

Article

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DeepSee: Setting up security - Part 4 of 5

In [part 1](#), [part 2](#), and [part 3](#) of this series we set up three user types. In this part of the tutorial we see how to secure model elements (such as DeepSee cubes) and DeepSee items (such as a folder containing pivot tables and dashboards in the DeepSee User Portal).



Secure cubes and DeepSee items

DeepSee allows developers to secure model elements (i.e. cubes, subject areas, pivot tables, dashboards, KPIs, listings, listing fields). In this tutorial one of the cubes defined in the APP namespace is the INVOICES cube. In this section we will see how to secure the INVOICES cube so that pivot tables and dashboards based on this cube can only be accessed by power users and administrators (but not by simple users).

Another task performed in this section is to secure pivot tables and dashboard stored in the Admin folder. We will see how to let only power users and administrators to access pivot tables and dashboards in the Admin folder.

Create visibility roles

To secure all pivot and dashboards DeepSee elements (e.g. pivot tables, dashboards, KPIs) based on the INVOICES cube and the Admin DeepSee folder, create in the Roles page the following [visibility roles](#) with no public permissions:


Role	Purpose
clnvoices	Secure the INVOICES cube
fAdmin	Secure the Admin folder

The screenshot shows the InterSystems Security Management console. The 'Resources' page is active, displaying a list of resources. A modal window titled 'Create a New Resource Name' is open, showing the 'clnvoices' resource being created. The description is 'Secure the INVOICES cube'. The 'Public Permission' section shows 'Read', 'Write', and 'Use' permissions are unchecked. The background list of resources includes %Admin_Journal, %Admin_Manage, %Admin_Operate, %Admin_Secure, %Admin_Task, and %DB_USER.

To secure the cube, navigate to the INVOICES cube in architect. Click on the light blue bar in the central panel. In the Details panel on the right select clnvoices under Resource. Compile the cube.

Menu Home | About | Help | Logout DeepSee > Architect

Invoices* Server: **amarin-Latitude-E7470** Namespace: **APP Switch** User: **_SYSTEM** Licensed to: **ISC Development** Instance: **C173**

View:  New Open Save Compile Build Documentation

Architect

Source Class **Model Elements** Add Element Undo Expand All Collapse


▼ User.InvoicesSource


- ☐ %ID
- ☐ Date
- ☐ InvoiceNumber
- ☐ LineItems
- ☐ Status


» Invoices **Element Type Details**


▼ Measures


▼ Dimensions



▼ %ID **data dimension** 




H1 **hierarchy** 




%ID level 1 %ID 


▼ Date **time dimension** **Date** 


H1 **hierarchy** 


Year level 1 Year  


Month level 2 MonthNumber   


Date level 3 DayMonthYear   


▼ InvoiceNumber **data dimension** 

H1 **hierarchy** 

InvoiceNumber level 1 InvoiceNumber 

▼ Status **data dimension** 

H1 **hierarchy** 

Status level 1 Status 

▼ Listings

▼ Listing Fields

▼ Calculated Members

▼ Named Sets

▼ Relationships

▼ Expressions

Details **Tools**

Cube Disabled ☐

Cube Name

Invoices

Display name

Invoices

Description

Caption Domain

Source class

User.InvoicesSource

Null replacement string

Default listing

▼

Owner **Resource** **clnvoices**

Count measure name Count measure caption

%COUNT

Initial build order Build restriction

Class name

User.Invoices

To secure the DeepSee items in the Admin folder, navigate to Folder Manager and click on the Admin folder. In the Details box on the left under Resource select fAdmin and save.

Menu Home | About | Help | Logout DeepSee > Folder Manager

Folder Manager Server: **amarin-Latitude-E7470** Namespace: **APP Switch** User: **_SYSTEM** Licensed to: **ISC Development** Instance: **C172**

Search:

Folder Manager

The Folder Manager lets you import, export, and delete items within user folders.

Export/Import Location

• Server • Browser

Server Directory

☐ Create Container Class For Export

Export Import Delete Browse

Details **Directory**

Name

Admin

Resource

fAdmin

Save Folder

Name	Type	Created by	Public
Fun facts	DASHBOARD	admin	Yes
My private pivot	PIVOT	_SYSTEM	
Pivot	PIVOT	_SYSTEM	
Admin	Folder		
Invoices	DASHBOARD	admin	Yes
Invoices	PIVOT	admin	Yes

Create a DSInvoices role

Next, add the two visibility roles we just created to a new DSInvoices role.

