Sitecore CMS 7.0

Security Administrator´s Cookbook

A Practical Guide to Administering Security in Sitecore

Table of Contents

Chapter 1

Introduction

The Security Administrator’s Cookbook is designed to give security administrators the information they need to administer security in Sitecore. This cookbook is primarily aimed at introducing new security administrators to the tools that Sitecore contains. However, the procedures described in this document will also be beneficial for more experienced and security administrators who are unfamiliar with the tools that Sitecore contains.

This cookbook contains the following chapters:

- **Chapter 1 — Introduction**
  This brief description of this document and its intended audience
- **Chapter 2 — Security in Sitecore**
  An overview of the basic concepts that security administrators need to understand and a brief introduction to the security tools that are available in Sitecore
- **Chapter 3 — Creating and Managing Users**
  Step by step instructions for user management tasks
- **Chapter 4 — Creating and Managing Roles**
  Step by step instructions for role management
- **Chapter 5 — Assigning and Reviewing Access Rights**
  Step by step instructions for managing access rights
- **Chapter 6 — Domains**
  Step by step instructions for managing domains
- **Chapter 7 — Security Accounts & Passwords**
  Step by step instructions for managing security accounts and passwords
- **Chapter 8 — Security and Item Buckets**
  Best approaches to managing security in Item buckets
- **Chapter 9 — Best Practices**
  A discussion of best practices for administering security in Sitecore

Chapter 2

Security in Sitecore

This chapter is a description of all the basic concepts that security administrators need to understand to get the most out of the Sitecore security system. It also contains a brief introduction to the security tools that are available in Sitecore.

This chapter contains the following sections:

- Security Accounts
- Security Tools

2.1 Security Accounts

In Sitecore, you use security accounts to control the access that users have to the items and content on their Web site as well as the access they have to the functionality that Sitecore contains.

In Sitecore, a security account can be either a user or a role.

2.1.1 Users and Roles

After you have created a user in Sitecore, you should assign them one or more of the roles that exist in Sitecore. A role contains a set of access rights to the various items that make up your Sitecore installation as well as permission to use the various tools that Sitecore contains.

By assigning roles to users you simplify the security administration process. The roles that a user is assigned determine the access rights that the user has.

If the predefined security roles that Sitecore contains do not suit your needs, you can easily create new roles and give these roles the appropriate access rights to the items and functionality that the Web site contains.

In short, users should be members of roles and the roles should be assigned the access rights that govern the permission that the members of each role have to the items in Sitecore. However, if you think that it is necessary, you can also assign individual access rights to the user as well.

If a user is a member of several roles they are given the accumulated access rights of all the roles.

Furthermore, a user can be a member of many different roles and roles can be members of other roles. When a role is a member of another role the access rights that the different roles contain are added together to give the users who have been assigned these roles the accumulated access rights of both roles.

For more information about the way Sitecore interprets security settings and access rights, see *How Sitecore Evaluates Access Rights* on page 45.

2.1.2 Access Rights

The access rights that you assign to a security account in Sitecore determine the access that the account has to the items and functionality that Sitecore contains.

The access rights that you can assign to an account are:

- **Field Read** — controls whether or not a user can read a specific field on an item.
- **Field Write** — controls whether or not a user can update a specific field on an item.
- **Read** — controls whether or not a user can see an item in the content tree and/or on the published Web site.
- **Write** — controls whether or not a user can update field values. The write access right requires the read access right and field read and field write access rights for individual fields (field read and field write are allowed by default).
- **Rename** — controls whether or not a user can change the name of an item. The rename access right requires the read access right.
- **Create** — controls whether or not a user can create child items under this item. The create access right requires the read access right.
- **Delete** — controls whether or not a user can delete an item. The delete access right requires the read access right.
- **Administer** — controls whether or not a user can configure access rights on an item. The administer access right requires the read and write access rights.

- **Language Read** — controls whether or not a user can read a specific language version of items.
- **Language Write** — controls whether or not a user can update a specific language version of items.
- **Site Enter** — controls whether or not a user can access a specific site.
- **Show in Insert** — controls whether or not a template is shown in the Content Editor in the Insert Options list.
- **Workflow State Delete** — controls whether or not a user can delete items when they are in a specific workflow state.
- **Workflow State Write** — controls whether or not a user can update items when they are in a specific workflow state.
- **Workflow Command Execute** — controls whether or not a user can execute a specific workflow command.
- ***** — controls whether or not all the access rights assigned to a specific item are assigned or denied.
- **Create Bucket** — controls whether or not a user can convert a normal content item into an item bucket.
- **Revert Bucket** — controls whether or not a user can revert an item bucket back to a normal content item.

2.1.3 Inheritance

Sitecore uses inheritance to streamline the process of assigning access rights. By using inheritance Sitecore spares security administrators the tedious task of assigning each role explicit access rights to every item in the content tree.

An item can inherit the access rights that have been specified for other items that are higher up the content tree. Any item can be configured to inherit the security settings of its parent item.

A security administrator can, for example, configure the security settings of a single item and by using inheritance, let these settings influence the security settings of all the items that are lower down the content tree.

Although items inherit security settings by default, Sitecore allows you to configure which items should inherit security settings and which should not. Sitecore defines the ability to inherit security settings as an access right; that you can allow or deny, just like Read and Write.

For more information about using inheritance to controls access rights, see Chapter 5, *Assigning and Reviewing Access Rights*.

2.2 Security Tools

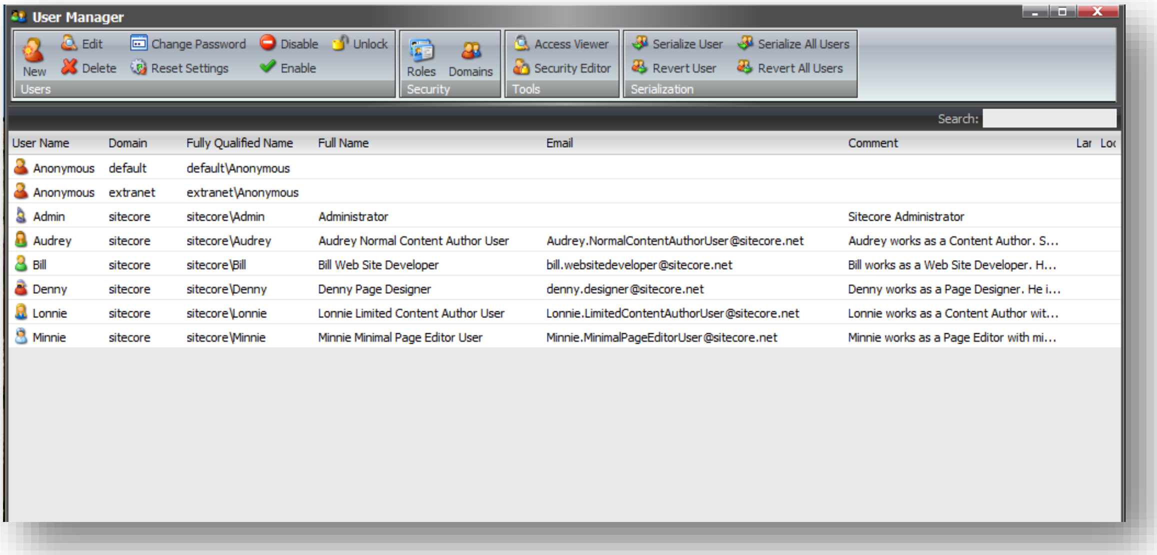
Sitecore contains several different tools for managing security.

The Sitecore security tools are:

- User Manager
- Role Manager
- Security Editor
- Access Viewer
- Domain Manager
- The **Security** tab in the Content Editor

2.2.1 User Manager

Use the User Manager to create and manage the users that have access to the system.



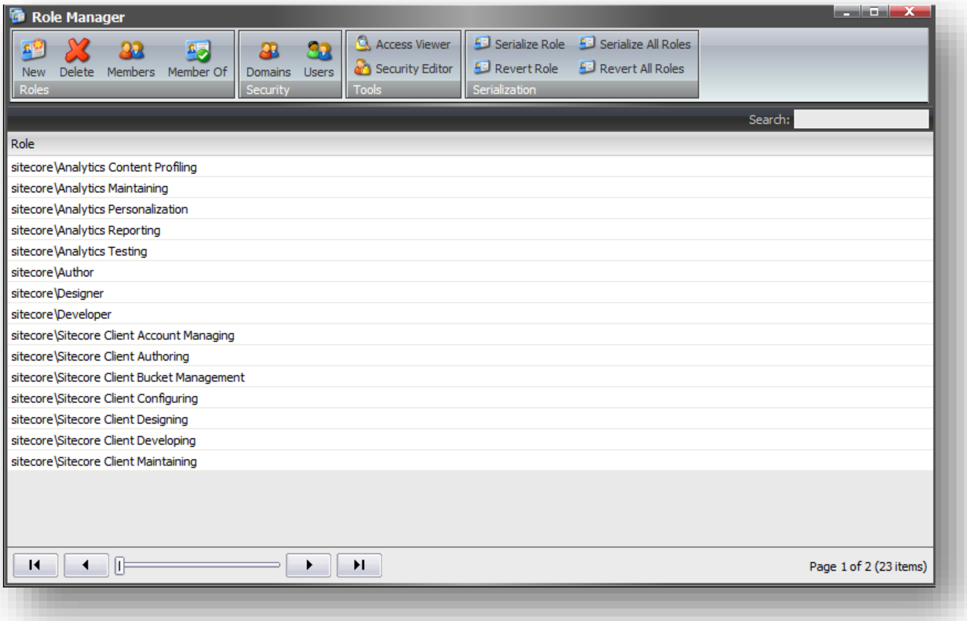
User Name	Domain	Fully Qualified Name	Full Name	Email	Comment	Lar	Loc
Anonymous	default	default\Anonymous					
Anonymous	extranet	extranet\Anonymous					
Admin	sitecore	sitecore\Admin	Administrator		Sitecore Administrator		
Audrey	sitecore	sitecore\Audrey	Audrey Normal Content Author User	Audrey.NormalContentAuthorUser@sitecore.net	Audrey works as a Content Author. S...		
Bill	sitecore	sitecore\Bill	Bill Web Site Developer	bill.websitedeveloper@sitecore.net	Bill works as a Web Site Developer. H...		
Denny	sitecore	sitecore\Denny	Denny Page Designer	denny.designer@sitecore.net	Denny works as a Page Designer. He i...		
Lonnie	sitecore	sitecore\Lonnie	Lonnie Limited Content Author User	Lonnie.LimitedContentAuthorUser@sitecore.net	Lonnie works as a Content Author wit...		
Minnie	sitecore	sitecore\Minnie	Minnie Minimal Page Editor User	Minnie.MinimalPageEditorUser@sitecore.net	Minnie works as a Page Editor with mi...		

In the User Manager you can:

- Create and edit users.
- Delete users.
- Change the password of other users.
- Enable and disable users.
- Open the other security tools.

2.2.2 Role Manager

Use the Role Manager to create and manage the roles that you want to assign the users of your system.



Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

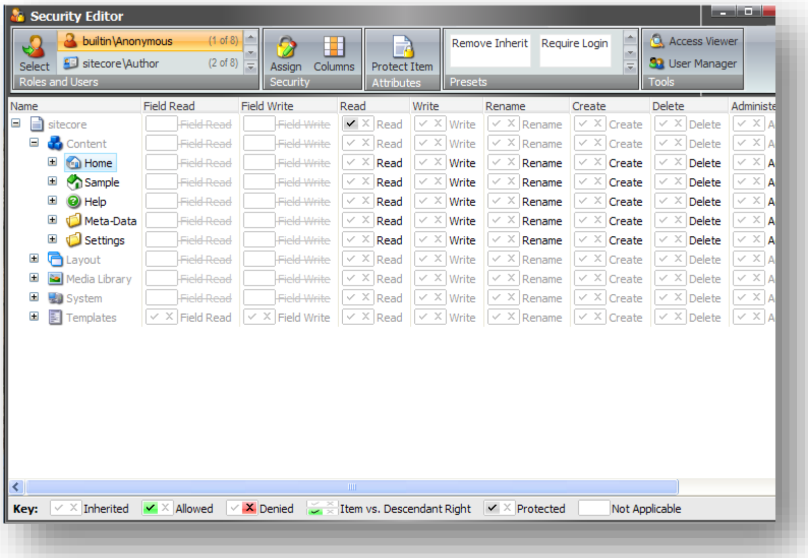
Page 1 of 2 (23 items)

In the Role Manager, you can:

- Create and delete roles.
- Add members to and remove them from a role.
- Make a role a member of and remove it from another role.
- Open the other security tools.

2.2.3 Security Editor

Use the Security Editor to manage the access rights that roles and users have to the items in the content tree.



Name	Field Read	Field Write	Read	Write	Rename	Create	Delete	Administe
sitecore	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Content	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Home	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Sample	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Help	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Meta-Data	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Settings	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Layout	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Media Library	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
System	~~Field Read~~	~~Field Write~~	Read	Write	Rename	Create	Delete	A
Templates	Field Read	Field Write	Read	Write	Rename	Create	Delete	A

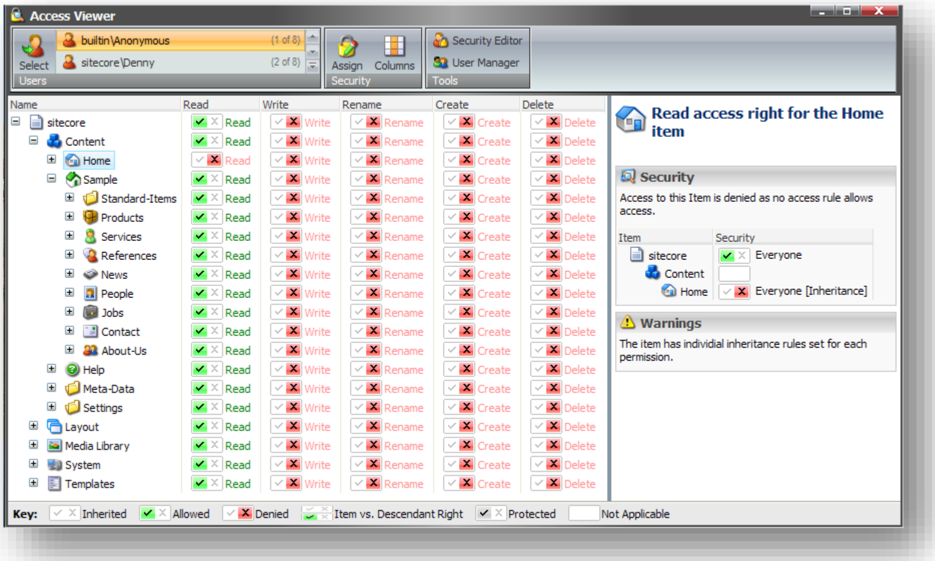
Key: ✓ Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right ✓ Protected □ Not Applicable

In the Security Editor, you can:

- Select the security account that you want to manage.
- Assign access rights to the selected security account.

2.2.4 Access Viewer

Use the Access Viewer to get an overview of the access rights that have been assigned to the security accounts.



Name	Read	Write	Rename	Create	Delete
sitecore	Read	Write	Rename	Create	Delete
Content	Read	Write	Rename	Create	Delete
Home	Read	Write	Rename	Create	Delete
Sample	Read	Write	Rename	Create	Delete
Standard-Items	Read	Write	Rename	Create	Delete
Products	Read	Write	Rename	Create	Delete
Services	Read	Write	Rename	Create	Delete
References	Read	Write	Rename	Create	Delete
News	Read	Write	Rename	Create	Delete
People	Read	Write	Rename	Create	Delete
Jobs	Read	Write	Rename	Create	Delete
Contact	Read	Write	Rename	Create	Delete
About-Us	Read	Write	Rename	Create	Delete
Help	Read	Write	Rename	Create	Delete
Meta-Data	Read	Write	Rename	Create	Delete
Settings	Read	Write	Rename	Create	Delete
Layout	Read	Write	Rename	Create	Delete
Media Library	Read	Write	Rename	Create	Delete
System	Read	Write	Rename	Create	Delete
Templates	Read	Write	Rename	Create	Delete

Read access right for the Home item

Security

Access to this Item is denied as no access rule allows access.

Item	Security
sitecore	✓ Everyone
Content	
Home	☒ Everyone [Inheritance]

Warnings

The item has individial inheritance rules set for each permission.

Key: ✓ Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right ✓ Protected □ Not Applicable

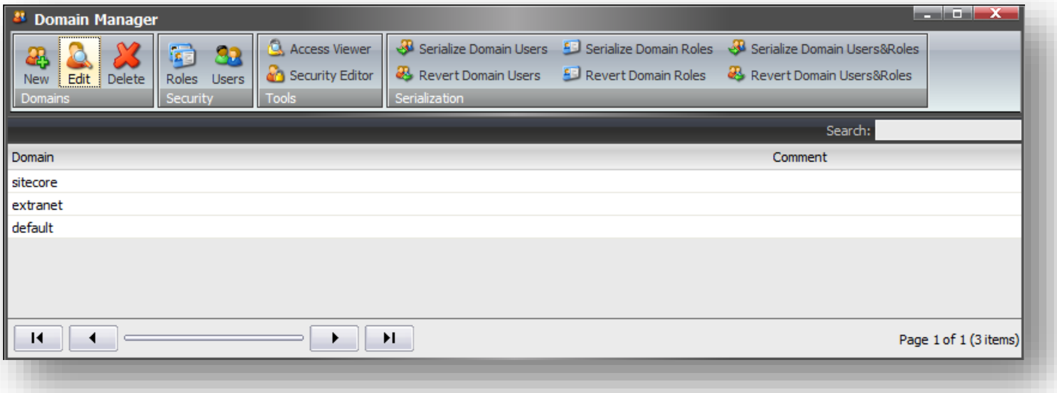
In the Access Viewer, you can:

- Get an overview of the access rights assigned to each security account for each item in the content tree.

- See an explanation that describes how the current settings have been resolved.

2.2.5 Domain Manager

Use the Domain Manager to create and manage domains.



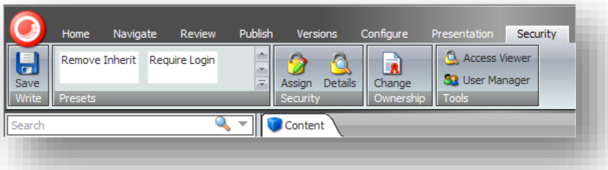
Domain	Comment
sitecore	
extranet	
default	

In the Domain Manager, you can:

- Create and delete domains.
- Specify whether the domains are global or locally managed.

2.2.6 Content Editor — Security

There are also some important security tools available on the **Security** tab in the Content Editor.



In the Content Editor, you can:

- Assign access rights to security accounts that give them access to individual items in the content tree.
- Get an overview of the roles and users that have access rights to individual items in the content tree.
- Change the ownership of items.

Chapter 3

Creating and Managing Users

This chapter describes how to use the User Manager to create new users and make them members of security roles.

This chapter contains the following sections:

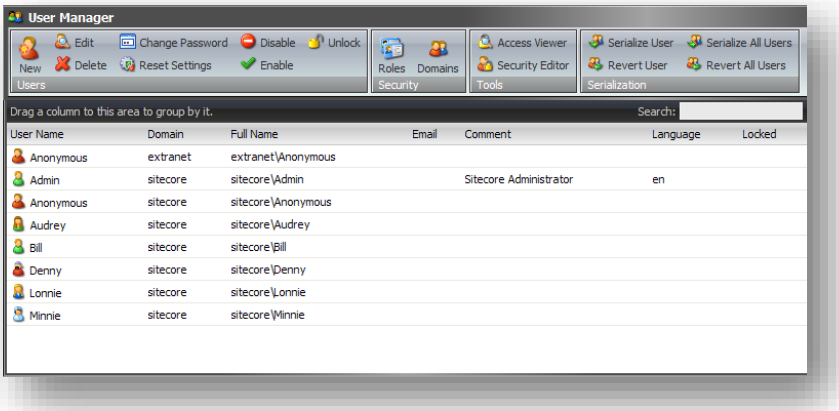
- Creating a User in the User Manager
- Managing a User

3.1 Creating a User in the User Manager

In Sitecore, you use the User Manager to add new users to the system and to manage the roles that they are members of.

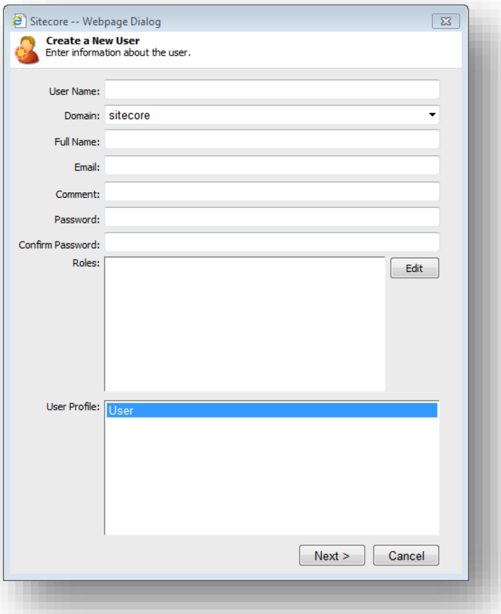
To create a user:

1. Log in to the Sitecore Desktop.
2. Click **Sitecore**, **Security Tools**, **User Manager** to open the **User Manager**.



User Name	Domain	Full Name	Email	Comment	Language	Locked
Anonymous	extranet	extranet\Anonymous				
Admin	sitecore	sitecore\Admin		Sitecore Administrator	en	
Anonymous	sitecore	sitecore\Anonymous				
Audrey	sitecore	sitecore\Audrey				
Bill	sitecore	sitecore\Bill				
Denny	sitecore	sitecore\Denny				
Lonnie	sitecore	sitecore\Lonnie				
Minnie	sitecore	sitecore\Minnie				

3. In the **User Manager** window, in the **Users** group, click **New**.



User Name:

Domain: sitecore

Full Name:

Email:

Comment:

Password:

Confirm Password:

Roles:

User Profile: User

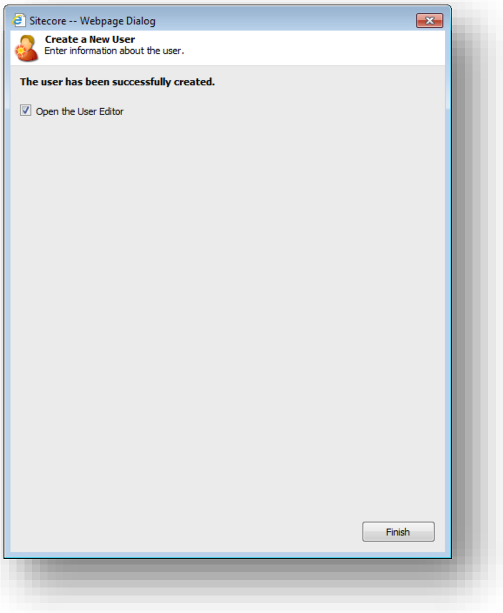
4. In the **Create a New User** dialog box, enter the relevant information about the new user.

   The **Create a New User** dialog box contains the following fields:

Field	Value
User Name	The name that the user will use in Sitecore.
Domain	The domain that the user will have access to.

Field	Value
Full Name	The full name of the user.
E-mail	The user’s e-mail address.
Comment	Any appropriate comments.
Password	The password of the new user — they can change it the first time they log in to Sitecore.
Confirm Password	Confirm the password you have given the user.
Roles	Click Edit to select the roles that you want to make the user a member of.
User Profile	The type of user you are creating.

5. Click **Next** to validate the information you have entered and create the user.



The user has been successfully created.

☑ Open the User Editor

6. Click **Finish** to complete the process.

If you selected the **Open the User Editor** checkbox, the **Edit User** dialog box is opened automatically.

For more information about making the user a member of some security roles, see *Assigning a Role to a User* on page 18.

