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Creating and managing Sage X3 users

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Introduction

This presentation will discuss Sage X3 users and how they interact with the Sage X3 system. Much of this is already discussed in the Sage University training classes and online help, but hope the topics chosen in this presentation will put a fresh perspective on these areas.

Sage University classes

- System Administrator Fundamentals

Online Help

- Administration help <https://online-help.sageerp3.com/erp/12/staticpost/administration-reference/>

Authentication and Authorisation

Access controls are necessary to protect confidentiality, integrity, and availability of objects i.e. we only want to allow authorized subjects to access specified objects (which could be data, function, menu, etc.)

Another security principle is that of accountability, i.e. identifying who did what and when.

Part of both Access Control and Accountability is to be able to irrefutably identify subjects. Subjects are often “real” interactive users (people), but can also be integration services or programs, such as batch server or web services in X3.

There are three main processes underpinning Access Control/Accountability

Identification

A subject claims to be a specific identity by the way of username, PIN, smart card, or some other form of Login ID.

Authentication (AuthN)

Verification of the claimed identity by way of additional information. For example, a password, PIN, passphrase, code word, etc. i.e. *Who you are*

NOTE: some systems allow you to introduce **Multi-factor Authentication (MFA)** whereby users need to provide different types of Authentications, for example a password and a fingerprint scan.

- Type 1 authentication: *something you know*, such as a password.
- Type 2 authentication: *something you have*, such as smart card or your physical location.
- Type 3 authentication: *something you are*, generally biometrics.

Authorization (AuthZ)

Authenticated subjects can only access objects they are authorized to use. i.e., *what you can do*.

X3 is based on Role Based Access Control (RBAC) in that a user is assigned a Role, which has rights assigned to it, although you may also have row-based restrictions at user level (for example)

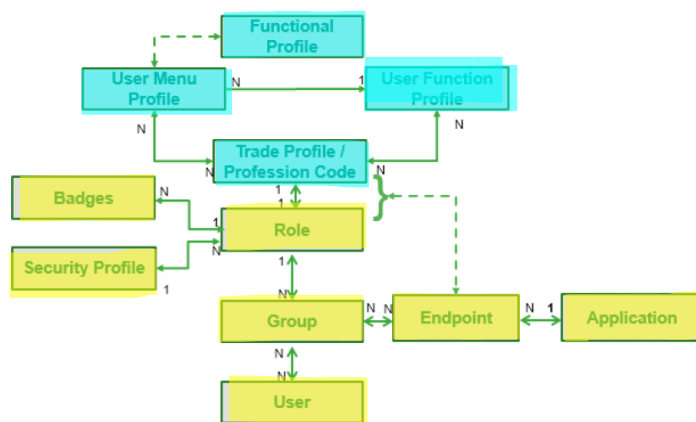
The user should be assigned roles, and roles should have privileges assigned, following the principle of “Least Privilege” i.e. users only have access to functions and data required to complete their assigned role within the business.

Syracuse vs Classic users

Users in X3 are defined at two levels:

Syracuse layer – this defines the username/password the user actually logs into the system as (as they connect to the Syracuse server first) Syracuse layer users are independent from folders and do not need any folder access to be able to login and see a menu. All metadata for this layer (user setup, etc.) is stored in the MongoDB database, so you only need Syracuse and MongoDB services running for Syracuse users to be able to login.

Classic layer – the user needs to have a record in each folder they require access to in X3, otherwise the user will not be allowed access. The metadata for users, etc. in the Classic layer is stored in SQL database tables (Oracle or MS SQL Server). Database and X3 Runtime services therefore must be running in order to access folders. The Classic layer user is also used by the old Classic ADC server (telnet handhelds) for users to login to the system, which is beyond the scope of this discussion.



Syracuse layer components

Classic layer components

Syracuse layer users

- Users are linked to Groups
- Groups are linked to Roles and Endpoints
- Roles are linked to Badges, Security profiles, Navigation pages and Home pages

NOTE: For the following sections, a record with a value for “Factory” prevents deletion of that record and may also impose additional restrictions on editing. By default will be value of “SAGE”
https://online-help.sageerpx3.com/erp/12/wp-static-content/static-pages/en_US/v7dev/administration-reference_factory_definition.html

Security profiles

Controls access to certain general features such as customisations and attachments, as well as access rights to many of the Administration sections functions.

Administration, Administration, Users, Security profiles

<https://online-help.sageerpx3.com/erp/12/staticpost/security-profiles/>

Code: Mandatory but can be anything.

Description: Mandatory but can be anything.

Customisation level: defines rights for modifying standard screens. Set to “None” to disallow any modification.

