

Cello How-To Guide

Membership Management



Contents

- 1 Membership Management 3
 - 1.1 Roles and Access provisions in CelloSaaS 3
 - 1.2 Add/Edit Role 4
 - 1.3 Delete Role 4
 - 1.4 Mapping Privilege to Roles 5
 - 1.5 Create / Edit Users 6
 - 1.6 Delete Users 7
 - 1.7 Lock/Unlock – Lock All/Unlock All Users..... 8
 - 1.8 Assign Roles to User 8
 - 1.9 Force Password Reset – Tenant Administrators 9
 - 1.9.1 Force Password Reset flow 10
 - 1.9.2 Change Password by User 10
 - 1.9.3 Retrieving Forgotten Passwords 10
 - 1.9.4 Blocking Password after n-times Unsuccessful Logins..... 11
 - 1.9.5 Password Strength Validator 12
 - 1.9.5.1 Password Strength Validator Settings in the Web.Config File 12
 - 1.9.6 Security Questions and Answers..... 13
 - 1.10 Password Encryption..... 13

1 Membership Management

Role management helps you manage authorization, which enables you to specify the resources that users in your application are allowed to access. Role management lets you treat groups of users as a unit by assigning users to roles such as manager, sales, member, and so on.

After you have created the roles, you can grant privileges to the Roles. For example, your site might include a set of pages that you want to display only to members. Similarly, you might want to show or hide a part of a page based on whether the current user is a manager. By using roles, you can establish these types of rules independent from individual application users. For example, you do not have to grant individual members of your site access to member-only pages. Instead, you can grant access to the role of member and then just add and remove users from that role as people sign up or let their membership lapse.

- Roles refer to the logical role the user play in the context of the application.
- Each user can be assigned one or more roles.
- At runtime, information about the logged in user is available in Context User Object.

1.1 Roles and Access provisions in CelloSaaS

There are two kinds of Role can be created in the application, They are

- Global Roles (Available for all the Tenant)
- Local Roles (Available for the Tenant Alone who created the Role)

Roles	Access provisions
Global Roles	These roles are common to all tenants
	By default Tenant Admins are considered as global role
	Tenant Admin does not possess rights to edit/delete global roles
Tenant Based Roles	Tenant based roles are created by Tenant Admin
	Specific to a particular tenant
	Product admin role is assigned to Company Admin

Product admin role has permission to Add Tenant details

CelloSaaS

admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

Role Management Tenant: Company

Search GO

Roles	Edit	Activate/Deactivate	Manage Privilege	Data Scope Privilege
Doctor		---		
Nurse		---		
Service Admin		---		
SystemMember		---		
Tenant Admin		---		

Show 10 entries Showing 1 to 5 of 5 entries

Add Role

Role Name*

Description*

Global Role ☒

Reset Save

Copyright © 2013 by techcello.com All Rights Reserved.

Role Management Screen

1.2 Add/Edit Role

By default, Tenant Admin has privileges to add role details. Below are the other properties of Role Management Screen, they are

- Role Name and Description are mandatory inputs
- Role Name should be unique within tenant and should not be a Global Role Name
- Role Name should not contain special characters except _ and -
- Role Id is auto generated
- On checking the “Is Global ” property will make the Role Global

1.3 Delete Role

User/Role Management Screens provides soft delete and hard delete methods, but Tenant Administrators are not allowed to either Soft/Hard delete the global roles created by Product Administrator.

Soft Delete – Deactivate Role.

Hard Delete – Delete Role. When hard deleted, all reference related to the roles are deleted from the database.

1.4 Mapping Privilege to Roles

Once a Role is created, the next step is to grant/revoke privileges to the Role created. Click on the Manage Privilege icon on the Roles List to navigate to Grant Privilege Screen.

Example:

A Role named “Doctor” is granted with privileges listed on the Assigned Privileges Container, similar clicking remove to revoke privileges from the Role. Upon doing, the granted role will get the intersection of assignable privileges and tenant license privileges.