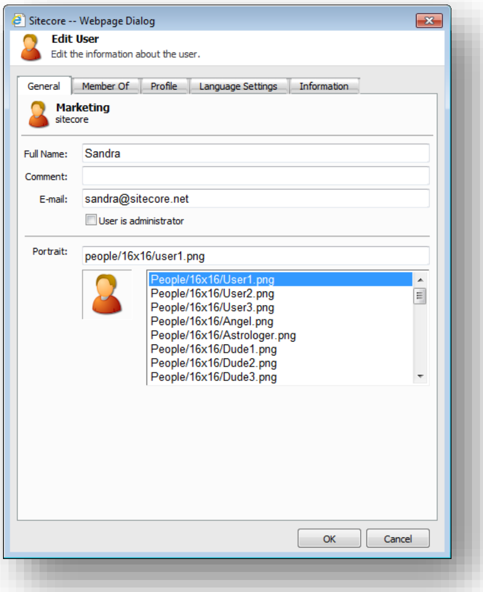
3.2 Managing a User

After you have created a new user, you can make them members of roles and remove them from roles. You may also need to edit their information in their Sitecore account. You can also delete a user from the system.

3.2.1 Editing a User

To edit a user:

1. In the **User Manager**, in the **Users** group, click **Edit**.
2. In the **General** tab, you can change the name and e-mail address of the user. You can also select the image that is used as a portrait of the user in Sitecore.



Edit User
Edit the information about the user.

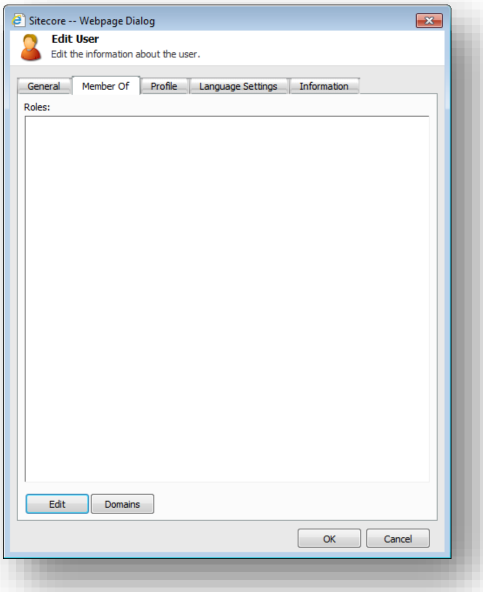
Marketing
sitecore

Full Name: Sandra
Comment:
E-mail: sandra@sitecore.net
□ User is administrator

Portrait: people/16x16/user1.png

People/16x16/User1.png
People/16x16/User2.png
People/16x16/User3.png
People/16x16/Angel.png
People/16x16/Astrologer.png
People/16x16/Dude1.png
People/16x16/Dude2.png
People/16x16/Dude3.png

3. In the **Member Of** tab, you can edit the roles that the user is a member of and the domains that the user can administrate.



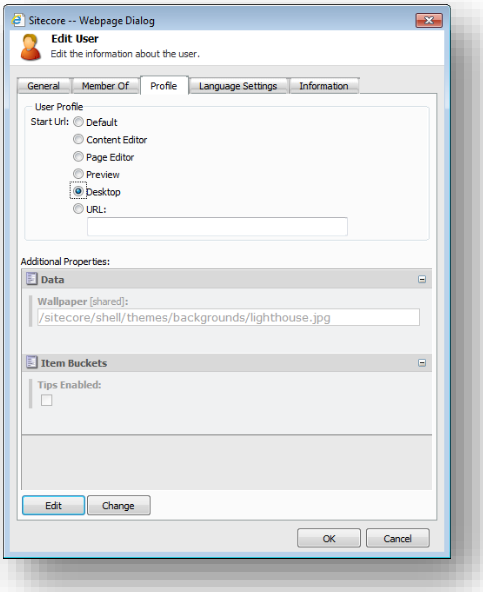
Sitecore -- Webpage Dialog

Edit User

Edit the information about the user.

For more information about making a user a member of some security roles, see the section *Creating and Managing Roles*.

4. In the **Profile** tab, in the **User Profile** section, you can specify which Sitecore tool is displayed to the user when they log in.



Sitecore -- Webpage Dialog

Edit User

Edit the information about the user.

User Profile

Start Url: ○ Default ○ Content Editor ○ Page Editor ○ Preview ● Desktop ○ URL:

Additional Properties:

Data

Wallpaper [shared]: /sitecore/shell/themes/backgrounds/lighthouse.jpg

Item Buckets

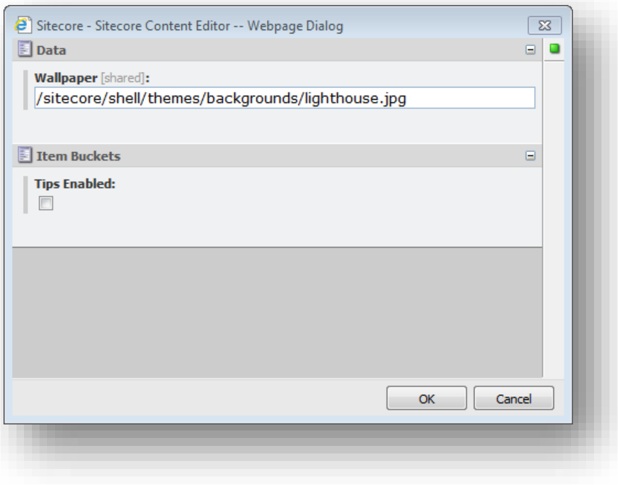
Tips Enabled: □

If you select	Then
Content Editor	The user can only open the Content Editor.
Page Editor	The user can only open the Page Editor.
Preview	The user can open the Preview client and then they can open the Page Editor.

If you select	Then
Desktop	The user can select the client that they want to open on the login page.
URL	You must enter a custom URL and the client selected by the user is ignored.

5. To edit the values in the **Additional Properties** section, click **Edit** to open a field editor window where you can edit the field values selected for the user.

   In the **Data** section, you can change the image used as wallpaper for this user.



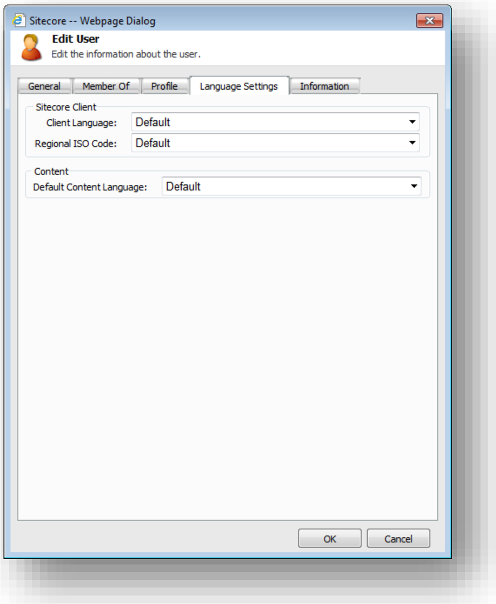
Wallpaper [shared]: /sitecore/shell/themes/backgrounds/lighthouse.jpg

Tips Enabled: □

   Notice that these settings are validated continuously and that you can see if there are any warnings or errors in the top right corner.

6. Click **Change** to change the user profile for the user. This opens a window where you can either browse to or search for the user profile you want to change to.

7. In the **Language Settings** tab, in the **Sitecore Client** section, you can specify the language and regional code that the Sitecore client should use when this user logs in.



Sitecore Client

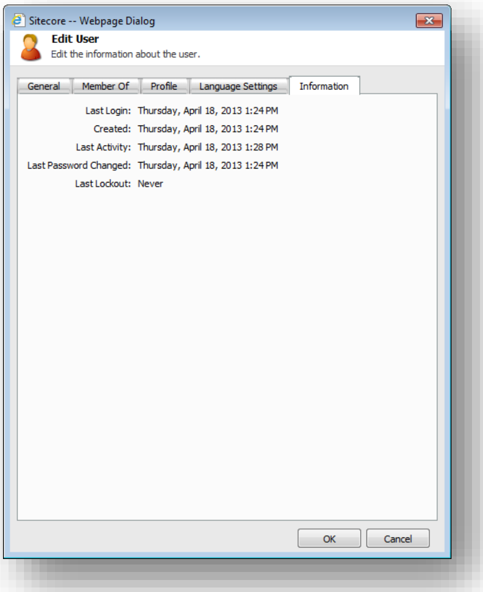
Client Language: Default

Regional ISO Code: Default

Content

Default Content Language: Default

8. In the **Content** section, you can specify the default language that the content of the Web site should be displayed in for this user.
9. In the **Information** tab, you can see some static information about the user:



Last Login: Thursday, April 18, 2013 1:24 PM
Created: Thursday, April 18, 2013 1:24 PM
Last Activity: Thursday, April 18, 2013 1:28 PM
Last Password Changed: Thursday, April 18, 2013 1:24 PM
Last Lockout: Never

The information includes when the user was created, when they last logged in, and so on.

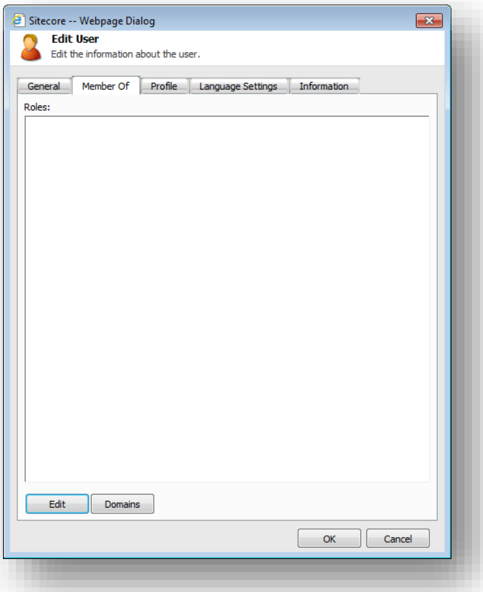
3.2.2 Assigning a Role to a User

One of the most important aspects of creating a user is specifying which roles the user should be a member of. These roles determine the access rights that the user is assigned and thereby the items that the user can access in Sitecore and the actions they can perform on these items.

To assign a role to a user:

1. In the **User Manager**, click **Edit** to open the **Edit User** dialog box.

2. Click the **Member Of** tab:

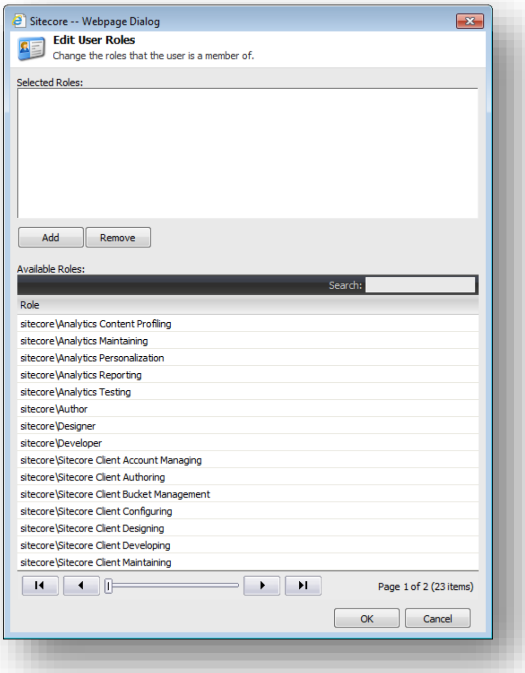


Edit User

Edit the information about the user.

Roles:

3. In the **Member Of** tab, click **Edit** to open the **Edit User Roles** dialog box:



Edit User Roles

Change the roles that the user is a member of.

Selected Roles:

Available Roles:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (23 items)

4. In the **Available Roles** section, select the roles that you want to make this user a member of and click **Add**.

   You can press SHIFT or CTRL to select several roles.

   You can also double click a role to add or remove it automatically.

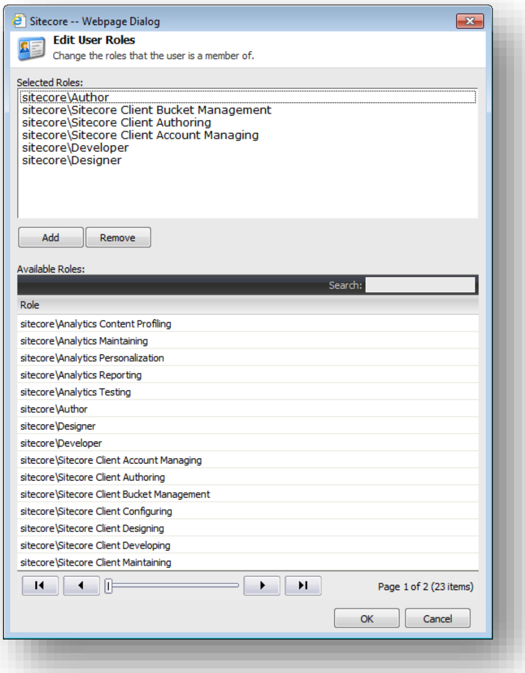
5. If the roles you want to make the user a member of are not displayed on this page, use the navigate buttons at the bottom of the dialog box to leaf through all the roles.

3.2.3 Removing a User from a Role

As a security administrator, you will often have to revoke a user's membership of some roles.

To remove a member from a role:

1. In the **User Manager**, click **Edit** to open the **Edit User** dialog box.
2. Click the **Member Of** tab and then click **Edit**.


Sitecore -- Webpage Dialog
Edit User Roles
Change the roles that the user is a member of.
Add
Remove
Search:
OK
Cancel

Selected Roles:

sitecore\Author
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Account Managing
sitecore\Developer
sitecore\Designer

Available Roles:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (23 items)

3. In the **Edit User Roles** dialog box, in the **Selected Roles** section, select the role that the user should no longer be a member of, and click **Remove**.

3.2.4 Deleting a User

Just as you need to create users, you also need to delete them from time to time.

To delete a user:

1. Open the **User Manager** and select the user that you want to delete.
2. In the **Users** group, click **Delete**.
3. When you are prompted to confirm that you want to delete this user, click **OK**.

The security account for this user has now been deleted.

For more information about deleting security accounts, see *Deleting Security Accounts* on page 58.

Chapter 4

Creating and Managing Roles

This chapter describes how to create and manage a role in the Role Manager. The topics include creating a role, assigning users to a role, and assigning a role to a role.

There is also an explanation of how the various roles work when combined.

This chapter contains the following sections:

- Creating a Role in the Role Manager
- Managing a Role

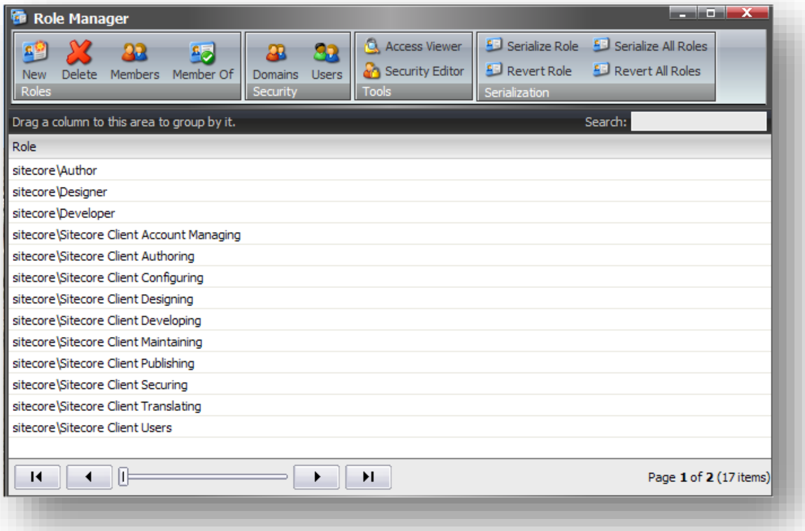
4.1 Creating a Role in the Role Manager

In Sitecore, you use the User Manager to create new roles and manage the roles that already exist.

Roles are containers for access rights that make it easier for you to manage the access rights that the users have to the items and tools that your Sitecore installation contains. When you make a user a member of a role they receive the access rights that belong to the role.

To create a role:

1. Log in to the Sitecore desktop.
2. Click **Sitecore**, **Security Tools**, **Role Manager**.

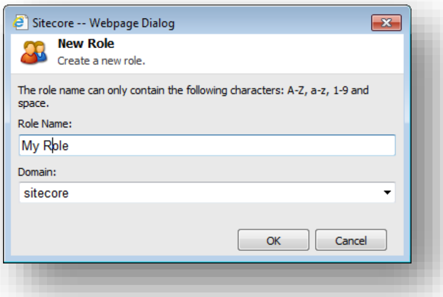


Role

sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining
sitecore\Sitecore Client Publishing
sitecore\Sitecore Client Securing
sitecore\Sitecore Client Translating
sitecore\Sitecore Client Users

Page 1 of 2 (17 items)

3. In the **Role Manager** window, in the **Roles** group, click **New**.



New Role

Create a new role.

The role name can only contain the following characters: A-Z, a-z, 1-9 and space.

Role Name: My Role

Domain: sitecore

4. In the **Role Name** field, enter the name of the new role.
5. In the **Domain** field, select the domain that this role should belong to and click **OK**. The new role is added in the **Role Manager** window.

For more information about domains, see the section *Domains*.

4.2 Managing a Role

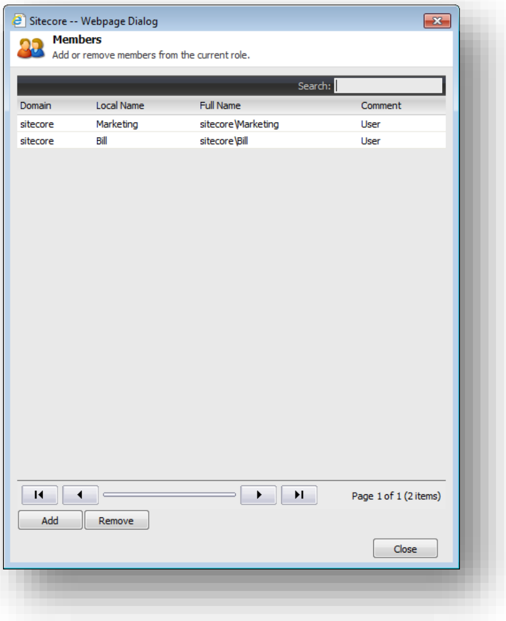
After you have created a role, you can make some users members of this role. In Sitecore, you can make any security account a member of a role — both users and roles. You can also delete a role.

4.2.1 Assigning a User to a Role

You can make any a user a member of any role.

To assign a user to a role:

1. In the **Role Manager**, select the role you want to assign a user to and click **Members**.



Sitecore -- Webpage Dialog

Members

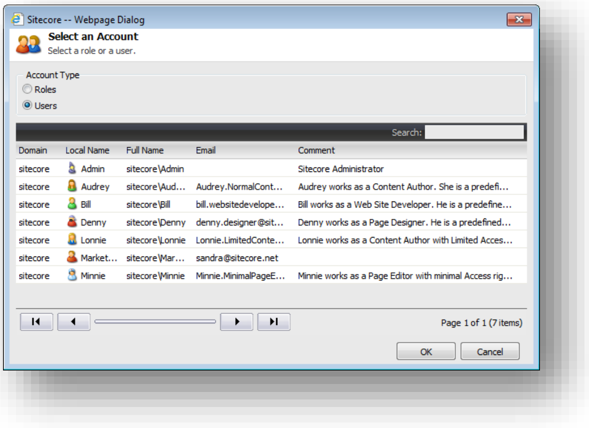
Add or remove members from the current role.

Search:

Domain	Local Name	Full Name	Comment
sitecore	Marketing	sitecore\Marketing	User
sitecore	Bill	sitecore\Bill	User

Page 1 of 1 (2 items)

2. In the **Members** dialog box, click **Add** to open the **Select an Account** dialog box.
3. In the **Select an Account** dialog box, in the **Account Type** section, click **Users** to see a list of users.



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Account Type

○ Roles

● Users

Search:

Domain	Local Name	Full Name	Email	Comment
sitecore	Admin	sitecore\Admin		Sitecore Administrator
sitecore	Audrey	sitecore\Aud…	Audrey.NormalCont…	Audrey works as a Content Author. She is a predefi…
sitecore	Bill	sitecore\Bill	bill.websitedevelope…	Bill works as a Web Site Developer. He is a predefine…
sitecore	Denny	sitecore\Denny	denny.designer@sit…	Denny works as a Page Designer. He is a predefined…
sitecore	Lonnie	sitecore\Lonnie	Lonnie.LimitedConte…	Lonnie works as a Content Author with Limited Acces…
sitecore	Market…	sitecore\Mar…	sandra@sitecore.net	
sitecore	Minnie	sitecore\Minnie	Minnie.MinimalPageE…	Minnie works as a Page Editor with minimal Access rig…

Page 1 of 1 (7 items)

If there is more than one page of users, use the buttons at the bottom of the window to leaf through the list of users.

4. Select the user that you want to add to this role.

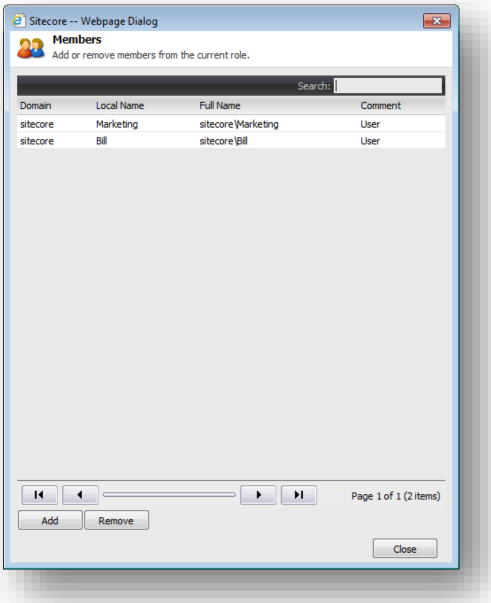
5. Click **OK** and the user is added to the **Members** dialog box and is now a member of that role.

4.2.2 Assigning a Role to a Role

You can also make a role a member of another role.

To assign a role to a role:

1. In the **Role Manager**, select the role that you want to assign a role to, and click **Members**.



Sitecore -- Webpage Dialog

Members

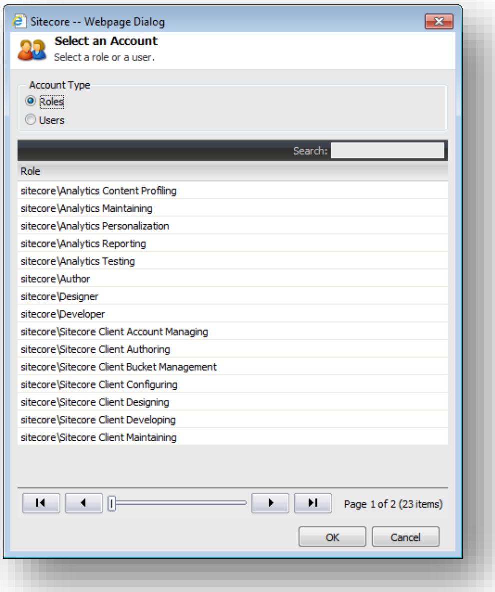
Add or remove members from the current role.

Search:

Domain	Local Name	Full Name	Comment
sitecore	Marketing	sitecore\Marketing	User
sitecore	Bill	sitecore\Bill	User

Page 1 of 1 (2 items)

2. In the **Members** dialog box, click **Add** to open the **Select an Account** dialog box.
3. In the **Select an Account** dialog box, in the **Account Type** section, click **Roles** to see a list of all the roles.



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Account Type

● Roles

○ Users

Search:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (23 items)

4. Select the role that you want to add to this role.

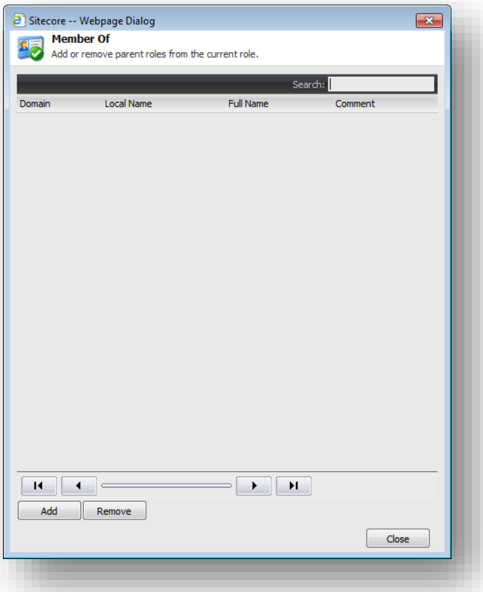
5. Click **OK** and the role is added to the **Members** dialog box and is now a member of that role.

