



# GRIN-Global – Administrator Webinar

## Session 5 Topics:

Searches (cont'd)

Security / Ownership / Permissions

Triggers

martin reisinger,  
instructor

# Review

- Questions regarding any topics covered in the Previous Sessions
  - ???
  - Data view editing???
  - Table mapping???

# Indexed Searches

...what does the Search Engine (SE) Search?

C. Words are also checked in any *full-text indexes*

The DBA can index any text field, usually large fields such as Note fields


The GG table **sys.fulltext.indexes** lists these fields

# How would you know what fields are indexed?

```
SELECT DISTINCT
    object_name(fic.[object_id])as
table_name,
    [name]
FROM
    sys.fulltext_index_columns fic
INNER JOIN sys.columns c
    ON c.[object_id] = fic.[object_id]
    AND c.[column_id] = fic.[column_id]
```

# Example: Fields Indexed at USDA GG

Showing 1 to 10 of 10 entries

| <b>table_name</b>    |  <b>name</b> |
|----------------------|---|
| accession            | note  |
| accession_inv_name   | plant_name  |
| accession_ipr        | ipr_number  |
| accession_pedigree   | description   |
| accession_source     | associated_species  |
| accession_source     | collector_verbatim_locality   |
| accession_source     | environment_description   |
| taxonomy_common_name | name  |
| taxonomy_common_name | simplified_name   |
| taxonomy_species     | name  |

Showing 1 to 10 of 10 entries

# IW Quick Review

## Use **Import Table Fields** –

A quick dump of the database fields & their default friendly names

# IW Quick Review... [CIP Crop Trait Wizard]

GRIN-Global Import Wizard v 1.10.3.0

1. Choose Type of Data      2. Specify Data      3. View Results

localhost\sqlexpress      07 - Crop Trait (Characterization / Evaluation Descriptors)

\* - Required Field      Load from file...

| Crop * | Note                 | Category *      | Trait Name *  | Trait Name       | Trait Description | Is Peer Reviewed? *                 | Data Type *     |
|--------|----------------------|-----------------|---------------|------------------|-------------------|-------------------------------------|-----------------|
| TOMATO | Contains data on ... | Environment...  | 24D           | 2,4-D            | TOLERANCE TO...   | <input checked="" type="checkbox"/> | Alpha/numeri... |
| TOMATO | Contains data on ... | Environment...  | 24D           | 2,4-D            | TOLERANCE TO...   | <input checked="" type="checkbox"/> | Alpha/numeri... |
| TOMATO | Contains data on ... | Production d... | ACIDITY       | TITRATABLE AC... | THE TITRATAB...   | <input checked="" type="checkbox"/> | Numeric des...  |
| TOMATO | Contains data on ... | Production d... | ALUMINUM      | ALUMINUM CO...   | ALUMINUM CO...    | <input checked="" type="checkbox"/> | Numeric des...  |
| TOMATO | Contains data on ... | Production d... | ASCORBIC ACID | ASCORBIC ACID    | AMOUNT OF AS...   | <input checked="" type="checkbox"/> | Numeric des...  |
| TOMATO | Contains data on ... | Disease des...  | BACTCANKER    | BACTERIAL CA...  | RESISTANCE T...   | <input checked="" type="checkbox"/> | Alpha/numeri... |
| TOMATO | Contains data on ... | Disease des...  | BACTCANKER    | BACTERIAL CA...  | RESISTANCE T...   | <input checked="" type="checkbox"/> | Alpha/numeri... |
| TOMATO | Contains data on ... | Disease des...  | BACTCANKER    | BACTERIAL CA...  | RESISTANCE T...   | <input checked="" type="checkbox"/> | Alpha/numeri... |

Cancel      < Previous      Import

# Security Model

Two broad concepts must be understood:

1. ownership
2. permissions



# Security Model

Two broad concepts must be understood:

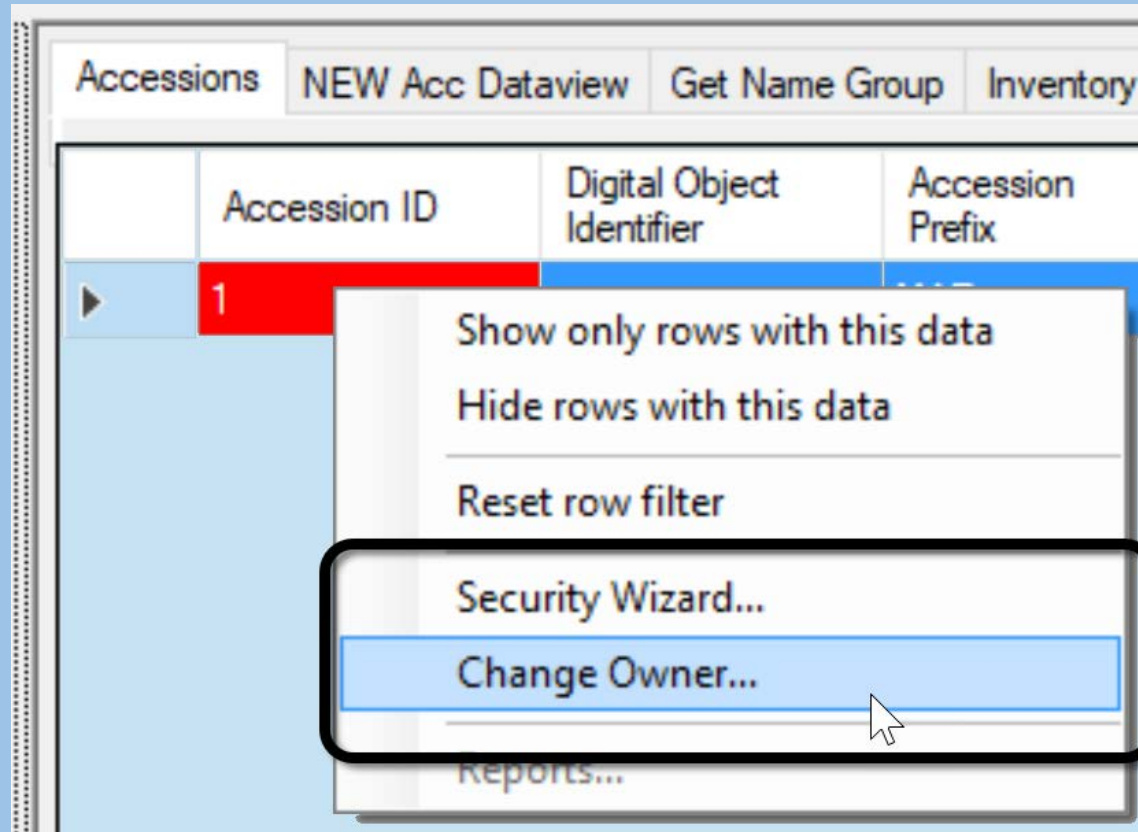
1. ownership
2. permissions

Also remember that the CT and the AT work in tandem



# Ownership: It is true that...

- Every GG record has *only* **1 owner**
- In the CT, an owner can  
(A) transfer *ownership*  
(B) give *permission* to others to delete or update records



CT screen; user owns the highlighted record

# Ownership

Generally, in the CT, anyone can create a record in any table

*Usually the creator* becomes the owner &  
the *only person* that can modify or update the record

# Ownership

The basic ownership model is that anyone can create a record in any table.

*Usually the creator* becomes the owner & the *only person* that can modify or update the record.

...but *not always*.

# Ownership works in tandem with Permissions

Much of the security desired in GG may be set within the Curator Tool

...by the owner of the record,  
assigning *permissions* to other users



# CT Security Wizard

The screenshot shows the 'Security Wizard v1.9.8.30' window. It features several sections: 'Policies' on the left with a list containing 'Marty's GEN Rule' (callout 2) and an 'Add Policy' button (callout 1); 'Permissions' at the top right with dropdowns for Read (Inherit, callout 3), Update (Allow, callout 3), Create (Inherit, callout 3), and Delete (Allow, callout 4); 'Scope' in the middle left with a 'Tables' list including 'accession' and its sub-items (callout 5), and a checked 'Include Child Tables' option; 'Row Restrictions' in the middle right with 'All My Rows' selected (callout 6); and 'Users' on the right with a list of users (callout 7) and an 'Edit User List' button. At the bottom right are 'Save' (callout 8) and 'Cancel' buttons.

The user documentation is at

[https://www.grin-global.org/docs/gg\\_security.docx](https://www.grin-global.org/docs/gg_security.docx)

# Owners can also transfer ownership

Accessions NEW Acc Dataview Get Name Group Inventory Get Inventory Maintenance Policy Orders Cooperators Get Site Get Sys Datavi

|  | Accession ID | Digital Object Identifier | Accession Prefix | Accession Number | Accession Suffix | Taxon               | Name |
|--|--------------|---------------------------|------------------|------------------|------------------|---------------------|------|
|  | 1            |                           | MAR              | 1                | RRG              | Humulus lupulus ... |      |
|  | 4700         |                           | MAR              | 2                | RRG              | Humulus lupulus     |      |

Show only rows with this data  
Hide rows with this data  
Reset row filter  
Security Wizard...  
Change Owner...  
Reports...

Change Ownership ...

New Owner:

☐ Selected rows only  
☐ Selected rows and all children rows

OK Cancel

# Ownership

However, some subsidiary tables have ownership that flows from a parent table.

Set up this way so that the owner of the important parent record would be able to also manage the subsidiary child tables

PARENT-OWNER



# Example: accession action's owner is the owner of the related accession record

GRIN-Global Admin v 2.0.3.0 - [Table Mapping - accession\_action - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Table Mappings > accession\_action

Database Area:  ☒ Enabled

Fields Relationships Indexes

| Child                          | Type             | Parent                   |
|--------------------------------|------------------|--------------------------|
| accession_action.accession_id  | Parent and owner | accession.accession_id   |
| accession_action.cooperator_id | Parent           | cooperator.cooperator_id |
| accession_action.created_by    | Parent           | cooperator.cooperator_id |
| accession_action.modified_by   | Parent           | cooperator.cooperator_id |
| accession_action.owned_by      | Parent           | cooperator.cooperator_id |
| accession_action.method_id     | Parent           | method.method_id         |

# Two examples where the user creates the record but does not own it

- crop observation records
- inventory records

# Crop Trait Observation

GRIN-Global Admin v 2.0.3.0 - [Table Mapping - crop\_trait\_observation - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Table Mappings > crop trait observation

Database Area: CROP ☒ Enabled

Fields Relationships Indexes

| Child                                     | Type             | Parent                             |
|---|------------------|------------------------------------|
| crop_trait_observation.created_by         | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.modified_by        | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.owned_by           | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.crop_trait_id      | Parent           | crop_trait.crop_trait_id           |
| crop_trait_observation.crop_trait_code... | Parent           | crop_trait_code.crop_trait_code_id |
| crop_trait_observation.inventory_id       | Parent and owner | inventory.inventory_id             |
| crop_trait_observation.method_id          | Parent           | method.method_id                   |

# Crop Trait Observation

GRIN-Global Admin v 2.0.3.0 - [Table Mapping - crop\_trait\_observation - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Table Mappings > crop trait observation

Database Area: CROP ☒ Enabled

Fields Relationships Indexes

| Child                                     | Type             | Parent                             |
|---|------------------|------------------------------------|
| crop_trait_observation.created_by         | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.modified_by        | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.owned_by           | Parent           | cooperator.cooperator_id           |
| crop_trait_observation.crop_trait_id      | Parent           | crop_trait.crop_trait_id           |
| crop_trait_observation.crop_trait_code... | Parent           | crop_trait_code.crop_trait_code_id |
| crop_trait_observation.inventory_id       | Parent and owner | inventory.inventory_id             |
| crop_trait_observation.method_id          | Parent           | method.method_id                   |

When relationship type is “OWNER\_PARENT,” the record in the child table is owned by the owner of the parent record



# Inventory Records

GRIN-Global Admin v 2.0.3.0 - [Table Mapping - inventory - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Table Mappings > inventory

