

# CMS Certified Consultant 12 LTS

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## About TYPO3

TYPO3 is an open-source enterprise content management system (CMS). The system offers a wide range of functions out of the box and can be extended by extensions. The software license (GPL) lets everyone to access, read, copy, distribute, and modify the source code which is freely available. TYPO3 is well documented at <https://docs.typo3.org>

### Goals:

- I know what TYPO3 is and where I can get further information.
- I know broadly the TYPO3 system requirements.
- I know the TYPO3 vocabulary and can name the essential components.

### Links:

- TYPO3 Getting Started Tutorial: System Requirements: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/SystemRequirements/Index.html>
- About TYPO3: <https://typo3.org/cms>
- get.typo3.org: System Requirements: <https://get.typo3.org/version/12#system-requirements>
- TYPO3 Getting Started Tutorial: Concepts: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/Concepts/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- TYPO3 Basics

### Tags:

- TYPO3
- Introduction

## About a CMS

A content management system is a software application for the collaborative creation, organization and editing of content, primarily in the online area.

### Goals:

- I can explain what a CMS is.
- I can explain how content and design are separated in a CMS.
- I know about features and advantages using a CMS.

### Links:

- Wikipedia entry: Content-Management-System:  
[https://en.wikipedia.org/wiki/Content\\_management\\_system](https://en.wikipedia.org/wiki/Content_management_system)

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- Introduction
- TYPO3

## About backend users and backend user groups

Users of a content management system can have different permissions. This allows users to focus on the features that are relevant to them.

### Goals:

- I know that users can be granted/denied access to certain modules and operations in the backend.
- I know what a backend user group is.
- I know that backend users inherit all permissions from all their assigned user groups.

### Links:

- TYPO3 Documentation: User Management: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/UserManagement/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- User
- User Group
- Backend Users and Groups
- TYPO3
- Backend
- Access

## About the TYPO3 Security Team

How to deal with security issues, both found and reported.

### Goals:

- I know how to report found issues with TYPO3.
- I know how to deal with disclosures in TYPO3.
- I know how I can help making TYPO3 more secure.

### Links:

- The TYPO3 Security Team: <https://typo3.org/community/teams/security/>
- TYPO3 Explained: The TYPO3 Security Team: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/Security/SecurityTeam/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Security

### Tags:

- TYPO3
- Documentation
- Security

## Access Control

The access control can be used to manage and restrict access to pages, content elements and other information for a specified period of time. It can also be used to set up a restricted area where visitors can log in to view content.

### Goals:

- I know what frontend users and frontend user groups are.
- I know how to apply frontend user group restrictions to pages and content elements.
- I know how to apply login-state-dependent visibility restrictions to pages and content elements.
- I know how to apply publish-date-dependent visibility restrictions to pages and content elements.

### Links:

- TYPO3 Documentation: Frontend login (users and user groups): <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/AccessControl/Login/Index.html>
- TYPO3 Documentation: Elements visibility: <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/AccessControl/Visibility/Index.html>
- TYPO3 Documentation: Access Control: <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/AccessControl/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- TYPO3 Handling

### Tags:

- Access
- Frontend Users and Groups
- Access Control
- TYPO3
- Publish Dates
- Backend
- Frontend
- User
- User Group
- Pages

## Accessibility: Accessible Backend (technical)

Developing an accessible backend in TYPO3 is a constantly evolving process to enable all users, regardless of their abilities or disabilities, to manage a TYPO3 website in the future. Consultants have to know the current state of accessibility of the TYPO3 backend.

### Goals:

- I know about the current state of accessibility of the TYPO3 backend.
- I am aware of limitations imposed by the 3rd party library CKEditor v5.
- I understand that currently an accessibility statement for the TYPO3 backend does not exist.
- I can advise users to navigate through the main module menu and the help menu by using only their keyboard.
- I understand the significance of an accessible TYPO3 backend to ensure equal access and usability for all users.
- I know an Accessibility Team is working on improvements for the TYPO3 backend.

### Links:

- TYPO3 documentation: CKEditor: <https://docs.typo3.org/m/typo3/guide-tell-me-something-about/main/en-us/Topics/Ckeditor.html#tmsa-ckeditor>
- TYPO3 Tutorial for Editors: Accessibility: <https://docs.typo3.org/m/typo3/tutorial-editors/main/en-us/Concepts/Accessibility.html>
- TYPO3: The Accessibility Team: <https://typo3.org/community/teams/accessibility>
- TYPO3: Accessibility Improvements: <https://typo3.org/cms/features/frontend-experience/accessibility>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Accessibility

### Tags:

- Screen Reader
- TYPO3 Backend
- Accessibility

## Accessibility: Accessible Frontend (technical)

Building an accessible frontend in TYPO3 is essential to ensure that all users can use and enjoy websites, regardless of their abilities or disabilities. Consultants must possess the skills to concept accessible websites in TYPO3, adhering to established accessibility guidelines and best practices.

### Goals:

- I understand the significance of creating an accessible frontend in TYPO3 to ensure equal access and usability for all users.
- I know the concept of landmarks and their role in improving website accessibility by providing navigational cues for screen reader users.
- I know about color contrast guidelines to ensure sufficient color differentiation for users with visual impairments.
- I can advise how to make TYPO3 websites compatible and optimized for screenreader users.
- I understand the importance of using plain language as an option to make content more accessible and understandable for a diverse range of users.

### Links:

- W3C: Understanding WCAG 2.0 Guideline 2.4 - Provide ways to help users navigate, find content, and determine where they are: <https://www.w3.org/TR/UNDERSTANDING-WCAG20/navigation-mechanisms.html>
- AbilityNet: An introduction to screen readers: <https://abilitynet.org.uk/factsheets/introduction-screen-readers>
- W3Schools: Accessibility Screen Readers: [https://www.w3schools.com/accessibility/accessibility\\_screen\\_readers.php](https://www.w3schools.com/accessibility/accessibility_screen_readers.php)
- MDN: ARIA - landmark role: [https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/Roles/landmark\\_role](https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/Roles/landmark_role)
- W3Schools: Accessibility Landmarks: [https://www.w3schools.com/accessibility/accessibility\\_landmarks.php](https://www.w3schools.com/accessibility/accessibility_landmarks.php)
- WCAG 2.1: success criteria tagged with contrast and all techniques: <https://www.w3.org/WAI/WCAG21/quickref/?tags=contrast>
- WebAIM: Contrast and Color Accessibility: <https://webaim.org/articles/contrast/>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Accessibility

### Tags:

- Screen Reader
- Landmarks
- Color contrast
- Accessibility

## Accessibility: Basic knowledge

Web accessibility is critical to creating inclusive and user-friendly websites that can be accessed and used by all individuals, including those with disabilities.

### Goals:

- I understand the importance of accessibility in web development, ensuring that websites adhere to WCAG guidelines and provide a seamless experience for all users.
- I can advise on web accessibility principles, including implementing landmarks, color contrast optimization, and providing accessible text for improved usability.
- I understand the significance of easy language in content creation, ensuring that websites are more accessible to individuals with cognitive disabilities or language barriers.
- I can conduct accessibility testing, including screen reader testing, to identify and address barriers in websites.

### Links:

- WCAG Resources: <https://wcag.com/resources/>
- w3 org Accessibility Fundamentals: <https://www.w3.org/WAI/fundamentals/>
- The TYPO3 Accessibility Team: <https://typo3.org/community/teams/accessibility>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Accessibility

### Tags:

- Frontend
- WCAG
- Legal
- Accessibility



## Agile: Basics of agile software development

Agile software development is an iterative and customer-centric approach to delivering solutions efficiently and effectively. Different agile frameworks, including Scrum, Kanban, and Kaizen, are used to streamline development processes, foster collaboration, and continuously improve projects.