4.2.3 Assigning this Role to another Role

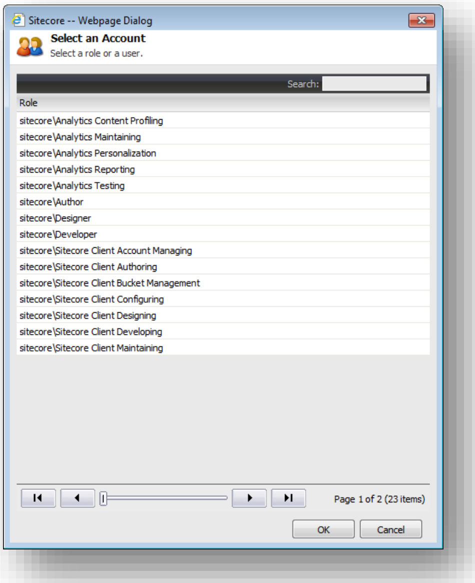
The role that you created earlier is like any other role and you can make it a member of another role.

To assign this role to another role:

1. In the **Role Manager**, select the role you created earlier.
2. In the **Roles** group, click **Member Of**.


Sitecore -- Webpage Dialog
Member Of
Add or remove parent roles from the current role.
Search:
Domain
Local Name
Full Name
Comment
Add
Remove
Close

3. In the **Member Of** dialog box, click **Add**.
4. In the **Select an Account** dialog box, select the role that you want to make this role a member of.



Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (23 items)

5. Click **OK** and the role you selected is added to the **Member Of** window. The role you created is now a member of the other role.

4.2.4 Deleting a Role

Just as you need to create roles, you also need to delete them from time to time.

To delete a role:

1. In the **Role Manager**, select the role you want to delete.
2. In the **Roles** group, click **Delete**.
3. When you are prompted to confirm that you want to delete this user, click **OK**.

This role is now removed from the security system. The security accounts that were members of this role are not removed from the system but they no longer possess the set of access rights that this role contained unless these access rights are granted to the security accounts by virtue of their membership of other roles.

For more information about deleting security accounts, see *Deleting Security Accounts*.

Chapter 5

Assigning and Reviewing Access Rights

This chapter describes how to assign access rights to security accounts. There is also a description of how the access rights that an account is assigned affect each other. The last section in this chapter describes how to get an overview of the security system.

- User's, Roles, and Access Rights
- Assigning Access Rights
- Using Inheritance to Control Access Rights
- How Sitecore Evaluates Access Rights
- Analyzing the Security System
- Deleting Security Accounts

5.1 User’s, Roles, and Access Rights

In Sitecore, the term security account can apply to either a user or a role. You can assign access rights to both users and roles.

However, we recommend that you only assign access rights to roles and not to users. You can then make all your users members of the roles that match their function in your organization. This simplifies security administration because you no longer have to think in terms of individual users and their access rights but only in terms of roles and the access rights that they possess.

This means that when an employee leaves your company or moves to another department, you simply remove them from some roles and make them members of other roles. Similarly when you hire a new employee you make them members of the roles that possess the access rights that match their function in your organization.

This method of working saves the security administrator a considerable amount of repetitive work and streamlines the security system.

5.2 Assigning Access Rights

A security account in Sitecore is useless until you assign it some access rights. You can assign access rights to both users and roles.

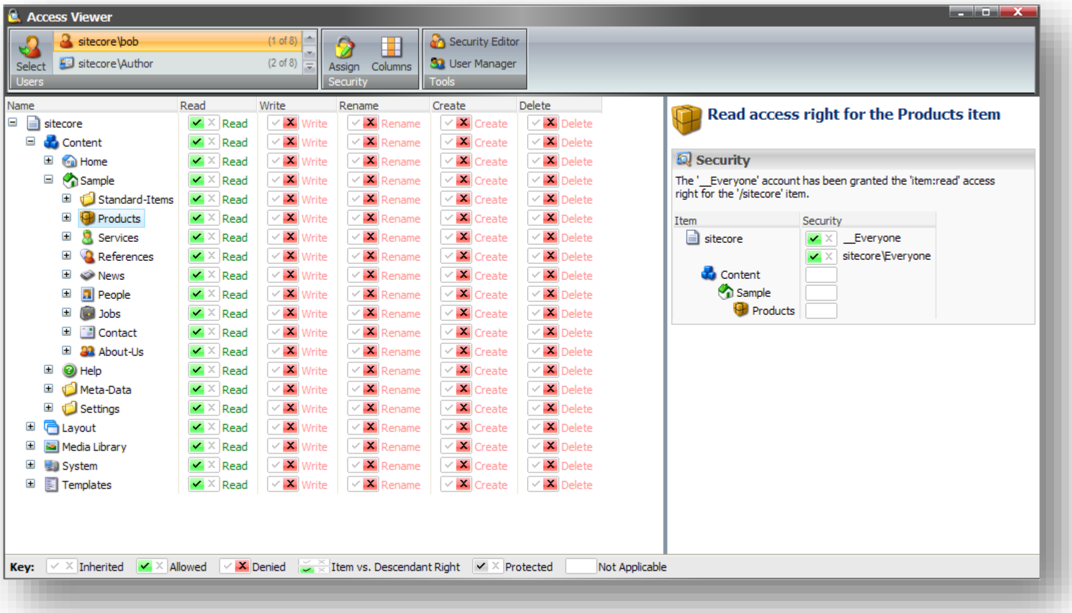
However, before you start to assign access rights to a role, you should try to get an overview of the access rights that the role has already been assigned.

5.2.1 Getting an Overview of the Access Rights Assigned to a Role

Use the Access Viewer to get an overview of the access rights that the role has already been assigned.

To open the Access Viewer:

1. Log in to Sitecore and click **Sitecore**, **Security Tools**, **Access Viewer**.



Name	Read	Write	Rename	Create	Delete
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Sample	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
People	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Help	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Settings	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Layout	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Media Library	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
System	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Templates	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete

Read access right for the Products item

Security

The '__Everyone' account has been granted the 'item:read' access right for the '/sitecore' item.

Item	Security
sitecore	✓ __Everyone ✓ sitecore\Everyone
Content	
Sample	
Products	

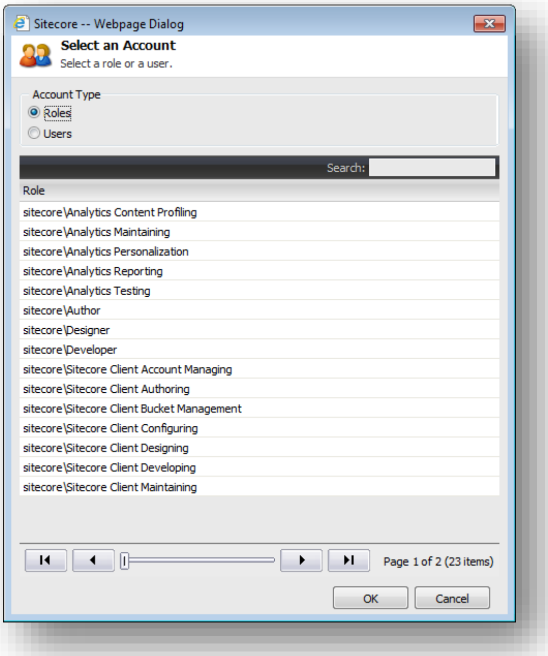
Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right Protected Not Applicable

2. In the **Access Viewer**, in the **Users** group, select the role that you are interested in.

   In this example, we use the *My Role* role that we created earlier. No permissions have been assigned to this role yet.

3. If the role is not visible, click the scroll arrows ▲ ▼ to find the role or click the ▼ drop down list button to select the role from a list.

4. If the role is not on the list, click **Select** to open the **Select an Account** dialog box:



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Account Type

● Roles

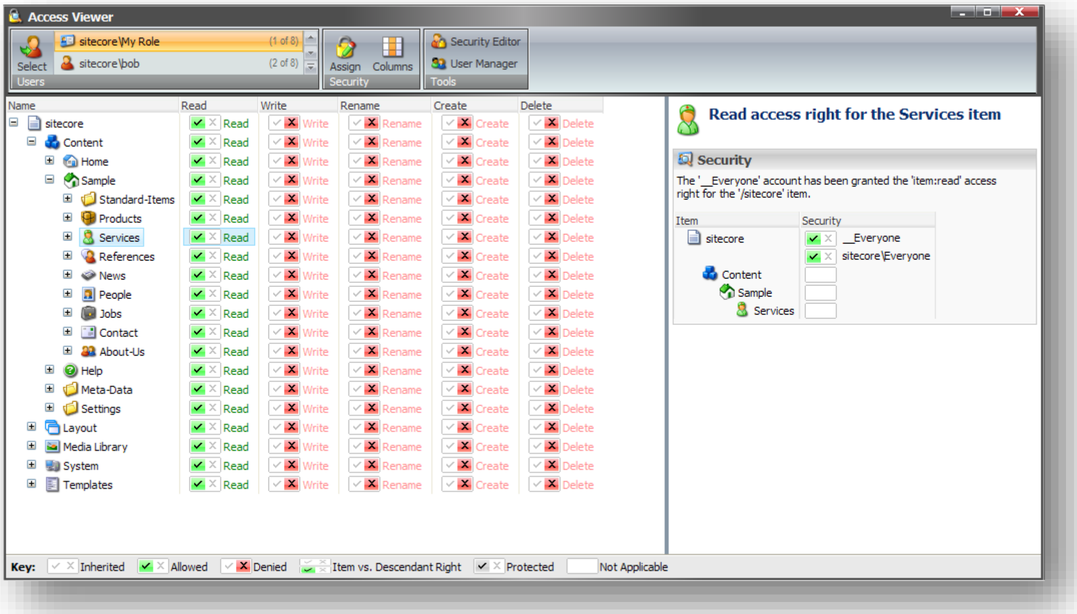
○ Users

Search:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (23 items)

5. In the **Select an Account** dialog box, select the account.
6. In the **Access Viewer**, you can see the permissions that the role currently possesses.



Access Viewer

sitecore\My Role (1 of 8)

sitecore\bob (2 of 8)

Name	Read	Write	Rename	Create	Delete
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Sample	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
People	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Help	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Settings	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Layout	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Media Library	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
System	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Templates	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete

Read access right for the Services item

Security

The '__Everyone' account has been granted the 'item:read' access right for the '/sitecore' item.

Item	Security
sitecore	✓ __Everyone ✓ sitecore\Everyone
Content	
Sample	
Services	

Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right Protected Not Applicable

In this picture, you can see that *sitecore\My Role* has read access to all the items currently displayed in the content tree.

How can this be? We have only just created this role and haven’t assigned it any access rights yet.

The explanation can be found in the right-hand pane. The *_Everyone* role has been explicitly granted read access to the *sitecore* item at the top of the content tree and to its descendants. The *_Everyone* role therefore inherits this read access to every other item in the content tree.

Every security account in Sitecore is automatically a member of the *_Everyone* role. *My Role* has therefore been granted read access to these items by virtue of its membership of the *_Everyone* role.

My Role does not have any other access rights to any of the items in the content tree.

Not specified means denied for access rights.

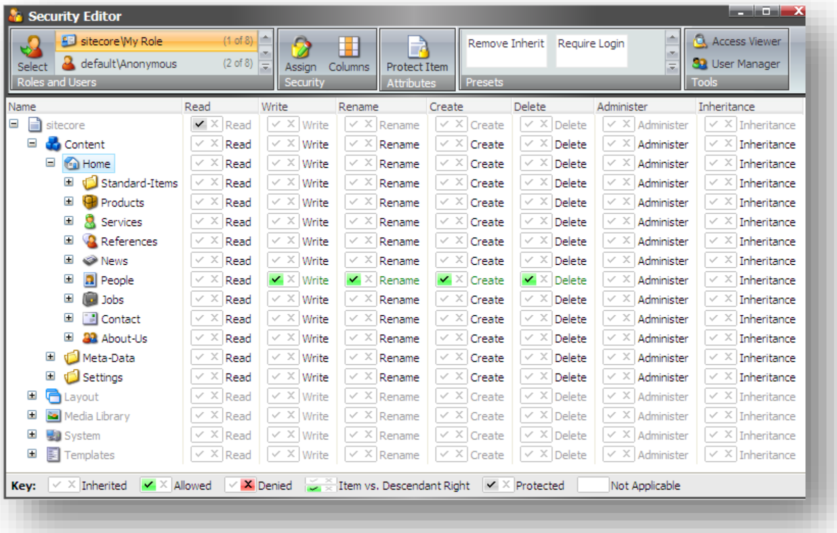
5.2.2 Assigning Access Rights to a Role

The new role must be able to do more than read items if it is to be a useful. You must therefore assign it some other access rights.

To assign access rights to a role:

1. Log in to Sitecore and click **Sitecore**, **Security Tools**, **Security Editor**.
2. In the **Security Editor**, in the **Roles and Users** group, select the role that you want to assign access rights to.

   In this example, we will grant *My Role* greater access to the *People* category in the content tree because this is the area of the Web site that this role should be responsible for.
3. In the **Security Editor**, expand the *People* node in the content tree.
4. Select the *People* item and grant *My Role* Write, Rename, Create, Delete, access rights.



sitecore\My Role (1 of 8)
default\Anonymous (2 of 8)

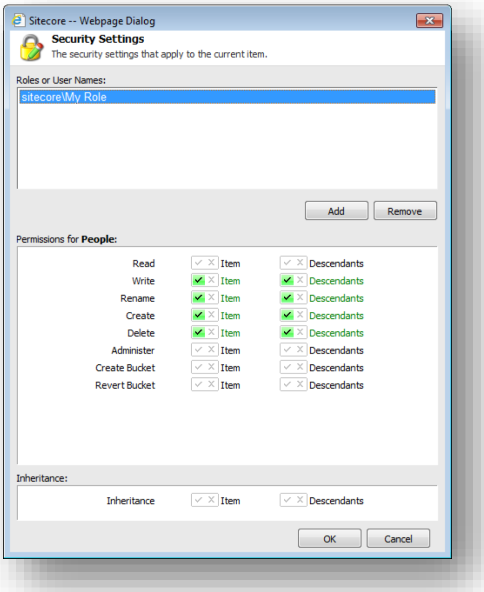
Name	Read	Write	Rename	Create	Delete	Administer	Inheritance
sitecore	✓ Read	Write	Rename	Create	Delete	Administer	Inheritance
Content	Read	Write	Rename	Create	Delete	Administer	Inheritance
Home	Read	Write	Rename	Create	Delete	Administer	Inheritance
Standard-Items	Read	Write	Rename	Create	Delete	Administer	Inheritance
Products	Read	Write	Rename	Create	Delete	Administer	Inheritance
Services	Read	Write	Rename	Create	Delete	Administer	Inheritance
References	Read	Write	Rename	Create	Delete	Administer	Inheritance
News	Read	Write	Rename	Create	Delete	Administer	Inheritance
People	Read	✓ Write	✓ Rename	✓ Create	✓ Delete	Administer	Inheritance
Jobs	Read	Write	Rename	Create	Delete	Administer	Inheritance
Contact	Read	Write	Rename	Create	Delete	Administer	Inheritance
About-Us	Read	Write	Rename	Create	Delete	Administer	Inheritance
Meta-Data	Read	Write	Rename	Create	Delete	Administer	Inheritance
Settings	Read	Write	Rename	Create	Delete	Administer	Inheritance
Layout	Read	Write	Rename	Create	Delete	Administer	Inheritance
Media Library	Read	Write	Rename	Create	Delete	Administer	Inheritance
System	Read	Write	Rename	Create	Delete	Administer	Inheritance
Templates	Read	Write	Rename	Create	Delete	Administer	Inheritance

Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right ✓ Protected Not Applicable

You do not need to give it Read access — it inherits Read access from the *Everyone* role.

You do not need to give it Administer access — members of *My Role* do not need to administer security for these items.

5. In the **Security** group, click **Assign**.



Sitecore -- Webpage Dialog

Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Add | Remove

Permissions for **People**:

Read	□ Item	□ Descendants
Write	☑ Item	☑ Descendants
Rename	☑ Item	☑ Descendants
Create	☑ Item	☑ Descendants
Delete	☑ Item	☑ Descendants
Administer	□ Item	□ Descendants
Create Bucket	□ Item	□ Descendants
Revert Bucket	□ Item	□ Descendants

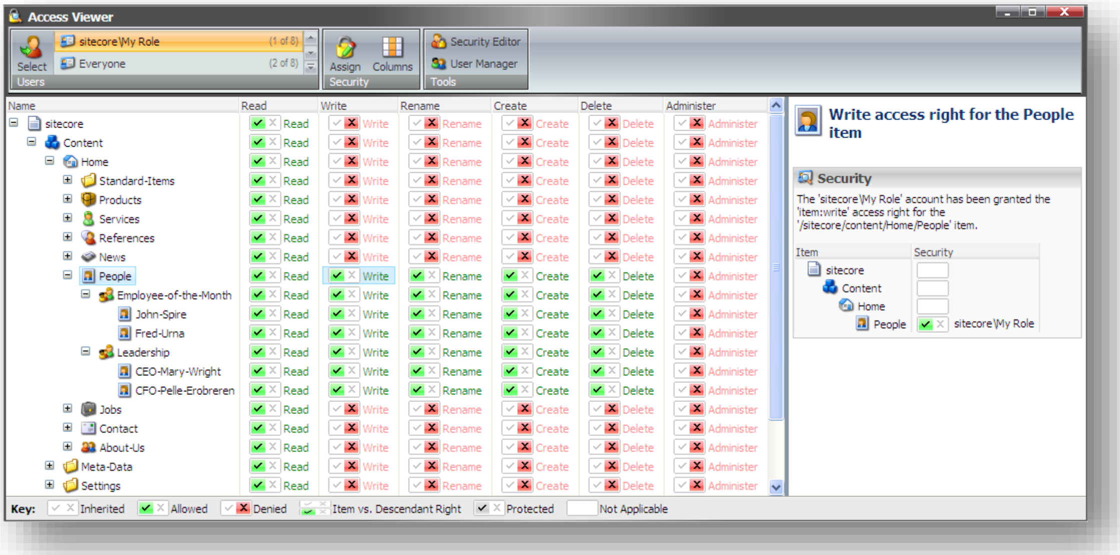
Inheritance:

Inheritance	□ Item	□ Descendants

OK | Cancel

By assigning the access rights directly in the Security Editor, you granted *My Role* the access rights to the item and its descendants.

6. Open the **Access Viewer**, select *My Role*, and expand the *People* node in the content tree to see the access rights that have been granted.



Access Viewer

Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Content	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Home	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Standard-Items	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Products	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Services	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
References	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
News	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Leadership	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
CEO-Mary-Wright	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
CFO-Pelle-Erobreren	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Jobs	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Contact	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
About-Us	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Meta-Data	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Settings	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer

Key: Inherited | ✓ Allowed | ✗ Denied | Item vs. Descendant Right | Protected | Not Applicable

Write access right for the People item

Security

The 'sitecore\My Role' account has been granted the 'item:write' access right for the '/sitecore/content/Home/People' item.

Item	Security
sitecore	
Content	
Home	
People	✓ sitecore\My Role

The *People* item has been granted all the access rights you selected. Furthermore, all of the subitems or descendants under the *People* item have also been granted these access rights. These items have inherited their access rights from their parent.

Important
The access viewer does no update itself automatically, you must collapse and expand the nodes you are interested in to refresh them and see the access rights that have been assigned to them.

5.2.3 Denying a Role Access Rights to an Item

However, you don’t want members of *My Role* to edit the information about the company’s management that is posted on your Web site. You must therefore deny this role access to the *Leadership* item and all of its subitems.

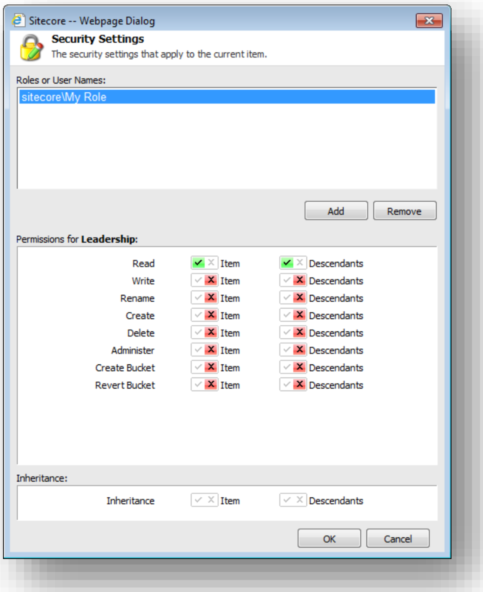
There are two ways to accomplish this; you can:

- Explicitly deny the role the relevant access rights.
- Use inheritance to control the access rights that the role possesses.

Explicitly Denying Access Rights to a Role

To explicitly deny access rights to a role:

1. In the **Security Editor**, select *My Role,* select the *Leadership* item, and in the **Security Group**, click **Assign**.
2. In the **Security Settings** dialog box, in the **Permissions for Leadership** pane, grant *My Role* read access to the item and its descendants and deny it access rights to do anything else to the *Leadership* item and its descendants.



Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

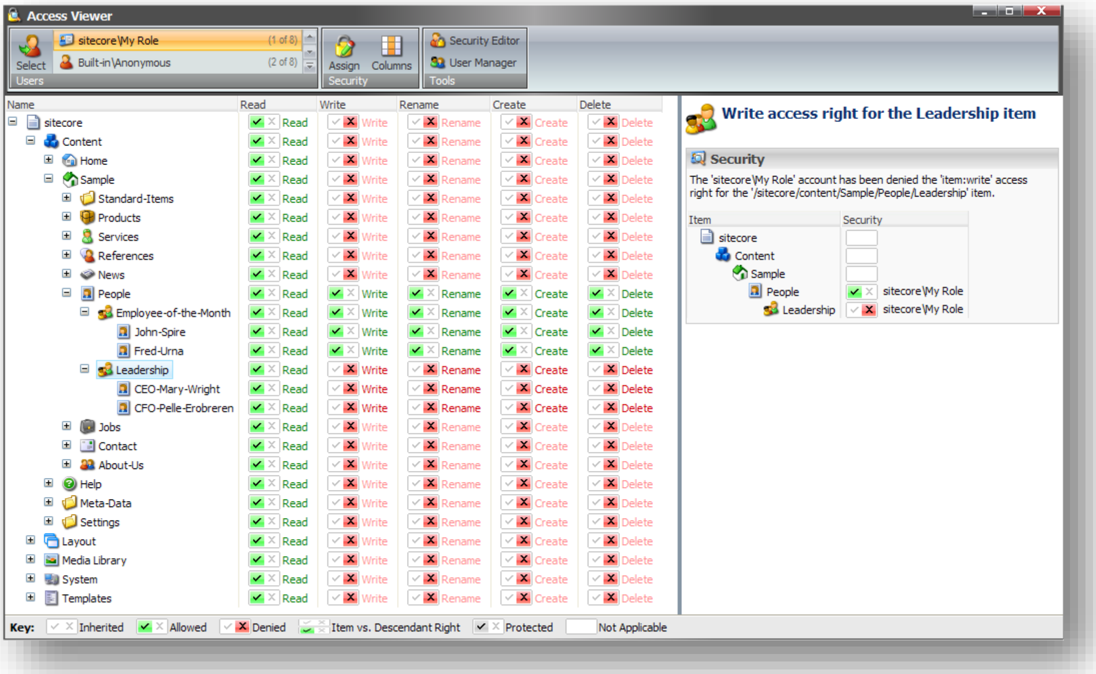
Permissions for **Leadership**:

Read	✓ Item	✓ Descendants
Write	✗ Item	✗ Descendants
Rename	✗ Item	✗ Descendants
Create	✗ Item	✗ Descendants
Delete	✗ Item	✗ Descendants
Administer	✗ Item	✗ Descendants
Create Bucket	✗ Item	✗ Descendants
Revert Bucket	✗ Item	✗ Descendants

Inheritance:

Inheritance	Item	Descendants

3. Open the **Access Viewer**, select *My Role*, and expand the *People* node in the content tree to see the access rights that the role now possesses.



