

Introduction to technical writing

The fundamentals of technical writing | MUNI 2023

The Red Hat Customer Content Services team



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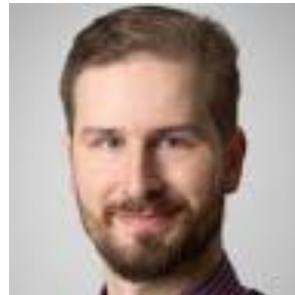
Arati Ajit Belgaonkar

I am a Technical Writer by profession and personally, I am an athlete. My hobbies are gardening and swimming.



Jiří Herrmann

A long-time Technical Writer at Red Hat, a language enthusiast, proud servant of two cats, and a shameless nerd



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I am a Senior Technical Writer at Red Hat and have been working there for 3 years. Before that, I worked as a translator to and from English for 10 years.

Organization of the course Fundamentals of technical writing:

Information about the course is available in [GitHub](#).

Goal of the course

Communication channels

Homework and grading

Homework	Deadline	Submit in	Max points	Requirement	Grading
1st Introduction	21st Feb, 11:59 a.m.	Odevzdávárna/ depository in IS	25	optional	Minimal requirement to pass: 65% of the total amount of points (65 points out of 100)
2nd Style	28th Feb, 11:59 a.m.	Odevzdávárna/ depository in IS	30	optional	
3rd Soft skills	7th Mar, 11:59 a.m.	Odevzdávárna/ depository in IS	20	optional	
4th Hard skills	14th Mar, 11:59 a.m.	Odevzdávárna/ depository in IS	25	optional	
5th Tooling	21st Mar, 11:59 a.m.	GitHub	30	mandatory	65% of the max amount of points (20 points out of 30)

What we'll discuss today

- What is technical writing?
- Comparison of writing styles
- Types of technical documentation
- Role of technical writers
- Life of a technical writer
- Career paths in technical writing
- It is all about users!
- Homework assignment

Instructions unclear, got stuck in washing machine.





What is technical writing?

- Writing technical information accurately, clearly, and effectively
- Forms of tech writing:
 - Manuals, guides
 - Solutions, troubleshooting
 - Release notes, patch notes
- Write *about* the product, but *for* the user



The importance of technical writing

- Users better understand and use the product more effectively.
- Developers can learn about the product quicker than parsing the code or experimenting.
- Customers make better decisions about buying the right product.
- Better knowledge-sharing

“How hard can it be?”



EXERCISE 1: Tea

- Describe the process of making
1 cup of loose-leaf tea



Literary style

vs.

Technical writing



Linux® is an open source operating system (OS).

An operating system is the software that directly manages a system's hardware and resources, like CPU, memory, and storage. The OS sits between applications and hardware and makes the connections between all of your software and the physical resources that do the work.

Literary style vs. technical writing

- Purpose of literary texts:
 - Convey emotions
 - Be open to interpretation
- Purpose of technical texts:
 - Convey information, task-oriented
 - No room for interpretation

Marketing style vs. Technical writing

Linux is the foundation for the modern IT stack, and Red Hat is one of the leading contributors to the Linux kernel and associated technologies in open source communities. Red Hat engineers help improve features, reliability, and security to make sure your infrastructure performs and remains stable—no matter your use case and workload.

1. To update the kernel, enter the following

command:

```
# yum update kernel
```

This command updates the kernel along with all dependencies to the latest available version.

2. Reboot your system for the changes to take effect.

Marketing style vs. technical writing

- Marketing texts:
 - Make product look good, sell, call to action
- Technical texts:
 - We can (and should) say something does not work
 - No promises

Journalistic style vs. Technical writing

Every security researcher just knew some god-awful vulnerability was going to get lobbed into the mix just as people wind down for the holiday and it looked for a moment like it might have landed: A critical (CVSS 10) vulnerability in the Linux kernel that lets remote and unauthenticated hackers execute arbitrary code? Yikes.

