IMPORTANCE OF
CONTENT STAGING MODULE IN KENTICO CMS

Content Staging module of Kentico CMS helps in implementing innovative solutions for managing content in a process-driven manner based on your specific needs. With staging, it is possible to validate the content entirely before deploying it to production. Read on to know more.

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Introduction

The world of content is never static, with changes occurring every day. Changes are not just on the text that end-recipients view, but also at the "back-end" of the content development process, which includes the entire gamut of the development ecosystem. The various instances where changes are made include content review at various stages, quality assurance steps, security validation, performance testing, and more.

Kentico CMS offers a content staging module that allows enterprises to manage their content in a process-centric manner, and innovate on such processes simultaneously to meet their unique requirements.

Without a Content Management System (CMS), making changes become hefty, often requiring manual changes of code that will invariably end up as a cumbersome task. Presence of a proper CMS makes the task of applying changes easy by separating the content from presentation and layout. However, the CMS should still have the required features in place to facilitate easy changes. Content staging module is an important component that makes the task of making changes on content easy and seamless.

This White Paper analyzes the Content Staging module of Kentico CMS and tries to give some insights into the purpose of content staging, configuration of staging module, and the implementation of best practices.

What is content staging?

A **staging site** is a common feature in web development. It functions as a clone of the live production site, on which developers test new versions of custom code, themes, and plugins, before moving the same to production.

Changes made to the pre-production staging environment will have a big impact on production. For instance, changes to shared components, or a high level of resource utilization during a custom component load testing turning rogue could cause a complete outage. When such changes are first applied on a staging site, the main site remains immune, until developers can fix all issues and apply the changes to the production site.

Content Staging in essence means deploying any change to the files residing in one or more servers, outside the development environment. The changes may be in files related to the editorial review of content, quality assurance, security validation, or any other pre-production function. It offers an additional editing stage, between the development stage and the live production environment.

Content submitted by authors and other contributors to the CMS get saved in display-agnostic format. The system overlays custom template components such as design elements, background and font, on the submitted content, to create a complete web page. With a CMS, web developers find it easy to develop a single design style and apply it to all content, or make necessary changes in design or style for specific pages. Content staging allows making and verifying changes in relation to all these aspects, and evaluating the impact of such changes on the website, before applying them to the production site.

The content staging module of Kentico CMS is one of the several pre-built modules distributed with the platform core, which facilitates the review and synchronization of changes made to documents or objects in a Kentico CMS instance on one server to another instance on a different server.

Why content staging?

Organizations may use **content staging** for a variety of purposes.

For the designers:

When multiple users create content, designers are forced to make simultaneous changes to templates and other CMS objects such as custom document types. The content staging module simplifies the design promotion process for designers and reduces the chances of user errors on the centralized site. At the same time, the content changes remain fluid, allowing the enterprise to exercise governance over the structural aspects of the site.

Adhering to content policies:

Many organizations make use of content staging to implement their content policies and standards. The content staging process may be configured to serve as a filter to ensure that the content adheres to laid down policies and standards. The content staging structure, for instance, validates whether a newly introduced template or layout adheres to design guidelines laid down by the organization.

Ensuring error free content:

Obvious as it is, published content needs to be free from grammatical errors, spelling mistakes, formatting issues, and other glitches. Instituting a content staging structure makes it possible to deploy one or more layers of proof-reading, editing, or vetting, and assign such responsibilities to different persons in the enterprise.

Eliminates duplication:

Content staging structure also serves as a filter to check whether a freshly posted content duplicates any existing content. Duplicate content can frustrate users and have a negative impact on search engine rankings.

Code Security:

Enterprises often launch custom codes for specific content related components, such as a new custom smiley, logo, or anything else. Content staging offers a convenient way to test such codes in real-life scenario without actually publishing it. Even if the code has undergone quality testing, a staging environment is essential to validate performance or security, and such validation best takes place behind the firewall. Doing so minimizes the risk of the machine or network being compromised owing to a security flaw in the new code.

A code becomes less stable when it moves from a dedicated testing environment to a shared production environment. Content staging allows placing pre-production environments inside the firewall.