Name	Read	Write	Rename	Create	Delete
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Sample	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Leadership	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
CEO-Mary-Wright	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
CFO-Pelle-Erobreren	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Help	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Settings	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Layout	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Media Library	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
System	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Templates	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete

Write access right for the Leadership item

Security

The 'sitecore\My Role' account has been denied the 'item:write' access right for the '/sitecore/content/Sample/People/Leadership' item.

Item	Security
sitecore	
Content	
Sample	
People	✓ sitecore\My Role
Leadership	☒ sitecore\My Role

Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right Protected Not Applicable

My Role can no longer edit the *Leadership* item or any of its descendants. However it still has Read access to the all of these items.

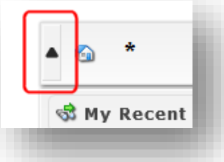
5.2.4 Assigning Access Rights using Search Operations

You can assign access rights and inheritance using the *Security Editor* or if you are using item buckets with large numbers of items, you can assign access rights and inheritance using the *Security Operations* available in Sitecore search.

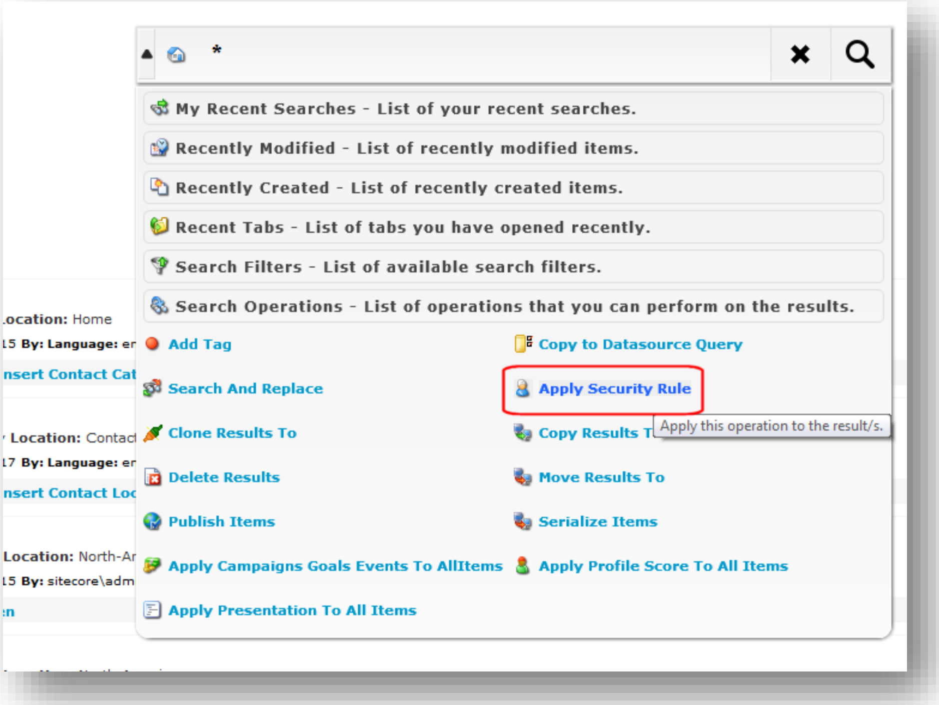
The *Apply Security Rule* operation allows security administrators to change the security settings for the content items listed in the search results.

How to assign access rights using a search operation:

1. To see all the available actions for your search results, click the chevron or triangle to the left of the search box.



2. Click **Search Operations** and then click **Apply Security Rule**.



My Recent Searches - List of your recent searches.

Recently Modified - List of recently modified items.

Recently Created - List of recently created items.

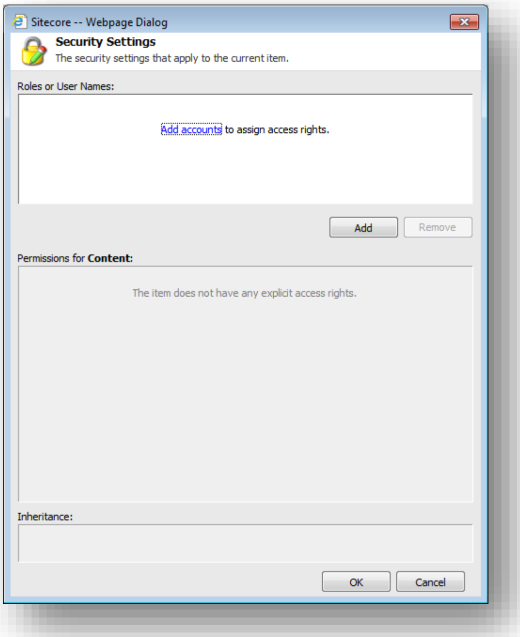
Recent Tabs - List of tabs you have opened recently.

Search Filters - List of available search filters.

Search Operations - List of operations that you can perform on the results.

Apply this operation to the result/s.

3. In the **Security Settings** dialog box, click **Add accounts** or click the **Add** button.



Security Settings

The security settings that apply to the current item.

Roles or User Names:

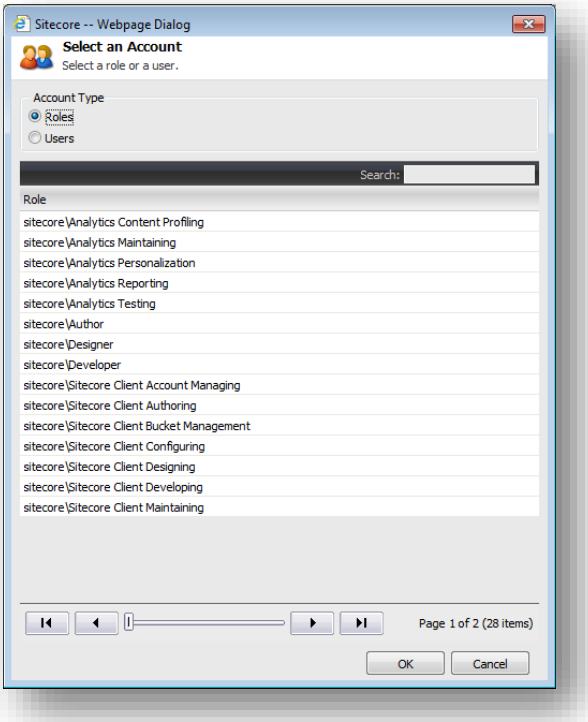
Add accounts to assign access rights.

Permissions for Content:

The item does not have any explicit access rights.

Inheritance:

4. In the **Select an Account** dialog box, select an account type from *Roles* or *Users*.



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Account Type

● Roles

○ Users

Search:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining

Page 1 of 2 (28 items)

5. When you have made your selection, click ok.

Note
This operation should only be performed by security administrators.

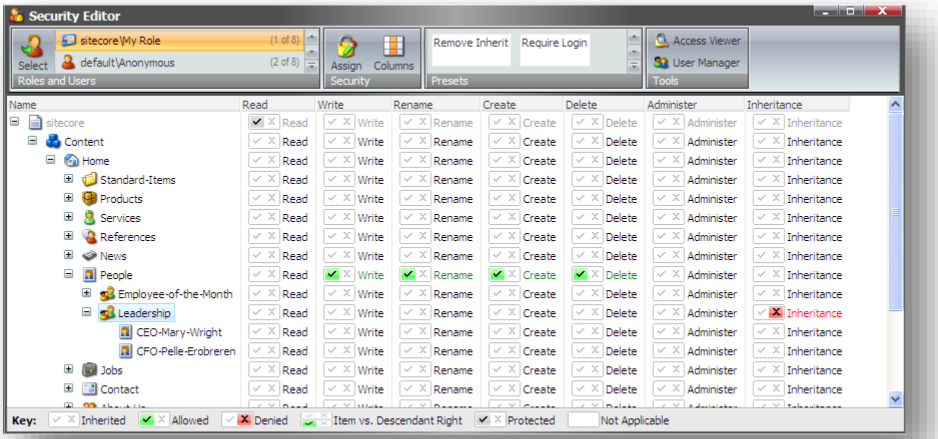
5.3 Using Inheritance to Control Access Rights

You can also use inheritance to control the access that a role has to the items in the content tree.

Note
To follow this example, you must undo the security settings that you applied in the previous section.

To use inheritance to deny access rights to a role:

1. In the **Security Editor**, select *My Role* and grant it access to the *People* item and deny it inheritance rights to the *Leadership* item:

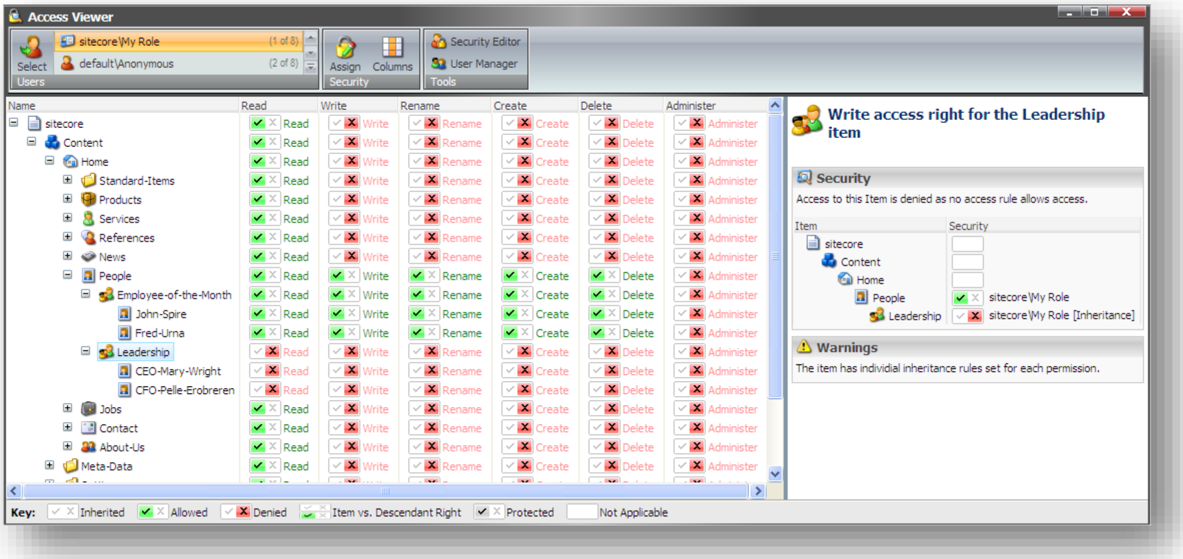


Security Editor

Name	Read	Write	Rename	Create	Delete	Administer	Inheritance
sitecore	✓ Read	Write	Rename	Create	Delete	Administer	Inheritance
Content	Read	Write	Rename	Create	Delete	Administer	Inheritance
Home	Read	Write	Rename	Create	Delete	Administer	Inheritance
Standard-Items	Read	Write	Rename	Create	Delete	Administer	Inheritance
Products	Read	Write	Rename	Create	Delete	Administer	Inheritance
Services	Read	Write	Rename	Create	Delete	Administer	Inheritance
References	Read	Write	Rename	Create	Delete	Administer	Inheritance
News	Read	Write	Rename	Create	Delete	Administer	Inheritance
People	Read	✓ Write	✓ Rename	✓ Create	✓ Delete	Administer	Inheritance
Employee-of-the-Month	Read	Write	Rename	Create	Delete	Administer	Inheritance
Leadership	Read	Write	Rename	Create	Delete	Administer	✗ Inheritance
CEO-Mary-Wright	Read	Write	Rename	Create	Delete	Administer	Inheritance
CFO-Pelle-Erobreren	Read	Write	Rename	Create	Delete	Administer	Inheritance
Jobs	Read	Write	Rename	Create	Delete	Administer	Inheritance
Contact	Read	Write	Rename	Create	Delete	Administer	Inheritance

Key: Inherited ✓ Allowed ✗ Denied Item vs. Descendant Right ✓ Protected Not Applicable

2. Open the **Access Viewer**, select *My Role*, and expand the *Leadership* node in the content tree to see the access rights that the role now possesses:



Access Viewer

Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Content	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Home	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Standard-Items	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Products	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Services	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
References	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
News	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Leadership	✗ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
CEO-Mary-Wright	✗ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
CFO-Pelle-Erobreren	✗ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Jobs	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Contact	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
About-Us	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Meta-Data	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer

Write access right for the Leadership item

Security

Access to this Item is denied as no access rule allows access.

Item	Security
sitecore	
Content	
Home	
People	✓ sitecore\My Role
Leadership	✗ sitecore\My Role [Inheritance]

Warnings

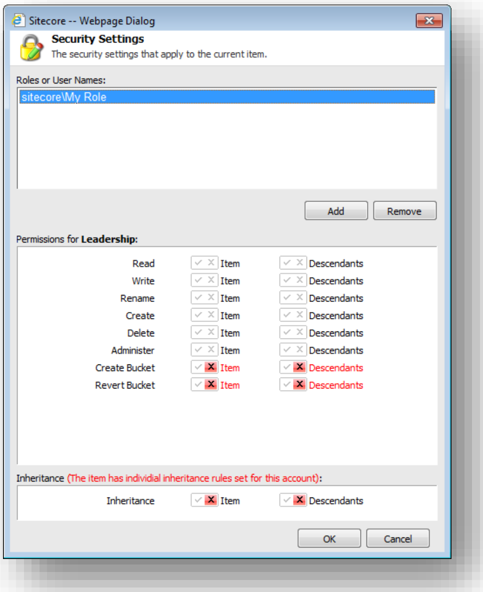
The item has individial inheritance rules set for each permission.

Key: Inherited ✓ Allowed ✗ Denied Item vs. Descendant Right ✓ Protected Not Applicable

As you can see, *My Role* no longer has any access to the *Leadership* item and any of its subitems. However, by denying the role inheritance rights to the descendants of the *Leadership* item, you have denied it every access right to these items including read access.

3. In the **Security Editor**, select *My Role*, select the *Leadership* item, and in the **Security Group**, click **Assign**.

4. In the **Security Settings** dialog box, you have more detailed control over the access rights that you can assign to an item and its descendants.



Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Permissions for **Leadership:**

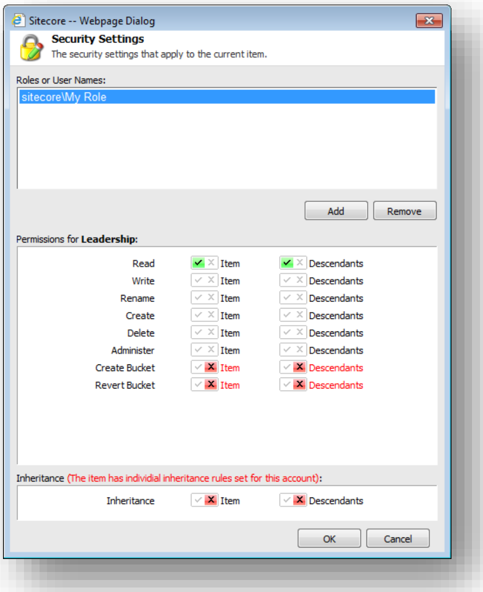
Read	Item	Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	☒ Item	☒ Descendants
Revert Bucket	☒ Item	☒ Descendants

Inheritance (The item has individial inheritance rules set for this account):

Inheritance	☒ Item	☒ Descendants

As you can see, *My Role* has no explicit access rights to the *Leadership* item and you have denied it inheritance rights to this item and its descendants.

5. In the **Permissions for Leadership** pane, grant *My Role* read access to the *Leadership* item and its descendants.



Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Permissions for **Leadership:**

Read	☑ Item	☑ Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	☒ Item	☒ Descendants
Revert Bucket	☒ Item	☒ Descendants

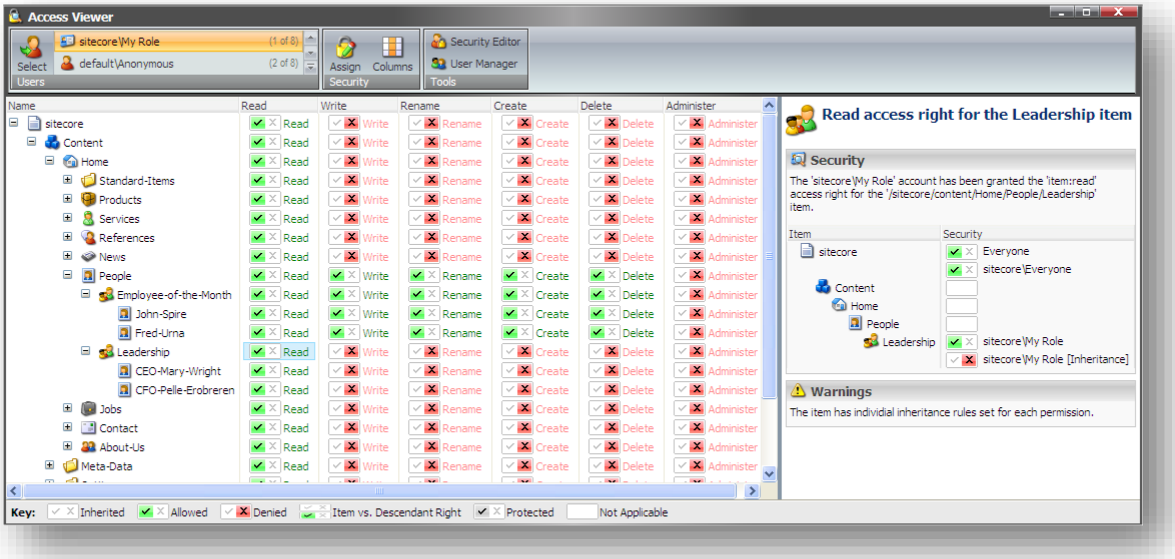
Inheritance (The item has individial inheritance rules set for this account):

Inheritance	☒ Item	☒ Descendants

By explicitly granting the role read access to the item and its descendants, you have overruled the inheritance settings and ensured that members of *My Role* can read both the item and its descendants.

Explicitly specified access rights overrule inheritance settings.

6. Open the **Access Viewer**, select *My Role*, and expand the *People* node in the content tree to see the access rights that the role now possesses.



Access Viewer

Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Content	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Home	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Standard-Items	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Products	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Services	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
References	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
News	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Leadership	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
CEO-Mary-Wright	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
CFO-Pelle-Erobreren	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Jobs	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Contact	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
About-Us	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Meta-Data	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer

Key: Inherited, ✓ Allowed, ✗ Denied, Item vs. Descendant Right, ✓ Protected, Not Applicable

Read access right for the Leadership item

Security

The 'sitecore\My Role' account has been granted the 'item:read' access right for the '/sitecore/content/Home/People/Leadership' item.

Item	Security
sitecore	✓ Everyone ✓ sitecore\Everyone
Content	
Home	
People	
Leadership	✓ sitecore\My Role ✗ sitecore\My Role [Inheritance]

Warnings

The item has individial inheritance rules set for each permission.

Now *My Role* has read access to all the items but cannot edit the *Leadership* item or any of its descendants.

As you can see, these two methods can be used to get the same results. However, we recommend that you use inheritance to control the access rights that a security account has to items and their descendants in situations like this.

You should use inheritance because:

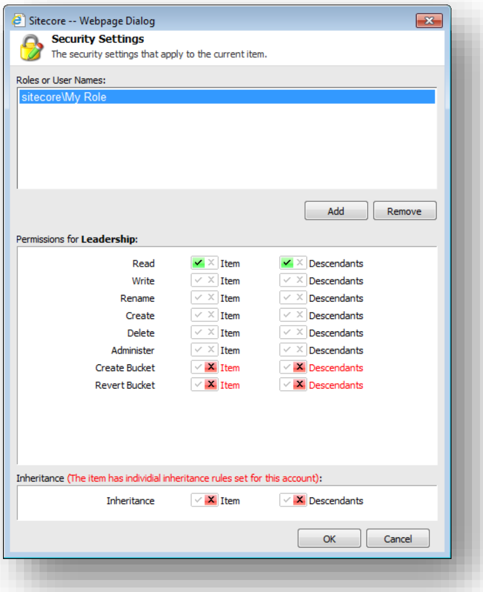
- Inheritance will not deny the user access to the item in question if the user is a member of another role that grants them access to the item. Access rights that are explicitly specified overrule inheritance settings.

5.3.1 Inheritance — Granting Access Rights to an Item and Denying them to Descendants

Security administrators often have to grant a role inheritance rights to an item but not to its descendants. For example, the members of *My Role* might need to edit the *Leadership* item but not the subitems about the CEO and the CFO.

To specify different inheritance rights to an item and its descendants:

1. In the **Security Editor**, select *My Role,* select the *Leadership* item, and in the **Security Group**, click **Assign**.



Sitecore -- Webpage Dialog

Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Add | Remove

Permissions for **Leadership**:

Read	✓ Item	✓ Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	☒ Item	☒ Descendants
Revert Bucket	☒ Item	☒ Descendants

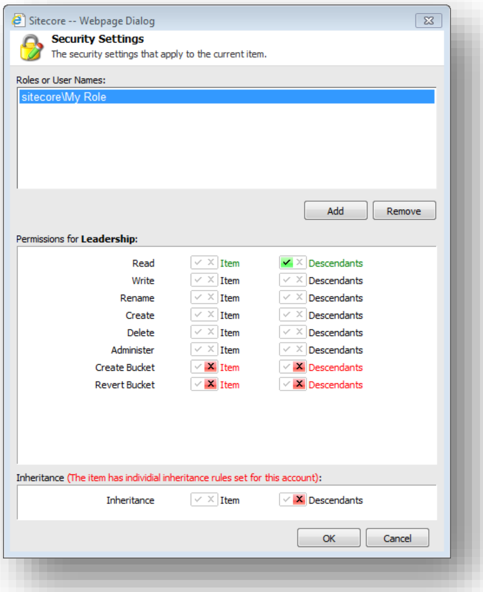
Inheritance (The item has individial inheritance rules set for this account):

Inheritance	☒ Item	☒ Descendants

OK | Cancel

2. In the **Security Settings** dialog box, in the **Inheritance** pane, do not deny the item permission to inherit access rights.

   You no longer need to grant the item explicit read access; it gains read access by being a member of the *Everyone* role.