### Goals:

- I understand the fundamental concepts and principles of Agile software development and their applicability to TYPO3 projects.
- I can choose and implement the appropriate Agile methodology, such as Scrum or Kanban, based on the project's complexity, team dynamics, and client requirements.
- I know about Scrum rituals and their advantages and disadvantages.
- I know about Kanban boards to visualize workflow, manage tasks, and monitor the progress of development activities, promoting efficiency and transparency.
- I know about Kaizen that process improvement is done by incremental, point-by-point perfection or optimization of a process.

### Links:

- Wikipedia: Kaizen: <https://de.wikipedia.org/wiki/Kaizen>
- Wikipedia: Kanban: <https://de.wikipedia.org/wiki/Kanban>
- What is Scrum?: <https://www.scrum.org/learning-series/what-is-scrum>

### Maintainer:

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### Domain Tag:

- Agile Software Development

### Tags:

- Project Management: Scrum
- Managing Products with Agility
- Project Management: Kaizen
- Project Management: Kanban
- Agile Software Development

## Agile: Kanban

Understand the Kanban methodology and its application in project management and workflow optimization.

### Goals:

- I can explain the fundamental principles and concepts of the Kanban methodology.
- I understand how Kanban visualizes workflows using boards, cards, and columns to enhance transparency and collaboration.
- I am familiar with Kanban's core practices, including limiting work-in-progress (WIP) and continuous improvement.
- I can differentiate between Kanban and other project management methodologies, such as Scrum or Agile.

### Links:

- Kanban Encoclypedia: <https://kanbanize.com/kanban-resources/getting-started/kanban-encyclopedia>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Agile Software Development

### Tags:

- Project Management: Kanban
- Agile Software Development

## Agile: Manifesto

Acquire a basic understanding of the Agile Manifesto, its principles, and its significance in modern project management approaches.

### Goals:

1. I can explain the origin and purpose of the Agile Manifesto in the software development industry.
2. I understand the four key values stated in the Agile Manifesto and their emphasis on customer collaboration, flexibility, and responsiveness.
3. I am familiar with the twelve principles of the Agile Manifesto that guide iterative and client-centric project management.
4. I can differentiate between traditional project management approaches and Agile principles outlined in the Manifesto.

### Links:

- Agile Manifesto: <https://agilemanifesto.org/>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Agile Software Development

### Tags:

- Project Management: Scrum
- Managing Products with Agility

## Agile: Scrum

Gain a foundational understanding of the Scrum methodology and its application in agile project management.

### Goals:

- I can explain the key principles and roles of the Scrum framework, including Scrum Master, Product Owner, and Development Team.
- I understand the iterative and incremental nature of Scrum, including the concepts of Sprints, Sprint Planning, Daily Standups, Sprint Review, and Sprint Retrospective.
- I am familiar with Scrum artifacts such as Product Backlog, Sprint Backlog, and Increment and their role in managing and delivering project value.
- I can differentiate between Scrum and other project management methodologies, such as Kanban or Waterfall.
- I know how to facilitate Scrum ceremonies, track progress, and promote collaboration within Scrum teams.

### Links:

- Scrum Guide: <https://scrumguides.org/>
- What is Scrum: <https://www.scrum.org/learning-series/what-is-scrum>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Agile Software Development

### Tags:

- Managing Products with Agility
- Agile Software Development

## Apache Solr and EXT:solr

Understand the capabilities of Apache Solr and the Solr TYPO3 extension to enhance search functionality in TYPO3 websites.

### Goals:

- I understand the core concepts and requirements of Apache Solr and the features provided by the Solr Extension for TYPO3.
- I understand that Apache Solr is based on the Lucene search library, which provides powerful indexing and searching capabilities.
- I know that an Apache Solr server is required to use the Solr TYPO3 extension.
- I can explain the key features and functionalities the Solr Extension offers, such as faceted search, filtering, and highlighting.
- I can assess the suitability of Apache Solr and the Solr TYPO3 extension for specific project requirements and make informed decisions regarding their implementation.

### Links:

- Solr Extension for TYPO3 website: <https://www.typo3-solr.com/>
- Apache Solr Features: <https://solr.apache.org/features.html>
- Solr Ext by DKD (German): <https://www.dkd.de/de/produkte/solr-enterprise-search/>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Onsite Search Engines

### Tags:

- Search Engine
- Search Bar
- Onsite Search Engines
- Extensions

## Backend Structure

The backend is divided into specific navigation components. A distinction is made between top bar, module menu, page tree, docheader, content area, directory tree and directory contents.

### Goals:

- I know the backend structure.
- I can find the module menu and explain the general tasks related to the modules.
- I can explain the difference between page tree and file tree.
- I can point out the content area and explain what it is used for.
- I know where the top bar and the docheader are located and which functions I can find there.
- I know what "Deep Links" are, how they are shared and in which scenarios they are used.
- I know what "Bookmarks" are, how they are created and in which scenarios they are useful.

### Links:

- TYPO3 Documentation: Deep Linking: <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/DeepLinking/Index.html>
- TYPO3 Documentation: General Backend Structure: <https://docs.typo3.org/m/typo3/reference-co-reapi/11.5/en-us/ExtensionArchitecture/HowTo/BackendModule/General/BackendInterface.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- TYPO3
- Backend
- Page Tree
- File Tree
- Modules
- Tool Bar
- Context Bar
- Search Bar
- CMS Basics

## Backend account

Access to the backend is secured by a login (username and password). A backend user can be granted rights to work with modules, pages, and content. Backend users can be grouped for easy management. For any credential issues I know how to reset my password or that the administrator is to be contacted for further issues.

### Goals:

- I know how to login into the backend.
- I know what to do when I lost my credentials.
- I know where to view and edit my user account details.
- I know what multi-factor authentication is and how it increases the security of my account.

### Links:

- TYPO3 Documentation: Multi-Factor Authentication: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/ApiOverview/Authentication/MultiFactorAuthentication.html>
- TYPO3 Documentation: Login: <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/Login/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- Security
- TYPO3
- Backend
- Login
- Logout
- Account
- Profile

## CSV - Character Separated Values

CSV files are used to exchange data between different computer systems. The editor must know how these files are structured so that they can be exported and additionally how they can be processed by TYPO3 without errors.

### Goals:

- I know what a CSV file is.
- I know how to open and edit a CSV file (with text editors or a table calculation program).
- I know the different common delimiters, enclosure and escape characters.
- I know the different file encodings (latin1 / utf-8).

### Links:

- wikipedia.org: Comma-separated values: [https://en.wikipedia.org/wiki/Comma-separated\\_values](https://en.wikipedia.org/wiki/Comma-separated_values)

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Media Management

### Tags:

- TYPO3
- Basics
- Files



## Cope with personal data on local systems

Managing personal data responsibly and ensuring compliance with data protection regulations is very important when working with local systems during the development workflow. Understanding how to handle personal data securely and implementing appropriate measures allows developers to protect sensitive information and maintain data privacy throughout development.

### Goals:

- I understand the importance of data protection and privacy regulations when handling personal data on local systems during the development workflow.
- I can identify personal data and distinguish between different types of sensitive information, such as personally identifiable information (PII) and protected health information (PHI).
- I am familiar with the principles of data minimization, data anonymization, and pseudonymization to reduce the risk of handling personal data during development.

### Links:

- How to make TYPO3 GDPR Compliant? - Blogpost: <https://typo3.com/blog/how-to-make-your-typo3-application-gdpr-compliant>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Development Workflow

### Tags:

- Data Protection
- Data Privacy

## Copyright and data protection

By using external files, e.g. images or videos, the copyright must be considered. When handling with information relating to an identifiable person the (country specific) legal situation must be considered.

### Goals:

- I am aware of the existence of copyright and can act accordingly.
- I am aware of the existence of data protection rules and can act accordingly.
- I know about restrictions using external resources.
- I know what personal information is and how to handle it.