CelloSaaS admin@company.com | Change Tenant

Manage Privileges Back

Role Name: Doctor Module: All

Search Privileges: Enter keyword to search... Features: All

Available Privileges +Add

- ☐ SelectAll
- ☐ Add_Chart
Description: Add_Chart
- ☐ View_EventMetadata
Description: View_EventMetadata
- ☐ AddPackage
Description: Add Package
- ☐ Add Payment Account
Description: User can create payment account details
- ☐ AddPickupList
Description: Add Pickup List
- ☐ Add Price Plan
Description: User can create package price plan details
- ☐ AddSettingsTemplate
Description: Add Settings Template
- ☐ CreateTenantLicense
Description: Create Tenant License
- ☐ AddTenantTemplate
Description: Add Tenant Template
- ☐ Add_Endpoint
Description: Add_Endpoint
- ☐ Add Notification
Description: Add Notification
- ☐ AddPackageSettings
Description: Add Package Settings
- ☐ Add Payment API Account
Description: User can create the payment api account
- ☐ AddPickupListValue
Description: Add Pickup List Value
- ☐ AddQuery
Description: Add Query
- ☐ Add_Report
Description: Add_Report
- ☐ AddTenant
Description: Add Tenant
- ☐ AddTenantSettings
Description: Add Tenant Settings
- ☐ AddUser
Description: Add User

Assigned Privileges -Remove

- ☐ SelectAll
- ☐ AddRole
Description: Add Role
- ☐ AddRolePrivilege
Description: Add Role Privilege
- ☐ AddUserRole
Description: Add User Role
- ☐ DeleteRoleFeature
Description: Delete Role Feature
- ☐ DeleteRoleSettings
Description: Delete Role Settings
- ☐ UpdateRole
Description: Update Role
- ☐ UpdateRolePrivilege
Description: Update Role Privilege
- ☐ ManageTenantAccess
Description: Manage Tenant Access
- ☐ SearchOtherTenantRoles
Description: Search Other Tenant Roles
- ☐ ViewPackageSettings
Description: View Package Settings
- ☐ ViewRoleFeature
Description: View Role Feature
- ☐ AddRoleFeature
Description: Add Role Feature
- ☐ AddRoleSettings
Description: Add Role Settings
- ☐ DeleteRole
Description: Delete Role
- ☐ DeleteRolePrivilege
Description: Delete Role Privilege
- ☐ DeleteUserRole
Description: Delete User Role
- ☐ UpdateRoleFeature
Description: Update Role Feature
- ☐ UpdateRoleSettings
Description: Update Role Settings
- ☐ SearchRole
Description: Search Role
- ☐ ViewPackage
Description: View Package
- ☐ ViewRole
Description: View Role
- ☐ ViewRolePrivilege

Copyright © 2013 by techcello.com All Rights Reserved.

Manage Privileges Screen

1.5 Create / Edit Users

Any user who have access to User Management related Privilege is allowed to Create/Edit/Delete user in the application. To create a user navigate to **Access Control -> Manage UserDetails**

CelloSaaS

admin@company.com | Change Tenant

My AccountSubscriptionTenantAccess ControlConfigurationBusiness EventsNotificationsWorkflowReportingMonitor

User Management

Tenant: Company

Search

User Name

GO

+ Add

Un-Lock

Un-Lock All

Lock

Lock All

Force Password Reset

	First Name	Last Name	User Name	Email Id	IsLocked	Edit	Deactivate	Activate	Manage Roles
<input type="checkbox"/>	Admin	Company	admin@company.com	admin@company.com					
<input type="checkbox"/>	bruce	willis	Bruce	bruce.will@techcello1.com					
<input type="checkbox"/>	Felix	Andrew	Felix	felix.andrew@techcello1.com					

Show 10 entries

Showing 1 to 3 of 3 entries

1

Copyright © 2013 by techcello.com All Rights Reserved.

User Management

CelloSaaS

admin@company.com | Change Tenant

My AccountSubscriptionTenantAccess ControlConfigurationBusiness EventsNotificationsWorkflowReportingMonitor

Add User Details

Cancel Save

Tenant Name: Company

User Details

First Name *

Last Name

User Name *

Email

Address Details

Address *

City *

State *

Country *

Postal Code

Cancel

Save

Copyright © 2013 by techcello.com All Rights Reserved.

Add User

Fill in all the necessary information about the user and click on Submit to create a new user.

Note:

- First Name, Last Name and User Name are mandatory.
- If you fill any one of the field in Address details then rest of the fields on the form will become mandatory.
- Email id is unique across the application.
- User Name unique within tenant.