Sitecore -- Webpage Dialog

Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Add | Remove

Permissions for **Leadership**:

Read	Item	✓ Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	☒ Item	☒ Descendants
Revert Bucket	☒ Item	☒ Descendants

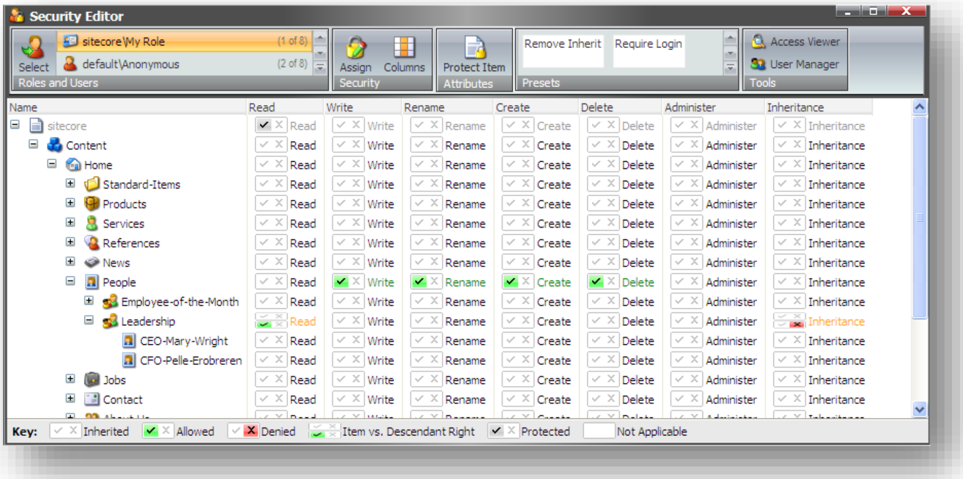
Inheritance (The item has individial inheritance rules set for this account):

Inheritance	Item	☒ Descendants

OK | Cancel

3. In the **Permissions for Leadership** pane, remove the explicit read access right from the item.

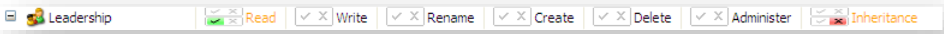
4. The **Security Editor** now looks like this:



Name	Read	Write	Rename	Create	Delete	Administer	Inheritance
sitecore	Read	Write	Rename	Create	Delete	Administer	Inheritance
Content	Read	Write	Rename	Create	Delete	Administer	Inheritance
Home	Read	Write	Rename	Create	Delete	Administer	Inheritance
Standard-Items	Read	Write	Rename	Create	Delete	Administer	Inheritance
Products	Read	Write	Rename	Create	Delete	Administer	Inheritance
Services	Read	Write	Rename	Create	Delete	Administer	Inheritance
References	Read	Write	Rename	Create	Delete	Administer	Inheritance
News	Read	Write	Rename	Create	Delete	Administer	Inheritance
People	Read	✓ Write	✓ Rename	✓ Create	✓ Delete	Administer	Inheritance
Employee-of-the-Month	Read	Write	Rename	Create	Delete	Administer	Inheritance
Leadership	Read	Write	Rename	Create	Delete	Administer	Inheritance
CEO-Mary-Wright	Read	Write	Rename	Create	Delete	Administer	Inheritance
CFO-Pelle-Erobreren	Read	Write	Rename	Create	Delete	Administer	Inheritance
Jobs	Read	Write	Rename	Create	Delete	Administer	Inheritance
Contact	Read	Write	Rename	Create	Delete	Administer	Inheritance

Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right Protected Not Applicable

The **Security Editor** displays a new icon:

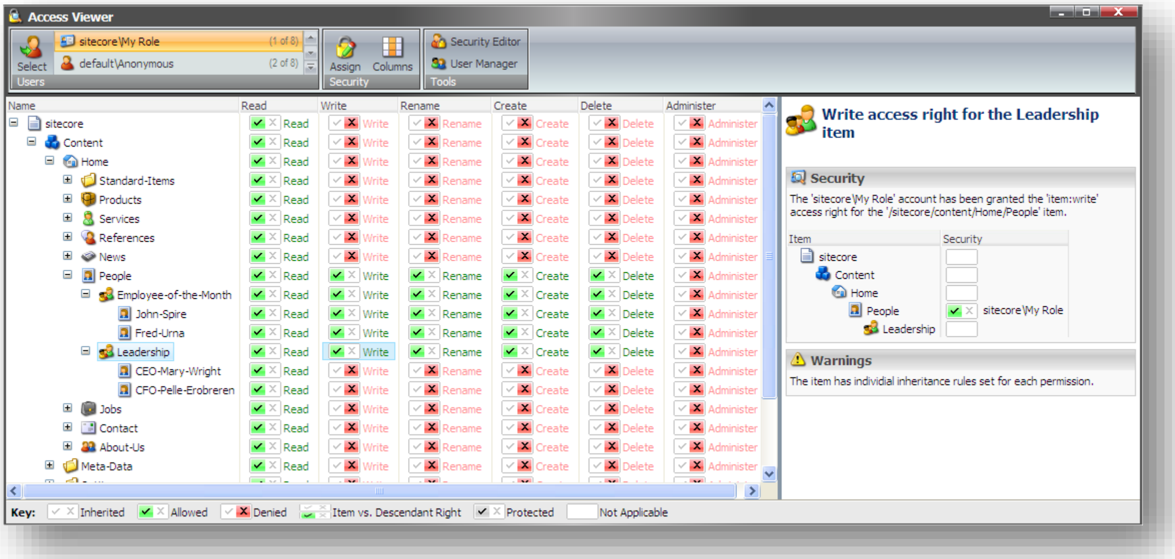


Leadership	Read	Write	Rename	Create	Delete	Administer	Inheritance

This icon indicates that different access rights and inheritance settings have been applied to the item and its descendants.

My Role now has full access rights to the *Leadership* item but not to its descendants.

5. Open the **Access Viewer**, select *My Role*, and expand the *People* node in the content tree to see the access rights that the role now possesses.



Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Leadership	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
CEO-Mary-Wright	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
CFO-Pelle-Erobreren	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer

Write access right for the Leadership item

Security

The 'sitecore\My Role' account has been granted the 'item:write' access right for the '/sitecore/content/Home/People' item.

Item	Security
sitecore	
Content	
Home	
People	✓ sitecore\My Role
Leadership	

Warnings

The item has individial inheritance rules set for each permission.

Key: Inherited ✓ Allowed ☒ Denied Item vs. Descendant Right Protected Not Applicable

The **Access Viewer** displays a warning informing you that different inheritance rules have been set for each access right.

As you can see in the Explainer on the right hand side, *My Role* inherits Write access to the *Leadership* item from the *People* item.

This illustrates the main benefit of using inheritance — you no longer have to specify each access right for every item in the content tree.

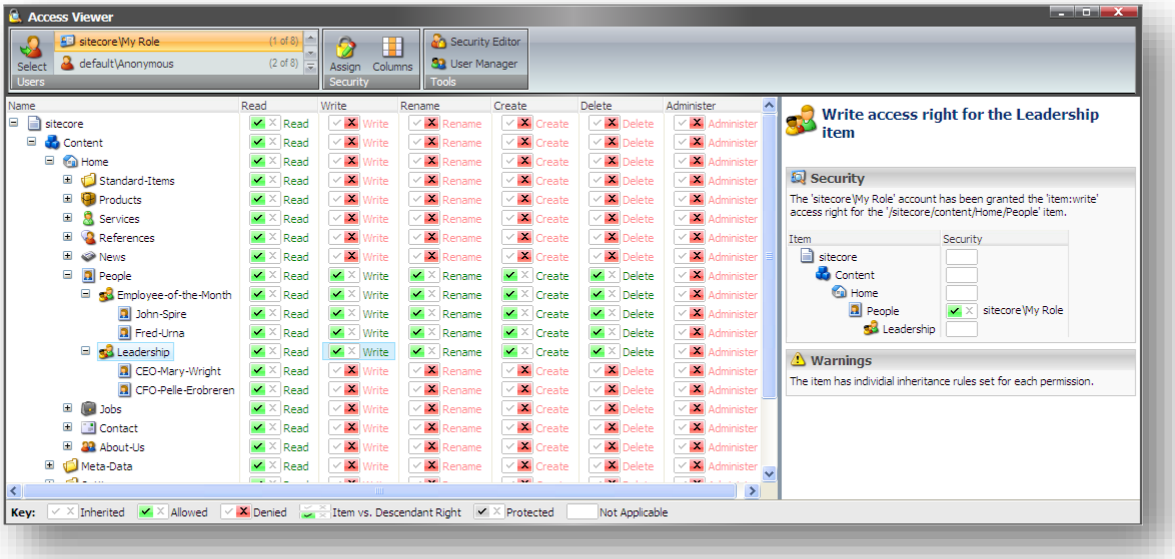
5.3.2 Inheritance — Denying Access Rights to an Item and Granting them to Descendants

You can also use inheritance to ensure that a role has access rights to the descendants of an item that it does not have to the item itself.

In this example, we will reverse the security settings that we applied in the previous section. The members of *My Role* should not have full access to the *Leadership* item but must have full access to its descendants; the *CEO* and *CFO* items.

To deny access rights to an item and grant them to its descendants:

1. Open the **Access Viewer** and review the access rights that *My Role* currently has to the *Leadership* item.



Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Content	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Home	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Standard-Items	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Products	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Services	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
References	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
News	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
Leadership	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	✗ Administer
CEO-Mary-Wright	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
CFO-Pelle-Erobreren	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Jobs	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Contact	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
About-Us	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer
Meta-Data	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete	✗ Administer

Key: Inherited · ✓ Allowed · ✗ Denied · Item vs. Descendant Right · ✓ Protected · Not Applicable

Write access right for the Leadership item

Security

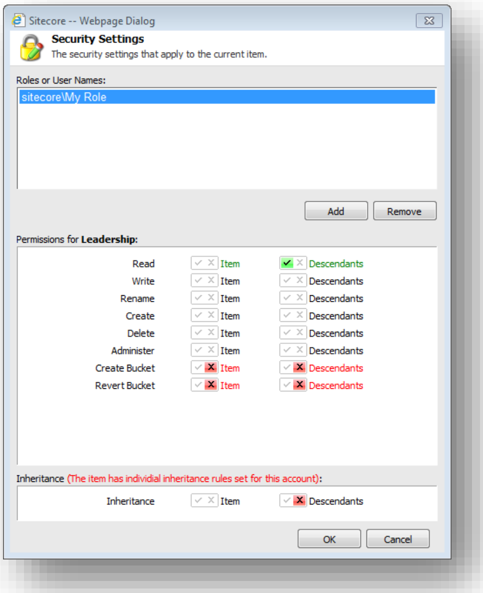
The 'sitecore\My Role' account has been granted the 'item:write' access right for the '/sitecore/content/Home/People' item.

Item	Security
sitecore	
Content	
Home	
People	✓ sitecore\My Role
Leadership	

Warnings

The item has individial inheritance rules set for each permission.

2. In the **Security** group, click **Assign** and the **Security Settings** dialog box currently looks like this:



Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Permissions for **Leadership**:

Read	Item	✓ Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	✗ Item	✗ Descendants
Revert Bucket	✗ Item	✗ Descendants

Inheritance (The item has individial inheritance rules set for this account):

Inheritance	Item	✗ Descendants

3. In the **Permissions for Leadership** pane, remove the explicit Read access right from the descendants and grant it to the item.

   This ensures that *My Role* can read the item.

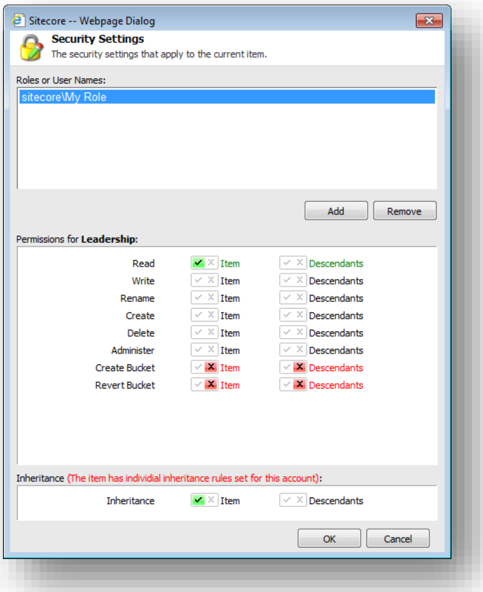
4. In the **Inheritance** pane, do not deny the descendants the right to inherit access rights.

   You do not have to explicitly allow them to inherit access rights.

   For inheritance not specified means that it is allowed.

5. In the **Inheritance** pane, deny the item the right to inherit access rights.

   The **Security Settings** dialog box should now look like this:



Sitecore -- Webpage Dialog

Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Add | Remove

Permissions for **Leadership**:

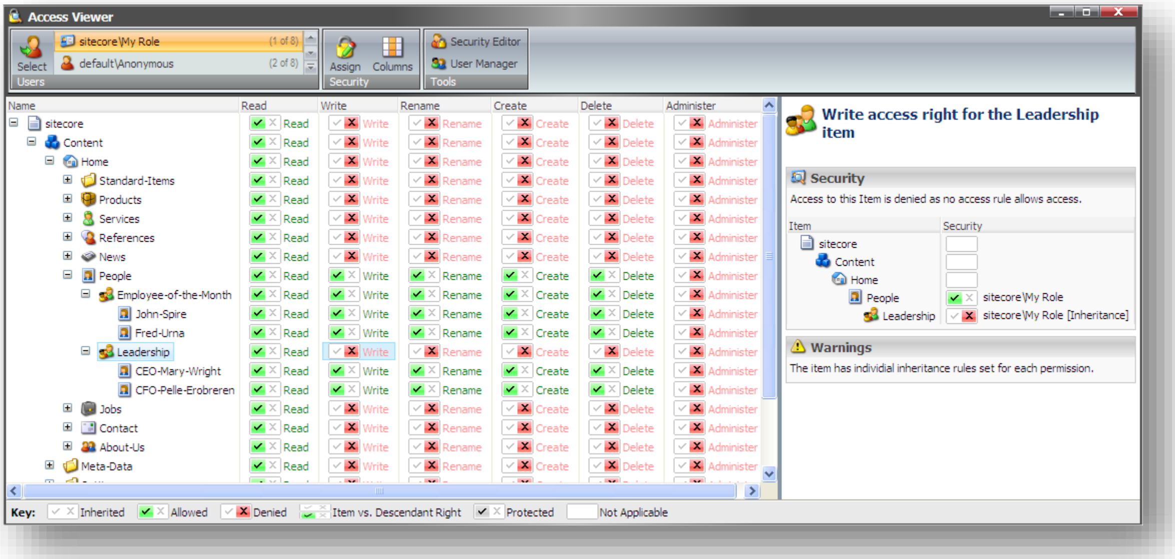
Read	✓ Item	Descendants
Write	Item	Descendants
Rename	Item	Descendants
Create	Item	Descendants
Delete	Item	Descendants
Administer	Item	Descendants
Create Bucket	☒ Item	☒ Descendants
Revert Bucket	☒ Item	☒ Descendants

Inheritance (The item has individial inheritance rules set for this account):

Inheritance	✓ Item	Descendants

OK | Cancel

6. Open the **Access Viewer** to check the access rights that *My Role* now has.



Access Viewer

sitecore\My Role (1 of 8)
default\Anonymous (2 of 8)

Name	Read	Write	Rename	Create	Delete	Administer
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Leadership	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
CEO-Mary-Wright	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
CFO-Pelle-Erobreren	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete	☒ Administer
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete	☒ Administer

Write access right for the Leadership item

Security

Access to this Item is denied as no access rule allows access.

Item	Security
sitecore	
Content	
Home	
People	✓ sitecore\My Role
Leadership	☒ sitecore\My Role [Inheritance]

Warnings

The item has individial inheritance rules set for each permission.

Key: Inherited · ✓ Allowed · ☒ Denied · Item vs. Descendant Right · ✓ Protected · Not Applicable

Members of *My Role* do not have full access to the *Leadership* item but do have full access to its descendants — the *CEO* and *CFO* items. Once again this has been achieved by using inheritance and not by explicitly denying and granting access rights to each item.

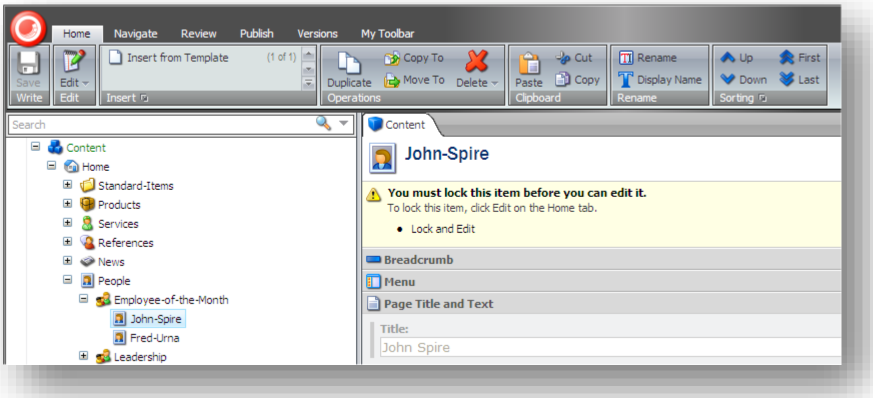
Access Rights Control Functionality

The access rights that you assign to the different roles affect the functionality that is available to the users in Sitecore.

Depending on the access rights you have been assigned, some buttons and commands in the Content Editor are shaded indicating that they are not available.

Furthermore, if a user has Create access to an item the Content Editor displays some functionality that is not visible to users who do not have Create access to the same item.

For example, the following screen shot displays the functionality displayed in the Content Editor for users with create permission to the current item:



John-Spire

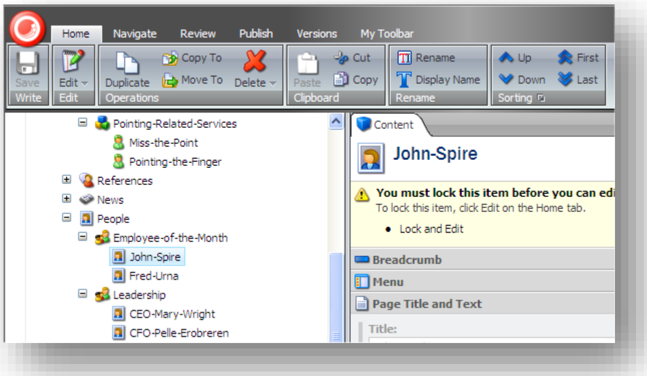
You must lock this item before you can edit it.
To lock this item, click Edit on the Home tab.

- Lock and Edit

Title:
John Spire

This user can insert a new subitem under the current item.

If the user does not have Create permission to the current item, the Content Editor looks like this:



John-Spire

You must lock this item before you can edi
To lock this item, click Edit on the Home tab.

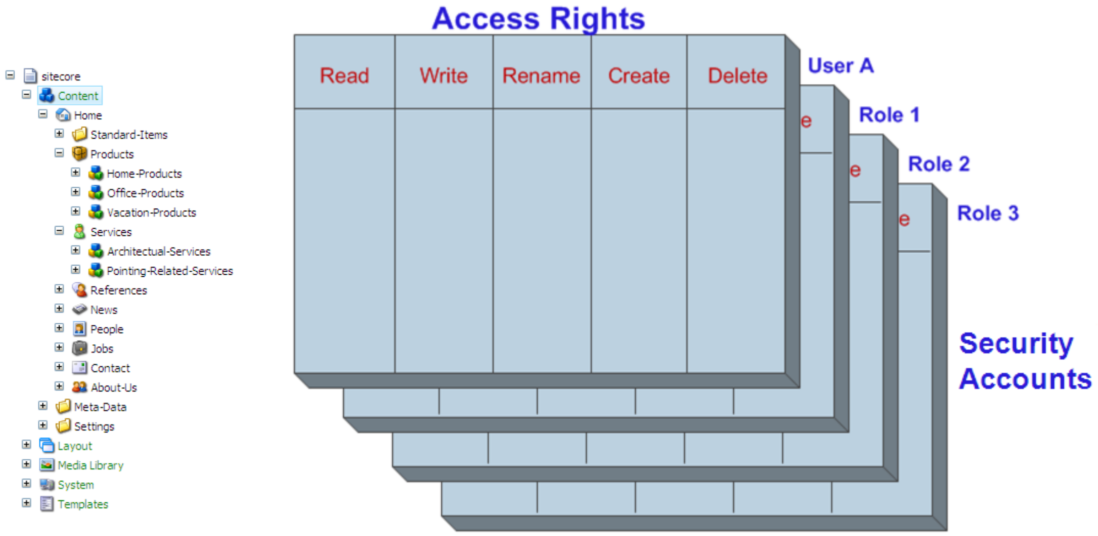
- Lock and Edit

Title:

The insert group is not displayed at all.

5.4 How Sitecore Evaluates Access Rights

The Sitecore security system is like a three dimensional matrix consisting of the items in the content tree, the access rights the user’s security account has been assigned, and the access rights that have been assigned to the roles that the user is a member of.



In Sitecore, every user and role can be a member of several roles. The security account is assigned the accumulated access rights of all the roles that it is a member of.

When you assign access right to roles, you must remember that:

- If a user is a member of a role that is explicitly granted an access right to a specific item, they are granted the access right.
- If a user is a member of a role that is explicitly denied an access right to a specific item, they are denied the access right.
- If a user is a member of two roles; one that explicitly grants them an access right to an item and another that explicitly denies them the same access right to the item, they are denied the access right.

  Deny always overrules allow for access rights gained from multiple roles.
- Access rights that are explicitly assigned to a user overrule the access rights that are explicitly assigned to the roles that the user is a member of.

  For example, if user is a member of several roles and one of these roles is explicitly denied an access right to an item, they are denied the access right. However, if the user’s security account is explicitly granted the same access right to the item, they are granted the access right.
- When an access right is not specified, it is denied. The default value for access rights is denied.

When you use inheritance, you must remember that:

- Inheritance is not an access right; it is a setting that determines whether or not an item can inherit or pass on access rights for a specific security account.
- An item can inherit access rights from any item that is higher up the content tree and can pass access rights on to any item that is lower down the content tree.

- When inheritance is not specified, it is allowed. The default value for inheritance is allowed.
- If a user is a member of two roles; one that allows them to inherit an access right to an item and another that does not allow them to inherit the same access right to the item, they are denied the access right.
- Access rights that are explicitly granted to one role overrule the inheritance settings specified for another role.

  For example, if a user is a member of two roles; one that does not allow them to inherit an access right to an item and another that explicitly grants them the same access right, they are granted the access right.
- The inheritance settings specified for the user's security account, behave the same way as the other inheritance settings.

  For example, if a user is a member of a role that does not allow them to inherit an access right to an item and the user's security account does allow them to inherit the same access right to the item; they are denied the access right.
- If a user is a member of a role that allows them to inherit an access right to an item and the user's security account does not allow them to inherit the same access right to the item, they are denied the access right.
- If the user's security account explicitly assigns an access right to the descendants of an item and one of the roles that the user is a member of denies this access right to a descendent item, the access right is denied to the descendent item.
- If the user's security account explicitly assigns an access right to the descendants of an item and one of the roles that the user is a member explicitly denies the same access right to the descendants of the item, the access right is granted to the descendent item.

Evaluating Access Rights

The following tables illustrate how Sitecore evaluates the various combinations of access rights and inheritance settings. There is also an explanation of the combinations contained in each table.

	Write Access to the Item			
	User	**Role 1**	**Role 2**	**Result**
A.	Write ✓ ✗	Write ✓ ✗	Write ✓ ✗	Write ✓ ❌
B.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Write ✅ ✗
C.	Write ✓ ✗	Write ✓ ❌	Write ✓ ✗	Write ✓ ❌
D.	Write ✓ ✗	Write ✅ ✗	Write ✓ ❌	Write ✓ ❌
E.	Write ✅ ✗	Write ✓ ❌	Write ✓ ✗	Write ✅ ✗
F.	Write ✓ ❌	Write ✅ ✗	Write ✓ ✗	Write ✓ ❌

A. No access right is specified for the user or any of their roles.

For access rights, not specified = Denied.

B. One role is assigned write access.

C. One role is denied write access.

D. Two roles have conflicting access rights.

Deny always overrules allow for access rights gained from multiple roles.

E. One role is denied write access and the user is granted write access.

F. One role is assigned write access and the user is denied write access.

> Access rights that are explicitly assigned to a user's security account overrule the explicit access rights assigned to the roles that the user is a member of.

Evaluating Inheritance Settings

	Parent Item		Child Item						Result
	Role 3		User		Role 1		Role 2		
	Item	Descendants	Item	Inheritance	Item	Inheritance	Item	Inheritance	
A.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✅ ✗
B.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✅ ✗
C.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ❌
D.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Inheritance ✓ ✗	Write ✅ ✗	Inheritance ✓ ✗	Inheritance ✓ ❌	Write ✓ ❌
E.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ❌	Inheritance ✓ ✗	Write ✓ ❌
F.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✅ ✗	Inheritance ✓ ✗	Write ✅ ✗
G.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ❌
H.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ❌
I.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ❌	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ❌
J.	Write ✓ ✗	Write ✅ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✅ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✅ ✗
K.	Write ✓ ✗	Write ✅ ✗	Write ✓ ❌	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✅ ✗	Write ✓ ✗	Inheritance ✓ ✗	Write ✓ ❌
L.	Write ✓ ✗	Write ✅ ✗	Write ✅ ✗	Inheritance ✓ ✗	Write ✓ ✗	Inheritance ✓ ❌	Write ✓ ✗	Inheritance ✓ ✗	Write ✅ ✗

One of the roles that the user is a member of gives them write access to the descendants of the Parent Item.