### Links:

- Wikipedia entry: Personal Data: [https://en.wikipedia.org/wiki/Personal\\_data](https://en.wikipedia.org/wiki/Personal_data)
- Wikipedia entry: Image use policy: [https://en.wikipedia.org/wiki/Wikipedia:Image\\_use\\_policy](https://en.wikipedia.org/wiki/Wikipedia:Image_use_policy)
- Wikipedia entry: Copyright: <https://en.wikipedia.org/wiki/Copyright>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Media Management

### Tags:

- TYPO3
- Basics
- Legal
- License
- Copyright

## Development Workflow: Testing and Quality Assurance

Understanding the importance of testing and quality assurance involves knowledge of testing methodologies, quality assurance processes, and the significance of ensuring the reliability and functionality of TYPO3 websites.

### Goals:

- I understand the significance of testing and quality assurance in TYPO3 projects and their impact on project success.
- I can explain the benefits of implementing automated testing processes in TYPO3 projects.
- I recognize the different types of tests used in TYPO3 development, such as unit tests, integration tests, and system tests.
- I appreciate the role of coding guidelines in maintaining code quality, readability, and consistency in TYPO3 projects.
- I understand the importance of documentation for quality assurance
- I can explain the importance of integrating quality assurance components into the development process

### Links:

- Testing Documentation and test types: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/Testing/Index.html>
- Coding Guidelines: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/CodingGuidelines/Index.html#cgl>
- Quality Assurance Initiative: <https://typo3.org/article/report-from-the-typo3-quality-assurance-initiative>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Development Workflow

### Tags:

- Automation
- Software Quality
- Best development practices
- Developing and Delivering Products Professionally
- Development Workflow

## Extension: Basics

TYPO3 extensions provide additional functionality and features to enhance the TYPO3 CMS. Learn the essential concepts, terminology and practices related to TYPO3 extensions in order to use them effectively in TYPO3 projects.

### Goals:

- I understand the concept of TYPO3 extensions and their role in extending the core functionality.
- I am familiar with popular TYPO3 extensions and their use cases.
- I can recommend suitable extensions for specific requirements.
- I know the limitations of the TYPO3 core features.
- I know how to use the TYPO3 Extension repository.

### Links:

- Extension repository: <https://extensions.typo3.org/>
- TYPO3 Features: <https://typo3.org/cms/features>
- Creating a First Extension: <https://docs.typo3.org/m/typo3/book-extbasefluid/10.4/en-us/4-FirstExtension/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Extensions

### Tags:

- News
- Extensions
- Content Elements
- General Extension Architecture
- Software Architecture for Extensions

## Extension: News extensions

The third-party TYPO3 extension "news" provides functionality for creating, managing, and displaying news articles on TYPO3 websites.

### Goals:

- I am familiar with the features and capabilities of the TYPO3 news extension.
- I am aware of the different options available for customizing the display and layout of news articles on the frontend.
- I understand how to organize news records by utilizing categories and storage folders.
- I am aware that other extensions (e.g. eventnews) provide additional functionality based on the news extension.

### Links:

- News Extension in Extension Repository: <https://extensions.typo3.org/extension/news>
- News extension users manual: <https://github.com/geogringer/news/blob/main/Documentation/UsersManual/NewsModule/Index.rst>

### Maintainer:

(Korbinian Kugelmann)

### Domain Tag:

- Extensions

### Tags:

- News
- Content
- Content Elements

## Frontend and backend

The website, or respectively layout and content output, is called a frontend. Pages and contents are maintained in the backend, and then displayed in the frontend.

### Goals:

- I can explain the difference between frontend and backend.
- I know about the technical requirements of a browser when working with TYPO3.

### Links:

- TYPO3 Documentation: Concepts: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/Concepts/Index.html>
- TYPO3 Documentation: Backend and Frontend: <https://docs.typo3.org/m/typo3/tutorial-getting-started/10.4/en-us/GeneralPrinciples/BackendAndFrontend/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- TYPO3
- Account
- Frontend
- Backend

## GNU General Public License (GPL)

Understanding the GNU General Public License (GPL) involves knowledge of the GPL's principles, terms and implications for using, modifying and distributing software licensed under the GPL. It encompasses an understanding of the open-source software movement, copyleft, and the freedoms and responsibilities granted by the GPL.

### Goals:

- I understand the key principles behind the GNU General Public License (GPL).
- I am aware of the freedoms granted to users under the GPL, including the freedom to use, study, modify, and distribute software.
- I understand the obligations and responsibilities imposed by the GPL when distributing software covered by the license.

### Links:

- TYPO3 Licenses: <https://typo3.org/project/licenses>
- GPL FAQ: <https://www.gnu.org/licenses/gpl-faq.html>
- GNU General Public License: <https://www.gnu.org/licenses/gpl-3.0.en.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Licenses, Legal Rights & Obligations

### Tags:

- Legal
- License
- Copyright
- Licenses, Legal Rights & Obligations

## Handling Security Vulnerabilities

Understand the necessary steps to inform the TYPO3 Security Team and take appropriate action when identifying a security vulnerability in TYPO3.

### Goals:

- I can recognize and assess security vulnerabilities when using TYPO3 installations.
- I know where and how to report security vulnerabilities to the TYPO3 Security Team promptly.
- I am can effectively communicate the details of a security vulnerability to the TYPO3 Security Team.
- I understand and follow responsible disclosure guidelines and procedures.
- I can collaborate with the TYPO3 Security Team, providing additional information or support to address the vulnerability.

### Links:

- Detect, analyze and repair a hacked site: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Security/HackedSite/Index.html>
- Types of Security Threats: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Security/TypesOfThreats/Index.html>
- TYPO3 Security Bulletins: <https://typo3.org/help/security-advisories>
- TYPO3 Security Team: <https://typo3.org/community/teams/security>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Security

### Tags:

- Dependency Injection
- Cross-Site Scripting (XSS)
- SQL Injection
- System Hardening
- Content Security Policy (CSP)
- Security



## Hosting environments

TYPO3 is compatible with different hosting environments, such as cloud hosting, in-house hosting, and traditional hosting providers.

Gain knowledge about the characteristics and advantages of possible hosting solutions.

TYPO3 Consultants know what to consider when choosing an appropriate hosting solution for a client.

### Goals:

- I can distinguish between cloud hosting, in-house hosting, and classic hosting providers, understanding their unique characteristics and deployment models.
- I know the benefits of cloud hosting, such as scalability, flexibility, and cost-effectiveness, and how it can accommodate varying traffic demands in TYPO3 projects.
- I understand the advantages of in-house hosting regarding data control, compliance, and security, as well as the associated responsibilities and resource requirements.
- I can identify the features of classic hosting providers, including their established infrastructure and service levels, and evaluate their suitability for TYPO3 projects.
- I can evaluate each hosting environment's suitability based on factors such as cost, performance, security, and resource requirements.

### Links:

- Blog Article about TYPO3 Hosting: <https://www.mogic.com/blog/typo3-hosting/>
- TYPO3 v12 System Requirements: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/SystemRequirements/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Server & Network Infrastructure

### Tags:

- Hosting

## Kano Model

The Kano Model is valuable for understanding and prioritizing client requirements and satisfaction. By utilizing the Kano Model, consultants can effectively identify and prioritize features and functionalities that will deliver the highest value to clients.

### Goals:

- I understand the fundamental concepts and principles of the Kano Model, including the different categories of customer requirements.
- I can apply the Kano Model to analyze customer needs and determine the level of satisfaction associated with various features and functionalities.
- I can identify and categorize customer requirements as basic, performance, excitement, or indifferent factors based on the Kano Model.

### Links:

- Talk about the Kano model (T3CV18): <https://www.youtube.com/watch?v=wGVSnYR5Bh0&t=3754s>
- Wikipedia: Kano Model: [https://en.wikipedia.org/wiki/Kano\\_model](https://en.wikipedia.org/wiki/Kano_model)

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Requirements Engineering

### Tags:

- Lifecycle & Refinement
- Project planning
- Developing and Delivering Products Professionally

## Maintenance

Regular updates and upgrades are vital for maintaining the stability, security, and functionality of TYPO3 installations. Keeping TYPO3 installations up-to-date with the latest security patches is crucial for protecting against emerging threats and vulnerabilities.