Database Area: INVENTORY ☒ Enabled

Fields Relationships Indexes

| Child                               | Type                    | Parent   |
|-------------------------------------|-------------------------|--|
| inventory.accession_id              | Parent                  | accession.accession_id                           |
| inventory.created_by                | Parent                  | cooperator.cooperator_id                         |
| inventory.modified_by               | Parent                  | cooperator.cooperator_id                         |
| inventory.owned_by                  | Parent                  | cooperator.cooperator_id                         |
| inventory.backup_inventory_id       | Self-referential parent | inventory.inventory_id                           |
| inventory.parent_inventory_id       | Self-referential parent | inventory.inventory_id                           |
| inventory.inventory_maint_policy_id | Parent and owner        | inventory_maint_policy.inventory_maint_policy_id |
| inventory.preservation_method_id    | Parent                  | method.method_id                                 |
| inventory.regeneration_method_id    | Parent                  | method.method_id                                 |

The owner of the Maintenance Policy is the owner of the inventory record

Why not have the Accession owner also own the Inventory record?

USDA set this up -- the owner of the Inventory Maintenance Policy owns the Inventory record,

so that their Ft. Collins site, where backup inventory is maintained, can control the respective inventory records at Ft. Collins

# Inventory Ownership – Can You Change This?

Yes

# Inventory Records

GRIN-Global Admin v 2.0.3.0 - [Table Mapping - inventory - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Table Mappings > inventory