The user's security account and the roles they are a member of can all have different inheritance settings to the Child Item. They can also have access rights set on the Child Item.

A. No inheritance settings are set on the child item.

> For inheritance, not specified = Allowed.

B. One of the roles allows the child item to inherit access rights.

C. One of the roles does not allow the child item to inherit access rights.

D. One of the roles allows the child item to inherit access rights and another role does not.

E. One of the roles allows the child item to inherit access rights and another role denies this access right to the item.

F. One of the roles does not allow the child item to inherit access rights and another role grants the access right to the item.

Access rights explicitly granted to an item overrule inheritance settings.

G. One of the roles allows the child item to inherit access rights and the user's security account does not allow the child item to inherit access rights.

H. One of the roles does not allow the child item to inherit access rights and the user's security account does.

The inheritance settings on the user's account work the same as the inheritance settings on roles.

I. The user's security account allows the child item to inherit access rights and one of the roles denies this access right to the item.

J. The user's account does not allow the child item to inherit access rights and one of the roles grants this access right to the item.

Once again, access rights explicitly granted to an item overrule inheritance settings.

K. The user's security account denies this access right and one of the roles allows the child item to inherit access rights.

L. The user's security account grants this access right and one of the roles does not allow the child item to inherit access rights.

Yet again, access rights explicitly granted to an item overrule inheritance settings.

Inheritance and the User's Security Account

You can also assign the user's security account access rights to the descendants of the parent item.

	Parent Item				Child Item		Result
	User		Role 1		Role 2		
	Item	Descendants	Item	Descendants	Item	Inheritance	
A	Write	Write ✓	Write	Write	Write ✗	Inheritance	Write ✗
B	Write	Write ✗	Write	Write	Write ✓	Inheritance	Write ✓
C	Write	Write ✓	Write	Write ✗	Write	Inheritance	Write ✓
D	Write	Write ✗	Write	Write ✓	Write	Inheritance	Write ✗
E	Write	Write ✓	Write	Write	Write	Inheritance ✗	Write ✗
F	Write	Write ✗	Write	Write	Write	Inheritance ✓	Write ✗

A. & **B.** — The access rights explicitly assigned to the child item overrule the access rights assigned to the descendants of the parent item.

C. & **D.** — The access rights assigned to the user's security account overrule the access rights assigned to the roles that the user is a member of.

E. & **F.** — Deny overrules allow.

5.5 Analyzing the Security System

As a Security Administrator, you must keep track of all the security accounts that are created for your Web site. You must be able to find out which:

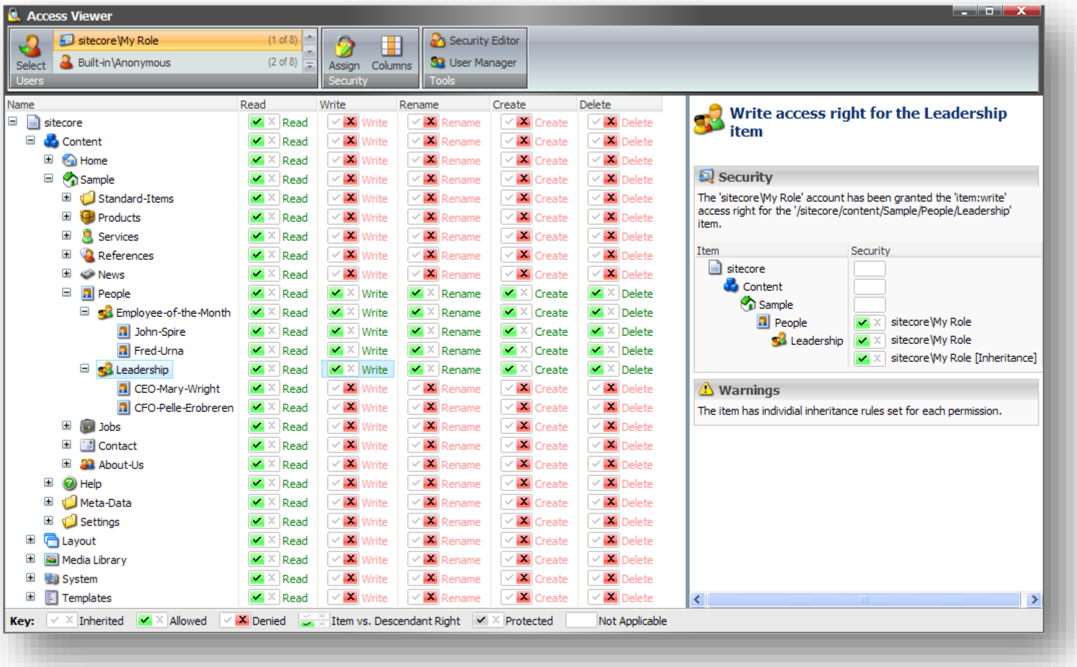
- Access rights have been assigned to a security account.
- Roles a user is a member of.
- Security accounts are members of a role.
- Roles a role is a member of.
- Security accounts have access rights to a particular item.

5.5.1 The Access Rights Assigned to a Security Account

In Sitecore, a security account is either a role or a user.

To see which access rights have been assigned to a security account:

1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Access Viewer**.



Name	Read	Write	Rename	Create	Delete
sitecore	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Content	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Home	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Sample	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Standard-Items	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Products	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Services	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
References	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
News	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Leadership	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
CEO-Mary-Wright	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
CFO-Pelle-Erobreren	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Jobs	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Contact	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
About-Us	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Help	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Meta-Data	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Settings	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Layout	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Media Library	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
System	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete
Templates	✓ Read	✗ Write	✗ Rename	✗ Create	✗ Delete

Key: Inherited ✓ Allowed ✗ Denied Item vs. Descendant Right Protected Not Applicable

Write access right for the Leadership item

Security

The 'sitecore\My Role' account has been granted the 'item:write' access right for the '/sitecore/content/Sample/People/Leadership' item.

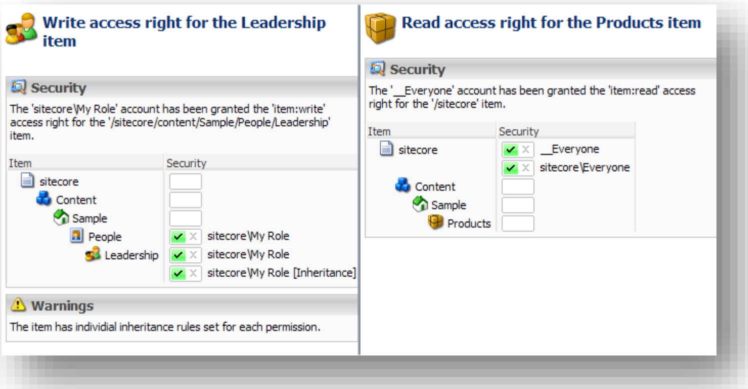
Item	Security
sitecore	
Content	
Sample	
People	✓ sitecore\My Role
Leadership	✓ sitecore\My Role
	✓ sitecore\My Role [Inheritance]

Warnings

The item has individial inheritance rules set for each permission.

2. In the **Access Viewer**, in the **Users** group, select the security account that you are interested in and the left-hand pane lists the access rights that this account has been assigned.

3. Select an access right to an item and the right-hand pane displays information about where this security account received this access right from.



Write access right for the Leadership item

Security

The 'sitecore\My Role' account has been granted the 'item:write' access right for the '/sitecore/content/Sample/People/Leadership' item.

Item	Security
sitecore	
Content	
Sample	
People	✓ ✕ sitecore\My Role
Leadership	✓ ✕ sitecore\My Role
	✓ ✕ sitecore\My Role [Inheritance]

Warnings

The item has individial inheritance rules set for each permission.

Read access right for the Products item

Security

The '__Everyone' account has been granted the 'item:read' access right for the '/sitecore' item.

Item	Security
sitecore	✓ ✕ __Everyone
	✓ ✕ sitecore\Everyone
Content	
Sample	
Products	

Sometimes the access right has been explicitly assigned to the security account.

Sometimes the access right has been explicitly assigned to a role that the security account is a member of.

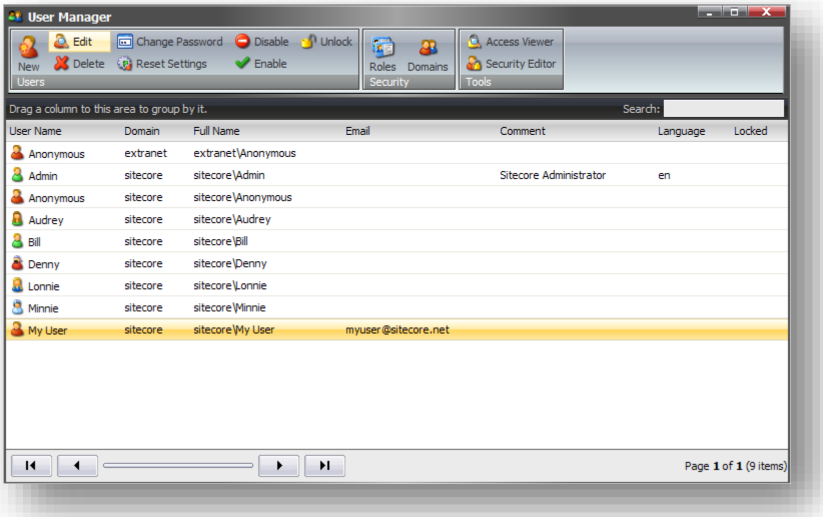
Sometime the security account inherits the access right.

4. In the **Access Viewer**, as you expand the content tree, you see the access rights that the current security account has to more items.

5.5.2 The Roles that a User is a Member Of

To see all the roles that a user is a member of:

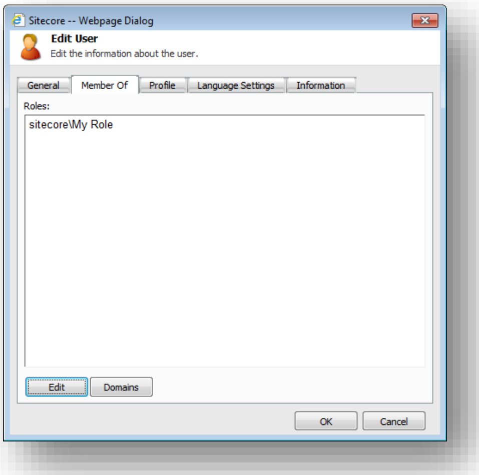
1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **User Manager**.



User Name	Domain	Full Name	Email	Comment	Language	Locked
Anonymous	extranet	extranet\Anonymous				
Admin	sitecore	sitecore\Admin		Sitecore Administrator	en	
Anonymous	sitecore	sitecore\Anonymous				
Audrey	sitecore	sitecore\Audrey				
Bill	sitecore	sitecore\Bill				
Denny	sitecore	sitecore\Denny				
Lonnie	sitecore	sitecore\Lonnie				
Minnie	sitecore	sitecore\Minnie				
My User	sitecore	sitecore\My User	myuser@sitecore.net			

Page **1** of **1** (9 items)

2. In the **User Manager**, select the user you are interested in and in the **Users** group, click Edit.



sitecore\My Role

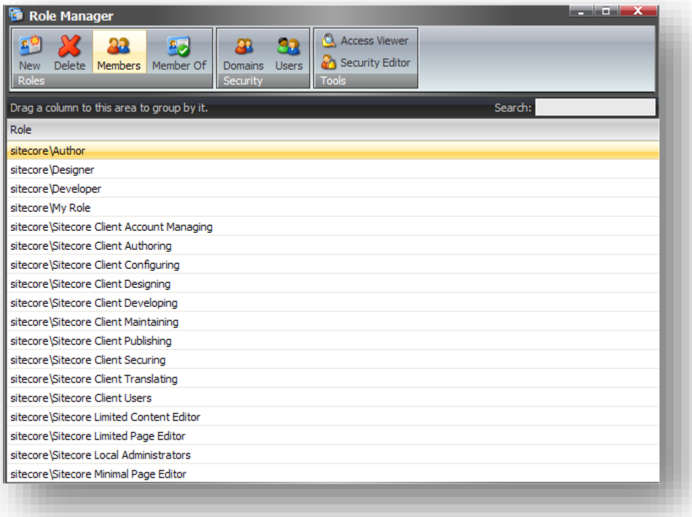
3. In the **Edit User** dialog box, click the **Member Of** tab.

   This tab lists the roles that this user is a member of.

5.5.3 The Members of a Role

To see the members of a role:

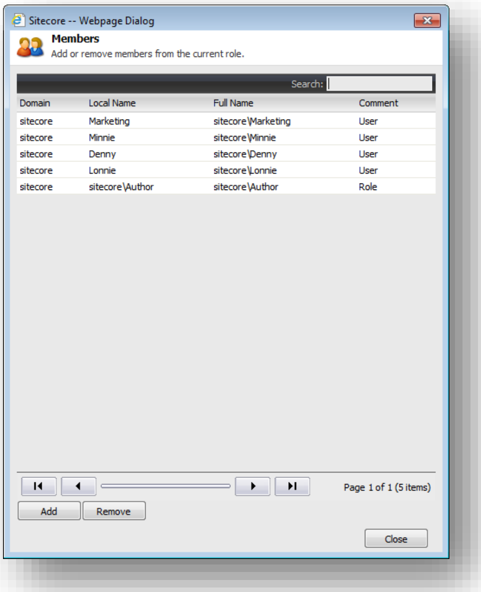
1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Role Manager**.



Role
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\My Role
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining
sitecore\Sitecore Client Publishing
sitecore\Sitecore Client Securing
sitecore\Sitecore Client Translating
sitecore\Sitecore Client Users
sitecore\Sitecore Limited Content Editor
sitecore\Sitecore Limited Page Editor
sitecore\Sitecore Local Administrators
sitecore\Sitecore Minimal Page Editor

2. In the **Role Manager**, select the role you are interested in and in the **Roles** group, click **Members**.

3. In the **Members** dialog box, you can see a list of all the security accounts, both users and roles that are members of this role.



Members

Add or remove members from the current role.

Domain	Local Name	Full Name	Comment
sitecore	Marketing	sitecore\Marketing	User
sitecore	Minnie	sitecore\Minnie	User
sitecore	Denny	sitecore\Denny	User
sitecore	Lonnie	sitecore\Lonnie	User
sitecore	sitecore\Author	sitecore\Author	Role

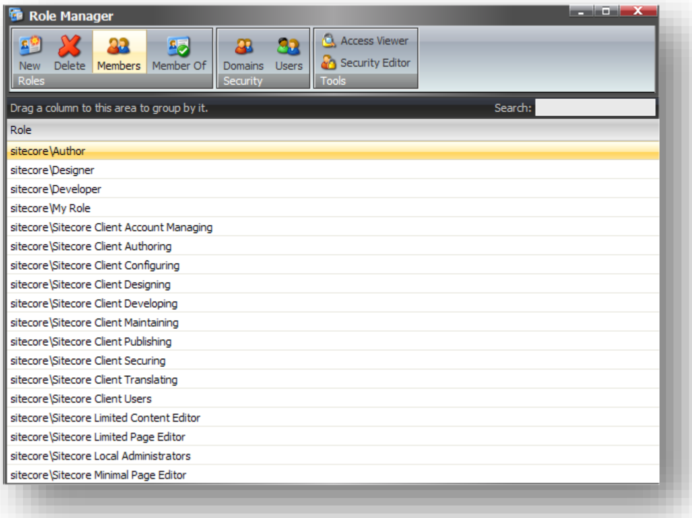
Page 1 of 1 (5 items)

5.5.4 The Roles that a Role is a Member Of

You also need to know which roles any given role has been made a member of.

To see which roles a particular role is a member of:

1. Open the **Role Manager** and select the role you are interested in.

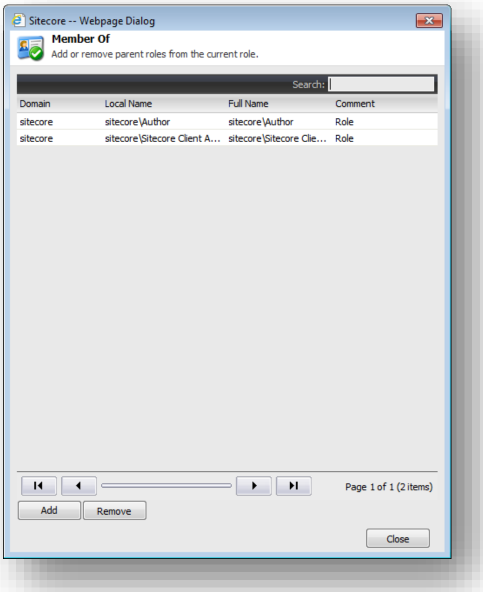


Drag a column to this area to group by it.

Role
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\My Role
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing
sitecore\Sitecore Client Maintaining
sitecore\Sitecore Client Publishing
sitecore\Sitecore Client Securing
sitecore\Sitecore Client Translating
sitecore\Sitecore Client Users
sitecore\Sitecore Limited Content Editor
sitecore\Sitecore Limited Page Editor
sitecore\Sitecore Local Administrators
sitecore\Sitecore Minimal Page Editor

2. In the **Roles** group, click **Member Of**.

3. The **Member Of** dialog box, you can see a list of all the roles that this role is a member of.



Sitecore -- Webpage Dialog

Member Of

Add or remove parent roles from the current role.

Domain	Local Name	Full Name	Comment
sitecore	sitecore\Author	sitecore\Author	Role
sitecore	sitecore\Sitecore Client A…	sitecore\Sitecore Clie…	Role

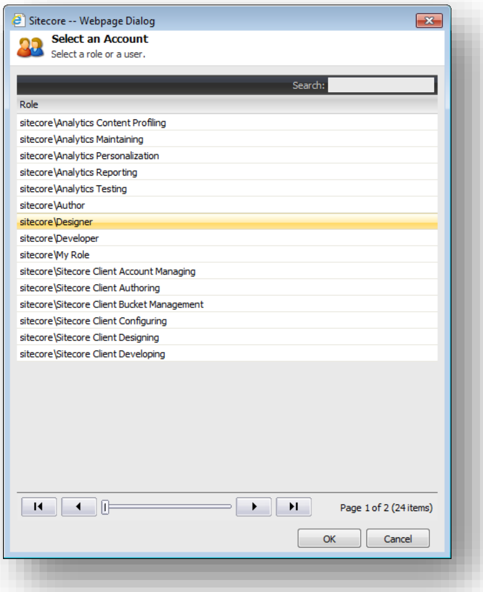
Page 1 of 1 (2 items)

Changing the Roles that a Security Account is a Members Of

Not only does the **Members Of** dialog box tell you which security accounts this role is a member of, but you can also use it to change the roles that this security account is a member of.

To make a role a member of another role:

1. Open the **Role Manager** and select the role you are interested in.
2. In the **Roles** group, click **Member Of**.
3. In the **Members Of** dialog box, click **Add** to open the **Select an Account** dialog box.



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\My Role
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing

Page 1 of 2 (24 items)

4. In the **Select an Account** dialog box, in the **Account Type** section, click **Roles** and select the role that you want to make the current role a member of.

To remove members from a role:

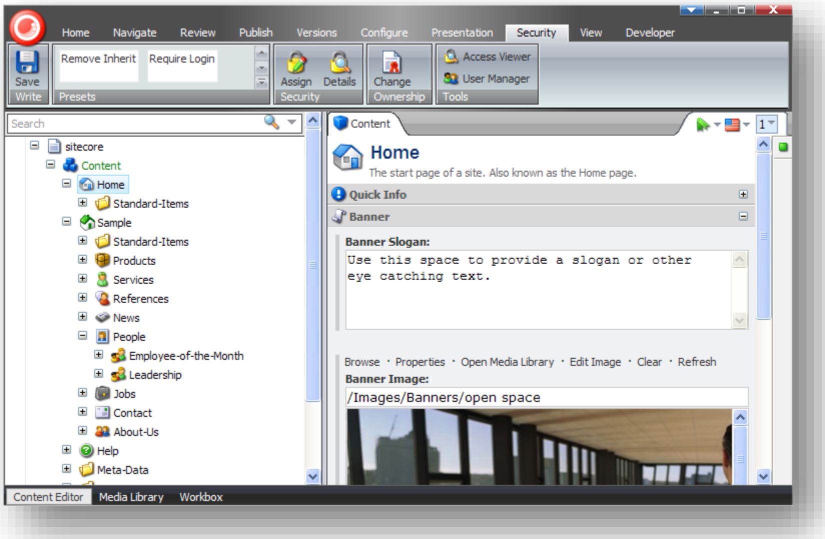
1. Open the **Role Manager** and select the role you are interested in.
2. In the **Roles** group, click **Member Of**.
3. In the **Members Of** dialog box, select the role that you want the current role to no longer be a member of.
4. Click **Remove** to remove the role from the list of roles that the current role is a member of.

5.5.5 The Security Accounts that have Access Rights to an Item

A security administrator must also be able to get an overview of the individual items and the security accounts that have access rights to them.

To see which security accounts have been assigned explicit access rights to an item:

1. Log in to the Sitecore Desktop and click **Sitecore**, **Content Editor**.



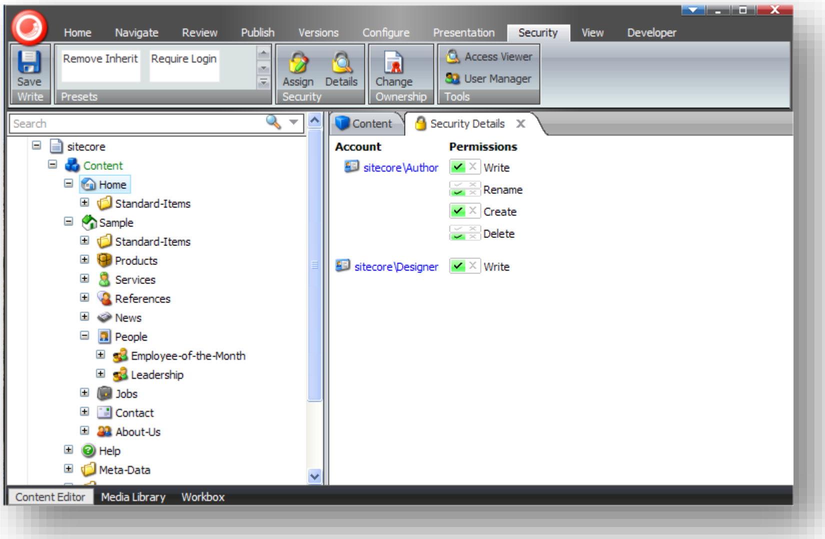
Banner Slogan:

Use this space to provide a slogan or other eye catching text.