### Goals:

- I understand the significance of regular maintenance, including updates and upgrades, for TYPO3 installations to address security vulnerabilities, improve performance, and introduce new features.
- I can assess the impact of updates and upgrades on existing TYPO3 installations, considering compatibility, functionality, and customizations.
- I am familiar with the update process in TYPO3, including the use of the extension manager and Composer, to ensure that the core system and installed extensions are updated to the latest versions.
- I can guide clients in planning and executing a maintenance schedule that includes regular updates and upgrades, minimizing the risk of compatibility issues and ensuring system stability.

### Links:

- TYPO3 documentation: Managing Extensions: <https://docs.typo3.org/m/typo3/tutorial-getting-started/main/en-us/Extensions/Management.html>
- TYPO3 documentation: TYPO3 Upgrade Guide: <https://docs.typo3.org/m/typo3/guide-installation/main/en-us/Index.html>
- TYPO3 Maintenance Releases: <https://typo3.org/cms/roadmap/maintenance-releases>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Maintenance & ELTS

### Tags:

- TYPO3
- CMS
- Extensions
- License
- Lifecycle & Refinement
- Software Quality
- Security
- Composer

## Maintenance: Releases (ELTS)

Extended Long-Term Support (ELTS) is a service provided by TYPO3 that offers extended support for older TYPO3 versions beyond their official end-of-life (EOL) dates. Understanding ELTS and its licensing is crucial for consultants to ensure compliance, support clients with legacy TYPO3 installations, and make informed decisions regarding using ELTS.

### Goals:

- I understand the concept of Extended Long-Term Support (ELTS) and its purpose in providing ongoing support for TYPO3 versions that have reached their official end-of-life (EOL).
- I am familiar with the licensing terms and conditions associated with ELTS, including the rights, limitations, and obligations outlined in the ELTS license agreement.
- I can guide clients in assessing the feasibility and benefits of opting for ELTS based on their specific requirements, budget, and risk tolerance.
- I can provide clients with accurate and up-to-date information regarding the availability, costs, and duration of ELTS services for different TYPO3 versions.
- I am aware of the consequences when an ELTS version has reached its official end-of-life (EOL), such as the lack of further TYPO3 security updates.

### Links:

- TYPO3: Extended Support (ELTS): <https://typo3.com/services/extended-support-elts>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Maintenance & ELTS

### Tags:

- License
- Maintenance & ELTS
- Licenses, Legal Rights & Obligations

## Multi-Factor Authentication (MFA) configuration

The MFA can be configured for a single user/group and extended by extensions.

### Goals:

- I know that I can force the use of MFA for editors and administrators.
- I know that the TYPO3 Core includes two MFA providers by default: Time-based one-time password (TOTP) and recovery codes (fallback provider)
- I know that more providers can be added via extensions
- I know how to configure providers for individual user / user groups
- I know that the MFA can be disabled

### Links:

- TYPO3 explained: Multi-Factor Authentication: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/ApiOverview/Authentication/MultiFactorAuthentication.html>
- Whats new slides TYPO3 v11: [https://typo3.org/fileadmin/t3o\\_common\\_storage/images/release\\_notes/v11/whats-new/TYPO3-v11-LTS-whats-new.pdf](https://typo3.org/fileadmin/t3o_common_storage/images/release_notes/v11/whats-new/TYPO3-v11-LTS-whats-new.pdf)

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Security

### Tags:

- Backend
- Login
- Backend Users and Groups

## Multi-site setup

TYPO3 allows multiple sites to be managed within one TYPO3 installation. Understanding the advantages and disadvantages of this concept enables the consultant to advise clients on the best solution for their requirements.

### Goals:

- I understand the concept of multiple site setups in TYPO3, where multiple websites or domains are managed within a single TYPO3 installation.
- I am familiar with the TYPO3 site configuration structure, such as site configurations, root page templates, and domain records, to facilitate the effective management of multiple sites.
- I know the concept of backend usergroups and the restrictions when managing permissions in a multi-site setup.

### Links:

- TYPO3 Documentation: Site handling: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/ApiOverview/SiteHandling/Index.html>
- TYPO3: Massively Multisite and Multilingual: <https://typo3.org/cms/features/massively-multisite-multilingual>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Administration & Support

### Tags:

- Site Management and URL Routing
- Multilingual
- Multisite
- Administration & Support

## Multilanguage Setup

Implementing a multilanguage setup in TYPO3 allows the creation of websites that address a global audience and provide content in multiple languages. Translating and localizing content are key features of a multilanguage website. Understanding the content translation and localization process allows consultants to guide clients in creating high-quality translations that resonate with the target audience.

### Goals:

- I can explain that TYPO3 is suitable for creating multilanguage websites.
- I understand the difference between single-tree and multi-tree setups in TYPO3 for managing multilanguage content.
- I'm aware of language fallbacks and how they enable the display of content in alternative languages when the desired translation is unavailable.
- I know how defining the default language for a TYPO3 website impacts content creation and language handling.
- I know about the different translation modes available in TYPO3.
- I know the difference between translation and localization.

### Links:

- How localization works (b13 blog post): <https://b13.com/blog/localization-part-1-how-localization-works-in-typo3>
- TYPO3 Frontend Localization Guide: <https://docs.typo3.org/m/typo3/guide-frontendlocalization/main/en-us/Introduction/Index.html>
- TYPO3 v12 Release. News: Internationalization: <https://typo3.org/article/typo3-v12-its-here-to-save-the-day#c13405>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Overview of TYPO3 and its Terminology

### Tags:

- Language
- Backend
- Localization
- Translation
- Localization and Internationalization

## Package Managers

Package managers like Composer are used in TYPO3 to simplify the management of dependencies. They automate the installation, updating, and autoloading of extensions, libraries or modules required by the project.

### Goals:

- I can explain why package managers are used in web projects.
- I know the advantages and disadvantages of using package managers.
- I know about package managers used in the TYPO3 ecosystem.

### Links:

- Composer Introduction: <https://getcomposer.org/doc/00-intro.md>
- TYPO3 Getting Started: <https://docs.typo3.org/m/typo3/tutorial-getting-started/main/en-us/SystemRequirements/Index.html#composer>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Development Workflow

### Tags:

- TYPO3
- PHP
- Package management
- Best development practices



## Possibilities & Limitations: Staging and publishing content on a TYPO3 website

This skill focuses on staging and publishing content on a TYPO3 website. It involves understanding the workflow and tools available within TYPO3 to facilitate the smooth transition of content from staging environments to live production environments or within live production environments.

### Goals:

- I know about TYPO3's workspaces and versioning features to separate content changes and modifications from the live production environment.
- I understand the importance of content review and approval processes in staging environments to ensure the quality and accuracy of published content.
- I know that workspaces can preview and test content changes in staging environments before publishing them to the live website.
- I know how to schedule content updates and publish them at specific dates and times using TYPO3's scheduling capabilities.
- I am aware of 3rd party solutions (community extensions) to manage content across different environments.

### Links:

- TYPO3 Workspaces Extension: <https://docs.typo3.org/c/typo3/cms-workspaces/main/en-us/>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Possibilities & Limitations

### Tags:

- Content
- Workflow
- Publishing
- Workspace Module
- Workspaces
- TYPO3 Handling

## Possibilities & Limitations: Strengths and weaknesses of TYPO3

The ability to identify, analyze, and understand use cases in a way that aligns with project objectives, user needs, and best practices. This ensures that TYPO3 solutions are tailored to meet specific requirements, enhance user experiences, and achieve project success.

### Goals:

- I know about TYPO3 CMS' core features and suitable use cases.
- I understand client needs and can advise if TYPO3 CMS should be used.
- I know that TYPO3 CMS may not always be the best solution to implement a client's requirement.

### Links:

- TYPO3 Use Cases: <https://typo3.com/solutions>
- Why TYPO3 (and sub pages): <https://typo3.com/typo3-cms/why-typo3>
- TYPO3 Features: <https://typo3.org/cms/features>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Possibilities & Limitations

### Tags:

- Basics

## Possibilities & Limitations: Supported image formats and capabilities

Understanding the capabilities of TYPO3 in handling image files, including cropping, supported image formats, and responsive image techniques.