Allow Office document upload: if not selected are blocked from uploading office documents, such as Word documents in Attachments.

Security level: If a user has access to the Security profile function, they can only create or modify security profiles with a higher level of security. Set to 99 if users with this profile should not be able to do anything.

The screenshot shows the Sage X3 user interface for configuring a security profile. At the top, there is a navigation breadcrumb: All > Administration > Administration > Users. The main heading is "Security profile". Below this, there are two tabs: "Information" (selected) and "Administration".

Information

Code * Description *

Administration

Customisation level

Administrator

User

None

Cannot create or modify cu...

Allow Office document upload

Allow Office document upload. This option allow ...

Security level *

Authorisations

This grid defines users access to certain administration functions. You can disallow everything except “Read” on “myProfile” (which is required to allow user login) for minimum rights, but this also blocks the user from changing their own password.

Authorisations 11 Results Display: 50

Code	Description	Create	Read	Write	Delete	Execute
myProfile	Personal user profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
printing	Print documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
users	Users, groups and roles management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
technicalSettings	Setup servers, endpoints, schedulers and authentication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
authoring	Personalization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pages	Navigation : dashboards, vignettes, menus, pages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
collaborationArea	Teams, documents and storage, Office integration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
statusAndUsage	System status and logs, maintenance actions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
importData	Import data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
exportData	Export data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
development	Development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The online help gives more details on these sections.

Roles

Allows you to group users by their business function.

Administration, Administration, Users, Roles

<https://online-help.sageerpx3.com/erp/12/staticpost/roles-3/>

Code: Mandatory but can be anything.

Description: Mandatory but can be anything.

Security Profile: Mandatory

Navigation page and Home pages are optional.

The screenshot shows the Sage X3 Role configuration interface. At the top, there are tabs for 'Information', 'Administration', and 'Explorer'. The 'Information' tab is active, displaying the role details. The 'Code' field is set to 'UserTrainRole' and the 'Description' field is set to 'Training role'. Below this, there are sections for 'Administration', 'Badges', 'Security profile', 'Home pages', 'Business Objects Profiles', and 'Mobile applications'. The 'Security profile' field is set to 'Training session' and the 'Navigation page' field is empty. The 'Badges' section shows 'ERPFULL' as a selected badge. The 'Business Objects Profiles' section is currently empty, showing 'No data to display'.

NOTE: Badges are a licensing mechanism they do not control authorisation in any way. Users will have read-only access to a function they do not have a badge available for.

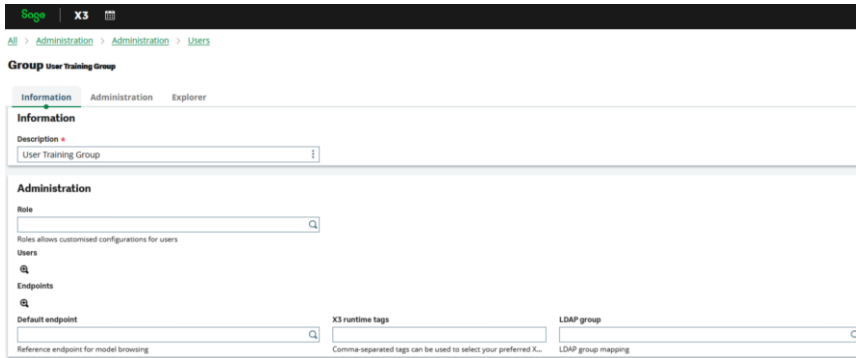
Groups

Used to simplify administration. Assigns roles and endpoints to users.

Administration, Administration, Users, Groups

<https://online-help.sageerpx3.com/erp/12/staticpost/groups/>

Description: Mandatory but can be anything.