Advanced Preview functionality:

The staging function is much more comprehensive and utilitarian than **the preview function,** which is commonly available in all CMS. The preview function displays the page the way it would look after a publish action, even though it does not actually publish the content. However, to preview, it is still necessary to make the content publishable, and this comes with many risks. Content staging provides an additional layer of protection, ensuring that nobody outside the corporate network could accidentally view the pre-published staged content that may not fully comply with corporate standards.

Other Advantages:

Kentico CMS Content Staging module enables all such possibilities, helping enterprises save considerable time and resources. Without content staging, the same tasks would require ad-hoc workarounds, which consume time and create stress for everyone in the ecosystem. With the content staging module, those responsible for the content may manage their own content easily, making changes without having to depend on technical support, and in this process, possible distortions are avoided that occur when another person is added to the layer.

Content staging models

Without content staging, making changes to content becomes a tiresome affair, often demands sending emails to and forth before the IT team accesses the source code and cut-copy-paste files as required. The content staging module makes the process easy, smooth, and seamless by offering an operational tool that facilitates the same tasks. All processes are automated, and the CMS makes the necessary changes in the back-end automatically.

There is no one best content staging model. Each organization has unique requirements with respect to processing their content. For instance, a large organization with several departments would require an elaborate content staging process, with chains of approvals, whereas, a small organization that has only one resource modifying or approving content can do away with the control structure entirely.

Key considerations and best practices:

The success of content staging nevertheless depends on instituting well-defined roles and responsibilities, and a transparent process, for all content related matters. Developing a content staging system without instituting such a process may result in several issues, such as:

- The system not reflecting the actual content related needs
- Disrupting the natural flow of the organization
- Not factoring in accessibility issues for people across different levels of the enterprise

All such issues can create stress, delays and inefficiencies, which might turn the task of instituting content staging counterproductive.

Organizations that do not have any existing content governance process may introduce Kentico CMS content staging module with a simple process flow that reflects the way content passes through different levels and departments in the organization, from the conception stage to the publishing stage. However, for organizations that already have one or more existing governance process for managing content and data related applications, (which include most of organizations) the best practice is to incorporate content staging module as part of such governance process, to the extent possible. When existing governance structures are in place, it is not a good idea to refrain from implementing content staging in isolation.

Regardless of the final structure adopted, make sure that the process flow design assigns specific responsibility for key content related tasks and landmarks, such as:

- Approval of changes made to documents
- Redesigning of webpage. A key consideration is whether to grant redesign privileges to authors/reviewers.
- Making changes to reflect the overall branding for the website
- Management of objects such as document types and roles
- Periodic review and maintenance of the governance model

Kentico CMS makes it possible to establish granular control over content staging capabilities, offering enterprises the flexibility to configure the tool in a way that closely aligns with their business processes.

Content staging overview:
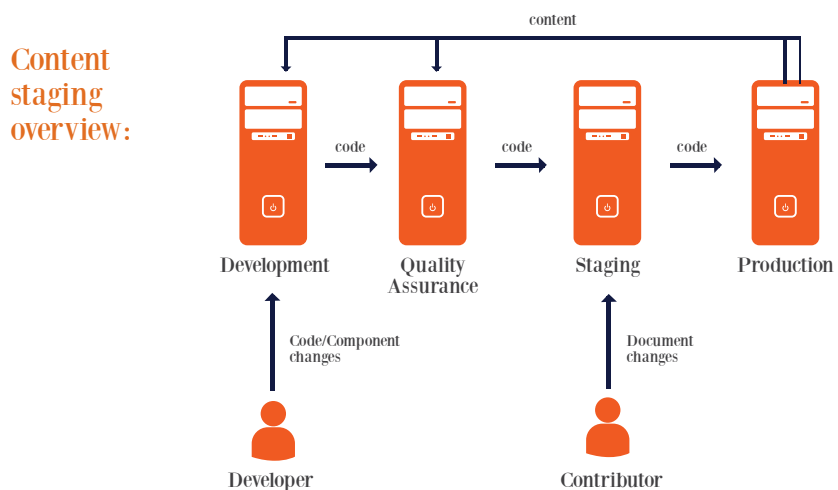
How it works

Kentico's content staging module offers an easy-to-use and intuitive user interface to:

• Review and change the contents of the documents in a content-tree interface
• Alter document relationships
• Create user-defined tables in documents and manage the data
• Review, synchronize or reject one or more changes to custom tables
• Track changes to users, custom tables, workflows and media libraries and synchronize objects such as websites

Apart from the administrative interface, Kentico CMS also offers access to synchronization using an API. This makes it easy to create customized processes that closely align with organizational needs.

