–	–
network processor module (NPM)	–	–	–
Network Termination 1 (NT1)	–	–	–
Network Time Protocol (NTP)	–	–	–
Network-to-Network Interface (NNI)	–	–	for Frame Relay
Networkers	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Next Hop Resolution Protocol (NHRP)	–	–	–
NFPA	–	National Fire Protection Association	–
NHRP	–	Next Hop Resolution Protocol	–
NI1	–	National ISDN-1	–
NIM	–	network interface module	–
NLESO	–	Network-Level Extended Security Option	–
NLRI	–	Network Layer Reachability Information	–
NMdraw menu	–	–	–
nmdraw program	–	–	–
NNI	–	Network Node Interface	for ATM
no.	–	number	–
nonextended AppleTalk	–	–	–
nonreal time (NRT)	–	–	–
nonreturn to zero (NRZ)	–	–	–
nonreturn to zero inverted (NRZI)	–	–	–
nonsecure, insecure, unsecure, not secured [do not use]	unsecured	–	–
not responding	–	–	Avoid hangs.
NPM	–	network processor module	–
NRT	–	nonreal time	–
NRZ	–	nonreturn to zero	–
NRZI	–	nonreturn to zero inverted	–
NSFnet	–	–	–
NT1	–	Network Termination 1	–
NTP	–	Network Time Protocol	–
null modem	–	–	–
NVRAM	–	–	Do not spell out.

O

Term or Phrase	Alternate/Preferred	Definition	Notes
OAM	–	Operation, Administration, and Maintenance	Used with or without “cell.”
OC-*x*	–	Optical Carrier Example: OC-48	–
odd-numbered [adj.]	–	–	–
ODI	–	Open Data-Link Interface	–
off line [predicate adj.]; offline [adj.]	–	–	–
offsite [noun, adj.]	–	–	–
off-the-shelf	–	Describes software or hardware products that are readymade; not specially designed or custom-made.	The opposite of “off-the-shelf” is “customized”, which indicates software or hardware products that are specially developed for specific users.
OIR	–	online insertion and removal	–
on line [predicate adj.]; online [adj.]	–	–	–
ON/OFF	–	–	Use all uppercase for warnings.
on or off [referring to LEDs]	–	–	Avoid lit/not lit.
on site [predicate adj.]; onsite [adj.]	–	–	–
on the basis of [do not use]	because of	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
onboard [adj.] onboard (vb.)	–	–	As a verb *onboard* means to go through procedures to effectively integrate (a new employee) into an organization or familiarize (a new customer or client) with one's products or services. Network onboarding denotes the process by which a user or device that is outside the main enterprise network, securely gains access to the network for the first time. Examples: This procedure describes how to onboard a user to the ADK DevNet site. Certificate-based network access enables organizations to quickly and securely allow onboarding of new users.
once	–	Do not use *once* to mean *after* or *when*. Rather, confine its use to mean a number of times. Example: The switch was upgraded *once*.	Compare with after and when.
ongoing [adj.]	–	–	–
online insertion and removal (OIR)	hot swap	Online insertion and removal (OIR) enables you to replace faulty modules without affecting system operation, which is similar to hot swapping. The difference between hot swapping and OIR is that OIR requires running Cisco IOS commands before and after the OIR. Hot swapping is strictly a hardware function and requires no commands. The following items use OIR in the routers: ■ Service Modules (SMs) ■ Network Interface Modules (NIMs) ■ SFPs ■ USB devices	–

Term or Phrase	Alternate/Preferred	Definition	Notes
only	–	Place *only* just preceding or following the word or phrase it modifies (not just before the verb, as is sometimes done in conversation). Correct: The manager could select only four participants. Incorrect: The manager could only select four participants.	–
on-premise[do not use]	on-premises [adj.] on premises [adv.]	–	–
on-premises [adj.] on premises [adv.]	–	–	–
OOF	–	out of frame	–
Open Data-Link Interface (ODI)	–	–	–
OpenDNS [do not use]	Cisco Umbrella	–	–
OPEN LOOK	–	–	–
Open Shortest Path First (OSPF) Protocol	–	–	–
Open Systems Interconnection (OSI)	–	–	–
OpenView	–	–	–
OpenWindows	–	–	–
OSI	–	Open Systems Interconnection	–
OSI reference model	–	–	Don't hyphenate OSI layer names, even if you use them as adjectives. Correct: Layer 3. Incorrect: Layer-3
OSPF (Open Shortest Path First) Protocol	–	–	–
out of frame (OOF)	–	–	–
out of sequence [adv.]; out-of-sequence [adj.]	–	–	–
overtemperature	–	–	–
overtighten	–	–	–
overviews (as a verb) [do not use]	summarizes	–	–
overvoltage	–	–	–