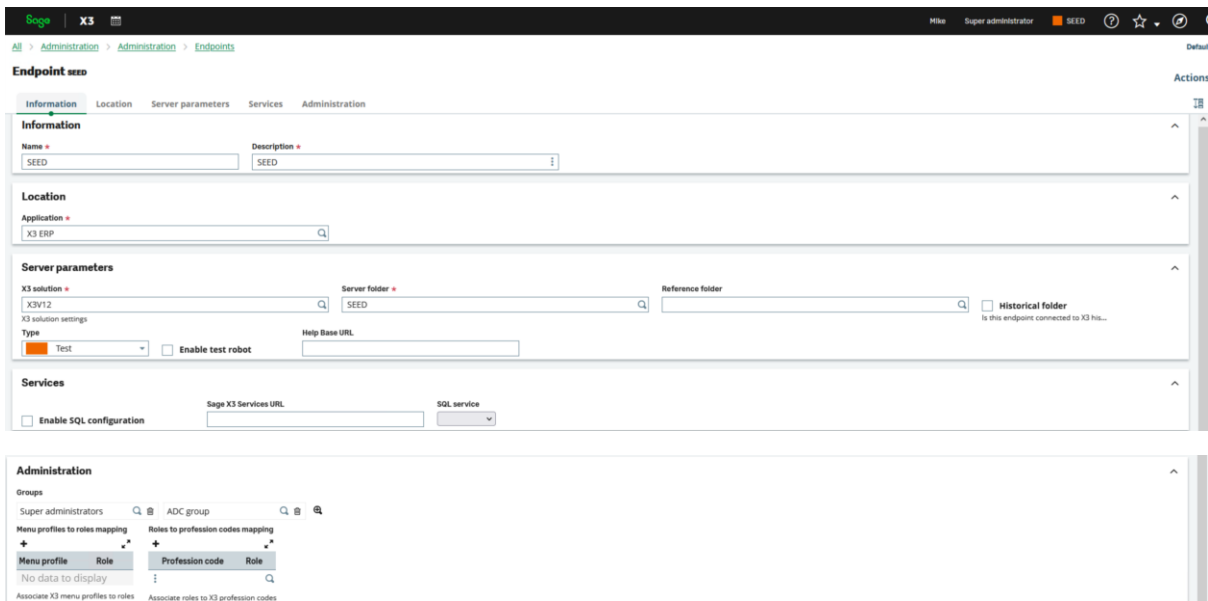
Endpoints

Configuration and link from Syracuse layer to the Classic folder.

Administration, Administration, Endpoints, Endpoints

<https://online-help.sageerpx3.com/erp/12/staticpost/endpoints/>

Edit the SEED record.



Groups section defines which Groups have access to this endpoint.

From the Actions button, select “Update professional code mappings” (or you can manually add entries) I will map ERP profession code to my training role, which will allow me to create Classic users from the Syracuse user setup (if I wish to do so) but is also used for LDAP user creation.

Roles to profession codes mapping

18 Results
Display: 50

Profession ...	Role
ACHE	Q
ADDO	Q
ADVT	Q
APPR	Q
ATEL	Q
CCPT	Q
CGES	Q
COMM	Q
DIRE	Q
ERP	Training Q
ETUD	Q
HDK	Q
MAGA	Q
PLAN	Q
RCPC	Q
RCPF	Q
REQ	Q
RESS	Q

Associate roles to X3 profession codes

Users

Syracuse layer user configuration. Every interactive user should have unique login. ([Security best practise](#))

Administration, Administration, Users, Users

<https://online-help.sageerpx3.com/erp/12/staticpost/users-4/>

Login: unique username (case insensitive) Cannot contain characters >=;< (and few other special characters) There seems to be no specific length limit in Syracuse screen (it accepts 800 characters!) but may be better to keep it to the 20-character limit for the link to the user record in the classic folder, otherwise you need to specify a more suitable Endpoints login.

Active: Must be checked to allow login.

Authentication: "Standard" is the default login method defined in Global Settings. "DB" is basic authentication which should not be used for live systems. ([Security best practise](#)) LDAP, SAML2 and OAuth2 will be available only if these are configured. Other fields depend on which Auth Method you specify.

Title: Not used anywhere.

Last name: mandatory.

Email: used by some authentication methods to link to the X3 user. (SAML2 and OAuth2)

Groups: assign relevant Groups to the user, which will give the user access to the Roles specified in the Group configuration.

Endpoints login: Not needed if the classic user login value is the same as the Syracuse layer login value. Otherwise can specify the appropriate codes. Once you complete the line, you can also use "Create X3 user" to generate the Classic user for the folder defined if needed.

The screenshot shows the Sage X3 Administration interface for the 'Users' section. It features several tabs: Login, Information, Administration, Explorer, and Custom locales. The 'Login' tab is active, showing configuration for the 'userTrain' user, including authentication methods (Standard, DB, LDAP, SAML2.0), password requirements, and LDAP synchronization settings. The 'Information' tab shows user details like title, first name, last name, email, and photo. The 'Administration' tab shows a list of groups and endpoints. A table under 'Endpoints login' shows the following data:

