

Introduction to Content Types and Content Type Publishing in Sharepoint 2010

(Microsoft Corporation)

Content types enable you to organize, manage, and handle content in a consistent way across your sites. By defining content types for specific kinds of documents or information products, you can ensure that each group of content is managed in a consistent way. This article explains basic concepts about content types, and how content type publishing can be used to share content types across site collections.

What is a Content Type?

In the course of doing business, a typical organization produces many different kinds of content; for example: legal contracts, marketing proposals, product design specifications, manufacturing process documents, etcetera. Although these different types of documents might share a small set of common properties, each type of content has unique attributes, and each might be created, used, shared, and retained in different ways. An organization might want to maintain different kinds of metadata about these different kinds of content, or it might want to apply different kinds of retention or confidentiality policies to them.

Organizations can define each of these different sets of documents as a content type. A content type is a group of reusable settings that describe the shared attributes and behaviors for a specific kind of content. Content types can be defined for any item type, including documents, list items, media files, and folders.

You can specify the following attributes for each content type:

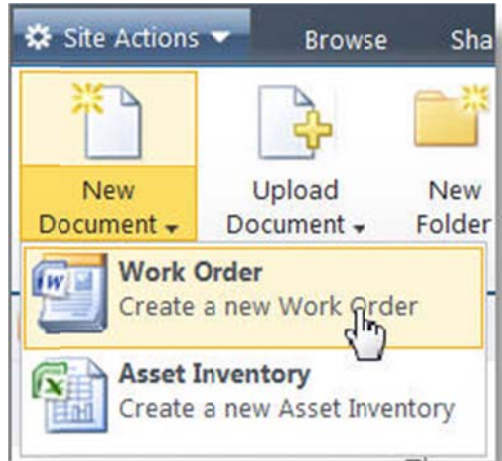
- The columns (metadata) that you want to assign to items of this type.
- The custom New, Edit, and Display forms to use with this content type.
- The workflows that are available for items of this content type.
- The custom solutions or features that are associated with items of this content type.
- The information management policies that are associated with items of this content type.
- The Document Information Panel, that displays in compatible Microsoft Office programs for items of this content type.
- The document template for new items of this type (document content types only).
- The document conversions that are available for items of this content type (document content types only).

Content types provide organizations with a way to manage and organize content consistently across sites, lists and libraries and they also make it possible for a single list or library to contain multiple item types or document types.

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If a library has been set up to support multiple content types, the New Document menu will present users with a list of the available content types, and they can select the type that corresponds to the kind of document that they want to create.



How Content Type Inheritance Works

Content types are organized into a hierarchy that allows one content type to inherit its characteristics from another content type. This allows categories of documents to share attributes across an organization, while allowing teams to customize these attributes for particular sites or lists.

There are two basic types of content types: site content types and list content types.

Site content types: Content types that are defined at the site level are called site content types, and they are managed in the Site Content Type Gallery for a site. Site content types are available for use in any subsites of the site for which they have been defined. For example, if a site content type is defined in the Site Content Type Gallery for the top-level site in a site collection, it is available for use in lists and libraries in all sites in that site collection. If content type publishing has been configured and this site collection is a hub for content type publishing, then these site content types can be published to subscribing site collections and Web applications. Site content types can be added individually to lists or libraries and customized for use in those lists or libraries.

List content types: When you add a site content type to a list or library, it is called a list content type. List content types are children of the site content types from which they are created.

How Inheritance Works for Site Content Types

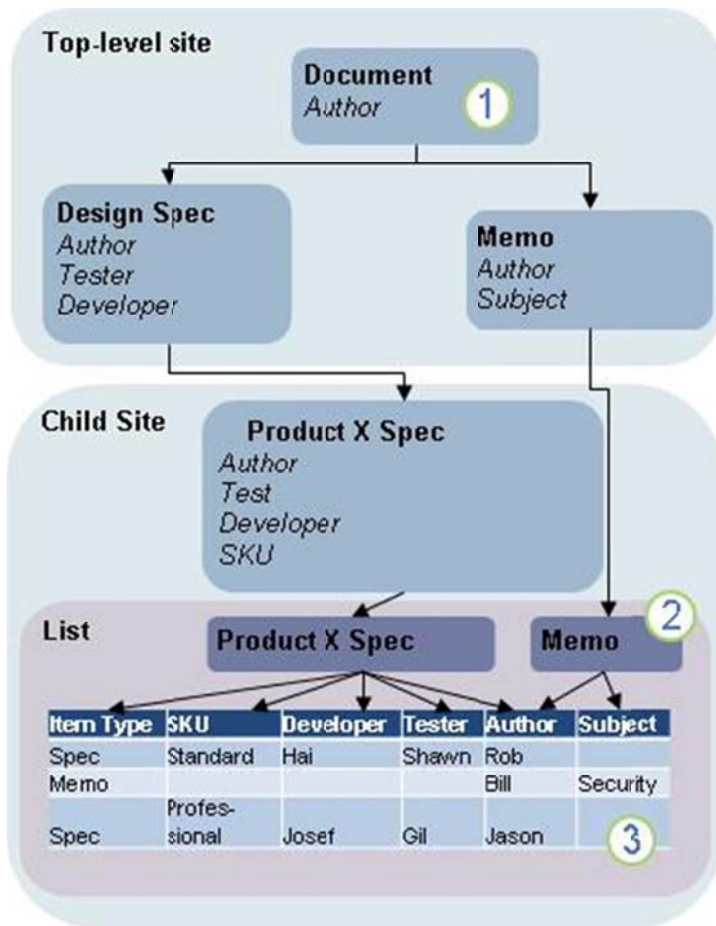
When you define a new custom site content type in the Site Content Type Gallery for a site, you choose an existing parent site content type in the Site Content Type Gallery as your starting point. You have access to a large number of default site content types you can use to create your own custom site content types. The new site content type that you create inherits all attributes of its parent content type, such as its document template, read-only setting, or columns. After you create your new site content type, you can make changes to any of these attributes.