P

Term or Phrase	Alternate/Preferred	Definition	Notes
packet assembler/disassembler (PAD)	–	–	–
Packet Exchange Protocol (PEP)	–	–	–
packets per second (pps)	–	–	–
packet-switched network (PSN)	–	–	–
packet switching [noun]; packet-switching [adj.]	–	–	–
PAD	–	packet assembler/disassembler	–
PAL	–	programmable array logic device	–
PAP	–	Password Authentication Protocol	–
Parallel Channel Adapter (PCA)	–	–	–
part number [generic reference]; Part Number [specific reference]	–	–	–
passthrough [noun, adj.]; pass through [verb]	–	–	–
Password Authentication Protocol (PAP)	–	–	–
path control network	–	–	–
path information unit (PIU)	–	–	–
pathname	–	–	–
pause	–	–	Avoid hang.
PBX	–	–	Do not spell out.
PC	–	–	Do not spell out.
PCA	–	Parallel Channel Adapter	–
P chassis	–	–	–
PCR	–	peak cell rate	Relates to ATM traffic management and is the primary usage.
		program clock reference	Cisco ATM usage relating to configuring clocking.
PDH	–	plesiochronous digital hierarchy	–
PDN	–	public data network	–
PDU	–	protocol data unit	–
peer-to-peer computing	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
PEP	–	Packet Exchange Protocol	–
percent	–	–	–
permanent virtual circuit (PVC)	–	–	–
physical control	–	–	–
physical layer	–	Layer 1 of the OSI reference model	–
physical unit (PU)	–	–	–
Physical Unit *n* (PU *n*)	–	Example: PU 2.1	–
ping [noun, verb]	–	–	Do not spell out.
pinout	–	–	–
PIU	–	path information unit	–
PLA	–	programmable logic array	–
plain old telephone service (POTS)	–	–	–
plastic leaded chip carrier (PLCC)	–	–	–
PLCC	–	plastic leaded chip carrier	–
plesiochronous digital hierarchy (PDH)	–	–	–
plug-and-play [adj.]	–	–	Because of globalization issues, avoid this term if possible; if you have to use the term, put it in quotation marks at first occurrence.
plug-in [noun, adj.]; plug in [verb]	–	–	–
p.m.	–	–	–
PNNI	–	Private Network Node Interface, Private Network-Network Interface, or Private Network-to-Network Interface	–
pod	–	–	Use lowercase. However, if you are referring to specific pods, use initial capitalization; for example, Pod 1, Pod 2, and so on.
PoE	–	Power over Ethernet	–
point of presence (POP)	–	physical access point to a long distance carrier interexchange	–
point to point [noun]; point-to-point [adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
POP	–	point of presence—physical access point to a long distance carrier interexchange or Post Office Protocol	–
pop-up window	–	–	–
post [do not use]	after	–	Do not use *post* to mean *after*. When used to mean *after*, post must be written only as a prefix. That is, it must appear at the start of a root word, with no space in between. Examples: postscript, postproduction, postprocessing
Post Office Protocol (POP)	–	–	–
POTS	–	plain old telephone service	–
power down [verb]; power-down [adj.]	–	–	–
Power over Ethernet (PoE)	–	–	–
power switch	–	–	–
power up [noun, verb]; power-up [adj.]	–	–	–
PPP	–	–	Do not spell out.
pre-FSIP	–	FSIP—Fast Serial Interface Processor	Avoid Serial Interface Processor (SIP).
preinstallation	–	–	–
presentation layer	–	Layer 6 of the OSI reference model	–
presentation services	–	–	–
press [verb]	–	–	Avoid depress.
preventative [do not use]	preventive	–	–
preventive	–	–	Avoid preventative.
PRI	–	–	Do not spell out.
PRI interface	–	–	When PRI is used as an adjective.
primary	–	–	Avoid master.
print server	–	–	–
printout [noun]; print out [verb]	–	–	–
prior to [do not use]		–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Private Network Node Interface (PNNI)	–	–	Also Private Network-Network Interface and Private Network-to-Network Interface.
Private Network-Network Interface (PNNI)	–	–	Also Private Network Node Interface and Private Network-to-Network Interface.
Private Network-to-Network Interface (PNNI)	–	–	Also Private Network Node Interface and Private Network-Network Interface.
program clock reference (PCR)	–	–	Cisco ATM usage relating to configuring clocking
programmable array logic device (PAL)	–	–	–
programmable logic array (PLA)	–	–	–
PROM	–	–	Do not spell out.
protocol data unit (PDU)	–	–	–
proxy ARP	–	–	–
proxy explorer	–	–	–
pseudowire	–	–	–
PSN	–	packet-switched network	–
PSTN	–	public switched telephone network	Avoid using PSTN in end-user content unless the context demands it (that is, if you need to distinguish the PSTN network from another type of phone network).
PU	–	physical unit	–
PU *n*	–	Physical Unit *n* Example: PU 2.1	–
public data network (PDN)	–	–	–
public switched telephone network (PSTN)	–	–	–
PVC	–	permanent virtual circuit	–