X3 user code	User login	Endpoint
USR1	USERTRAIN	SEED
	USERTRAIN	X3V12 / X3

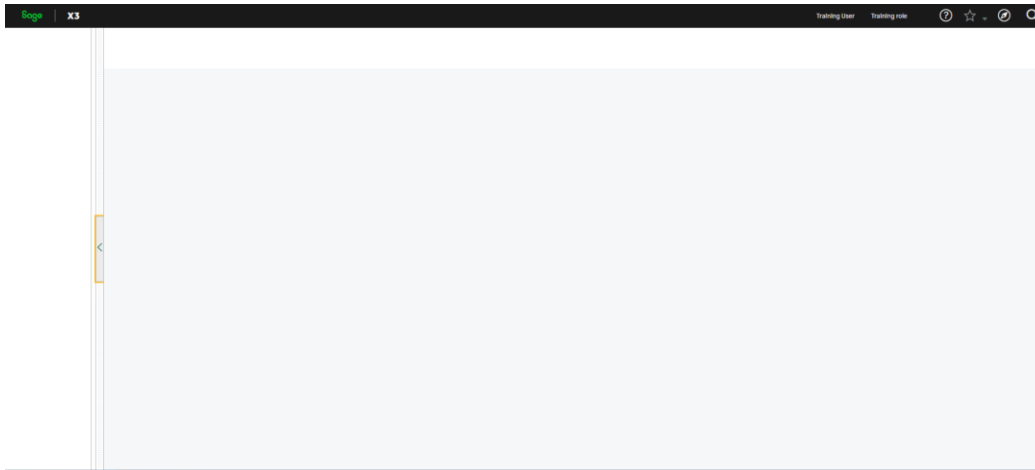
Now let us see what happens when I login as “userTrain” user

The screenshot shows the Sage X3 login page. At the top, it says 'Sage X3' and 'User userTrain does not have any role'. Below this, there are input fields for 'Login' and 'Password'. A checkbox for 'Remember me on this device' is present, along with a 'Forgot password?' link. A green 'Sign in' button is at the bottom.

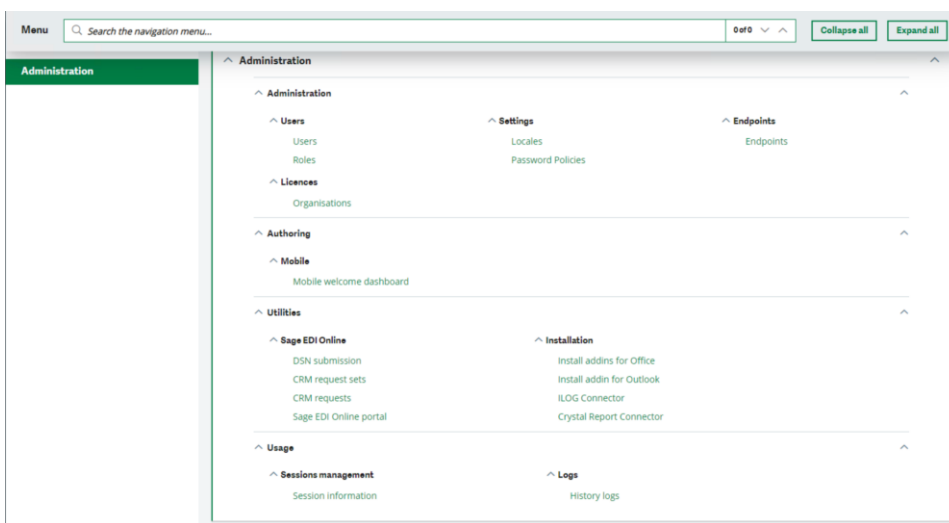
OK so “Role” is mandatory to be able to login, despite being optional in the Group setup, so I’ll add one.

The screenshot shows the Sage X3 Administration interface for the 'User Training Group'. The 'Role' field is highlighted in yellow. The page shows various configuration options for the group, including information, administration, and endpoints.

I don’t have any Landing Pages, nor the right to create one so the page looks a little sparse.



The navigation page shows me what I have access to...