Menu Home | About | Help | Logout System > Security Management > Roles > Edit Role

Edit: DSInvoices Server: **amarin-Latitude-E7470** Namespace: **%SYS**
User: **UnknownUser** Licensed to: **ISC Development** Instance: **C173**

Save Cancel Edit Role

Edit definition for role DSInvoices:

Role saved.

General Members Assigned To SQL Privileges SQL Tables SQL Views SQL Procedures

Name: DSInvoices
Required.

Description:

Privileges:

Resource	Permission	Edit	Delete
clnvoices	RWU	Edit	Delete
fAdmin	RWU	Edit	Delete

Add...

Extend poweruser and the Admin user

Assign the DSInvoices role to poweruser and the Admin users, but not to simpleuser.

Menu Home | About | Help | Logout System > Security Management > Users > Edit User

Edit: Admin Server: **amarin-Latitude-E7470** Namespace: **%SYS**
User: **UnknownUser** Licensed to: **ISC Development** Instance: **C173**

Save Profile Cancel Edit User

Edit definition for user Admin:

General Roles SQL Privileges SQL Tables SQL Views SQL Procedures

User Admin is assigned to the following roles:

Role Name	Grant Option	
DSAdmin	<input type="checkbox"/>	Remove
DSInvoices	<input type="checkbox"/>	Remove

Remove All

Assign the user to additional roles by selecting one or more available roles and pressing [Assign].

Available

----- Select One or More -----

- %All
- %DB_%DEFAULT
- %DB_APP-CACHE
- %DB_APP-CODE
- %DB_APP-DATA
- %DB_APP-DEEPSEE
- %DB_APP-DSTIME
- %DB_APP-FACT
- %DB_APP-INDEX
- %DB_CACHE
- %DB_CACHEAUDIT
- %DB_CACHelib
- %DB_CACHESYS
- %DB_CACHETEMP

Selected

----- Select One or More -----

[Assign](#)

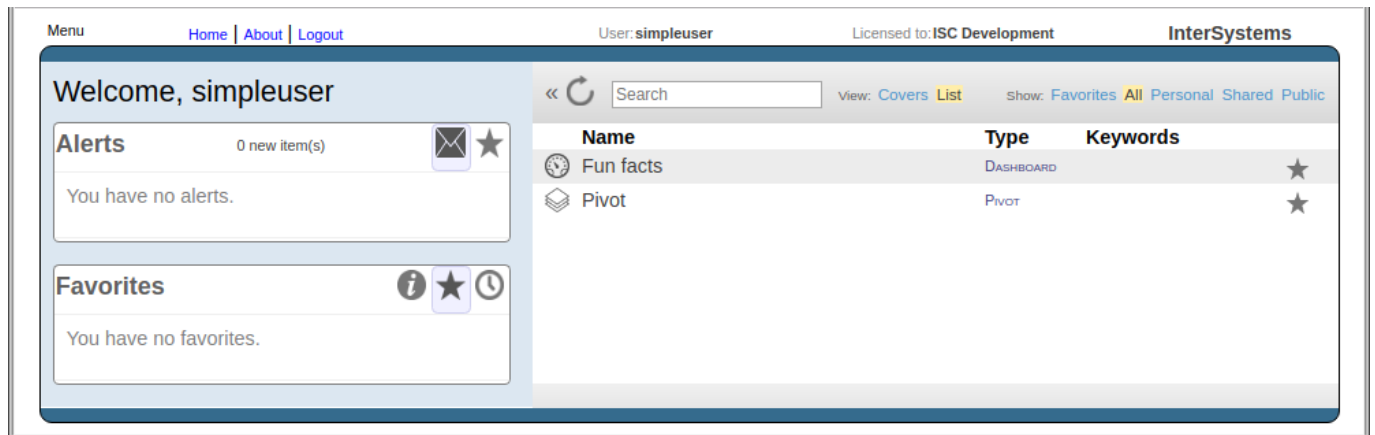
[Assign with Grant Option](#)

Hold the [Shift] or [Ctrl] key while clicking to select multiple roles.

Test the users

Open an incognito/private window of your browser and log in with simpleuser, poweruser, and Admin. Navigate to Analyzer and User Portal and confirm that the Admin folder is visible for poweruser and Admin but not for

simpleuser. As shown in the example below, simpleuser can only see pivot tables and dashboards outside the Admin folder that not based on the INVOICES cube ("Fun facts" and "Pivot" in the example below):



In the [last part](#) of these series we will conclude with some remarks and troubleshooting tips, including how to "hide" pivot tables in User Portal.

[#Access control](#) [#Beginner](#) [#Security](#) [#InterSystems IRIS BI \(DeepSee\)](#)

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