Q

Term or Phrase	Alternate/Preferred	Definition	Notes
QLLC	–	Qualified Logical Link Control	–
QoS	–	quality of service	–
Qualified Logical Link Control (QLLC)	–	–	–
quality of service (QoS)	–	–	–
query	–	–	–
queue; queued; queuing	–	–	–

R

Term or Phrase	Alternate/Preferred	Definition	Notes
rack-mount; rack-mounted; rack-mounting	–	–	Hyphenate at all occurrences.
radio frequency interference (RFI)	–	–	–
RADIUS	–	–	Do not spell out.
RAM	–	–	Do not spell out.
rcp (remote copy)	–	–	–
Ready To Send (RTS) signal	–	–	–
real time [noun]; real-time [adj.]	–	–	Avoid using non-real-time by rewording the sentence.
reboot	–	–	–
Recommendation X.25	–	–	–
Recycle Bin	–	–	Use this term. Do not use Trash Can or Trash Bin, which are copyrighted terms by Apple.
Reduced Instruction Set Computer (RISC)	–	–	–
redundant power supply	–	–	Not RPS.
Redundant Power System (RPS)	–	–	Use when referencing the specific Access product and the physical unit in the NetBeyond hardware product; use the acronym only when referring to FRU in the NetBeyond product.
refer to [do not use]	see	–	–
regarding with regard to with respect to [do not use]	about	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
reinstall	–	–	–
release	–	Use *release* to refer generically to Cisco software. Capitalize *release* when referring to specific software. Examples: The previous Cisco IOS release did not support this feature. The Cisco Nexus 7010 uses Cisco NX-OS Release 5.1(2).	Compare with model and version.
remote access [noun]; remote-access [adj.]	–	–	–
remote copy (rcp)	–	–	–
Remote Monitoring (RMON)	–	–	–
Remote Operations Service Element (ROSE)	–	–	–
remote-procedure call (RPC)	–	–	–
remote shell (rsh)	–	–	–
remote source-route bridging (RSRB)	–	–	–
rendezvous point (RP)	–	–	–
replaceable	–	–	–
request/response unit (RU)	–	–	–
Request To Send (RTS) signal	–	–	–
revolves around	–	–	Avoid centers around.
Resource Reservation Protocol (RSVP)	–	–	–
RFC	–	–	Do not spell out.
RFI	–	radio frequency interference	–
RETURN signal	–	–	–
right	–	–	Avoid right-hand.
right-hand [do not use]	right	–	–
right-justify	–	–	–
RIP	–	Routing Information Protocol	–
RISC	–	Reduced Instruction Set Computer	–
RJ-*x*	–	Example: RJ-45	–

Term or Phrase	Alternate/Preferred	Definition	Notes
rlogin	–	–	–
RMON	–	Remote Monitoring	–
RoboHELP	–	–	–
rollback [noun, adj.]; roll back [verb]	–	–	–
rollout [noun, adj.]; roll out [verb]	–	–	–
rollover [noun and adj.]; roll over [verb]	–	–	–
ROM	–	–	Do not spell out.
ROSE	–	Remote Operations Service Element	–
round-trip time (RTT)	–	–	–
routable	–	–	–
Route Processor (RP)	–	–	–
router/hub	–	–	Access products terminology
Route Switch Processor (RSP)	–	–	–
Route Switch Processor (RSP); RSP card or module	–	–	–
routing information field	–	–	–
Routing Information Protocol (RIP)	–	–	–
Routing Table Maintenance Protocol (RTMP)	–	–	–
RP	–	rendezvous point or Route Processor	–
RPC	–	remote-procedure call	–
RPS	–	Redundant Power System	Use when referencing the specific Access product and the physical unit in the NetBeyond hardware product; use the acronym only when referring to FRU in the NetBeyond product.
rsh	–	remote shell	–
RSP	–	Route Switch Processor	–
RSRB	–	remote source-route bridging	–
RSVP	–	Resource Reservation Protocol	–
RS-*x* [do not use]	EIA/TIA-x	–	–
RTMP	–	Routing Table Maintenance Protocol	–