Before Linux users worldwide get panties in a panicked bunch, there's more positive news however: The vulnerability only appears to affect `ksmbd`, an in-kernel SMB file server that was merged to mainline in the Linux 5.15 release in August 2021; i.e. users running SMB servers via the much more widely deployed Samba, rather than `ksmbd` can more likely than not get back their mince pies or other recreational activities unperturbed.

Trend Micro Zero Day Initiative (ZDI) made public several vulnerabilities affecting the `ksmbd` module in the Linux kernel. Trend Micro's Zero Day Initiative (ZDI) reported four vulnerabilities affecting the kernel's `ksmbd` module, and one issue affecting the CIFS driver. (...) The `ksmbd` is a kernel-side file server compatible with the SMB protocol included in the Linux kernel in 2021. It is designed to be a lightweight file server without the need of a downstream userspace (for example: samba) component providing such service. Trend Micro's Zero Day found a number of issues with `ksmbd` and disclosed their findings on December 22, 2022.

Journalistic style vs. technical writing

- Journalistic texts:
 - Flexible approach to length, language and storytelling style
 - Unique writer's voice
- Technical texts:
 - Rigid style
 - Unified voice of multiple writers

Academic style

As we remember, the fourth field of a security context is an optional component [:level]. Security level or simply level consists of sensitivities and categories. Sensitivities can be also understood as classifications(e.g. Confidential, Secret, Top Secret, etc.) and categories as compartments(e.g. Finance, Marketing, Personnel, etc). Currently, the Reference SELinux policy defines 16 sensitivities(s0,...,s15) and 1024 categories(c0,...,c1023)(these values are defined in the file build.conf of the Reference policy[15])

vs. Technical writing

The Multi-Level Security (MLS) technology classifies data in a hierarchical classification using information security levels, for example:

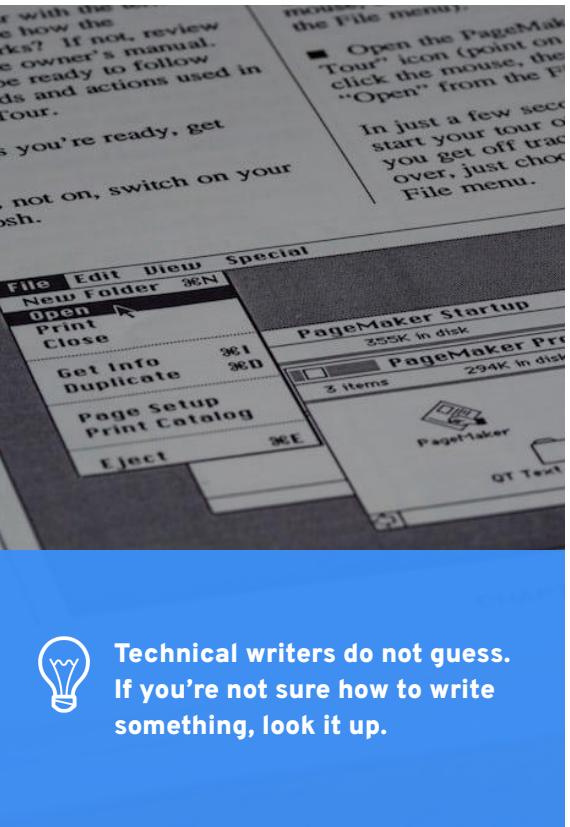
- [lowest] Unclassified
- [low] Confidential
- [high] Secret
- [highest] Top secret

By default, the MLS SELinux policy uses 16 sensitivity levels:

- s0 is the least sensitive.
- s15 is the most sensitive.

Academic style vs. technical writing

- Language of academic texts:
 - Graduate-level English, jargon
 - Might be patronizing, descriptive
 - Not constrained by length
- Language of technical texts:
 - Simple English, avoid jargon
 - Keep it simple, task-oriented
 - As short as possible



Technical writing style

- Purpose: Convey information, task-oriented
- Style: Highly regulated and standardized, brief, unambiguous
- Language: Simple English, no jargon
- Accessibility, readability, findability

Types of technical documentation

Manuals, guides

- “How do I do XY?, “What is XY?”
- Conceptual, procedural, referential
- Longer, more detailed, focused on a use case

Solutions, troubleshooting

- “XY is not working”, “How to fix the XY error?”
- Sometimes integrated into the product itself
- Focused on a specific problem, often curated by customer support

Release notes, patch notes

- “What changed in version XY?”, “What’s new in the latest XY?”
- Simple structure, brief, focused on a software version

Types of technical documentation

Chapter 20. Installing and managing Windows virtual machines

To use Microsoft Windows as the guest operating system in your virtual machines (VMs) on a RHEL 9 host, Red Hat recommends taking extra steps to ensure these VMs run correctly.