Introduction to Content Types and Content Type Publishing in Sharepoint 2010

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Whenever you make changes to a site content type, you can specify whether you also want to update the child site or list content types that inherit their attributes from the site content type you are updating. You can update only those attributes that the child site or list content types share with a parent content type. If a child site content type has been customized with additional attributes that the parent site content type does not have (for example, extra columns), the customizations are not overwritten when the child site content type is updated. Changes that you make to a site content type do not affect the parent site content type from which it was created.

The following figure shows how content type inheritance works. The Site Content Type Gallery for this top-level site contains three site content types: Document, Design Spec, and Memo. The Design Spec and Memo content types are children to the Document content type, and both share the Author column because they inherit this from the Document content type. On a subsite in this site collection, the Design Spec content type has been used to create a new child site content type called Product X Spec, which contains an additional column. Instances of the new Product X Spec site content type and the Memo site content type are added to a library, where they function as list content types. The library displays columns that are relevant to both content types, including the Author column, which both content types share.



1 Site content type with columns represented by italicized text.

2 List content type

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3 The library to which both content types has been added displays columns that are relevant to both of them, and items of each content type have metadata in the specific columns that are relevant to them.

How Inheritance Works For List Content Types

If you have a list or library that is set up to allow multiple content types, you can add content types to this list or library from the group of site content types that are available for your site.

When you add a content type to a list or library, you make it possible for that list or library to contain items of that type. The New Item or New Document command in that list or library lets users create new items of that type. One of the key advantages of content types for lists and libraries is that they make it possible for a single list or library to contain multiple item types or document types, each of which may have unique metadata, policies, or behaviors.

When you add a site content type to a list or library to make it available for use in that location, it is known as a list content type, and it is a child of the site content type from which it is created. This list content type inherits all attributes of its parent site content type, such as its document template, read-only setting, workflows, and columns.

You can customize a list content type for the specific list or library to which you added it. These customizations do not affect the parent site content type. If the parent site content type for a list content type is updated, your list content type will inherit these changes (if the person who maintains the site content type chooses to apply the updates to all child content types). If you have customized any attributes that your list content type shares with its parent site content, your customizations will be overwritten if updates to the parent site content type are pushed down to all inheriting content types. If you customize your list content type by adding attributes that the parent content type does not have (for example, extra columns), these customizations are not overwritten if updates to the parent site content type are pushed down to all inheriting content types.

Content Type Publishing

Organizations can share content types across site collections in their deployment by using a Managed Metadata service application to set up content type publishing. Content type publishing helps organizations manage content and metadata consistently across their sites because content types can be created and updated centrally, and updates can be published out to multiple subscribing site collections or Web applications.

To set up content type publishing, the farm administrator must create a Managed Metadata service and configure it to designate a specific site collection as a hub for content type publishing. After the Managed Metadata service has been created and configured the farm administrator publishes it. The farm administrator can use this published URL to connect other Web applications to this Managed Metadata service application and subscribe to its content types.

Your organization can set up multiple Managed Metadata services to share content types from multiple site collections. Individual Web applications can also have connections to multiple Manage Metadata services and subscribe to content types from multiple Hub sites.

The Managed Metadata service must be configured by an administrator.

Introduction to Content Types and Content Type Publishing in Sharepoint 2010

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If content type publishing has been configured for the Managed Metadata service by an administrator, you can publish content types from the Site Content Type Gallery in a hub site collection to other subscribing site collections. After a content type is published, it becomes read-only on subscribing sites (although users can change the read-only status and make updates). Site owners for subscribing sites can use the content type as-is by adding it to lists or libraries, or they extend it by creating new site or list content types that are based on it.

When the published content type is updated in the Site Content Type Gallery of the hub site, the updates can be republished to subscribing sites. Content type publishing is managed by a timer job, which can be configured by your administrator. Depending on how frequently the timer job has been set up to run, there may be a lag time between when an updated content type is published and when subscribing sites receive the updates.

Local versions of published content types are read-only on subscribing sites (although users can change the read-only status and make updates). This helps organizations use content type publishing to support consistent content management across sites. If you delete a published content type in the Site Content Type Gallery for the hub site, any published versions of it on subscribing sites are not be deleted. They simply lose their read-only status and become editable.