Term or Phrase	Alternate/Preferred	Definition	Notes
Real-Time Transport Protocol (RTP)	–	–	–
RTS signal	–	Ready To Send signal or Request To Send signal	–
RU	–	request/response unit	–
RUNCMD server	–	–	–
run-from-flash [adj.]	–	–	–
run time [noun, predicate adj.]; run-time [adj.]	–	–	–
rxboot [do not use]	boot helper image	–	–

S

Term or Phrase	Alternate/Preferred	Definition	Notes
SAAL	–	signaling ATM adaptation layer	–
SAP	–	Service Advertising Protocol, Session Announcement Protocol, or service access point	–
SAR	–	segmentation and reassembly	–
SAS	–	single attachment station	–
SATF	–	shared-access transport facility	–
SBus	–	–	–
scalable	–	–	–
SCI	–	serial port communications interface	–
SCR	–	sustainable cell rate	–
screen saver	–	–	When used as an adjective, screen saver should be hyphenated as in “screen-saver slideshow” or “screen-saver mode.”
SDH	–	Synchronous Digital Hierarchy (standard)	–
SDH/SONET	–	Synchronous Digital Hierarchy/Synchronous Optical Network	–
SDLC (Synchronous Data Link Control) Protocol	–	–	–
SDLC Transport	–	–	–
SDLLC	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
SDSU	–	–	–
SEAL	–	simple and efficient AAL	–
see	–	–	Avoid refer to.
segmentation and reassembly (SAR)	–	–	–
self-check; self-checking	–	–	–
self-sufficient [adj., predicate adj.]	–	–	–
self-test	–	–	–
send	–	–	Avoid transmit.
Sequenced Packet Exchange (SPX)	–	–	–
Sequenced Packet Protocol (SPP)	–	–	–
serial interface	–	–	–
Serial Interface Processor (SIP) [do not use]	pre-FSIP	–	This product is obsolete; use the term “pre-FSIP.”
serial line	–	–	–
Serial Line Internet Protocol (SLIP)	–	–	–
serial port	–	–	–
serial port communications interface (SCI)	–	–	–
serial tunnel (STUN)	–	–	Not serial tunneling; however, STUN uses serial tunneling.
serviceability	–	–	–
service access point (SAP)	–	–	–
Service Advertising Protocol (SAP)	–	–	Not Service Advertisement Protocol.
Service Provider MultiChannel Interface Processor (SMIP)	–	–	–
Service-Specific Connection-Oriented Protocol (SSCOP)	–	–	–
service-specific coordination function (SSCF)	–	–	–
session layer	–	Layer 5 of the OSI reference model	–
setup [noun, adj.]; set up [verb]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
several	–	–	Avoid a number of.
SFTP	–	–	Do not spell out.
SGBP	–	Stack Group Bidding Protocol	–
shared-access transport facility (SATF)	–	–	–
shielded twisted-pair (STP)	–	–	–
shutdown [noun]; shut down [verb]	–	–	–
side panel	–	–	–
signaling	–	–	–
signaling ATM adaptation layer (SAAL)	–	–	–
silicon switching engine (SSE)	–	–	–
Silicon Switch Processor (SSP)	–	–	–
Silver-certified partner	–	–	Silver partner on subsequent occurrences.
SIMM	–	–	Do not spell out.
simple and efficient AAL (SEAL)	–	–	–
Simple Network Management Protocol (SNMP) Version *x* SNMPv*x*	–	Example: SNMPv3	–
since	–	Use *since* when referring to time. To test whether you are using *since* correctly, see if you can substitute *ever since*. (Do not use *since* to mean because.) Example: The dog has been missing since Friday.	Compare with as, because, and for.
single attachment station (SAS)	–	–	–
single-mode [adj.]	–	–	–
slave [do not use]	subordinate	–	–
slide mount [noun]; slide-mount [adj.]	–	–	–
SLIP	–	Serial Line Internet Protocol	–
slotted ring [noun]	–	–	–
slotted screw	–	–	–
small office/home office (SOHO)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
SMDS	–	Switched Multimegabit Data Service	–
SMIP	–	Service Provider MultiChannel Interface Processor	–
SMT *x*	–	Station Management Specification, Revision *x* Example: SMS, Revision 3.1	–
SNA	–	Systems Network Architecture	–
SNM	–	SunNet Manager	–
SNM Console	–	–	–
SNMPv*x*	–	Example: SNMPv3	See Simple Network Management Protocol (SNMP).
so that	–	When *so* introduces a clause of purpose or result, change it to *so that*. Example: Use a large font so that the difference is apparent.	–
soft permanent virtual channel (SPVC)	–	–	–
soft permanent virtual connection (SPVC)	–	–	–
soft permanent virtual path (SPVP)	–	–	–
software release [generic reference]; Software Release [specific reference]	–	–	–
SOHO	–	small office/home office	–
SONET	–	–	Do not spell out.
source-route bridging (SRB)	–	–	–
source-route translational bridging	–	–	SR/TLB—Cisco feature; do not use SRTB.
Source Routing Transparent (SRT)	–	–	–
SP	–	Switch Processor	–
spanning tree [noun]; spanning-tree [adj.]	–	–	–
Spanning Tree Protocol (STP)	–	–	–
SPARCstation	–	–	–
SPP	–	Sequenced Packet Protocol	–