For this purpose, the following sections provide information on optimizing Windows VMs on the host, as well as installing and managing these VMs.

20.1. Installing Windows virtual machines

You can create a fully-virtualized Windows machine on a RHEL 9 host using the graphical Windows installer inside the virtual machine (VM), a Windows guest operating system (OS).

To create the VM and to install the Windows guest OS, use the `virt-manager` command or the RHEL 9 web console.

Prerequisites

- A Windows OS installation source, which can be one of the following:
 - An ISO image of an installation medium
 - A disk image of an existing VM installation
- A storage medium with the KVM `virtio` drivers.

To create this medium, see [Preparing virtio driver installation media](#).

Unable to SSH to new Virtual Machine after upgrading the template to RHEL 8.7 or 9

 **SOLUTION VERIFIED** - Updated November 29 2022 at 9:49 PM - [English](#) ▾

Environment

- Red Hat Enterprise Linux (RHEL) 9
 - cloud-init-22.1-5 or higher (9.1)
 - cloud-init-21.1-10 or higher (9.0)
- Red Hat Enterprise Linux (RHEL) 8
 - cloud-init-22.1-5 or higher (8.7)
- Configuration file `cloud.cfg` originally created on RHEL 8.4 with `cloud-init-20.3-10` or lower
- Red Hat Virtualization 4
- Red Hat OpenStack Platform 16
- Red Hat OpenShift Container Platform 4
- Amazon AWS
- Microsoft Azure
- Google Cloud Platform

Issue

- Unable to SSH to a Virtual Machine after upgrading it to RHEL 8.7, 9 or higher versions.
- During first boot, sshd fails to start on new Virtual Machines:

```
Nov 29 08:49:18 rhe18 systemd[1]: Starting OpenSSH server daemon...
Nov 29 08:49:18 rhe18 sshd[2946]: Unable to load host key: /etc/ssh/ssh_host_rsa_key
Nov 29 08:49:18 rhe18 sshd[2946]: Unable to load host key: /etc/ssh/ssh_host_ecdsa_key
Nov 29 08:49:18 rhe18 sshd[2946]: Unable to load host key: /etc/ssh/ssh_host_ed25519_key
Nov 29 08:49:18 rhe18 sshd[2946]: sshd: no hostkeys available -- exiting.
Nov 29 08:49:18 rhe18 systemd[1]: sshd.service: Main process exited, code=exited, status=1/FAILURE
Nov 29 08:49:18 rhe18 systemd[1]: sshd.service: Failed with result 'exit-code'.
Nov 29 08:49:18 rhe18 systemd[1]: Failed to start OpenSSH server daemon.
```

Resolution

Chapter 1. Overview

1.1. Major changes in RHEL 9.1

Installer and image creation

Following are image builder key highlights in RHEL 9.1 GA:

- Image builder on-premise now supports:
 - Uploading images to GCP
 - Customizing the `/boot` partition
 - Pushing a container image directly to a registry
 - Users can now customize their blueprints during the image creation process.

For more information, see [Section 4.1, "Installer and image creation"](#).

RHEL for Edge

Following are RHEL for Edge key highlights in RHEL 9.1-GA:

- RHEL for Edge now supports installing the services and have them running with the default configuration, by using the `fdo-admin` CLI utility

For more information, see [Section 4.2, "RHEL for Edge"](#).

Security



The role of technical writers

- Understand the subject, and describe it well enough to save work for the readers.