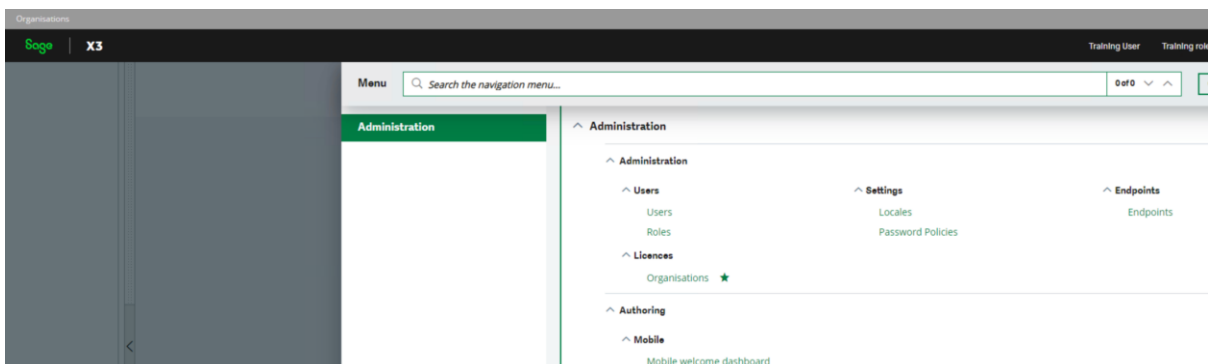


Take a look at some of these options, in the main I only have read only access to the records I am able to see. Note that although I get "Customize page" option, I cannot at this stage modify the page.

Navigation pages

As I am not all happy with all the options on the menu, although fairly unused and a bit clunky, I will edit the Navigation Page for this user.

First, I will create a shortcut for the "Organisations" function for the training user, then logout.



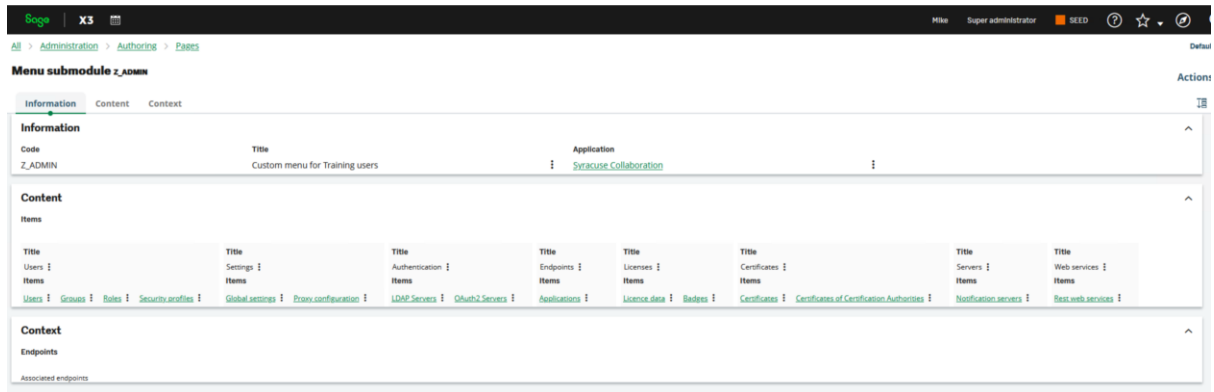
As ADMIN user I will check the default “home” navigation page then create a new custom home page.

I can't edit SAGE protected pages or menu modules, so will create custom ones first.