Term or Phrase	Alternate/Preferred	Definition	Notes
SPVC	–	soft permanent virtual channel or soft permanent virtual connection	–
SPVP	–	soft permanent virtual path	–
SPX	–	Sequenced Packet Exchange	–
SRAM	–	–	Do not spell out.
SRB	–	source-route bridging	–
SRT	–	Source Routing Transparent	–
SR/TLB	–	source-route translational bridging	Cisco feature; do not use SRTB.
SRTS	–	synchronous residual time stamp	–
SSCF	–	service-specific coordination function	–
SSCOP	–	Service-Specific Connection-Oriented Protocol	–
SSCP	–	system services control point	–
SSE	–	silicon switching engine	–
SSH	–	–	Do not spell out.
SSIP	–	Standard Serial Interface Processor	–
SSP	–	Silicon Switch Processor	–
Stack Group Bidding Protocol (SGBP)	–	–	–
stand alone [verb]; standalone [adj.]	–	–	–
Standard Serial Interface Processor (SSIP)	–	–	–
standoff [noun]	–	–	–
start	–	–	Avoid initiate. Avoid launch.
start-stop transmission	–	–	–
startup [noun, adj.]; start up [verb]	–	–	–
Station Management (SMT) Specification, Revision *x*	–	–	Use SMT *x* on subsequent occurrences.
STM	–	synchronous transfer mode	–
STP	–	shielded twisted-pair or Spanning Tree Protocol	–
STS-3c	–	synchronous transport signal Level 3, concatenated	–
STS-10x	–	Cisco Ethernet terminal server system	–

Term or Phrase	Alternate/Preferred	Definition	Notes
STUN	–	serial tunnel	Not serial tunneling; however, STUN uses serial tunneling
subarea	–	–	–
subnet mask	–	–	–
subnetwork	–	–	–
subordinate	–	–	Avoid slave.
such as	–	When you give an example of something, use *such as* to indicate that the example is a representative of the thing mentioned. Example: Cisco produces many routers, such as the Cisco 7513 and Cisco 1004.	Compare with like.
summarizes	–	–	Avoid overviews (as a verb).
SunNet Manager (SNM)	–	–	–
SunOS	–	–	–
Sun workstation	–	–	–
sup [do not use]	supervisor	An abbreviation for “supervisor”	–
supercomputer	–	–	–
superuser	–	–	–
supervisor	–	–	Avoid the abbreviation sup.
suspend operation	–	–	Avoid hang.
sustainable cell rate (SCR)	–	–	–
SVC	–	switched virtual circuit	–
SVCC	–	switched virtual channel connection	–
SVCI	–	switched virtual circuit identifier	–
SVP	–	switched virtual path	–
SVPC	–	switched virtual path connection	–
Switched Multimegabit Data Service (SMDS)	–	–	–
switched virtual channel connection (SVCC)	–	–	–
switched virtual circuit (SVC)	–	–	–
switched virtual circuit identifier (SVCI)	–	–	–
switched virtual path (SVP)	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
switched virtual path connection (SVPC)	–	–	–
Switch Processor (SP)	–	–	–
Synchronous Data Link Control (SDLC) Protocol	–	–	–
Synchronous Digital Hierarchy (SDH) [standard]	–	–	–
Synchronous Digital Hierarchy/Synchronous Optical Network (SDH/SONET)	–	–	–
synchronous residual time stamp (SRTS)	–	–	–
synchronous transfer mode (STM)	–	–	–
synchronous transport signal Level 3, concatenated (STS-3c)	–	–	–
syslog	–	–	–
system-defined [adj.; predicate adj.]	–	–	–
system services control point (SSCP)	–	–	–
Systems Network Architecture (SNA)	–	–	–