### Goals:

- I know that TYPO3 can crop images to achieve desired dimensions and aspect ratios.
- I am familiar with the supported image formats in TYPO3.
- I can advise on the benefits and considerations of using different image formats in TYPO3, such as balancing image quality and file size.
- I am aware of TYPO3 extensions or plugins that can enhance image manipulation and optimization features.

### Links:

- Comparison of Image formats: <https://blog.scaleflex.com/best-web-image-formats/>
- List of supported image files: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Configuration/Typo3ConfVars/GFX.html#imagefile-ext>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Possibilities & Limitations

### Tags:

- Image processing
- Media Management
- TYPO3 Basics

## Possibilities & Limitations: Supported video formats

Working with videos in TYPO3 requires understanding the supported video formats to ensure compatibility and optimal playback across different devices and browsers.

### Goals:

- I am familiar with the commonly supported video formats in TYPO3 and understand their compatibility across various browsers and devices.
- I can identify the advantages and limitations of each supported video format, considering factors such as video quality, file size, and browser support.
- I am aware that TYPO3 allows the embedding of videos from external providers and can advise on implementing appropriate consent mechanisms to ensure compliance with data protection regulations.

### Links:

- Tutorial for Editors 'Embedding video and audio': <https://docs.typo3.org/m/typo3/tutorial-editors/main/en-us/ContentElements/Media/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Media Management

### Tags:

- Content
- Video
- Media Management
- Media

## Possibilities & Limitations: User permissions and user groups

User permissions and user groups in TYPO3 can be configured to manage access rights and control user interactions within the system. TYPO3 provides the ability to configure backend and frontend users with different levels of rights and permissions.

### Goals:

- I understand the concept of user permissions and user groups in TYPO3 and their significance in controlling access to system features and content.
- I know how to define and configure usergroups based on specific roles or functional requirements within the TYPO3 installation.
- I am familiar with the different types of user permissions available in TYPO3, such as page access, content editing, extension management, and administrative tasks.
- I know where to define permissions (group-based and user-based)
- I can give advice how to set up a group-based permission concept in TYPO3
- I know the limitations and problems regarding user permissions

### Links:

- Frontend Login: <https://docs.typo3.org/m/typo3/tutorial-editors/main/en-us/AccessControl/Login/Index.html>
- Backend User Management: <https://docs.typo3.org/m/typo3/tutorial-getting-started/12.4/en-us/UserManagement/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Possibilities & Limitations

### Tags:

- User
- User Group
- Permissions
- Backend Users and Groups
- Module: Access
- Backend Administration
- Access Control

## Requirements Engineering

Requirements engineering is widely used in project management and software development. This skill involves discovering, analyzing, documenting, and managing requirements effectively. It encompasses understanding different types of requirements, managing stakeholders, and ensuring proper ticket management for each issue.

### Goals:

- I understand the distinction between functional and non-functional requirements and can identify examples of each.
- I am proficient in analyzing and prioritizing requirements, ensuring they align with project objectives and stakeholder needs.
- I can document requirements using appropriate techniques, such as user stories, use cases, or requirement specifications.
- I understand the importance of stakeholder management and can effectively communicate and collaborate with stakeholders throughout the requirements engineering process.
- I can establish a clear and traceable link between requirements and project deliverables to ensure their successful implementation.
- I recognize the significance of maintaining a separate ticket for each issue or requirement, enabling proper tracking, assignment, and resolution.

### Links:

- Wikipedia: Functional Requirement: [https://en.wikipedia.org/wiki/Functional\\_requirement](https://en.wikipedia.org/wiki/Functional_requirement)
- Wikipedia: Non-Functional Requirement: [https://en.wikipedia.org/wiki/Non-functional\\_requirement](https://en.wikipedia.org/wiki/Non-functional_requirement)
- Wikipedia: Requirements Engineering: [https://en.wikipedia.org/wiki/Requirements\\_engineering](https://en.wikipedia.org/wiki/Requirements_engineering)

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Requirements Engineering

### Tags:

- Best development practices
- Developing and Delivering Products Professionally
- Agile Software Development
- Requirements Engineering
- Development Workflow

## SEO (On-Page)

With the help of TYPO3, the user can easily optimize the visibility of content in search engines.

### Goals:

- I can explain what SEO means.
- I can explain and use meta-tags for pages and images.
- I can explain and use headline structures.

### Links:

- SEO for TYPO3 Editors: <https://docs.typo3.org/c/typo3/cms-seo/12.4/en-us/Editor/Index.html>
- SEO Starter Guide (Google): <https://support.google.com/webmasters/answer/7451184?hl=en>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Target Group Optimization

### Tags:

- TYPO3
- Basics
- Google
- Search Engine
- Keywords
- Metadata
- Ranking

## SEO (Technical)

The editor is aware of the relevance of duplicate content on websites and the consequences for search engine results. By using canonical links properly, an editor knows how to prevent duplicate content issues. Furthermore, the editor has knowledge about forcing robots not to index the content of a page, and/or not scan it for links to follow. The editor knows what an XML Sitemap is and that these are used to give search engines information about the structure of the website.

### Goals:

- I know what canonical links are and when they should be used.
- I know about robot instructions in metadata.
- I know the relevance of an XML sitemap of a website.

### Links:

- Wikipedia: Search engine optimization: [https://en.wikipedia.org/wiki/Search\\_engine\\_optimization](https://en.wikipedia.org/wiki/Search_engine_optimization)
- TYPO3 Documentation: SEO Introduction: <https://docs.typo3.org/c/typo3/cms-seo/12.4/en-us/Editor/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Target Group Optimization

### Tags:

- Google
- Target Group Optimization
- Search Engine



## SEO: Basic knowledge

Acquire a foundational understanding of basic Search Engine Optimization (SEO) principles to enhance website visibility and search engine rankings, including awareness of duplicate content and proper use of redirects.

### Goals:

- I can identify common HTTP status codes (e.g., 301, 404) and understand their impact on website health and user experience.
- I understand the purpose of redirects (e.g., 301 redirects) and their proper implementation.
- I recognize the importance of addressing duplicate content issues to maintain SEO integrity.

### Links:

- Moz SEO Learning Center: Duplicate Content: <https://moz.com/learn/seo/duplicate-content>
- Moz SEO Learning Center: HTTP Status Codes: <https://moz.com/learn/seo/http-status-codes>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- SEO

### Tags:

- Basics
- SEO

## SEO: Content migrations and website relaunches

When migrating content in TYPO3, it is essential to consider the impact on Search Engine Optimization (SEO). Content migrations, e.g. during a relaunch, best practices include a way that preserves SEO rankings, ensures a smooth transition, and avoids potential negative impacts on search engine visibility.

### Goals:

- I understand the importance of SEO in content migration within TYPO3, recognizing that preserving search engine rankings and traffic is important for maintaining online visibility.
- I am aware of setting up proper 301 redirects for URLs that have changed during the migration, preventing broken links, and preserving SEO authority.
- I understand the significance of maintaining consistent content organization and structure during migration, ensuring that search engines can crawl and index new content effectively.
- I am familiar with best practices for managing duplicate content issues during migration, using canonical tags and other techniques to consolidate duplicate pages and avoid SEO penalties.
- I can ensure that meta tags, such as title tags and meta descriptions, are appropriately transferred or updated during content migration to maintain relevancy and click-through rates in search results.
- I understand the impact of changes in the content hierarchy and navigation on SEO, and I can implement strategies to mitigate potential negative effects on site crawlability and ranking.
- I can educate and guide stakeholders on SEO considerations during content migration, emphasizing the importance of SEO-friendly practices and the potential impact on search engine visibility.