Database Area: INVENTORY ☒ Enabled

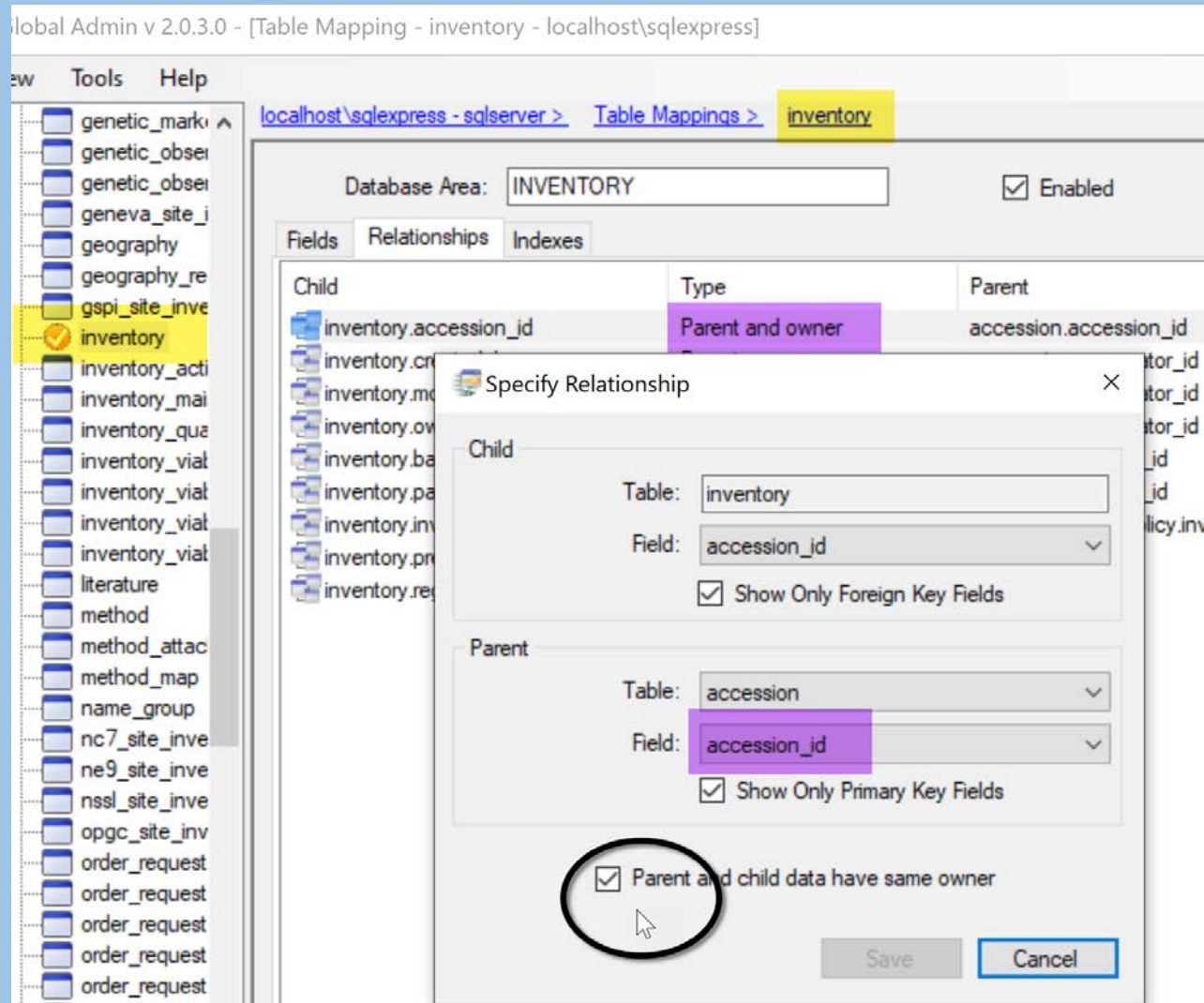
Fields Relationships Indexes

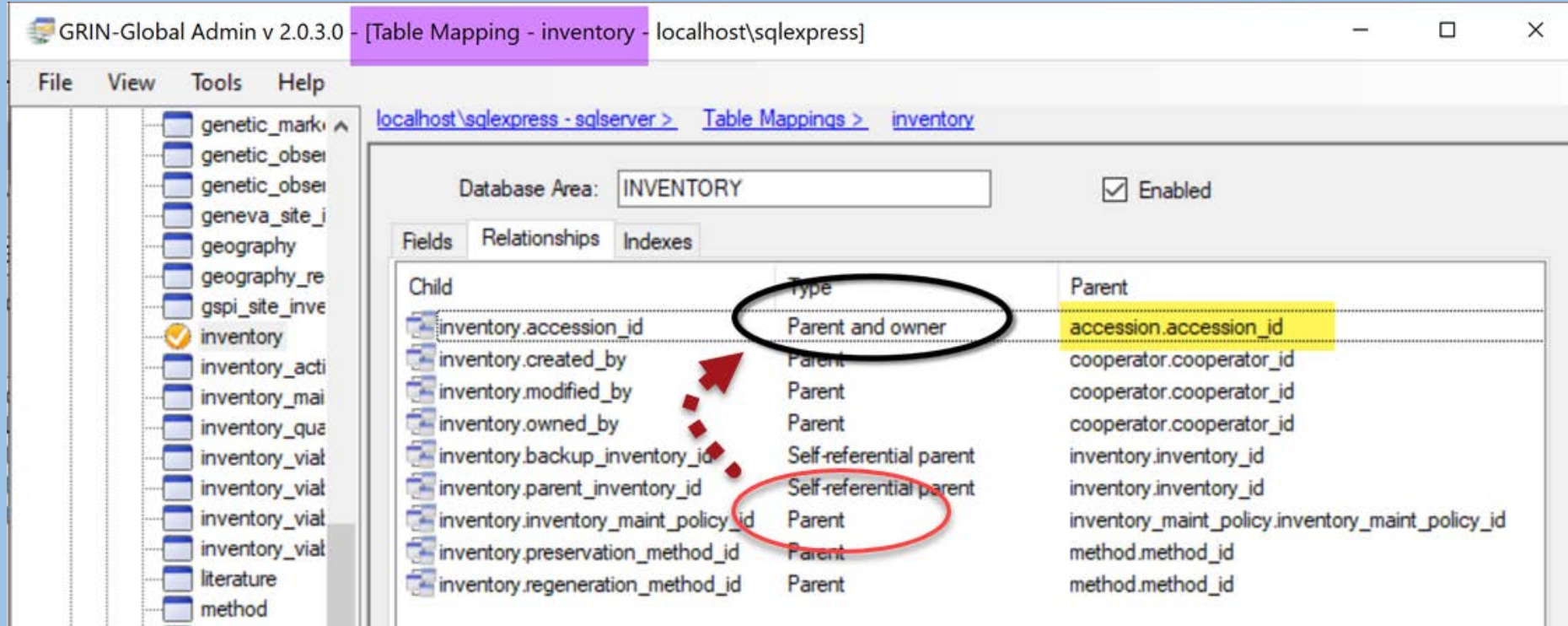
| Child                               | Type                    | Parent   |
|-------------------------------------|-------------------------|--|
| inventory.accession_id              | Parent                  | accession.accession_id                           |
| inventory.created_by                | Parent                  | cooperator.cooperator_id                         |
| inventory.modified_by               | Parent                  | cooperator.cooperator_id                         |
| inventory.owned_by                  | Parent                  | cooperator.cooperator_id                         |
| inventory.backup_inventory_id       | Self-referential parent | inventory.inventory_id                           |
| inventory.parent_inventory_id       | Self-referential parent | inventory.inventory_id                           |
| inventory.inventory_maint_policy_id | Parent and owner        | inventory_maint_policy.inventory_maint_policy_id |
| inventory.preservation_method_id    | Parent                  | method.method_id                                 |
| inventory.regeneration_method_id    | Parent                  | method.method_id                                 |

The owner of the Maintenance Policy is the owner of the inventory record



# via Table Mapping





now the owner of the accession record  
owns the inventory

from: ☐ Show All  
 man, Rei Group

le Sub-Folders

ab 1 Root Folder

New List

- MAR\_2\_RRG
- MAR\_2\_RRG\_\*\*
- MAR\_2\_RRG\_SD

Accession **Inventory** Orders Cooperators ...

| Inventory ID | Inventory Prefix | Inventory Number | Inventory Suffix | Inventory Type | Accession | Inventory Maintenance Policy | Inventory Maintenance Site | Created Date   | Created By                  | Owned Date     | Owned By                     |
|--------------|------------------|------------------|------------------|----------------|-----------|------------------------------|----------------------------|----------------|-----------------------------|----------------|------------------------------|
| 4700         | MAR              | 2                | RRG              | **             | MAR 2 RRG | SYSTEM                       | DBMU                       | 12/5/2020 7... | Reisinger, Martin, Reisi... | 12/5/2020 7... | Reisinger, Martin, Reisin... |
| 4701         | MAR              | 2                | RRG              | SD             | MAR 2 RRG | MAR-Hum                      | DBMU                       | 12/5/2020 7... | Alias, Herman, Rei Gro...   | 12/5/2020 7... | Reisinger, Martin, Reisin... |

| Created By                  | Owned By                     |
|-----------------------------|------------------------------|
| Reisinger, Martin, Reisi... | Reisinger, Martin, Reisin... |
| Alias, Herman, Rei Gro...   | Reisinger, Martin, Reisin... |

New Inventory record is owned by the owner of the accession

# SQL for Listing OWNER-PARENT Relationships

```
SELECT st1.table_name AS child, st2.table_name AS owner
FROM sys_table_relationship str
JOIN sys_table_field stf1 ON stf1.sys_table_field_id = str.sys_table_field_id
JOIN sys_table st1 ON st1.sys_table_id = stf1.sys_table_id
JOIN sys_table_field stf2 ON stf2.sys_table_field_id = str.other_table_field_id
JOIN sys_table st2 ON st2.sys_table_id = stf2.sys_table_id
WHERE relationship_type_tag = 'OWNER_PARENT'
```

The OWNER-PARENT setting in the **sys\_table\_relationship** table indicates which table, if any, acts as the owning parent

Can you change the Owner when the owner is no longer in the organization?

Can you change the Owner when the owner is no longer in the organization?

Of course!

the Administrator is the ruler of the database

& anyone in the Administrator Group

# Users, Groups, & Permissions

Permissions -- Who can do what to a record:

- Read
- Update
- Delete
- Create

# Users

GRIN-Global Admin v 2.0.3.0 - [Users - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqls
  - Groups
  - Users**

New User...