T

Term or Phrase	Alternate/Preferred	Definition	Notes
T1/E1	–	–	–
TACACS; TACACS+	–	–	Do not spell out.
tailend [noun, adj.]	–	–	–
target identifier [no acronym]	–	–	–
Target Identifier Address Resolution Protocol (TARP)	–	–	–
TARP	–	Target Identifier Address Resolution Protocol	–
TC	–	transmission convergence	–
T-carrier	–	–	–
Tcl	–	Tool Command Language	–
T-connector	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
TCP	–	–	Do not spell out.
TCP/IP	–	–	Do not spell out.
TDM	–	time-division multiplexing	–
teardown [noun, adj.]; tear down [verb]	–	–	–
telco	–	–	–
Telcordia	–	–	On first reference use Telcordia Technologies; on subsequent reference use just Telcordia. Do not mention that the former name was Bellcore.
Telecommunications Industry Association (TIA)	–	–	–
Telnet [noun, adj.]	–	–	–
telnet [verb]	–	–	–
terminal emulation [noun]; terminal-emulation [adj.]	–	–	–
terminal server	–	–	–
terminate	cancel	–	Avoid abort.
Terminate and Stay Resident (TSR) [noun, adj.]	–	–	–
terminator	–	–	–
TFTP	–	–	Do not spell out.
that	–	Use *that* to introduce a restrictive clause (a clause whose removal would change the meaning of the sentence or cause the meaning to be lost). Do not use commas with restrictive clauses. Example: This is the router that they ordered.	Compare with which.
that is	–	–	Avoid i.e.
the same size	–	–	Avoid equal-sized.
third party [noun]; third-party [adj.]	–	–	Avoid 3rd party.
throughput	–	–	–
thumbscrew	–	–	–
TIA	–	Telecommunications Industry Association	–
TIFF	–	–	Do not spell out.

Term or Phrase	Alternate/Preferred	Definition	Notes
time-division multiplexing (TDM)	–	–	–
timeframe	–	–	–
timeout [noun, adj.]; time out [verb]	–	–	–
time slot	–	–	–
timestamp [noun, adj., verb]	–	–	–
TM SWG	–	traffic management subworking group	–
TN3270	–	–	–
to	–	–	Avoid in order to.
to bring on board	–	–	Avoid onboard as a verb.
to get on board	–	–	Avoid onboard as a verb.
toggle button	–	Use only in specific context. The toggle button has a specific behavior that is different from that of a button, in that, it enables users to switch from one setting to another.	Use only when the GUI demands it; do not use it as a substitute for “button”.
token bus	–	–	–
token passing	–	–	–
Token Ring	–	–	–
Token Ring Interface Processor (TRIP)	–	–	–
top panel	–	–	–
ToS	–	type of service	–
touchpad	–	–	–
touchscreen	–	–	–
toward	–	–	Avoid towards.
traceback [adj.]	–	–	–
traceroute [noun, adj.]; trace route [verb]	–	–	–
trade-off [noun]; trade off [verb]	–	–	–
trade show	–	–	–
traffic management subworking group (TM SWG)	–	–	–
transaction services	–	–	–
transit bridging	–	–	–
translational bridging	–	–	–
transmission control	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
transmit [do not use]		–	–
transparent bridging	–	–	–
transport layer	–	Layer 4 of the OSI reference model	–
trap	–	–	–
Trash Bin [do not use]	Recycle Bin	–	Do not use. Trash Can and Trash Bin are copyrighted terms by Apple.
Trash Can [do not use]	Recycle Bin	–	Do not use. Trash Can and Trash Bin are copyrighted terms by Apple.
TRI-Bus	–	–	Obsolete product, not obsolete term.
TRIP	–	Token Ring Interface Processor	–
troubleshoot	–	–	–
TRouter	–	–	Obsolete product, not obsolete term.
trunk coupling unit	–	–	–
TSR [noun, adj.]	–	Terminate and Stay Resident	–
tty	–	–	Do not spell out.
tunneling	–	–	–
turnaround [noun, adj.]; turn around [verb]	–	–	–
twinaxial	–	–	–
twisted pair [noun]; twisted-pair [adj.]	–	–	–
type [do not use]	enter (data)	–	–
type of service (ToS)	–	–	–

U

Term or Phrase	Alternate/Preferred	Definition	Notes
UB Networks Net/One [protocol]	–	–	–
UB Networks XNS [protocol]	–	–	–
UBR	–	unspecified bit rate	–
UDP	–	–	Do not spell out.
UI	–	–	Do not spell out.
u-law [avoid; use mu-law]	–	–	–
UltraNet	–	–	–
undervoltage	–	–	–
UNI	–	User-Network Interface	–