### Links:

- TYPO3 documentation: General Recommendations for SEO: <https://docs.typo3.org/c/typo3/cms-seo/main/en-us/GeneralRecommendations/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- SEO

### Tags:

- Content
- Content Elements
- Target Group Optimization
- Best development practices

## SEO: Page Metadata

Understanding the purpose of metadata for websites and the possibilities of configuring and editing metadata. This skill involves knowledge of the principles, requirements, and best practices for ensuring the proper use of metadata for search engine optimization (SEO).

### Goals:

- I am aware of the two types of metadata and their purposes: HTML metadata and structured data.  
I know about some important concepts related to website metadata like Title Tags, Meta Descriptions, Canonical URLs, etc.  
I understand that while some metadata can impact SEO, it's just one aspect of optimizing a site for online visibility.

### Links:

- MDN: Metadata in HTML: [https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction\\_to\\_HTML/The\\_head\\_metadata\\_in\\_HTML](https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/The_head_metadata_in_HTML)
- MDN: - The metadata element: <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/meta>
- Meta tags and attributes that Google supports: <https://developers.google.com/search/docs/crawling-indexing/special-tags>
- web.dev: Metadata: <https://web.dev/learn/html/metadata/>
- Main documentation: MetaTag API: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/ApiOverview/Seo/MetaTagApi.html>
- Main documentation: TypoScript Reference (Page): <https://docs.typo3.org/m/typo3/reference-typo3/main/en-us/Setup/Page/Index.html#meta>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- SEO

### Tags:

- Metadata
- SEO

## Scaling and Performance Optimization:

Understand the principles and concepts of scaling and performance optimization in TYPO3 websites.

### Goals:

- I am aware of scaling strategies to handle increased traffic and concurrent user loads or optimize the website's performance.
- I know about different caching solutions, such as varnish.
- I know how to measure and analyze the performance of a website.
- I know the common approaches to increase the performance of a website.

### Links:

- TYPO3 Blog posts about performance: <https://typo3.com/blog/tag/performance/>
- Recommended performance Blog Posts in TYPO3 Docs: <https://docs.typo3.org/m/typo3/guide-tell-me-something-about/main/en-us/Topics/Performance.html#blog-postings>
- Performance & Scalability: <https://typo3.org/cms/features/secure-performant-scalable/performance-scalability>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Server & Network Infrastructure

### Tags:

- Architecture
- Cache
- Image Generation
- Caching
- Performance
- Server Configuration
- Hosting
- Server & Network Infrastructure
- Scalability

## Search Engines (Solr, elasticsearch, Indexed Search, ke\_search)

Understand the importance and functionality of onsite search engines in TYPO3 websites.

Learn how onsite search engines improve user experience, enhance navigation and enable users to find relevant content quickly

### Goals:

- I am familiar with the purpose and benefits of implementing on-site search engines in TYPO3 websites.
- I understand the differences and capabilities of popular search engines, such as Solr, Elasticsearch, KE Search, and Indexed Search.
- I can assess clients' search requirements and recommend the most suitable search engine solution for their TYPO3 websites, e.g. single site setups, multisite setups or indexing external sources.
- I am aware of the key considerations for integrating and configuring on-site search engines within TYPO3.

### Links:

- elasticsearch: <https://www.elastic.co/what-is/elasticsearch>
- KE Search functions: <https://www.kesearch.de/en/functions>
- Solr Features: <https://solr.apache.org/features.html>
- Indexed Search: <https://docs.typo3.org/c/typo3/cms-indexed-search/main/en-us/Introduction/Index.html>

### Maintainer:

(Korbinian Kugelman)

### Domain Tag:

- Onsite Search Engines

### Tags:

- TYPO3
- Search
- Search Engine
- Search Bar

## Securing a TYPO3 installation

Implementing robust security measures is crucial for protecting TYPO3 installations from potential threats and vulnerabilities.

Understand security guidelines and best practices to assess and enhance the security of TYPO3 installations, to safeguard sensitive data and ensure the integrity of websites.

### Goals:

- I understand the importance of securing a TYPO3 installation to protect against unauthorized access and security breaches.
- I understand the key security guidelines and best practices for securing TYPO3 installations, including regular updates, access control, system hardening, and data protection.
- I recognize the importance of enforcing HTTPS to encrypt communication between the TYPO3 website and users.
- I can assess the need for and oversee the implementation of Multi-Factor Authentication (MFA) for backend users.
- I understand the Content Security Policy (CSP) and its significance in mitigating cross-site scripting (XSS) attacks.
- I can work with developers and administrators to define and implement an appropriate Content Security Policy (CSP) for the website.

### Links:

- Wikipedia: HTTPS: [https://de.wikipedia.org/wiki/Hypertext\\_Transfer\\_Protocol\\_Secure](https://de.wikipedia.org/wiki/Hypertext_Transfer_Protocol_Secure)
- MDN Web Docs: Content Security Policy (CSP) - HTTP: <https://developer.mozilla.org/en-US/docs/Web/HTTP/CSP>
- TYPO3 Documentation: Content Security Policy (CSP): <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Security/GuidelinesAdministrators/ContentSecurityPolicy.html>
- TYPO3 Documentation: Multi-Factor Authentication: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/ApiOverview/Authentication/MultiFactorAuthentication.html>
- TYPO3 Documentation: Security Guidelines: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Security/Index.html#security-guidelines>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Security

### Tags:

- Security
- Cross-Site Scripting (XSS)
- HTTPS
- System Hardening
- Data Protection

- Multi-Factor Authentication (MFA)
- Content Security Policy (CSP)
- Access Control

## System requirements

Understanding server configuration specific to TYPO3 projects involves knowing the server requirements, software dependencies, and best practices for configuring servers to ensure optimal performance and security.

### Goals:

- I understand the server requirements for hosting TYPO3 websites.
- I am familiar with common server software (e.g., web server, database) used in TYPO3 installations.
- I know the best practices for server configuration to optimize TYPO3 performance and security.
- I understand the implications of server settings on TYPO3 websites and can make informed decisions regarding server infrastructure.

### Links:

- TYPO3 Documentation: Installing TYPO3: <https://docs.typo3.org/m/typo3/tutorial-getting-started/main/en-us/Installation/Install.html>
- TYPO3 Documentation: System Requirements: <https://docs.typo3.org/m/typo3/tutorial-getting-started/main/en-us/SystemRequirements/Index.html#system-requirements>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Server & Network Infrastructure

### Tags:

- Security
- Database Handling
- Performance
- Web server
- Server Configuration
- Hosting



## TER

Knowledge about the standard extension hub of TYPO3.

### Goals:

- I know that almost all extensions available for TYPO3 are hosted in the TYPO3 Extension Repository (TER).
- I know how to access the TYPO3 Extension Repository (TER), search through extensions, and download them.

### Links:

- TYPO3 Extension Repository (TER): <https://extensions.typo3.org/>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Extensions

### Tags:

- TYPO3
- Extensions

## TYPO3 Accessibility: Working with images

Including images in TYPO3 websites in an accessible manner is important to ensure that users with disabilities can perceive and understand the visual content.

### Goals:

- I understand the importance of accessible images and their impact on providing inclusive user experiences on TYPO3 websites.
- I know that text on images should be avoided because screen readers cannot read it.
- I can differentiate between the different types of images and can advise on the usage of alternative texts for images.
- I am aware of best practices for writing alternative texts for images, including being concise, descriptive, and contextually relevant.
- I know how to add metadata for images in the TYPO3 backend.
- I can verify and test the accessibility of images by reviewing and evaluating the implementation of alternative texts in TYPO3.

### Links:

- Deque University: Web Accessibility Checklist - Images: <https://dequeuniversity.com/checklists/web/images>
- WebAIM: Accessible images: <https://webaim.org/techniques/images/>
- WAI: Images Tutorial: <https://www.w3.org/WAI/tutorials/images/>
- TYPO3 Tutorial: Working with Images: <https://docs.typo3.org/m/typo3/tutorial-editors/main/en-us/ContentElements/Images/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Accessibility

### Tags:

- Screen Reader
- Color contrast
- Accessibility

## TYPO3 CMS Versions and development Roadmap

Staying up-to-date with TYPO3 versions and clearly understanding of the development roadmap enables consultants to plan and execute TYPO3 projects effectively, leverage new features and improvements, and provide informed recommendations to clients and stakeholders.