Banner Image:

/Images/Banners/open space

2. In the content tree, locate the item you are interested in.
3. Click the **Security** tab, in the **Security** group, click **Details**:

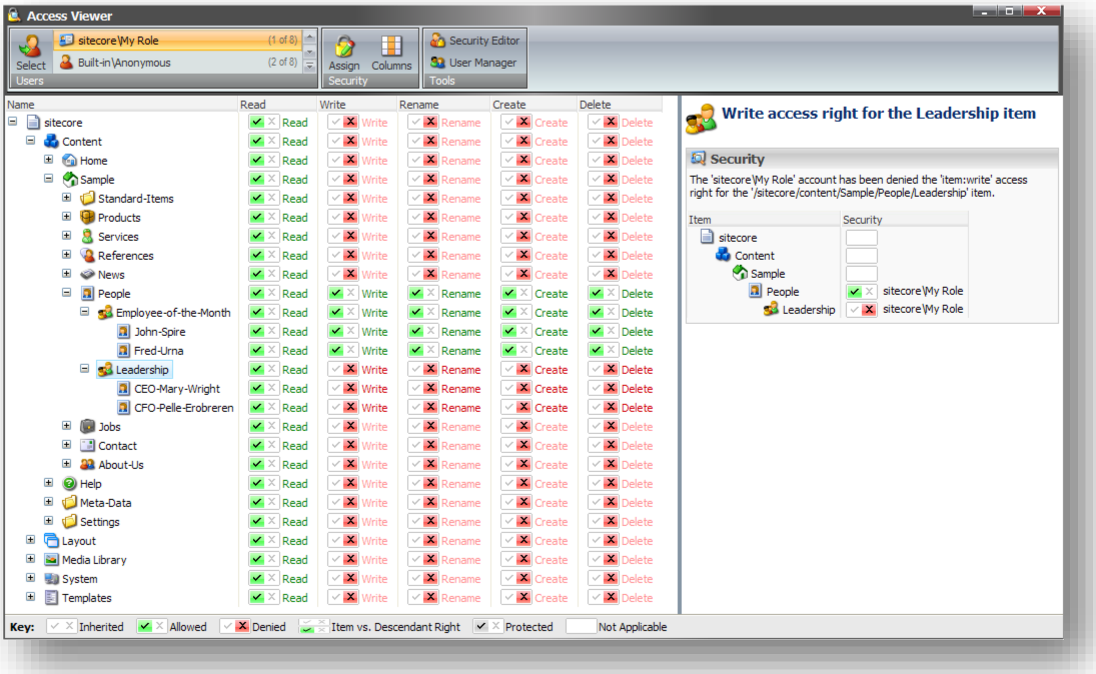


Account	Permissions
sitecore\Author	✓ Write Rename ✓ Create Delete
sitecore\Designer	✓ Write

4. The **Security Details** tab in the content pane displays a list of the roles that have been assigned explicit access rights to the current item.

You can also use the **Access Viewer** to see the access rights that each role has to items in the content tree.

1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Access Viewer**.



Name	Read	Write	Rename	Create	Delete
sitecore	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Content	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Home	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Sample	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Standard-Items	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Products	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Services	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
References	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
News	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
People	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Employee-of-the-Month	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
John-Spire	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Fred-Urna	✓ Read	✓ Write	✓ Rename	✓ Create	✓ Delete
Leadership	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
CEO-Mary-Wright	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
CFO-Pelle-Erobreren	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Jobs	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Contact	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
About-Us	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Help	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Meta-Data	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Settings	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Layout	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Media Library	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
System	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete
Templates	✓ Read	☒ Write	☒ Rename	☒ Create	☒ Delete

Write access right for the Leadership item

Security

The 'sitecore\My Role' account has been denied the 'item:write' access right for the '/sitecore/content/Sample/People/Leadership' item.

Item	Security
sitecore	□
Content	□
Sample	□
People	✓ sitecore\My Role
Leadership	☒ sitecore\My Role

Key: ✓ ✗ Inherited ✓ Allowed ☒ Denied ✓ ✗ Item vs. Descendant Right ✓ ✗ Protected □ Not Applicable

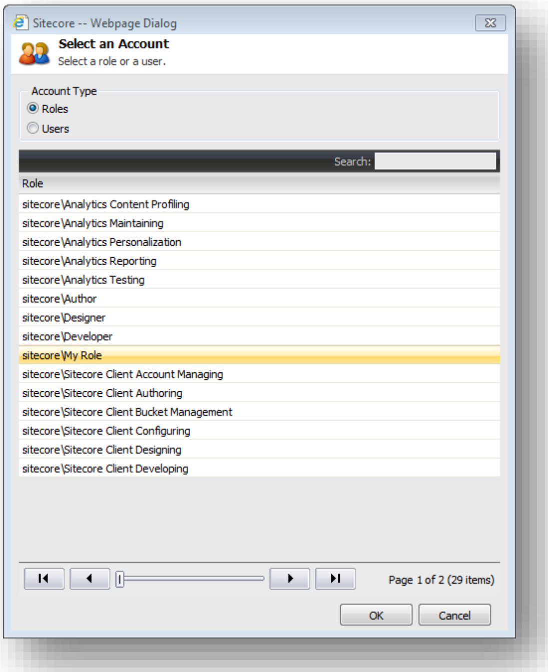
2. In the **Users** group, select a security account.

3. In the **Access Viewer**, expand the content tree to see the access rights that the security account has to the items that make up your Web site.

4. Select an access right and the explainer tells you where the security account gained this access right from.

5. When you are familiar with the access rights that this role has, select another role to see the access rights that it has.

6. If the security account you want to see is not listed in the **Users** group, click **Select** and select the security account in the **Select an Account** dialog box.



Sitecore -- Webpage Dialog

Select an Account

Select a role or a user.

Account Type

● Roles

○ Users

Search:

Role
sitecore\Analytics Content Profiling
sitecore\Analytics Maintaining
sitecore\Analytics Personalization
sitecore\Analytics Reporting
sitecore\Analytics Testing
sitecore\Author
sitecore\Designer
sitecore\Developer
sitecore\My Role
sitecore\Sitecore Client Account Managing
sitecore\Sitecore Client Authoring
sitecore\Sitecore Client Bucket Management
sitecore\Sitecore Client Configuring
sitecore\Sitecore Client Designing
sitecore\Sitecore Client Developing

Page 1 of 2 (29 items)

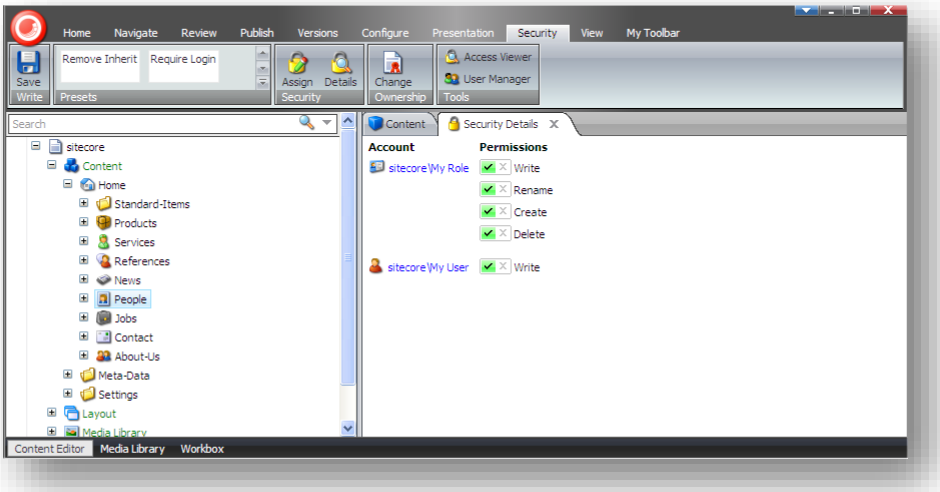
7. It is then added to the list in the **Access Viewer** and you can see the access rights it has to each object in the content tree.

Changing the Security Accounts that have Access Rights to an Item

When you have an overview of the security accounts that have access rights to a particular item, you are better equipped to change the security accounts that have access rights to the item.

To change the security accounts that have access rights to an item:

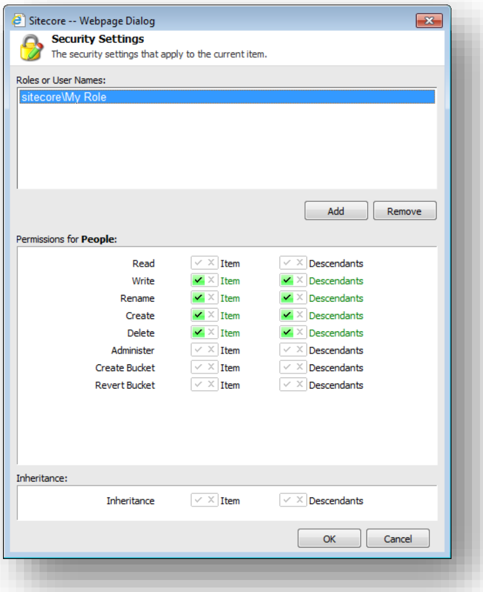
1. Open the **Content Editor** and in the content tree, select the item you are interested in.
2. In the **Security** group, click **Details**.



Account	Permissions
sitecore\My Role	✓ Write ✓ Rename ✓ Create ✓ Delete
sitecore\My User	✓ Write

The **Security Details** tab shows you which security accounts have been assigned explicit access rights to the item.

3. In the **Security** group, click **Assign**.



Sitecore -- Webpage Dialog

Security Settings

The security settings that apply to the current item.

Roles or User Names:

sitecore\My Role

Permissions for **People**:

Read	Item	Descendants
Write	✓ Item	✓ Descendants
Rename	✓ Item	✓ Descendants
Create	✓ Item	✓ Descendants
Delete	✓ Item	✓ Descendants
Administer	Item	Descendants
Create Bucket	Item	Descendants
Revert Bucket	Item	Descendants

Inheritance:

Inheritance	Item	Descendants

This dialog box gives you an overview of the roles that have explicit access rights to this item as well as the access rights they have been explicitly assigned.

4. To remove a security account from the list, select it in the **Roles or User Names** field and click **Remove**.

   This security account no longer has explicit access rights to the current item.

5. To add a security account to the list, click **Add** and select the security account in the **Select an Account** dialog box.

   This security account is now added to the **Roles and User Names** field and you can assign it explicit access rights to the current item.

5.6 Deleting Security Accounts

In Sitecore, a security account is identified by its name — *domain name\account name*. Two security accounts therefore cannot have the same name.

As a security administrator, you will have to remove users and roles from the security system as your company changes and grows.

When you delete a security account, you must be aware that:

- Sitecore removes the account definitions.
- Sitecore does *not* remove the access rights associated with the accounts.
- The access rights are still stored on the individual items in the content tree.

This means that if you create a new security account with the same name as one that you deleted earlier, the new security account is granted the same access rights as the old security account.

Furthermore, when you delete a role, Sitecore:

- Removes membership of this role from all the users who were members of the role.
- Removes all the access rights associated with this role from all the users who were members of the role.

If you create a new role with the same name as the role you deleted:

- The new role is granted all the access rights that the old role possessed.
- The new role does not have any members.

When you delete a user, Sitecore:

- Sitecore removes this user from all the roles that they are a member of.

If you create a new user with the same name as the user you deleted:

- The new user is granted all the access rights that were assigned to the old user's security account.
- The new user does not automatically become a member of any roles.

This is one of the reasons that we recommend only assigning access rights to roles. If you do not assign access rights to a user's security account, you minimize the risk of inadvertently granting them individual access rights to items in the content tree. You can concentrate on managing the access rights of the roles that they are members of.

Chapter 6

Domains

This chapter describes how Sitecore uses domains. There is also a description of how to add security accounts to a domain.

This chapter contains the following sections:

- The Domain Manager

6.1 The Domain Manager

Domains are used to simplify the process of managing multiple Web sites within a single system. Domains are also security constructs that allow you to create different users and roles for each domain.

Sitecore contains the following domains by default:

- **Extranet** — this domain contains the users that correspond to the visitors to the Web site. It also contains the customized roles that manage read access to the content of the Web site.
- **Sitecore** — this domain contains all the users who can access the Sitecore clients and the Sitecore Client roles that influence the client features that are available to users. It also contains the customized roles that control the access that users have to content items.

  Members of the Sitecore domain can access the Sitecore client tools and edit the Web site — if they have the appropriate access rights.

If you are a member of the Extranet domain and are a member of the appropriate Sitecore roles (for example, *Sitecore Client Authoring*), you can access the Sitecore domain and use the client tools to edit the content of the Web site.

If you are a member of the Sitecore domain, you may be able to access the Extranet domain depending on how the developers and the security architect have designed the domain and the login page.

Furthermore, there are two types of domain — global domains and locally managed domains. In a locally managed domain, the users can only see that specific domain and not the other domains in the system. In a global domain users may be able to see all the domains in the system depending on how the security architect has configured the system.

You can create extra domains, for example, for the Web site of another company or a subsidiary.

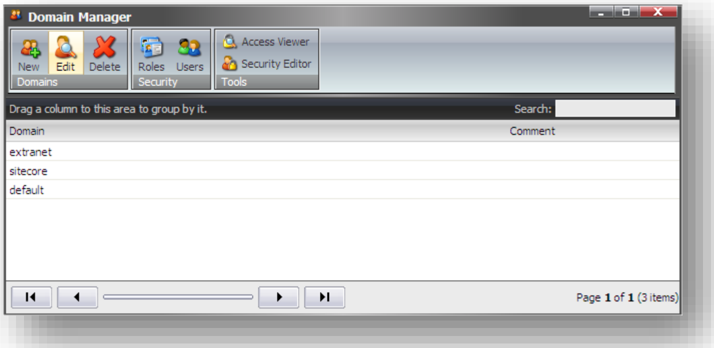
Creating and managing domains is a task for a security architect. When you create a domain, you must create a database for it and register both the domain and the database in the `Web.config` file.

6.1.1 Creating a Domain

As a security administrator, you may occasionally have to create a domain.

To create a domain:

1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Domain Manager**.



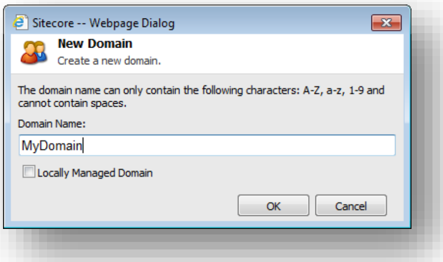
Drag a column to this area to group by it.

Search:

Domain	Comment
extranet	
sitecore	
default	

Page 1 of 1 (3 items)

2. In the **Domain Manager**, in the **Domains** group, click **New**.



New Domain
Create a new domain.

The domain name can only contain the following characters: A-Z, a-z, 1-9 and cannot contain spaces.

Domain Name: MyDomain

□ Locally Managed Domain

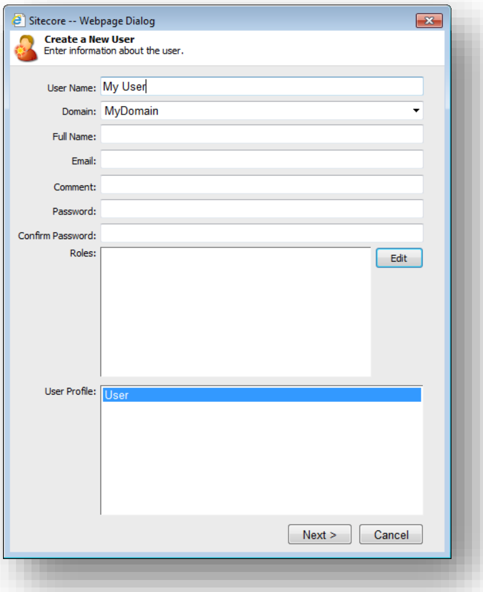
3. In the **New Domain** dialog box, enter the name of the domain.
4. In the **Locally Managed Domain** field, enter a check mark if this should be a locally managed domain.

Assigning Security Accounts to a Domain

Because a domain is also a security construct, it must contain users and roles before it has any meaning.

To assign a new user to a domain:

1. In the **User Manager**, when you create a new user, you specify which domain it belongs to.



Create a New User
Enter information about the user.

User Name: My User
Domain: MyDomain
Full Name:
Email:
Comment:
Password:
Confirm Password:
Roles:
User Profile: User

2. In the **Create a New User** dialog box, in the **Domain** field, select the domain from the drop-down list.

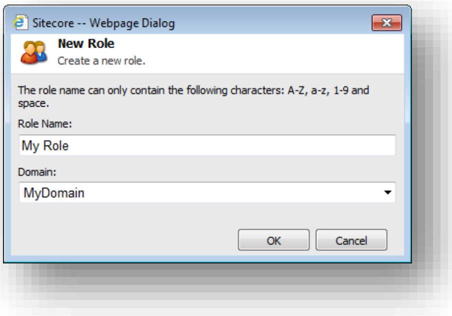
   This new user belongs to the domain you selected.

When you edit the security account of an existing user you cannot change the domain that they belong to.

If a user needs to access multiple domains, you must create separate security accounts for each domain they need to access.

To assign a new role to a domain:

1. In the **Role Manager**, when you create a new role, you specify which domain it belongs to.



Sitecore -- Webpage Dialog

New Role

Create a new role.

The role name can only contain the following characters: A-Z, a-z, 1-9 and space.

Role Name: My Role

Domain: MyDomain

2. In the **New Role** dialog box, in the **Domain** field, select the domain from the drop-down list.

   This new role belongs to the domain you selected.

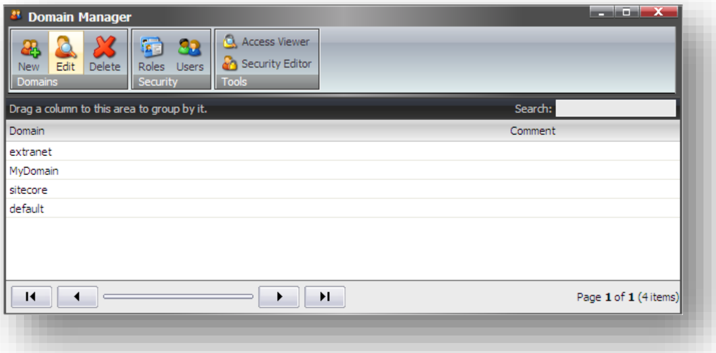
You cannot edit an existing role and change the domain that it belongs to.

6.1.2 Editing a Domain

You can also edit a domain. When you edit a domain, the only setting you can change is whether or not it is a locally managed domain.

To edit a domain:

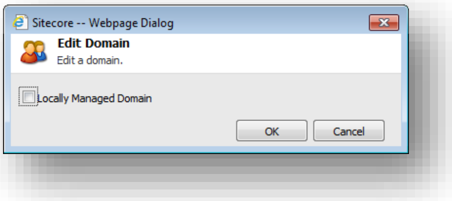
1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Domain Manager**.



Domain	Comment
extranet	
MyDomain	
sitecore	
default	

Page 1 of 1 (4 items)

2. In the **Domain Manager**, select the domain you want to edit and in the **Domains** group, click **Edit**.



Sitecore -- Webpage Dialog

Edit Domain

Edit a domain.

□ Locally Managed Domain

3. In the **Edit Domain** dialog box, select or clear the **Locally Managed Domain** field.

   In a locally managed domain, the users and roles are domain specific and the users can only see the items in the domain that they belong to and not the other domains in the system.

6.1.3 Deleting a Domain

You can also delete a domain when you no longer need it.

To delete a domain:

1. Log in to the Sitecore Desktop and click **Sitecore**, **Security Tools**, **Domain Manager**.
2. In the **Domain Manager**, select the domain you want to edit and in the **Domains** group, click **Delete**.

When you delete a domain, the users and roles that belong to the domain are not deleted. However, these security accounts are useless as the domain no longer exists.

Chapter 7

Security Accounts & Passwords

Security administrators can spend a considerable amount of time managing the security accounts that they have created. The tasks they must perform include editing security accounts, managing passwords and instructing user's in their corporate password policy.

This chapter contains the following sections:

- Managing a User's Security Account
- Specifying Security Settings

7.1 Managing a User’s Security Account

Security administrators have to manage many aspects of the security accounts that have been created for Sitecore users.

These tasks include:

- Passwords
- Teaching users about the company password policy
- Unlocking security accounts
- Disabling and enabling security accounts

7.1.1 Passwords

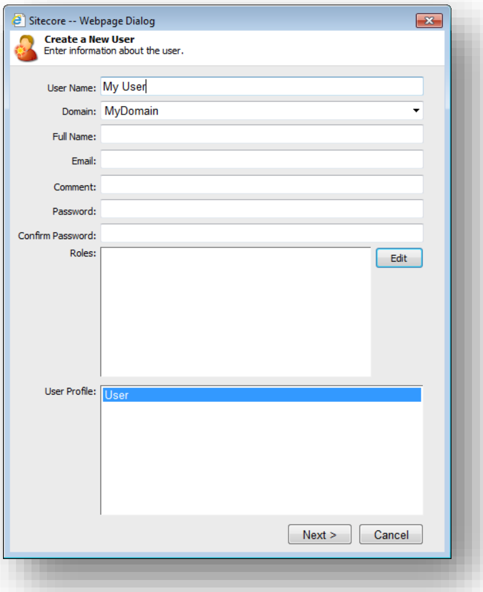
Users must login to Sitecore before they can edit any of the items that they have been assigned access rights to. When a user logs in they must authenticate themselves by entering their user name and password.

When a security administrator creates a user, they give them a user name and assign them a password.

Assigning a Password to a New User

To create a new user and give them a password:

1. Open the **User Manager** and in the **Users** group, click **New**.



Sitecore -- Webpage Dialog

Create a New User
Enter information about the user.

User Name: My User
Domain: MyDomain
Full Name:
Email:
Comment:
Password:
Confirm Password:
Roles:
User Profile: User

2. Enter all the appropriate information and make a note of the password that you give this user.

   When you have finished making the user a member of the appropriate roles, you must inform the user of the user name and the password you have given them.

Important
Passwords are case-sensitive in Sitecore but user names are not.

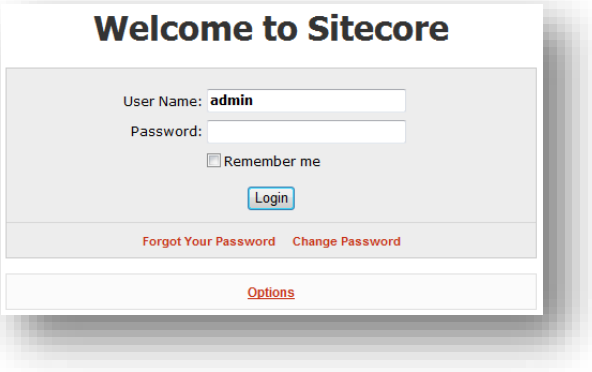
Changing Your Password

When the new user logs in to Sitecore, one of the first things they must do is change their password to one that they know and can remember. The user cannot change their user name.

The security administrator must therefore tell them how to change their password and inform them about any password policies that they must follow.

To change your password:

1. Open the *Login* page.



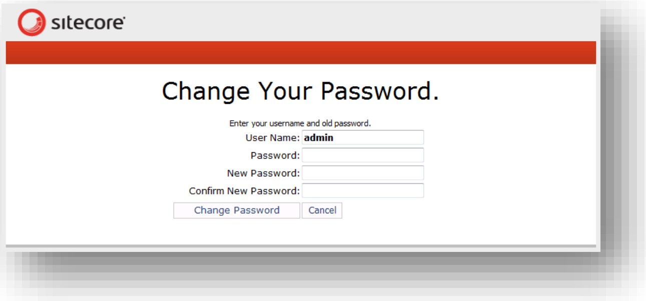
Welcome to Sitecore

User Name: admin

Password:

□ Remember me

2. Click **Change Password**.



Change Your Password.

Enter your username and old password.

User Name: admin

Password:

New Password:

Confirm New Password:

3. In the *Change Your Password* page, enter your user name, the password the security administrator has given you, and the new password you want to use.

   This new password must conform to the password policy that has been defined by the security architect.

4. Click **Change Password** to change your password. You can now log in to Sitecore with your new password.

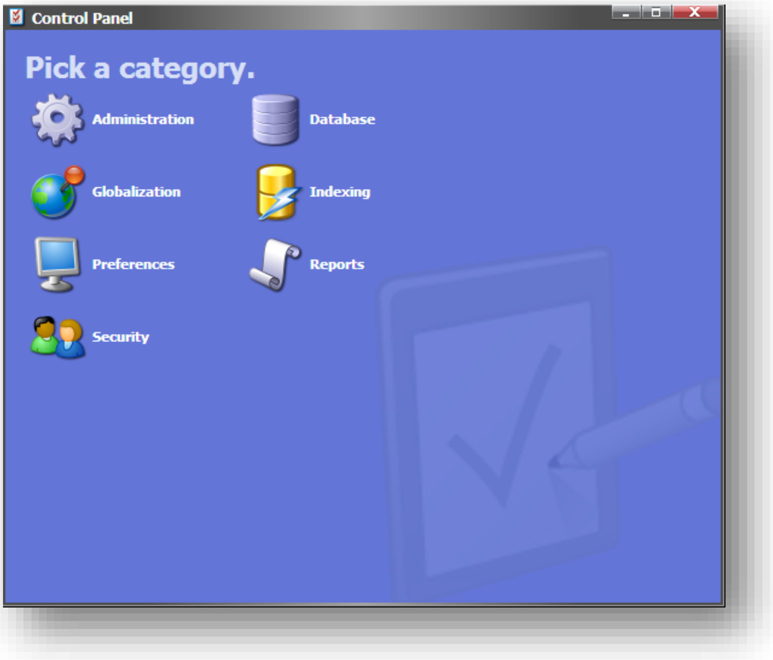
For more information about defining the password policy, see the section *Specifying Security Settings*.