Administration, Authoring, Pages, Menu submodules

<https://online-help.sageerpx3.com/erp/12/staticpost/menu-submodules/>

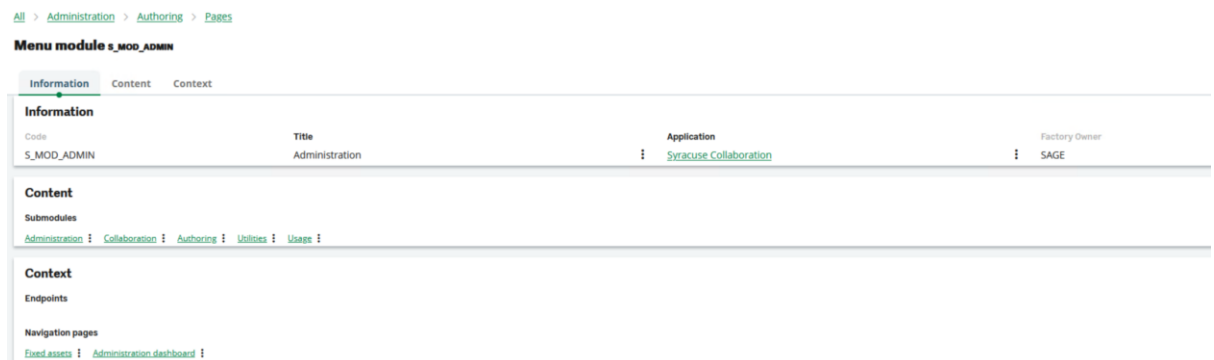
Based on S_ADMIN



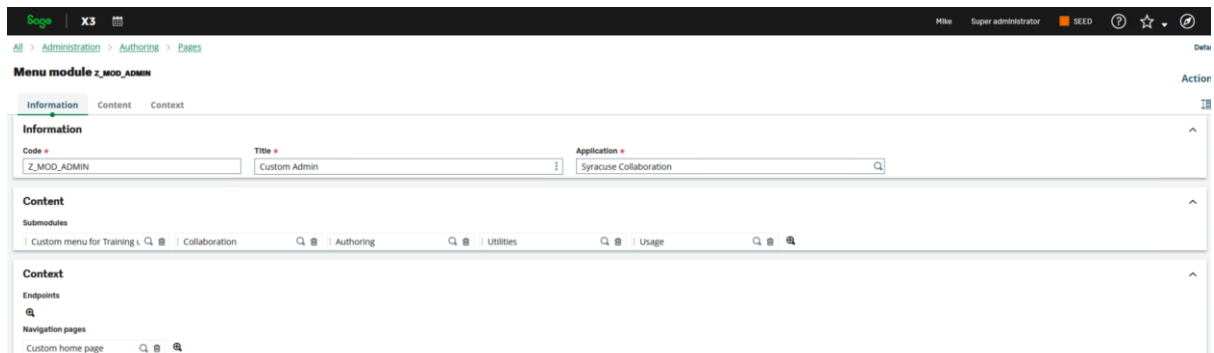
Administration, Authoring, Pages, Menu modules

<https://online-help.sageerpx3.com/erp/12/staticpost/menu-modules/>

Based on S_MOD_ADMIN

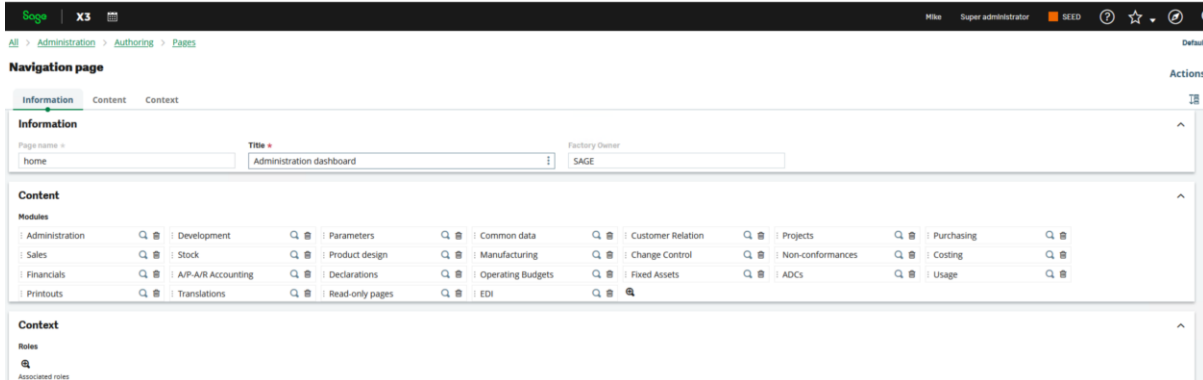


Create new one which will be my own version.

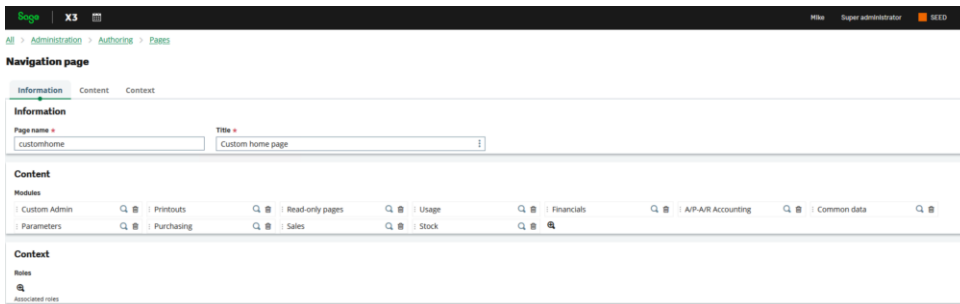


Administration, Authoring, Pages, Navigation pages

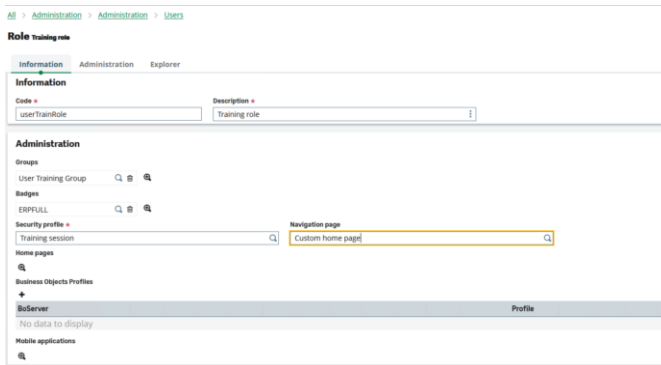
<https://online-help.sageerp3.com/erp/12/staticpost/navigation-pages/>