Who can be a technical writer **ANYONE!**

(...with some effort)

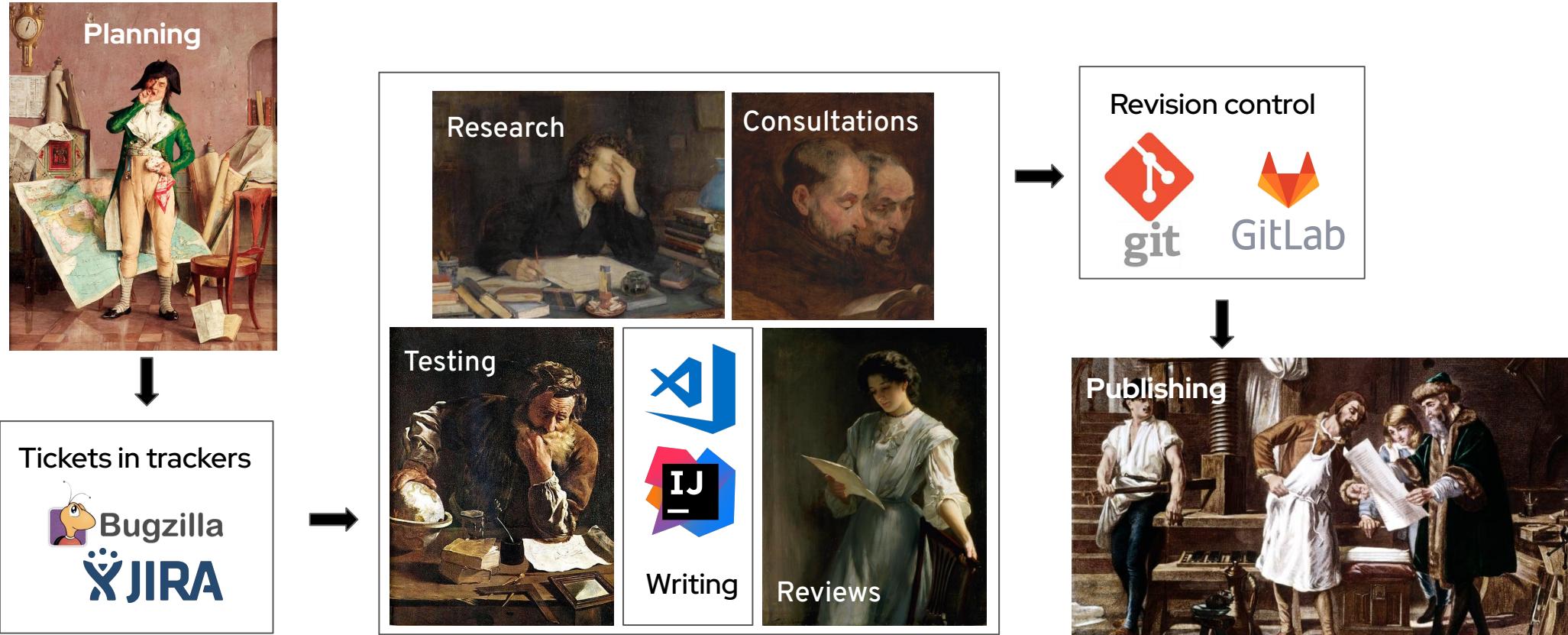
However, it helps to have experience with:

- Written composition in English
- The related subject matter (such as IT)
- Teamwork

What people think I do
when I tell them that I am a technical writer:



How documentation actually happens



Credits:

The Passion of Creation by Leonid Pasternak; wikimedia Commons, PD-Russia-expired, edited

Domenico Fetti - Archimedes, Wikimedia Commons, PD-US, edited

Anonymous, a Copy after a painting traditionally attributed to Van Dyck of Two Monks Reading, Wikimedia Commons, PD-US, edited