If you provide email id while creating a user, an activation email will be sent to the email id which was used to create the user. The user has to activate the account by clicking on the activation link he/she received via email.

If email Id is not given then a default password will be set for that user. User need to login with default password. Default password is “**company#123**”, if you want to change the default password then add the following settings in App Settings.config file.

```
<add key="DefaultUserPassword" value="company#123" />
```

After successful authentication using the default password or activation link, the user will receive Password Reset screen to update his/her new password.

1.6 Delete Users









Tenant admin is not allowed to hard delete a user from the system, but Soft Delete can be done using De-Activate Option. Once the user is deactivated, the user will not be allowed to login to the system.

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

User Management Tenant: Company

Search User Name GO + Add Un-Lock Un-Lock All Lock Lock All Force Password Reset

<input type="checkbox"/>	First Name	Last Name	User Name	Email Id	IsLocked	Edit	Deactivate	Activate	Manage Roles
<input type="checkbox"/>	Admin	Company	admin@company.com	admin@company.com					
<input type="checkbox"/>	bruce	wills	Bruce	bruce.will@techcello1.com					
<input type="checkbox"/>	Felix	Andrew	Felix	felix.andrew@techcello1.com					

Show 10 entries Showing 1 to 3 of 3 entries ⏪ ⏴ 1 ⏵ ⏩

1.7 Lock/Unlock – Lock All/Unlock All Users

Tenant Administrators are allowed to Lock/Unlock selective or all the users of the system using the User Management Screen. Locking a user will stop the user from using the system.

1.8 Assign Roles to User

After the Roles and Users are created, finally assign Roles to User.

Navigate to Access Control → Manage User Details -> Select the user → Click on Manage Roles

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

Manage User Roles Back

User Name: Bruce Tenant Name: Company + Add

Role Name	Description	Manage Tenants	Remove
Nurse	Nurse		

Add User Role

☐ Doctor Description: Doctor ☐ SystemMember Description: SystemMember ☐ Tenant Admin Description: Tenant Admin Role ☐ Service Admin Description: Service Admin Role

Cancel Save

Copyright © 2013 by techcello.com. All Rights Reserved

Check the Roles you want to map the user with and click on Save.

Note:

- A user can be mapped with more than 1 role at a time.

1.9 Force Password Reset – Tenant Administrators

Tenant Administrators can do force password reset for a selective or set of users by clicking on the Force Password Reset button available in the User Management Screen.

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

User Management Tenant: Company

✓ Password Change Forced successfully!

+ Add Un-Lock Un-Lock All Lock Lock All Reset Password Force Password Reset

<input type="checkbox"/>	First Name	Last Name	User Name	Email Id	IsLocked	Edit	Deactivate	Activate	DisAssociate	Manage Roles
<input type="checkbox"/>	Admin	Company	admin@company.com	admin@company.com						
<input checked="" type="checkbox"/>	bruce	wills	Bruce	bruce.will@techcello1.com						
<input type="checkbox"/>	Felix	Andrew	Felix	felix.andrew@techcello1.com						

User Management Screen

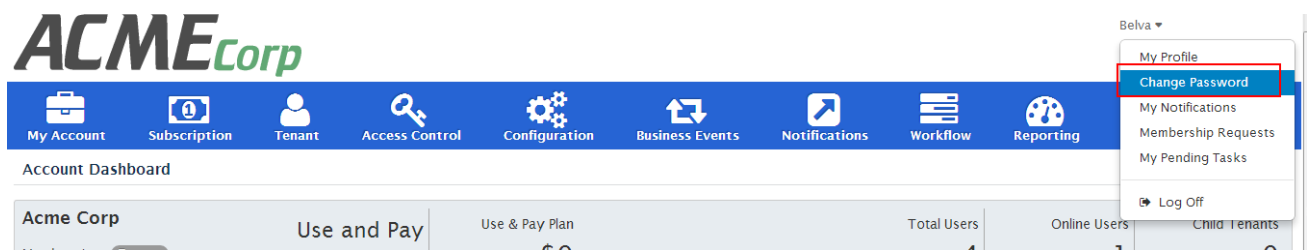
1.9.1 Force Password Reset flow

When the Force Password function executed by the Product or Tenant Admin, a password reset email (Must be configured well advance) will be sent to the respective user if the email id is available for the specific user, else the user can use the default password configured globally. The default password can be configured by adding a key in the **AppSettings.Config** file (Refer the below Code Snippet).

```
<add key="DefaultUserPassword" value="company#123" />
```

1.9.2 Change Password by User

Users are allowed to change their password by navigating through My Actions >> Change Password.