### Goals:

- I know the development cycle and the versioning scheme of an LTS version.
- I know the lifespan and lifecycle of an LTS version.
- I know the expiration date of the current LTS and ELTS version.
- I know the cost and conditions for using ELTS versions.
- I know the lifespan and lifecycle of PHP versions.
- I can explain why not to run projects on unsupported versions.
- I know where to find information about upcoming features of TYPO3.
- I know what breaking changes are and where to find information about it.

### Links:

- Buying ELTS in TYPO3 shop: <https://shop.typo3.com/ELTS/>
- Extended Support Page on typo3.com: <https://typo3.com/services/extended-support-elts>
- Maintenance Releases: <https://typo3.org/cms/roadmap/maintenance-releases>
- Development Roadmap: <https://typo3.org/cms/roadmap>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- TYPO3 Versions & Development Roadmap

### Tags:

- PHP
- Version
- Maintenance & ELTS

## TYPO3 Community Engagement

This skill focuses on engaging with the TYPO3 community to share knowledge, collaborate, and stay updated on TYPO3 developments. The TYPO3 community offers various platforms and channels for communication, networking, and support.

### Goals:

- I am familiar with TYPO3 Slack and Discord to seek help, share knowledge, and collaborate with other TYPO3 professionals.
- I am aware of TYPO3 camps and user groups where one can learn, share experiences, and network with other TYPO3 enthusiasts.
- I know of Stack Overflow as a platform to ask and answer relevant questions, contribute to the TYPO3 knowledge base and help fellow TYPO3 users.
- I know where to find TYPO3 community news, announcements, and events through community newsletters and social media channels.

### Links:

- TYPO3 Slack channel: <https://typo3.slack.com/>
- StackOverflow: #TYPO3: <https://stackoverflow.com/questions/tagged/typo3>
- TYPO3 Community: <https://typo3.org/community/>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- General Basics

### Tags:

- education
- cooperation
- TYPO3 Basics

## TYPO3 System Extensions

Familiarity with TYPO3 System Extensions involves understanding the purpose, functionality, and usage of the core extensions developed by the TYPO3 CMS core team.

### Goals:

- I am familiar with the system extensions included with TYPO3, such as "Import/Export" or "Form Framework".
- I understand the purpose and functionality of each TYPO3 system extension.
- I am aware of the best practices for configuring and managing TYPO3 system extensions to ensure optimal performance and security.
- I can advise on the appropriate use of system extensions and their potential impact on TYPO3 project development and maintenance.

### Links:

- TYPO3 System Extensions: <https://docs.typo3.org/Home/SystemExtensions.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Extensions

### Tags:

- Extensions
- General Extension Architecture
- Software Architecture for Extensions
- Extensions

## TYPO3 Trademark

Knowledge of the TYPO3 trademark policies, guidelines, and restrictions ensures compliance and proper usage of the TYPO3 brand.

### Goals:

- I am familiar with the TYPO3 trademark policies, guidelines, and restrictions.
- I can differentiate between proper and improper usage of the TYPO3 trademark.

### Links:

- TYPO3 Trademark Usage Policy: <https://typo3.org/project/brand/trademarks>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- General Basics

### Tags:

- TYPO3
- Legal
- TYPO3 Basics
- Licenses, Legal Rights & Obligations

## The Purpose of TypoScript

TypoScript is a powerful configuration language used to define the behavior and appearance of TYPO3 websites. TypoScript techniques provide additional flexibility and control over the TYPO3 website's functionality and design.

### Goals:

- I am familiar with the purpose and significance of TypoScript in TYPO3.
- I know TypoScript can configure the behavior of TYPO3 elements, such as menus, content rendering, and page templates.
- I know where to find information about TypoScript.
- I know that TypoScript can be used to ease the work of editors by defining default values for certain fields or making them mandatory.

### Links:

- Introduction: TypoScript Reference: <https://docs.typo3.org/m/typo3/reference-typo3/main/en-us/Introduction/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Overview of TYPO3 and its Terminology

### Tags:

- TypoScript
- TypoScript and Rendering
- PageTS

## URL redirect Basics

The user knows the effects in terms of SEO and backlinks in a subsequent change of a URL. The user knows how to minimize the negative effects by defining redirects.

### Goals:

- I know what URL redirects are.
- I know about the differences between the redirect types.
- I know about the effects of incorrect URL redirects for website visitors and search engines.

### Links:

- TYPO3 Documentation: Redirects module: <https://docs.typo3.org/c/typo3/cms-redirects/12.4/en-us/Usage/Index.html>
- TYPO3 Documentation: Redirect basics: <https://docs.typo3.org/c/typo3/cms-redirects/12.4/en-us/Basics/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Target Group Optimization

### Tags:

- Target Group Optimization



## Understanding GDPR

Understanding GDPR (General Data Protection Regulation) involves knowledge of the principles, requirements, and best practices for ensuring compliance with data protection laws. It includes understanding the considerations related to including external content, such as players or like buttons, on websites while maintaining user privacy.

### Goals:

- I understand the key principles and provisions of relevant data privacy regulations.
- I can identify personal data and sensitive data as defined by data protection laws.
- I am aware of the legal requirements and best practices for data privacy and protection.
- I can assess the privacy implications of including external content, such as players or like buttons, on websites and make informed decisions to mitigate risks and ensure compliance.
- I understand the importance of obtaining user consent for data collection and processing activities and can advise on implementing appropriate consent mechanisms.
- I can guide stakeholders in implementing privacy-enhancing measures, such as anonymization, pseudonymization, and data minimization, to protect user data.
- I am familiar with the requirements for data breach notification and can advise on appropriate response and mitigation strategies.

### Links:

- Introduction to GDPR compliance: <https://gdpr.eu/compliance/>
- European Commission: Data Protection: [https://commission.europa.eu/law/law-topic/data-protection\\_en](https://commission.europa.eu/law/law-topic/data-protection_en)

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Licenses, Legal Rights & Obligations

### Tags:

- Data Protection
- Data Privacy

## Understanding Web Services / APIs

Web Services / APIs enable different software systems to communicate and interact, facilitating data exchange, integration with external services, and interoperability.

Understanding Web Services involves knowledge of what APIs are, their applications, and the considerations associated with their usage.

Starting with v12 LTS TYPO3 is offering reactions to integrate your website into other systems.

### Goals:

- I understand the concept of an API (Application Programming Interface) and its role in enabling communication between software systems.
- I can explain the purpose and benefits of using APIs, such as integrating different systems, accessing third-party services, and enhancing functionality.
- I am aware of the potential risks and challenges associated with using APIs, such as security vulnerabilities, reliance on external services, and the need for proper authentication and authorization mechanisms.
- I can evaluate the suitability of using APIs for specific use cases and consider factors such as data privacy, scalability, and long-term maintenance.
- I know about the TYPO3 reactions and webhooks functionality.

### Links:

- GeeksforGeeks: RESTful Web Services: <https://www.geeksforgeeks.org/restful-web-services/>
- GeeksforGeeks: What are Web Services?: <https://www.geeksforgeeks.org/what-are-web-services/>
- Webhooks and Reactions: <https://usTYPO3.com/webhooks-and-reactions.html>
- TYPO3 12 LTS Release News: <https://typo3.org/article/typo3-v12-lts-here-to-save-the-day#c13395>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- Extensions

### Tags:

- Security
- Scalability
- Maintenance
- Data Privacy
- TYPO3 reactions
- TYPO3 webhooks
- Web Service

- API
- Authorization
- Authentication

## Understanding development workflows

Acquire the knowledge and understanding of best practices for working with different environments. Learn the importance of avoiding direct code changes on live systems and the benefits of implementing automated deployment processes.