Refresh

Properties

localhost\sqlexpress - sqlserver > Users

| User Name         | Full Name                       | Admin? | Enabled? | Language | Web Login |
|-------------------|---------------------------------|--------|----------|----------|-----------|
| administrator     | SYSTEM, Administrator           | Y      | Y        | English  |           |
| donald@mginc.com  | Duck, Donald The Duck O...      | N      | Y        | English  |           |
| guest             | SYSTEM, Guest                   | N      | Y        | English  |           |
| mar@mginc.com     | Reisinger, Martin Reisinger ... | N      | Y        | English  |           |
| mar4064@mginc.com | Alias, Heman Rei Group          | N      | Y        | English  |           |
| martinA@mginc.com | Reisinger, MartinA Reising...   | Y      | Y        | English  |           |

2 users who should never be touched!



# Adding CT Users...

Must complete...

- User Name & Password
- Geography and Site codes
- Enabled (checkbox) allows CT login
- Active (checkbox) (if this user will be an active cooperator)
- Groups: CT Users

User Users - localhost\\sqlexpress

**General** Permissions Groups

User Name:   Password must be set before saving 1

☒ Enabled

Cooperator Information

General Web Login Contact Info Geographic Notes

Current Cooperator is (none) 

Title: First Name: Last Name:

2

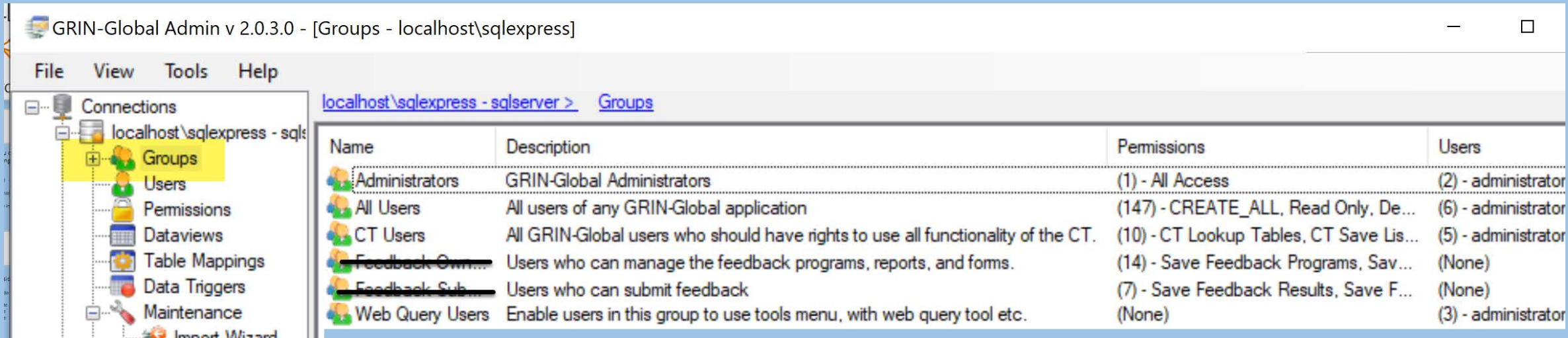
Full Name (for display):

Job:  Discipline:

Organization:  Organization Abbreviation:

Language:  ☐ Active

# Groups



GRIN-Global Admin v 2.0.3.0 - [Groups - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Groups

| Name                       | Description  | Permissions                             | Users               |
|----------------------------|--|---|---------------------|
| Administrators             | GRIN-Global Administrators   | (1) - All Access                        | (2) - administrator |
| All Users                  | All users of any GRIN-Global application   | (147) - CREATE_ALL, Read Only, De...    | (6) - administrator |
| CT Users                   | All GRIN-Global users who should have rights to use all functionality of the CT. | (10) - CT Lookup Tables, CT Save Lis... | (5) - administrator |
| <del>Feedback Own...</del> | Users who can manage the feedback programs, reports, and forms.                  | (14) - Save Feedback Programs, Sav...   | (None)              |
| <del>Feedback Sub...</del> | Users who can submit feedback  | (7) - Save Feedback Results, Save F...  | (None)              |
| Web Query Users            | Enable users in this group to use tools menu, with web query tool etc.           | (None)                                  | (3) - administrator |

The web application (Public Website) allows a user to be anonymous. That account is the “**guest**” account. It should never be a member of the **CT Users** or **Administrators** groups.



# Permissions – 2 types – created by:

1. fellow CT users for other CT users
2. the GG Admin

# Permissions Created by a User

Using the Curator Tool's Security Wizard...

- a record owner...

- defines access for records which she owns  
to other CT users

# CT Security Wizard

The screenshot shows the 'Security Wizard v1.9.8.30' window. It features several sections: 'Policies' on the left with a list containing 'Marty's GEN Rule' (callout 2) and an 'Add Policy' button (callout 1); 'Permissions' at the top right with dropdowns for Read (Inherit, crossed out), Update (Allow, callout 3), Create (Inherit, crossed out), and Delete (Allow, callout 4); 'Scope' in the middle left with a 'Tables' list including 'accession' and its sub-items (callout 5 points to the list), and a checked 'Include Child Tables' option; 'Row Restrictions' in the middle right with 'All My Rows' selected (callout 6) and an empty 'Selected Rows' section; and 'Users' on the right with a list of users (callout 7) and an 'Edit User List' button. At the bottom right are 'Save' (callout 8) and 'Cancel' buttons.

The user documentation is at

[https://www.grin-global.org/docs/gg\\_security.docx](https://www.grin-global.org/docs/gg_security.docx)

# Permissions Created by a User

Using the Curator Tool's Security Wizard...

- a record owner...