Thomas Kennington - Reading the letter, Wikimedia Commons, PD-US, edited

Giovanni Batista Quadrione - The Cartographer, Wikimedia Commons, PD-US, edited

ClassicStock

Career paths in technical writing



****DO NOT
FORGET
DEVELs & QEs**

Career paths	Job roles	Responsibilities
Technical documentation	Technical writer, Technical author, Technical communicator	Writing user manuals, installation guides, and other technical documentation for software, hardware, and other products.
Technical editing	Technical editor, Technical proofreader, Technical reviewer	Reviewing and revising technical documents to ensure accuracy and clarity.
Content development	Technical eLearning developer, Technical trainer, Technical instructional designer	Creating instructional and training materials for technical products and processes.
Content strategy	Technical content strategist,	Auditing and analyzing existing content, developing strategy, measuring and analyzing content performance.
Management	Technical program manager	Managing the documentation process, releases, coordinates with other departments.
Consulting	Technical communication consultant	Advising companies on how to effectively communicate technical information to their customers and employees.



QUICK TIP

 Get acquainted with the concept of [user personas](#). While not a technical writing concept, personas can help you customize your content to best suit your target audience.

The user

The user is the focus of your writing. Make sure you know who your target audience is and tailor your content accordingly.

Best practices for user-focused content:

- Use second person.
- Make the content action-oriented.
- Ask for user feedback.
- See what I did there?

User story

User stories help plan new features and functionalities in Agile development. They focus on what the user wants and how the proposed feature/functionality can help them reach their goal:

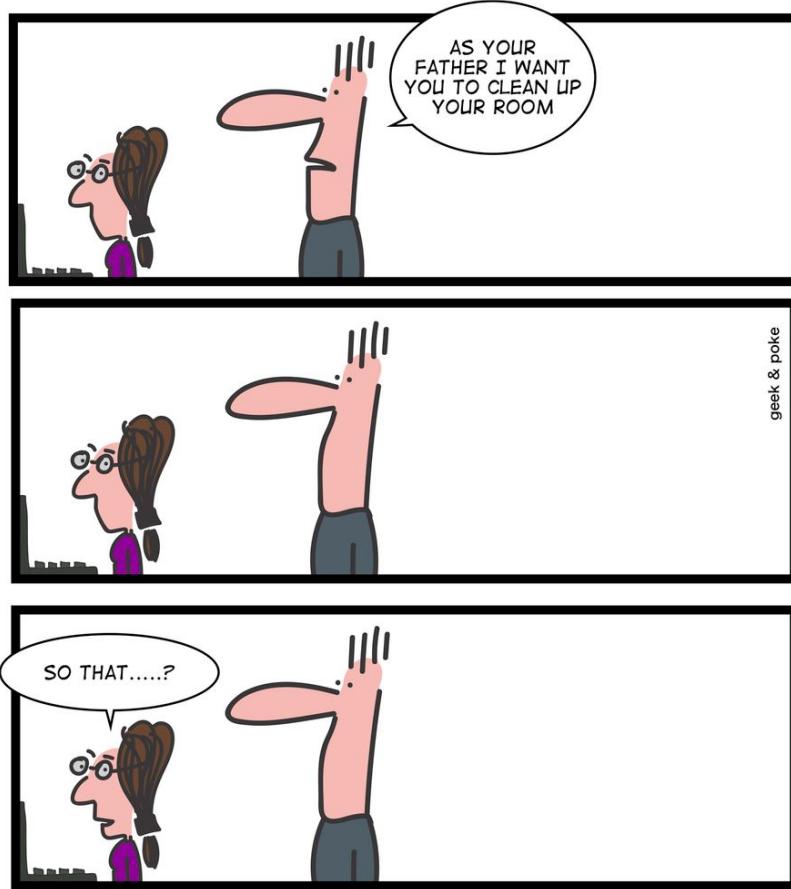
“As a [type of user], I want to [goal], so that [benefit].”

User stories are visualized as maps that capture each step the user takes when using the proposed feature/functionality to achieve their goal.

User story map elements:

- Activities
- Steps
- Details

AGILE FAMILIES



MAKE SURE YOUR USER STORY IS CORRECTLY PHRASED

Conclusion



- DOCUMENTATION
 - Technical writing
 - Types of documentation
 - Comparison of writing styles
- WRITER
 - The role of technical writers
 - What tech writers usually do
- USER
 - = king, target audience, user stories

Thank you