Content synchronization:

To synchronize content, users need to define source servers (where content originates) and target servers (the destination for changes). Defining the same server as both source and target server makes possible bi-directional synchronization. After configuring all instances, synchronization starts. All changes are logged as staging tasks in CMS Desk -> Tools -> Staging. Synchronization can also be done automatically, based on a pre-defined scheduled task- *Content Synchronization.*

The content staging module supports the synchronization of:

• **Document data,** or documents in the website content tree. Documents are the fundamental units of the staging module in Kentico CMS. There could be several types of documents, distinguished by data structure, form layout, design, queries, or any other settings.

• **Document attachments:** Attachments and/or fields are synchronized together with the document.

• **Document relationships:** When both the documents and the relation types exist on target server, the relationships between documents are synchronized. When documents are on different sites, this synchronization does not take place.

• **Workflow process:** Published document versions are synchronized to the target server while both servers have the same workflow schemas defined.

• **Custom tables** and the data contained inside such tables.

• **Media libraries** and the files and folders in them

• **ACLs (document-level permissions)**

• Almost all Global objects. However, physical files related to global objects, such as web part source files, form control files, and ASPX page template files are not synchronized.

The **Staging module** does not support synchronization of the following:

- *Accounts*
- *Activities*
- *Blog comments*
- *Booking event attendees*
- *Contacts*
- *Events logs*

- *Forms data*
- *Forms posts*
- *Friends*
- *Message board messages*
- *Web templates*

Point to note: Changes made in media library files and folders are logged as content staging tasks, only when performed through the user interface. When users upload or update files directly using FTP, the changes are not logged.

Content Security:

A key issue underlining all these functions is **security.** Kentico CMS offers several layers of security in its content staging module. Content staging tasks and synchronization happen only when specific tasks are assigned, and when they happen, the traffic moves over HTTPS secured SOAP-based web service. Administrators assign permissions to security roles to manage tasks and servers, and administrators could use such permissions to restrict synchronization of documents to specific departments or users.

To sum up, the content staging module in Kentico CMS offers a flexible solution for allowing users and administrators to review and synchronize changes between Kentico CMS servers. This out of the box implementation supports procedural configuration of content to be synchronized, security permissions, content sources and targets using the administrative UI. Even if the supported use cases do not satisfy the business needs, Kentico CMS empowers developers to build custom solutions by exposing the functionality programmatically and also by providing complete API documentation.

About Suyati

Suyati provides marketing technology and integration services for companies that wish to combine the best of breed solutions and create a unified approach to customer acquisition. This unified digital marketing approach requires system integration between various CMS and CRM platforms, and a slew of ecommerce, Marketing Automation, Social Media Listening, email and social marketing, and customer service systems. Our specialized knowledge in Salesforce, open source and .Net based systems enables us to build effective custom integrated solutions for our clients.

Suyati's custom technology solutions have been deployed in companies in the US, Western Europe and Australia, and have helped many enterprises leverage the web/cloud/mobile technologies to acquire customers through integrated digital marketing. Suyati is based in Chicago with product engineering capability out of the US and India.

More at: *www.suyati.com*   Get in touch: *services@suyati.com*

References:

- http://www.kentico.com/product/resources/whitepapers/the-value-of-content-staging/content stagingwhitepaper

- http://devnet.kentico.com/articles/files/thomas-robbins/staging/contentstaging_v7

- https://wpengine.com/support/staging/

- https://devnet.kentico.com/docs/7_0/devguide/index.html?content_staging_what_can_be_synchronized.htm

- http://sitecore.robhabraken.nl/index.php/2068/setting-up-content-staging/

- https://devnet.kentico.com/docs/7_0/devguide/index.html?content_staging_what_can_be_synchronized.htm