1.9.3 Retrieving Forgotten Passwords

- Go to <http://yourapp.com/Account/LogOn>
- Click Forgot password?
- Enter your company code & username and click submit. You'll be redirected to Reset Password step 2. receive an email at the email address specified on your Personal Information page.



- Answer your password question, and click Continue.
- It will take you to reset password step 3 screen to reset to a new password.

1.9.4 Blocking Password after n-times Unsuccessful Logins

Application Administrators can configure the Password Block after n – unsuccessful login event. To configure, navigate to **Configuration >> Manage Settings Template >> Create or Edit Existing Template**

Parameter	Description
Maximum Password Answer Failure Count	Number of times unsuccessful login event can occur due to wrong answer tried during the Password Reset
Maximum Password Failure Count	Number of times unsuccessful login event can occur due to wrong Password tried.

Note: The default value is null, when set with number of times for one or both the parameters, Cello will automatically count the number of unsuccessful login tries and block the user automatically when they reach the maximum count.

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Manage Settings Template

Back Save

Template Details

Template Details	Value
Name*	DefaultCustomTemplate
Type	<input type="radio"/> Fixed <input checked="" type="radio"/> Customized
Is Global	<input checked="" type="checkbox"/>

Attributes*

Please select the below attributes, then provide a value

Select	Attribute Name	Attribute Value
<input checked="" type="checkbox"/>	WCF Shared Key
<input type="checkbox"/>	Tenant Authentication Setting	
<input type="checkbox"/>	User Password Expiration Days	
<input type="checkbox"/>	Application Connection String	ConnectionString~Provider
<input type="checkbox"/>	Home Realm	
<input checked="" type="checkbox"/>	Share Users	<input type="checkbox"/>
<input type="checkbox"/>	Maximum Password Answer Failure Count	
<input type="checkbox"/>	Maximum Password Failure Count	
<input checked="" type="checkbox"/>	User Connection String	ConnectionString~Provider
<input type="checkbox"/>	Auto Approval For Tenant Creation	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Theme	CelloSkin
<input checked="" type="checkbox"/>	Logo	<div>Choose File</div> <div>No file chosen</div> <div>Supported Formats include .bmp, .png, .jpg</div>
<input type="checkbox"/>	Date Format String	12/5/2013 8:04:01 AM
<input checked="" type="checkbox"/>	Language	English
<input type="checkbox"/>	Disable Product Analytics	<input type="checkbox"/>

Save

1.9.5 Password Strength Validator

The password entered by the user will be validated against the password against the Regular Expression that is set in the **web.config** file. If there is no valid regular expression then the password validation criteria defaults to be equal to each other and of 8 characters in length.

1.9.5.1 Password Strength Validator Settings in the Web.Config File

The following settings are added in the App setting sections:

ValidationExpression: A regular expression that is used to validate the strength of the input password. Example : "(?!^[0-9]*\$)(?!^[a-zA-Z]*\$)^[a-zA-Z0-9]{8,10}\$" is the default regular expression

ValidationFailureMessage: Set the message to be displayed to the user when the password validation fails. This message should reflect the criteria on which the password validation failed, i.e. which criteria for the password validation is failed.

ValidationSuccessMessage: Set the message to be displayed to the user when the password validation succeeds.

1.9.6 Security Questions and Answers

Security questions are used to better protect the user accounts and to help verify the user identity in case if they have forgotten their password. These are typically set up when the user account was first created. Cello pre-configured some default Q/A, which will be listed in the First Time Password Reset Screen.