Note
If the user's security account has been locked, they cannot change their password. If they try, a message is displayed telling them that at least one of the passwords that they entered is invalid. They can keep trying to change their password but will keep seeing the same message.

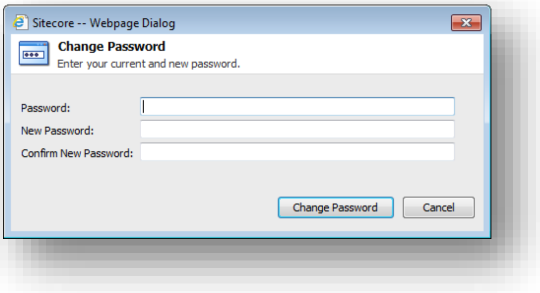
Alternatively, you can:

1. Log in to the **Sitecore Desktop** with the password you were given by the security administrator.

2. In the **Sitecore Desktop**, click **Sitecore**, **Control Panel**.



3. In the **Control Panel**, click **Preferences**, **Change Your Password**.



4. In the **Change Password** dialog box, enter the password that you received from the Security Administrator.
5. Enter and confirm the new password.
6. Click **Change Password** to change your password.

The user is the only person who can use this dialog box to change their password.

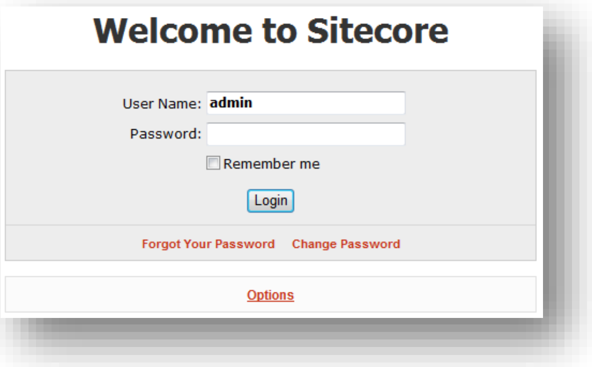
7.1.2 Forgotten Passwords

As any security administrator knows, users forget their password from time to time. When this happens the security administrator must tell the user how to get a new password. Alternatively, the security administrator can change their password for them and send them their new password. The user can change this password the next time they log in to Sitecore.

When you try to log in and realize that you have forgotten your password, you can submit a request to have your current password sent to you in an e-mail.

To receive your password in an e-mail:

1. Open the *Login* page.



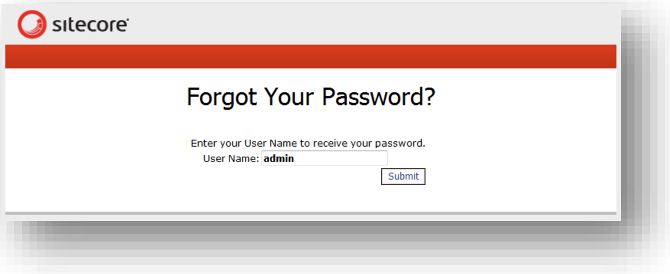
Welcome to Sitecore

User Name: admin

Password:

□ Remember me

2. Click **Forgot Your Password?**



Forgot Your Password?

Enter your User Name to receive your password.

User Name: admin

3. In the *Forgot Your Password?* page, enter your user name. You must enter your user name in the *domainname\username* format.

   Your password will then be sent to you in an e-mail if the `Web.config` file has been set up correctly.

Note
If the user's security account has been locked, they cannot request an e-mail. If they try, a message is displayed telling them that the system was unable to access their data in Sitecore and no e-mail is sent. They can keep requesting an e-mail but none will be sent.

To learn how to enable the Forgot Your Password functionality, see *Enabling the Forgot Your Password E-mail* on page 73.

Getting Locked Out

When a user can't remember their password, they inevitably enter an incorrect password several times before they admit to themselves that they have forgotten their password.

Every time you enter an incorrect password Sitecore informs you that your attempt to log in has failed and lets you try again.

However, a standard part of password policy is to lock a user's account if they enter an incorrect password a certain number of times. Sitecore will not tell you that the account has been locked and you can keep trying to log in. Even if you remember the correct password, you still can't log in.

Important
If your security account has been locked, you cannot change your password.

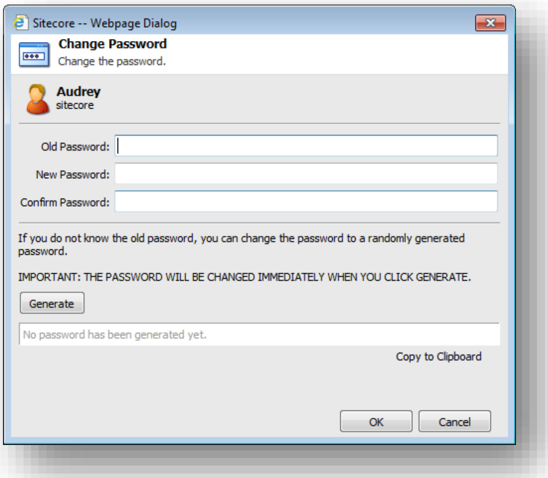
When a user's security account has been locked, the security administrator must unlock their security account and change their password for them.

Changing the Password of a User who has forgotten their Password

The security administrator can change a user’s password for them.

To change the password for a user:

1. Log in to the **Sitecore Desktop** and open the **User Manager**.
2. In the **User Manager**, select the user whose password must be changed.
3. In the **Users** group, click **Change Password**.



If you do not know the old password, you can change the password to a randomly generated password.

IMPORTANT: THE PASSWORD WILL BE CHANGED IMMEDIATELY WHEN YOU CLICK GENERATE.

No password has been generated yet.

4. In the **Change Password** dialog box, in the **Old Password** field, enter the old password, and then enter and confirm the new password that the user should use.

   However, it is very unlikely that you know the password that the user has forgotten.

5. If you don’t know the user’s password, click **Generate** to create a new randomly generated password.

   When you click **Generate**, the user’s password is changed immediately to the new password.

   The user’s current password becomes invalid as soon as the random password is generated and they will no longer be able to log in with the old password.

6. Copy this new password to the clipboard and send it to the user in question along with guidelines about your company’s password policy.

   The user can then log in to Sitecore and change their password to one that they can remember.

The user who forgot their password could be locked out of the system and will therefore not be able to change their password until the security administrator unlocks their security account.

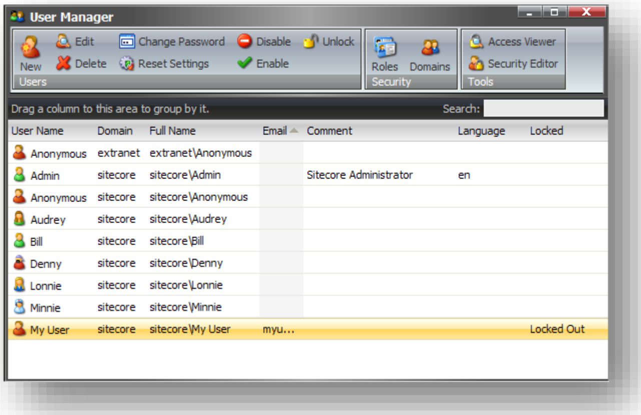
7.1.3 Unlocking a User’s Security Account

If a user is locked out, they must ask the security administrator to unlock their security account.

To unlock a security account:

1. Log in to the **Sitecore Desktop** and open the **User Manager**.
2. In the **User Manager**, select the user who is locked out.

When a user has been locked out, there is an entry in the **Locked** column of the User Manager to tell you that this user is locked out.



User Name	Domain	Full Name	Email	Comment	Language	Locked
Anonymous	extranet	extranet\Anonymous				
Admin	sitecore	sitecore\Admin		Sitecore Administrator	en	
Anonymous	sitecore	sitecore\Anonymous				
Audrey	sitecore	sitecore\Audrey				
Bill	sitecore	sitecore\Bill				
Denny	sitecore	sitecore\Denny				
Lonnie	sitecore	sitecore\Lonnie				
Minnie	sitecore	sitecore\Minnie				
My User	sitecore	sitecore\My User	myu…			Locked Out

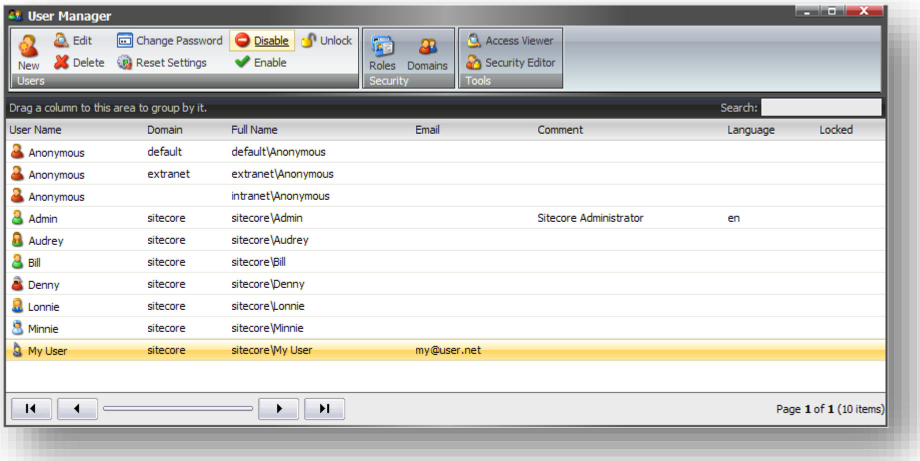
3. In the **Users** group, click **Unlock**.

7.1.4 Disabling and Enabling a User

A security administrator will occasionally have to prevent some users from accessing the system for certain periods of time, for example, when they are on extended leave.

To disable a user:

1. Log in to the **Sitecore Desktop** and open the **User Manager**.
2. In the **User Manager**, select the user that you want to disable.



User Name	Domain	Full Name	Email	Comment	Language	Locked
Anonymous	default	default\Anonymous				
Anonymous	extranet	extranet\Anonymous				
Anonymous		intranet\Anonymous				
Admin	sitecore	sitecore\Admin		Sitecore Administrator	en	
Audrey	sitecore	sitecore\Audrey				
Bill	sitecore	sitecore\Bill				
Denny	sitecore	sitecore\Denny				
Lonnie	sitecore	sitecore\Lonnie				
Minnie	sitecore	sitecore\Minnie				
My User	sitecore	sitecore\My User	my@user.net			

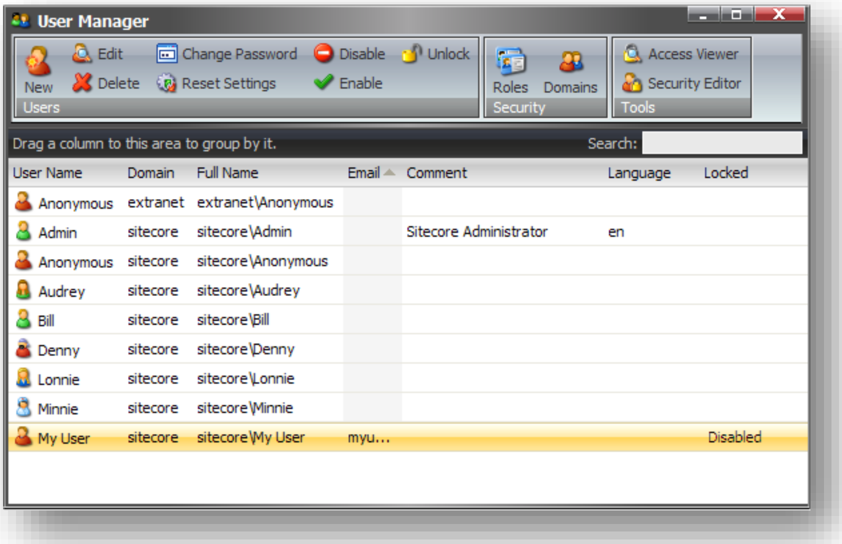
Page **1** of **1** (10 items)

3. In the **Users** group, click **Disable**.

To enable a user:

1. Log in to the **Sitecore Desktop** and open the **User Manager**.
2. In the **User Manager**, select the user that you want to enable.

When a user has been locked out, there is an entry in the **Locked** column of the User Manager to tell you that this user is locked out.



User Name	Domain	Full Name	Email	Comment	Language	Locked
Anonymous	extranet	extranet\Anonymous				
Admin	sitecore	sitecore\Admin		Sitecore Administrator	en	
Anonymous	sitecore	sitecore\Anonymous				
Audrey	sitecore	sitecore\Audrey				
Bill	sitecore	sitecore\Bill				
Denny	sitecore	sitecore\Denny				
Lonnie	sitecore	sitecore\Lonnie				
Minnie	sitecore	sitecore\Minnie				
My User	sitecore	sitecore\My User	myu...			Disabled

3. In the **Users** group, click **Enable**.

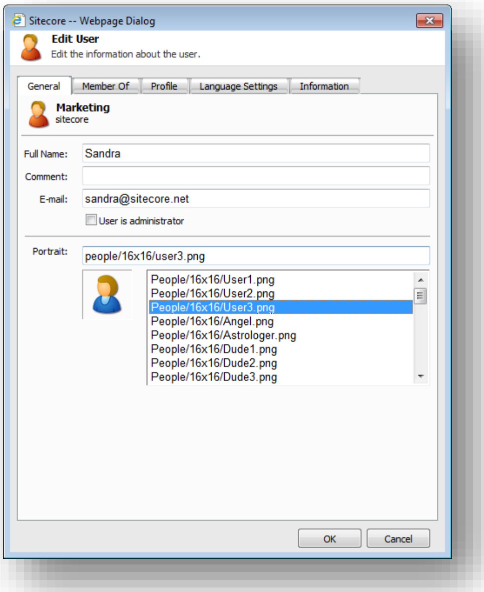
7.1.5 Editing a User’s Security Account

After you have created a user, situations will arise where it becomes necessary for the security administrator to change some of the information stored in their security account. For example, you might need to change their e-mail address, the roles they are members of, and so on.

To edit a user’s security account:

1. Log in to the **Sitecore Desktop** and open the **User Manager**.
2. In the **User Manager**, select the user that you want to edit.

3. In the **Users** group, click **Edit**.



Edit User
Edit the information about the user.

Marketing
sitecore

Full Name: Sandra
Comment:
E-mail: sandra@sitecore.net
□ User is administrator

Portrait: people/16x16/user3.png

People/16x16/User1.png
People/16x16/User2.png
People/16x16/User3.png
People/16x16/Angel.png
People/16x16/Astrologer.png
People/16x16/Dude1.png
People/16x16/Dude2.png
People/16x16/Dude3.png

4. In the **Edit User** dialog box, you can change any of the information that is displayed on any of the tabs.

Note
The name displayed in the **Full Name** field in the **Edit User** dialog box is not the name of the user’s security account. It is their full name. You cannot change the name of the user’s security account after it has been created. The name of the security account is its identifier and all of the user’s security settings are associated with this name. Similarly, you cannot change the name of a security role.

7.2 Specifying Security Settings

The security administrator and the security architect can between them determine a number of security settings.

These settings include:

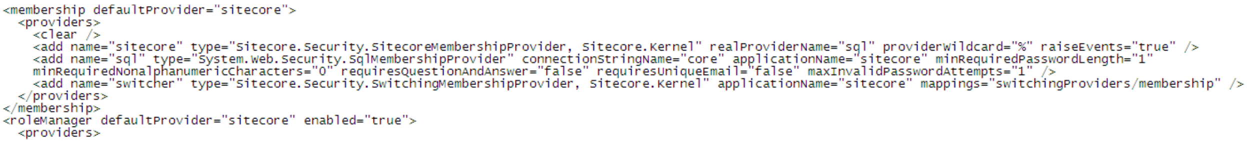
- Password policy
- Forgot your password functionality

7.2.1 Password Policy

The security architect can specify the password policy that should be enforced on the Web site. The parameters that can be specified include the length and strength of the passwords that users must use, as well as the number of times that a user can enter an incorrect password before they are locked out.

To specify the password policy:

1. In Windows Explorer, browse to the folder where the Web site is stored. This is typically `C:\Inetpub\wwwroot\SitecoreWebsite\WebSite`.
2. Open the `Web.config` file in Notepad.
3. Scroll down to the following section:



```
<membership defaultProvider="sitecore">
  <providers>
    <clear />
    <add name="sitecore" type="Sitecore.Security.SitecoreMembershipProvider, Sitecore.Kernel" realProviderName="sql" providerWildcard="%" raiseEvents="true" />
    <add name="sql" type="System.Web.Security.SqlMembershipProvider" connectionStringName="core" applicationName="sitecore" minRequiredPasswordLength="1"
    minRequiredNonalphanumericCharacters="0" requiresQuestionAndAnswer="false" requiresUniqueEmail="false" maxInvalidPasswordAttempts="1" />
    <add name="switcher" type="Sitecore.Security.SwitchingMembershipProvider, Sitecore.Kernel" applicationName="sitecore" mappings="switchingProviders/membership" />
  </providers>
</membership>
<roleManager defaultProvider="sitecore" enabled="true">
  <providers>
```

4. Edit the following properties:

Property	Defines
minRequiredPasswordLength	The minimum number of characters that a password must contain.
minRequiredNonalphanumericCharacters	The minimum number of non alphanumeric characters that a password must contain. Non alphanumeric characters are any characters that do not contain the value of a number or a letter, for example, !@#$%&*() Default value = 0.
maxInvalidPasswordAttempts	The maximum number of times that a user can enter an incorrect password before their security account is locked out.

To learn more about the .NET properties, see Microsoft's documentation. Visit, for example, http://www.asp.net/.

7.2.2 Enabling the Forgot Your Password E-mail

You must also edit the `Web.config` file to enable Sitecore to send an e-mail to users who use the Forgot Your Password functionality and send a request to receive a new password in an e-mail.

To enable the Forgot Your Password functionality:

1. Open the `Web.config` file in Notepad.

2. Scroll down to the following section:

```
      <!--  MAIL SERVER
            SMTP server used for sending mails by the Sitecore server
            Is used by MainUtil.SendMail()
      -->
      <setting name="MailServer" value="mail.server.net" />
      <!--  MAIL SERVER USER
            If the SMTP server requires login, enter the user name in this setting
      -->
      <setting name="MailServerUserName" value="" />
      <!--  MAIL SERVER PASSWORD
            If the SMTP server requires login, enter the password in this setting
      -->
      <setting name="MailServerPassword" value="" />
      <!--  MAIL SERVER PORT
            If the SMTP server requires a custom port number, enter the value in this
setting.
            The default value is: 25
      -->
      <setting name="MailServerPort" value="25" />
```

3. Enter the address of your mail server in the `<setting name="MailServer" value="mail.server.net" />` section.

4. Save the `Web.config` file.

Chapter 8

Security and Item Buckets

In Sitecore, you typically apply security using inheritance. However, item buckets removes the hierarchy on items which affects the way inheritance works. This chapter highlights the approaches and limitations on managing security with item buckets.

This chapter contains the following sections:

8.1 Managing Security with Item Buckets

There are several ways you can manage security in item buckets and this chapter highlights the different approaches available to you. There are two principle ways to manage security:

- Use Inheritance on item buckets
- Do not use inheritance on item buckets

8.1.1 Item Buckets Security

Item buckets support inheritance. Inheritance is implemented at content retrieval time. If a user does not have access at either the user/role level or at the item/ancestor level then the item is nullified. Checking for inheritance on items is not too expensive, so this kind of security is easily supported in Sitecore. Therefore you can continue to set inheritance permissions on item buckets and they will adhere to these rules.

Scalability

Using inheritance is scalable. For example, if you have one million content items, security checks are not implemented on all items at once, because you are paging the data. Therefore, to optimize for scalability these checks should only occur on about 20 items at a time.

If at the API layer you were to run an expensive query, for example to fetch every item in the index, then of course this would not scale well and it would take some time to return all the items in the query.

Limitations

In search, facets do not respect security in terms of the number of items displayed in your search results. However, this is not a significant issue, as users do not physically have access to all of the items displayed anyway. Users may notice that there are some items in the tree that they do not have permission to access.

To maintain a high level of performance in the UI and paging correctness, Sitecore displays empty search results for any items that users to not have access to.

How to Apply Security

When applying security to a search index there are two common approaches you can take:

Applying security rules when indexing

By default Sitecore applies security rules at query time. The main disadvantage of this approach is that it could potentially result in the UI displaying incorrect hit counts. For example, if the search index has 4000 results but you do not have read access to three of these items, only 3997 items will be in your search results. However, this will still communicate to the UI that you have 4000 results.

This may not be so noticeable when you have large amounts of items but is more obvious when returning small numbers of items.

Applying security rules at query time

There are some special pipelines that you can use to apply security rules during query time. You can find these pipelines in the `Sitecore.ContentSearch.config` file.

Indexing Rebuild Pipeline

This is a special pipeline designed to be executed from the Index Manager dialog box. This is reserved for system use only.

`Arguments : (ISearchIndex)` - The search index.

```
<indexing.filterIndex.inbound>

    <processor
     type="Sitecore.ContentSearch.Pipelines.IndexingFilters.ApplyInboundIndexFilter,
     Sitecore.ContentSearch"/>

</indexing.filterIndex.inbound>
```

Index Outbound Filter Pipeline

This is a pipeline designed to filter out items when they are retrieved from the index. By default this applies standard Sitecore item-level security restrictions.

```
<indexing.filterIndex.outbound>

    <processor
     type="Sitecore.ContentSearch.Pipelines.IndexingFilters.ApplyOutboundSecurityFilter,
     Sitecore.ContentSearch"/>

</indexing.filterIndex.outbound>
```

Chapter 9

Best Practices

This chapter lists some of the best practices that we recommend for security administrators.

This chapter contains the following section:

- Best Practices

9.1 Best Practices

We have a few recommendations for security administrators that should make their job a bit easier.

9.1.1 Only Assign Access Rights to Roles and Not to Users

By only assigning access rights to roles you simplify the process of assigning access rights. You no longer think in terms of users but in terms of the roles and functions that exist in your organization.

By mapping the roles you create to the functions in your organization, you can easily manage the access rights that that your employees should be assigned. If they perform this function in your organization, they should be members of this role.

When an employee’s job description changes, you simply make them a member of the appropriate roles and remove them from the roles they no longer need. When an employee leaves your organization, just delete their user account and they are automatically removed from all the roles that they were members of. When another employee replaces them you just make them members of the appropriate roles.

Furthermore, by only assigning access rights to roles, you make it easier to control the access rights that an individual user has to items in the content tree. For example, if you want to ensure that a user is granted or denied access to a particular item for a period of time, you don’t have to study all the roles the user belongs to, you just grant or deny this access right to the user’s security account. This setting overrules the access rights specified for the roles the user is a member of and the user is then granted or denied the access right. To revert to the standard settings, you just remove the explicit security setting from the user’s security account.

9.1.2 Don’t Make Roles Domain Specific

We recommend that you only make domain specific roles when you have to.

By keeping all your roles in the Sitecore domain, you ensure that they are available to all of the domains managed by your system. Once you have created a role and made it domain specific, you cannot change the domain that it belongs to.

9.1.3 Don’t Specifically Deny Access Rights — Use Inheritance

We recommend that you use inheritance whenever possible to limit the access that roles have to the items in Sitecore.

Using inheritance instead of directly denying access rights to items makes it easier to manage the security system. You no longer have to check the access rights assigned to each item for a particular role you only manage the inheritance settings on the parent items that determine whether or not the access rights are inherited by their descendants.