- defines access for records which she owns
  - to other CT users

CT user security policies are usually adequate for most of an organization's security needs

# Debugging: Permissions issues: Review Policies Created by Users

GRIN-Global Admin v 2.0.3.0 - [User donald@rrginc.com - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqlserver
  - Groups
  - Users
    - administrator
    - donald@rrginc.com
    - guest
    - mar@rrginc.com
    - mar4064@rrginc.com
    - martinA@rrginc.com
    - reed@rrginc.com
  - Permissions
  - Dataviews

localhost\sqlexpress - sqlserver > Users > donald@rrginc.com

General Permissions **Groups**

Group Membership

| Name        | Description  |
|-------------|--|
| All Users   | All users of any GRIN-Global application   |
| CT Users    | All GRIN-Global users who should have rights to use all functionality of the CT. |
| ReadersOnly | Read Only - a safe way to CT   |
| Donald Duck |  |
| Colleagues  |  |

# Debugging: Permissions issues: Review Policies Created by Users

GRIN-Global Admin v 2.0.3.0 - [User donald@rrginc.com - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserv > Users > donald@rrginc.com

Assigned Permissions

| Group       | Name              | Resource                    | Create  | Read    | Update  | Delete  | Restricted To  |
|-------------|-------------------|-----------------------------|---------|---------|---------|---------|--|
| All Users   | CREATE_ALL        | -- any resource --          | Allow   | Inherit | Inherit | Inherit | -  |
| All Users   | Read Only         | -- any resource --          | Deny    | Allow   | Deny    | Deny    | -  |
| ReadersOnly | Read Only         | -- any resource --          | Deny    | Allow   | Deny    | Deny    | -  |
| CT Users    | CT Lookup Ta...   | get_lookup_table_list (...) | Inherit | Allow   | Inherit | Inherit | -  |
| Colleagues  |                   | accession                   | Inherit | Inherit | Allow   | Deny    | accession.owned_by in 830 and accession.owned_by in 830 (for all children) |
| Donald Duck |                   | accession                   | Inherit | Inherit | Deny    | Deny    | accession.owned_by in 830 and accession.owned_by in 830 (for all children) |
| All Users   | Default - acce... | accession                   | Allow   | Allow   | Allow   | Allow   | accession.owned_by = __CURRENTCOOPERATORID__                               |
| All Users   | Default - acce... | accession action            | Allow   | Allow   | Allow   | Allow   | accession action owned by = __CURRENTCOOPERATORID__                        |



# AT: Review Permission Policies Created by Users

GRIN-Global Admin v 2.0.3.0 - [User donald@rrginc.com - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqlserver
  - Groups
  - Users
    - administrator
    - donald@rrginc.com
    - guest
    - mar@rrginc.com
    - mar4064@rrginc.com
    - martinA@rrginc.com
  - Permissions
    - SW - mar@rrginc.com - Donald Duck
    - SW - mar@rrginc.com - Colleagues
    - All Access
    - CREATE\_ALL

localhost\sqlexpress - sqlserver > Users > donald@rrginc.com

General Permissions Groups

Assigned Permissions

| Group       | Name              | Resource                    | Create  | Read    | Update  | Delete  | Restricted To                        |
|-------------|-------------------|-----------------------------|---------|---------|---------|---------|--------------------------------------|
| All Users   | CREATE_ALL        | -- any resource --          | Allow   | Inherit | Inherit | Inherit | -                                    |
| All Users   | Read Only         | -- any resource --          | Deny    | Allow   | Deny    | Deny    | -                                    |
| ReadersOnly | Read Only         | -- any resource --          | Deny    | Allow   | Deny    | Deny    | -                                    |
| CT Users    | CT Lookup Ta...   | get_lookup_table_list (...) | Inherit | Allow   | Inherit | Inherit | -                                    |
| Colleagues  |                   | accession                   | Inherit | Inherit | Allow   | Deny    | accession.accession_id in 1 and acc. |
| Donald Duck |                   | accession                   | Inherit | Inherit | Deny    | Deny    | accession.owned_by in 830 and acc.   |
| All Users   | Default - acce... | accession                   | Allow   | Allow   | Allow   | Allow   | accession.owned_by = __CURRENT.      |

# AT: Review Permission Policies Created by Users

GRIN-Global Admin v 2.0.3.0 - [Permissions - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Permissions

| Permission                           | Resource           | Enabled? | Create  | Read    | Update  | Delete  | Restrict To  |
|--------------------------------------|--------------------|----------|---------|---------|---------|---------|--|
| SW - mar@rginc.com - Donald Duck     | accession          | Y        | Inherit | Inherit | Deny    | Deny    | accession.owned_by in 830 (for all children) and accession.owned_by in 830 |
| SW - mar@rginc.com - Colleagues      | accession          | Y        | Inherit | Inherit | Allow   | Deny    | accession.owned_by in 830 (for all children) and accession.owned_by in 830 |
| All Access                           | -- any resource -- | Y        | Allow   | Allow   | Allow   | Allow   | -  |
| CREATE_ALL                           | -- any resource -- | Y        | Allow   | Inherit | Inherit | Inherit | -  |
| CT Lookup Tables                     | get_lookup_ta...   | Y        | Inherit | Allow   | Inherit | Inherit | -  |
| CT Save Lists                        | app_user_item...   | Y        | Allow   | Allow   | Allow   | Allow   | app_user_item_list.cooperator_id in __CURRENTCOOPERATORID__                |
| CT Save Settings                     | app_user_gui_...   | Y        | Allow   | Allow   | Allow   | Allow   | app_user_gui_setting.owned_by = __CURRENTCOOPERATORID__                    |
| CT Security Wizard - group languages | sys_group_lang     | Y        | Allow   | Allow   | Allow   | Allow   | sys_group_lang.owned_by = CURRENTCOOPERATORID                              |

# System Permissions

Defined by the Administrator using the AT;

- aren't restricted to rows owned by a single user

- can allow rights to all rows in a table  
(or even all tables)