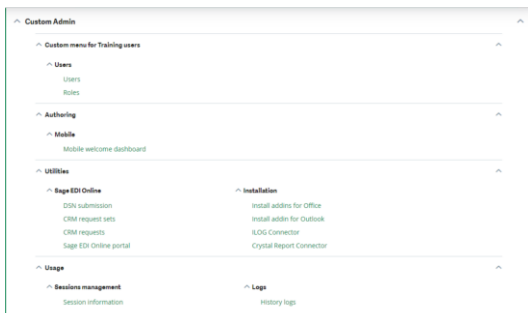
I will create new page “customhome”



Change the default Navigation Page in the Role



We can login as “userTrain” and see the change has taken effect...



...but beware, this is **not** impacting authorisation, the user can still use their Favorites (or bookmarks) to call any function they are authorised to access.

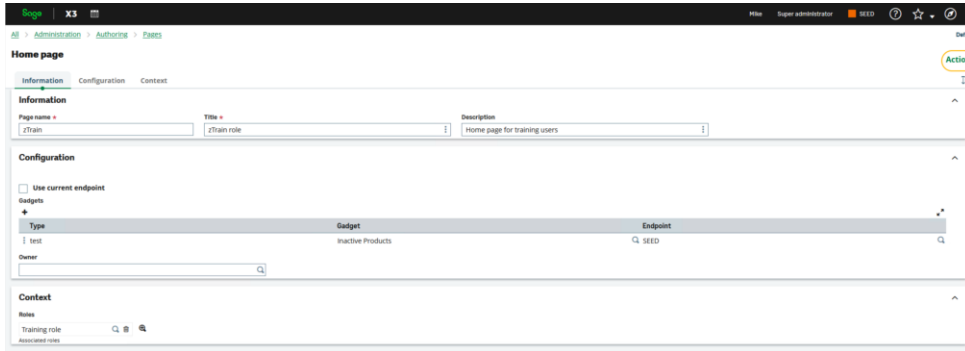
Home pages

Although my user does not have ability to create or add Home pages, an admin can assign some.

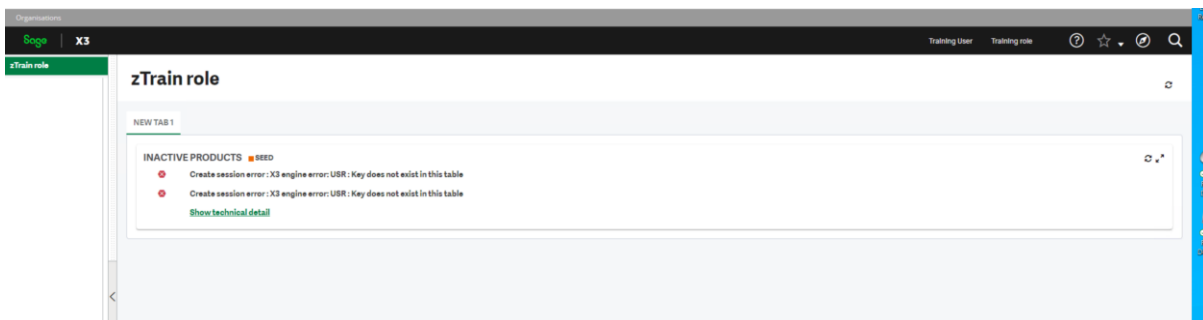
Administration, Authoring, Pages, Home pages

<https://online-help.sageerpx3.com/erp/12/staticpost/home-pages/>

As admin user I will create a custom home page and assign to the “TrainingRole”

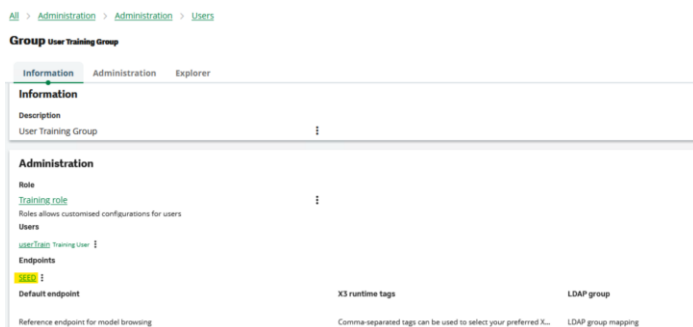


When I login as user with Training role, I will see this home page available now.