Term or Phrase	Alternate/Preferred	Definition	Notes
unidirectional	–	–	–
unipolar	–	–	–
United States [noun]; U.S. [adj.]; use US in *Packet*; USA [address]	–	–	–
UNIX	–	–	–
unsecured	–	–	Avoid nonsecure, insecure, unsecure, not secured.
unshielded twisted-pair (UTP)	–	–	–
unspecified bit rate (UBR)	–	–	–
upgradable	–	–	–
uppercase	–	–	–
uptime	–	–	–
upto [do not use]	up to	–	–
up to	–	–	Avoid upto.
up-to-the-minute [do not use]	latest	–	–
URL	–	–	Do not spell out. Avoid web address.
USB	–	–	Do not spell out.
U.S. spelling of terms (for example, color, center, fiber)	–	–	Avoid British spelling of terms (for example, colour, centre, fibre).
use	–	–	Avoid leverage (as a synonym for use).
user	–	person using the software or hardware, not necessarily the customer	–
User Guide	–	–	Avoid User's Guide, Users' Guide.
username	–	–	–
User-Network Interface (UNI)	–	–	–
utilize [do not use]	use (except when referring to bandwidth utilization)	–	
UTP	–	unshielded twisted-pair	–
uudecode [product-specific term]	–	–	–
uuencode [product-specific term]	–	–	–

V

Term or Phrase	Alternate/Preferred	Definition	Notes
value-added network	–	–	–
variable bit rate (VBR)	–	–	–
VBR	–	variable bit rate	–
VCC	–	virtual channel connection	–
VCI	–	virtual connection identifier or virtual channel identifier (ATM only)	–
VCN	–	virtual circuit number	–
Versatile Interface Processor (VIP)	–	–	–
version	–	Use *version* to refer generically to software or a document. Capitalize *version* when referring to something specific, such as a protocol. Examples: The set-top box (STB) supports two software versions. First, determine which version of Linux is running. See the third version of this document. The STB supports both IGMP Version 2 (IGMPv2) and IGMP Version 3 (IGMPv3).	Compare with model and release.
Version *x* [specific microcode version]	–	Example: Version 3.1	–
V.FAST	–	access terminology—modem speed	–
VIC	–	voice interface card	–
VINES	–	Virtual Integrated Network Service	–
VIP	–	Versatile Interface Processor	–
VIP2	–	second-generation Versatile Interface Processor	–
virtual channel connection (VCC)	–	–	–
virtual channel identifier (VCI) [ATM only]	–	–	–
virtual circuit	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
virtual circuit number (VCN)	–	–	–
virtual connection identifier (VCI)	–	–	–
Virtual Device Context (VDC)	–	–	–
virtual fibre channel	–	–	Do not use an acronym; always use the full form.
Virtual Integrated Network Service (VINES)	–	–	–
virtual loadable module (VLM)	–	–	–
virtual path connection (VPC)	–	–	–
virtual path identifier (VPI)	–	–	–
virtual path identifier/virtual channel identifier (VPI/VCI)	–	–	–
virtual port channel (vPC)	–	–	–
viz. [do not use]	namely	–	–
VLAN	–	–	Do not spell out.
VLAN Membership Policy Server (VMPS)	–	–	–
VLAN Query Protocol (VQP)	–	–	–
VLAN Trunking Protocol (VTP)	–	–	–
VLM	–	virtual loadable module	–
VMPS	–	VLAN Membership Policy Server	–
VMware	–	–	Avoid VMWare, vmware.
VOD	–	–	Do not spell out.
voice interface card (VIC)	–	–	–
voicemail [noun, adj.]	–	–	–
voicemail box	–	–	–
VoIP	–	–	Do not spell out.
VPC	–	virtual path connection	–
VPI	–	virtual path identifier	–
VPI/VCI	–	virtual path identifier/virtual channel identifier	–
VPN	–	–	Do not spell out.
VQP	–	VLAN Query Protocol	–

Term or Phrase	Alternate/Preferred	Definition	Notes
VTP	–	VLAN Trunking Protocol	–
vty	–	–	Do not spell out.
V.*x*	–	Example: V.35	–
V.*x*bis	–	Example: V.42bis	–

W

Term or Phrase	Alternate/Preferred	Definition	Notes
wakeup [noun, adj.]; wake up [verb]	–	–	–
wall-mount; wall-mounted; wall-mounting	–	–	Hyphenate all occurrences.
WAN	–	–	Do not spell out.
WAN interface card (WIC)	–	–	–
want	–	–	Avoid desire/desired.
wavelength-division multiplexing (WDM)	–	–	–
WDM	–	wavelength-division multiplexing	–
web	–	–	Avoid Web.
web address [do not use]	URL	–	–
web-based interface	–	–	Avoid html-based interface.
web page	–	–	–
website	–	–	Use as one word, not two.
web UI	–	–	–
when	–	*When* combines the idea of *after* with the immediacy of the following action. Example: When you press **Return**, the program starts.	Compare with after and once.