Developers can modify or add additional question and answers by making appropriate changes in the Web App >> Views >> FirstTimeUser.aspx

```
<select name="securityQuestion" style="width: 226px;">
  <option><%: this.GetLocalResourceObject("PetName")%></option>
  <option><%: this.GetLocalResourceObject("AnniversaryDate") %></option>
  <option><%: this.GetLocalResourceObject("BirthCity") %></option>
  <option><%: this.GetLocalResourceObject("MiddleName_Father") %></option>
  <option><%: this.GetLocalResourceObject("MiddleName_Spouse") %></option>
  <option><%: this.GetLocalResourceObject("MiddleName_Child") %></option>
  <option><%: this.GetLocalResourceObject("LastName_Friend") %></option>
  <option><%: this.GetLocalResourceObject("HighSchoolCity") %></option>
  <option><%: this.GetLocalResourceObject("CarMake") %></option>
</select>
```

1.10 Password Encryption

Techcello Provides two widely used and industry standard Encryption algorithm for Encrypting/Decrypting the Password information of the users. They are

1. Advanced Encryption Standard (AES)
2. Triple Data Encryption Standard

Techcello encrypts all the passwords using the provider configured in the following section -

Search for the section “<!-- Tenant Crypt Key DAL-->” inside the **Unity.config** file

```
<typeAlias alias="IPasswordEncryptionService"
  type="CelloSaaS.Library.Encryption.IPasswordEncryptionService,
CelloSaaS.Library" />
  <typeAlias alias="TripleDESPasswordEncryptionService"
  type="CelloSaaS.EncryptionProvider.TripleDESPasswordEncryptionService,
CelloSaaS.EncryptionProvider" />
```

```
<container name="Services">
  <types>
    <type type="ITenantKeyStoreService" mapTo="DBStore"
name="ITenantKeyStoreService"></type>
    <type type="IPasswordEncriptionService" mapTo="TripleDESPasswordEncryptionService"
name="IPasswordEncriptionService"></type>
    <type type="ITenantService" mapTo="TenantService" name="ITenantService"></type>
    <type type="ITenantUserAssociationService" mapTo="TenantUserAssociationService"
name="ITenantUserAssociationService"></type>
    <type type="IWorkflowService" mapTo="WorkflowService" name="IWorkflowService"></type>
    <type type="IWorkflowDefinitionService" mapTo="WorkflowDefinitionService"
name="IWorkflowDefinitionService"></type>
    <type type="IActivityService" mapTo="ActivityService" name="IActivityService"></type>
    <type type="IExpressionParserProvider" mapTo="ExpressionParserProvider"
name="IExpressionParserProvider"></type>
  </types>
</container>
```

Note:

1. By Default, CelloSaaS follows TripleDES Encryption mechanism and all the default passwords coming with the product such as Product Admin User's Password, WCf Shared key etc , in case if you want to change from TripleDES to AES, refer the below Procedure
2. TripleDES and AES Password Algorithms are configurable, so you can change it based on the security requirement.
3. When porting from TripleDES to AES encryption provider, follow the below procedure
 - a. Update the default password of the product admin to AES Encrypted password
 - b. Remove all the users and recreate them

Configuration Change to Move from TripleDES to AES Encryption

```
<typeAlias alias="IPasswordEncriptionService"
  type="CelloSaaS.Library.Encryption.IPasswordEncriptionService,
CelloSaaS.Library" />
<typeAlias alias="AESPasswordEncryptionService"
  type="CelloSaaS.EncryptionProvider.TripleDESPasswordEncryptionService,
CelloSaaS.EncryptionProvider" />
```

```
<container name="Services">
  <types>
    <type type="ITenantKeyStoreService" mapTo="DBStore"
name="ITenantKeyStoreService"></type>
    <type type="IPasswordEncriptionService" mapTo=" AESPasswordEncryptionService "
name="IPasswordEncriptionService"></type>
    <type type="ITenantService" mapTo="TenantService" name="ITenantService"></type>
    <type type="ITenantUserAssociationService" mapTo="TenantUserAssociationService"
name="ITenantUserAssociationService"></type>
    <type type="IWorkflowService" mapTo="WorkflowService" name="IWorkflowService"></type>
    <type type="IWorkflowDefinitionService" mapTo="WorkflowDefinitionService"
name="IWorkflowDefinitionService"></type>
    <type type="IActivityService" mapTo="ActivityService" name="IActivityService"></type>
    <type type="IExpressionParserProvider" mapTo="ExpressionParserProvider"
name="IExpressionParserProvider"></type>
  </types>
</container>
```

Contact Information

Any problem using this guide (or) using Cello Framework. Please feel free to contact us, we will be happy to assist you in getting started with Cello.

Email: support@techcello.com

Phone: +1(609)503-7163

Skype: techcello