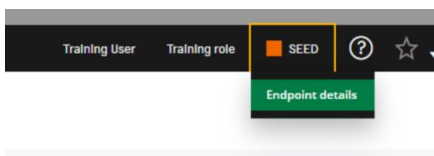


My Group does not yet have rights to the SEED folder, and I also do not have a user in the SEED folder either.

I will edit the Group to add SEED folder before proceeding with the Classic user.



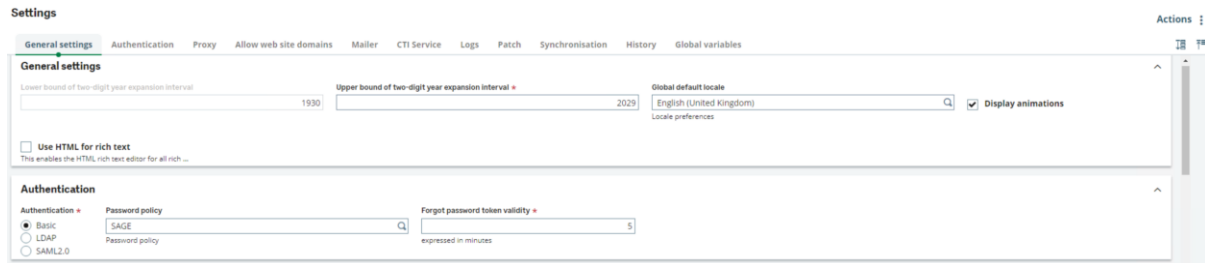
NOTE: if I don't also add the Syracuse endpoint, the user will not get the option to select this endpoint of course. This does not prevent the user from accessing the Administration section of the menu though.



Global settings

Navigate to Administration, Administration, Settings, Global settings

You can set the default login mechanism (if you have multiple setup) and the password policy for Basic authentication.

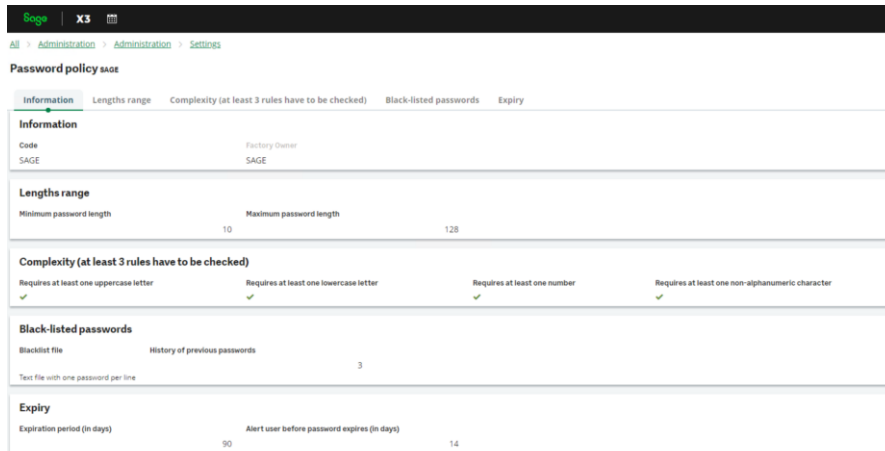


NOTE: SAML2 is shown as an option because I have a SAML2 server configured in Administration, Administration, Settings, Authentication, SAML2 id Provider

Password policies

Navigate to Administration, Administration, Settings, Password Policies

See the password policy in force and can create new.





External authentication

As per [security best practise](#), ***“you should never use the basic authentication in production, as it is only intended for demos.”***

Instead, you should use one of the other supported mechanisms:

- Sage ID
- OAuth2
- SAML2
- LDAPS

Automatically creating users

There are some circumstances where Sage X3 users can be created automatically. The most useful one is when running LDAP authentication, the LDAP Synchronisation process can create Syracuse and corresponding Classic users.

See blog article “LDAP and X3 User creation” <https://communityhub.sage.com/gb/sage-x3/b/sage-x3-uk-support-insights/posts/ldap-and-classic-users> for an example.



And finally...

This presentation has hopefully helped you understand Sage X3 users and how they interact with the Sage X3 system. If you have any questions, comments, corrections, or suggestions how this session can be improved then feel free to contact me.



Online help

Security best practices <https://online-help.sageerpx3.com/erp/12/staticpost/security-best-practices/>

<https://online-help.sageerpx3.com/erp/12/staticpost/users-implementation>

<https://online-help.sageerpx3.com/erp/12/staticpost/no-of-roles-per-user/>

[\[COEX-609\] Increase of AUB activity code Beyond 50 - Jira \(sage.com\)](#)