Term or Phrase	Alternate/Preferred	Definition	Notes
which	–	Use *which* to introduce a nonrestrictive clause (a clause that could be removed without changing the meaning of the sentence—similar to a parenthetical statement). Use commas with nonrestrictive clauses. Example: The Cisco 7500 series, which Cisco introduced several years ago, is the most popular series.	Compare with that.
while	–	Use *while* to indicate time. If you can substitute the phrase *at the same time that*, use *while*. Example: While [At the same time that] you hold down the **Shift** key, press **Return**.	Compare with although.
whitelist [do not use]	allowed list	–	–
WIC	–	WAN interface card	–
Wide-area Network Interface Coprocessor (WNIC)	–	–	–
wildcard	–	–	–
Wi-Fi	–	–	Avoid wi fi, wi-fi, Wi fi, Wi-fi.
wi fi, wi-fi, Wi fi, Wi-fi [do not use]	Wi-Fi	–	–
Windows *x*– [adj.]	–	Example: Windows 2000–based application	Note use of en dash.
Windows *x* [noun]	–	Example: Windows 2000	–
WNIC	–	Wide-area Network Interface Coprocessor	–
workaround [noun]; work around [verb]	–	–	–
workgroup	–	–	–
workstation	–	–	–
worldwide	–	–	–
wrist strap	–	–	–
write-enable	–	–	–
write-only [adj.]	–	–	–

Term or Phrase	Alternate/Preferred	Definition	Notes
write-protect [adj.]	–	–	–
write protection [noun]	–	–	–
WWW	–	–	Do not use this abbreviation unless it is part of a URL; use the lowercase form in a URL.

X

Term or Phrase	Alternate/Preferred	Definition	Notes
Xerox Network Systems (XNS) Protocol	–	–	–
Xerox PUP [protocol]	–	–	–
XID	–	exchange identification	–
XML	–	–	Do not spell out.
Xmodem	–	–	–
XNS (Xerox Network Systems) Protocol	–	–	–
XRemote	–	–	–
X server	–	–	–
xterm	–	–	–
X Window System	–	–	X is the approved short form, not X Windows, although the latter has become widespread.
X.*x*	–	Example: X.25	–

Y

Term or Phrase	Alternate/Preferred	Definition	Notes
year-end	–	–	–
Ymodem	–	–	–

Z

Term or Phrase	Alternate/Preferred	Definition	Notes
zeros [plural]	–	–	–
ZIP [when used as ZIP code]	–	–	–

Reference Material

Topic	Resource Name and Link
Cisco style and tool references	■ *Cisco Technical Content Style Guide* (latest version) ■ *Cisco Marketing and Communications Style Guide* (Log in to Cisco Brand Exchange, click **Guidelines & Policies**, followed by **Brand Guides**, and then search for the style guide in the page listing.) ■ *Cisco XML Writing Guidelines* ■ XML Client Dashboard ■ WEM Tech Comms Dashboard ■ *FrameMaker Templates Handbook* and 2014 templates (WEM location: `Digital Assets\en\us\td\templates\2014_frame11`) ■ Cisco Distribution Team home page to submit changes to the *FrameMaker Templates Handbook*. ■ MS Word 2014 templates (WEM location: `Digital Assets\en\us\td\templates\2014_word2010`) ■ Cisco Collaboration Dictionary for UIs and Documentation ■ Acrolinx Term Browser (for Collaboration, Cisco Nexus 9000, Cisco UCS, and Cisco MDS product names) ■ *Command Reference Tagging Guidelines for the Cisco IOS Doc Set* ■ *Task Table Tagging Guidelines for FrameMaker* ■ CTC Continuous Learning Program ■ *Minimalist Doc Writing Style* (Continuous Learning Program) ■ *Understanding and Applying Minimalism* ■ *Prime UX Evolution Style Guide* (select version of interest)

Topic	Resource Name and Link
Other style and tool references	■ *The Chicago Manual of Style* ■ *IEEE Transactions, Journals, and Letters: Information for Authors* ■ *The Elements of Style* ■ *Merriam-Webster's Collegiate Dictionary* ■ *Microsoft Writing Style Guide* ■ Mac Keyboard Shortcuts
Cisco technical references	■ Accessibility Center ■ Cisco Corporate Compliance Industry Standards & Regulations Library ■ Cisco Legal Services Contains information on corporate affairs, licensing and technology, intellectual property, regulatory affairs, privacy, and more. ■ Cisco Trademarks ■ Networking Master Terminology List
Other technical references	■ *The Authoritative Dictionary of IEEE Standards Terms* ■ *Microsoft Computer Dictionary* ■ *Newton's Telecom Dictionary* (published annually)