### Goals:

- I can distinguish between environments like development, staging, and live.
- I understand the purpose and significance of each environment and its role in the software development lifecycle.
- I am aware of the potential risks and pitfalls associated with making code changes directly on live systems.
- I comprehend the benefits of implementing automated deployment processes, such as continuous integration and continuous deployment (CI/CD), in TYPO3 projects.

### Links:

- General security guidelines - using staging servers: <https://docs.typo3.org/m/typo3/reference-coreapi/main/en-us/Security/GeneralGuidelines/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

### Tags:

- Architecture
- Best development practices
- Development Workflow

## Version Control Management

Knowledge of version control management enables effective collaboration and code management in TYPO3 projects and involves understanding the concepts and principles of version control and its significance in maintaining code integrity, enabling collaboration, and tracking changes.

### Goals:

- I understand the concepts and principles of version control and its importance in TYPO3 development.
- I am familiar with common version control systems used in TYPO3 projects.
- I know about the basic functionalities of version control, such as committing changes, branching, and merging.
- I understand the benefits of using version control for tracking code changes and enabling collaboration in TYPO3 projects.

### Links:

- What is a distributed version control system?: <https://about.gitlab.com/topics/version-control/benefits-distributed-version-control-system/>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Development Workflow

### Tags:

- Version
- Best development practices
- Developing and Delivering Products Professionally
- Development Workflow

## Web Vulnerability Types

Knowledge about possible vulnerabilities in web development.

### Goals:

- I know what cross-site scripting (XSS) is.
- I know what arbitrary code execution is.
- I know what an SQL injection is.
- I know how I can prevent these vulnerabilities in my code.

### Links:

- OWASP: Vulnerability: <https://owasp.org/www-community/vulnerabilities/>
- TYPO3 Explained: Security Guidelines: Types of Security Threats:: <https://docs.typo3.org/m/typo3/reference-coreapi/12.4/en-us/Security/TypesOfThreats/Index.html>

### Maintainer:

TYPO3 (Andreas Wolf)

### Domain Tag:

- Security

### Tags:

- TYPO3
- Security
- Cross-Site Scripting (XSS)
- SQL Injection

## Web accessibility

To make a website accessible to as many people as possible, a user must know the basics of accessible websites.

### Goals:

- I know what web accessibility is and who defines the rules for web accessibility.
- I know how to improve the use of web pages to be better accessible for people with disabilities.
- I know how to handle content and structure for people with disabilities properly.

### Links:

- TYPO3 Documentation: Accessibility: <https://docs.typo3.org/m/typo3/tutorial-editors/12.4/en-us/Concepts/Accessibility.html>
- Web Content Accessibility Guidelines (WCAG) 2.0: <https://www.w3.org/TR/WCAG20/>
- Web Accessibility Initiative (WAI): <https://www.w3.org/WAI/>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- Target Group Optimization

### Tags:

- TYPO3
- Screen Reader
- Colour-blind
- WCAG
- Basics

## What is TYPO3 Association doing for you?

Understand the benefits and contributions of the TYPO3 Association, a non-profit organization supporting the TYPO3 CMS ecosystem. The TYPO3 Association plays a vital role in fostering the TYPO3 community, coordinating development efforts, and providing resources for TYPO3 users and contributors.

### **Goals:**

- I understand the purpose and role of the TYPO3 Association in supporting the TYPO3 CMS project.
- I am aware of the benefits and services provided by the TYPO3 Association to its members.
- I know how to become a member of the TYPO3 Association and the advantages of membership.
- I am familiar with the TYPO3 Association's funding and sponsorship initiatives and their impact on the TYPO3 ecosystem.
- I can access and utilize TYPO3 Association resources, such as documentation, guidelines, and tools, to enhance my TYPO3 projects.
- I understand the TYPO3 Association's involvement in community events, conferences, and camps, and how it contributes to the overall TYPO3 community.
- I am aware of the TYPO3 Association's efforts in coordinating TYPO3 core development, ensuring quality and stability.
- I can contribute to the TYPO3 Association's activities, such as volunteering, participating in working groups, and supporting community initiatives.

### **Links:**

### **Maintainer:**

TYPO3 (Korbinian Kugelmann)

### **Domain Tag:**

- General Basics

### **Tags:**

- TYPO3 Association



## What is TYPO3 GmbH doing for you?

The TYPO3 GmbH is a fully-owned service company of the TYPO3 Association providing support and services for TYPO3.

### Goals:

- I know that the TYPO3 GmbH was created as an executive branch of the TYPO3 Association.
- I know that the TYPO3 GmbH acts on the goals and ideals of a professional open source software vendor and takes care of commercial services, such as extended support plans and partnerships with agencies and industry.
- I am aware that the TYPO3 GmbH is not in competition with agencies using TYPO3 CMS, but provides additional supporting services, such as presales services and marketing for the content management system.
- I know that the TYPO3 GmbH organizes the TYPO3 Developer Days and the TYPO3 Conference.
- I know that the TYPO3 GmbH provides certification programs, verifying the knowledge of TYPO3 professionals and the agencies that employ them.

### Links:

- TYPO3 Certification: <https://typo3.com/services/certifications>
- TYPO3 Association: <https://typo3.org/project/association>
- The TYPO3 GmbH: <https://typo3.org/project/association/structure/the-typo3-company>

### Maintainer:

TYPO3 (Korbinian Kugelmann)

### Domain Tag:

- General Basics

### Tags:

- TYPO3 Certification
- TYPO3 Association
- TYPO3 GmbH
- Administration & Support
- Licenses, Legal Rights & Obligations

## Working with translations

TYPO3 offers the function to deliver contents, datasets as well as metadata multilingual. Content elements can be translated via a "free" or "connected" mode. The number of languages that can be editorially recorded is not limited in TYPO3.

### Goals:

- I can provide page translations in any pre-configured language.
- I know the difference between the free and connected mode of translation and know how to configure them.
- I can switch between the columns and the language view in the page module.
- I can edit translated pages, content elements and data records.
- I know the translation view in the module *List*.
- I know how to provide and edit translations of file metadata.
- I know the translation overview of the module *Info*.
- I know that certain combinations of actions on content elements can lead to "mixed" mode and how to reset to "free" or "connected" mode.
- I know that using "mixed" mode implies a lot of challenges when editing content (e.g.: changing the order of content elements).

### Links:

- Frontend Localization Guide: <https://docs.typo3.org/m/typo3/guide-frontendlocalization/12.4/en-us/Index.html>

### Maintainer:

TYPO3 (Oliver Thiele)

### Domain Tag:

- CMS Basics

### Tags:

- CMS Basics
- TYPO3
- Translations
- Language
- Page
- Content
- Files
- Internationalization
- Localization
- L10n
- l18n
- i18n

- List Module
- Page Module
- File List Module
- Info Module

## closed user groups

Learn about closed user groups in the context of TYPO3 and explore the fundamental concept of restricted access to specific content and functionalities.

### Goals:

1. I understand the concept of closed user groups in TYPO3.
2. I can manage front-end users and groups within TYPO3 to organize and control access permissions.
3. I know about the possibilities and TER extensions to restrict file access, ensuring that only logged-in users can view and download specific files.
4. I am aware that there are extensions available in the TYPO3 Extension Repository (TER) that provide additional login providers.

### Links:

- TER Extensions related to felogin:  
[https://extensions.typo3.org/?tx\\_solr%5Bfilter%5D%5B0%5D=tags%3Alogin](https://extensions.typo3.org/?tx_solr%5Bfilter%5D%5B0%5D=tags%3Alogin)
- Blog article (DE):  
<https://www.sgalinski.de/typo3-agentur/typo3-website-base/geschuetzte-seitenbereiche-und-downloads/>
- TYPO3 Frontend Login Documentation: <https://docs.typo3.org/c/typo3/cms-felogin/main/en-us/Introduction/Index.html>

### Maintainer:

TYPO3 (Korbinian Kugelman)

### Domain Tag:

- Extensions

### Tags:

- Extensions
- User
- User Group
- Frontend Users and Groups