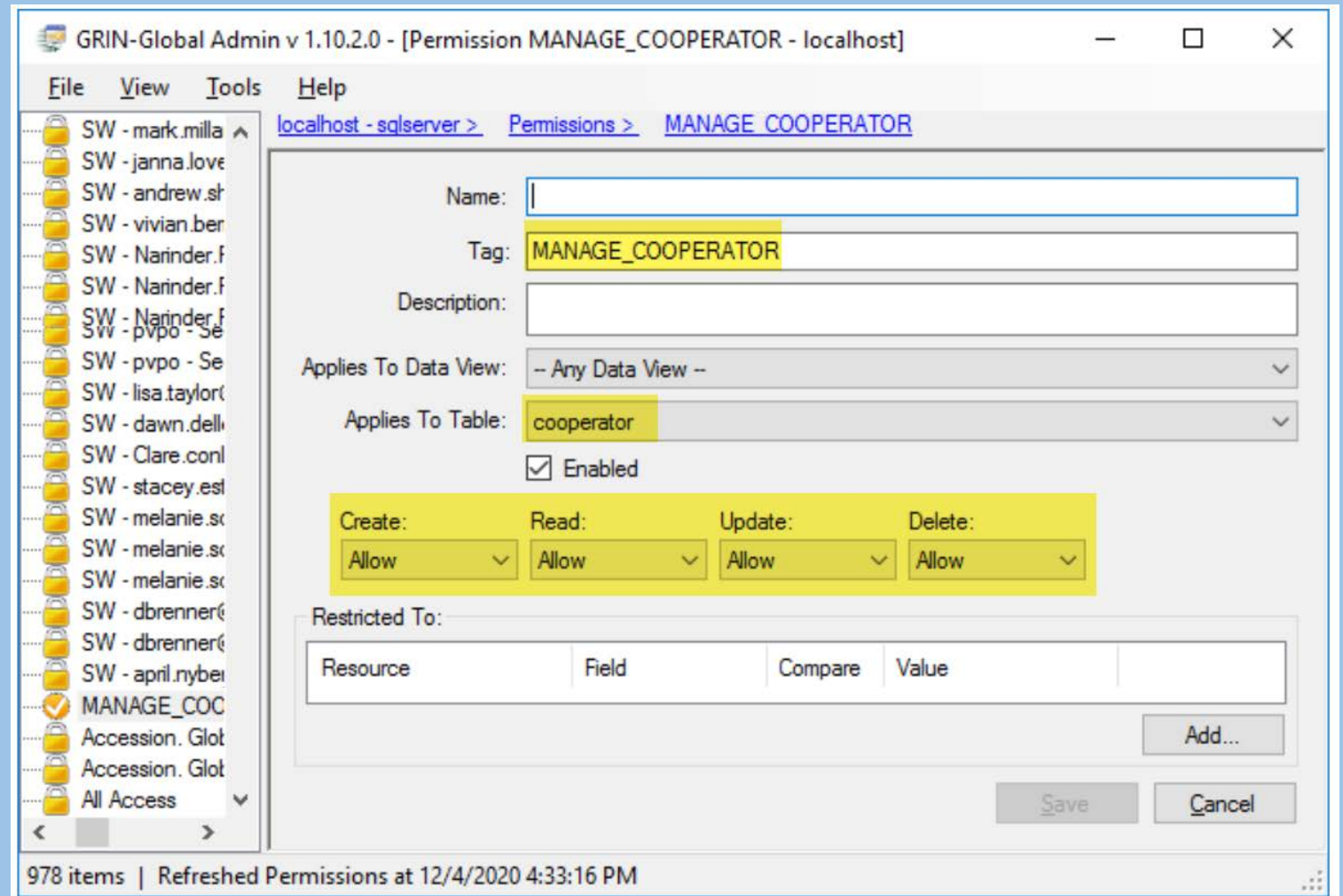
- can allow access to all rows owned by users from a particular site

# Permissions, Groups, & Users

1. Create a permission
  2. Create a group
    - assign permissions to the group
    - assign users to the group
- A permission can be used in multiple groups
  - A group can have multiple permissions and multiple users

# Ex. 1: Allowing Access to a Table

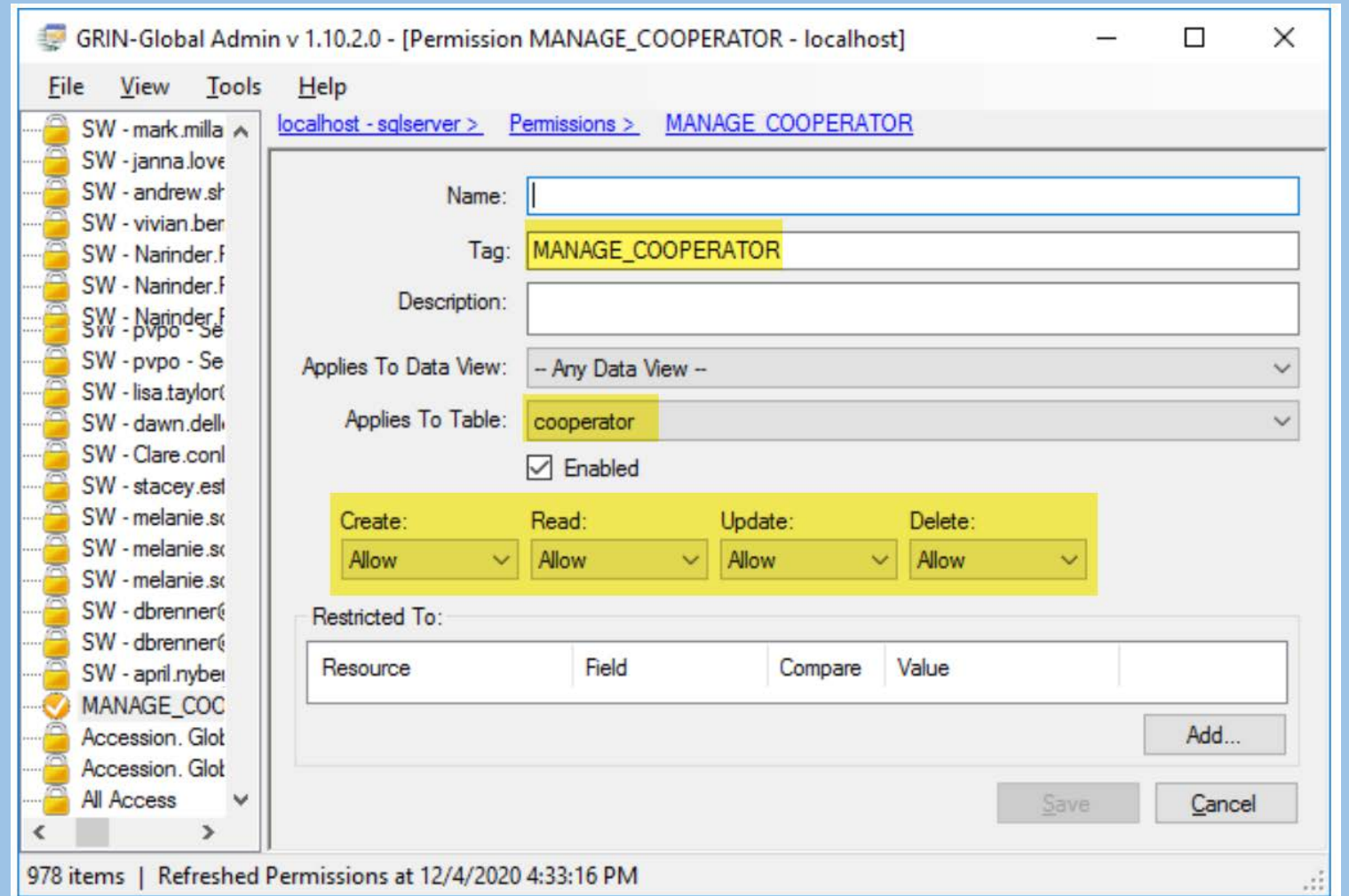
The following permission allows complete access to the cooperator table:



# Allowing Access to a Table

Key points:

- **Applies To Table:** field is set
- **Update and Delete** are allowed
- **Restricted To:** leave empty

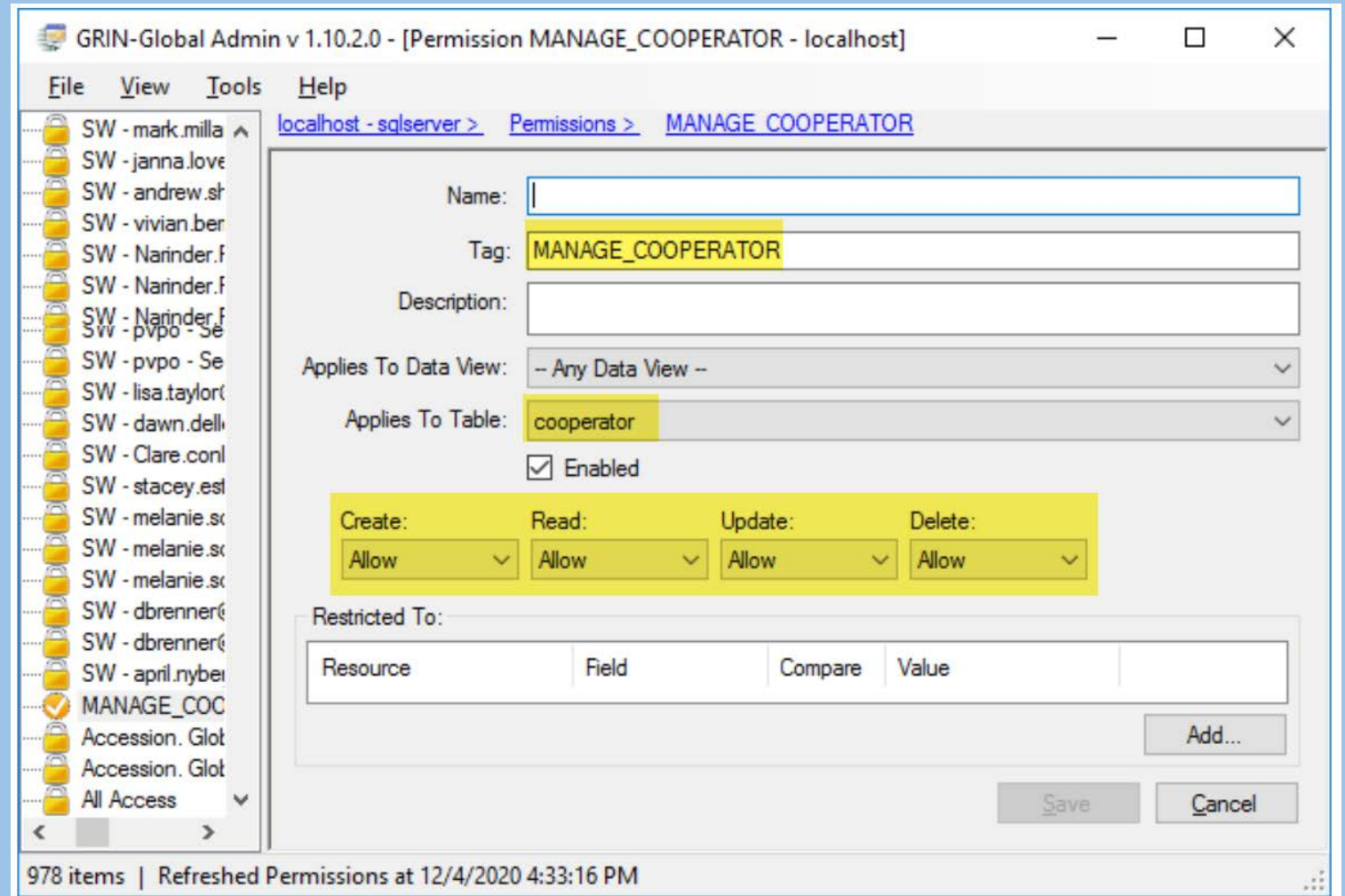




# Allowing Access to a Table

## Notes:

- the setting "**Data View**" isn't supported
- **Name & Description** are optional, but help document your permissions
- leave the **Enabled** checkbox *enabled*



# Ex. 2: Allowing all access for a site's records

The screenshot shows the GRIN-Global Admin v 1.10.2.0 application window. The title bar indicates the current context is '[Permission MANAGE\_SITE\_NC7 - localhost]'. The interface includes a menu bar (File, View, Tools, Help) and a breadcrumb trail: [localhost - sqlserver >](#) [Permissions >](#) [MANAGE\\_SITE\\_NC7](#).

On the left, a tree view lists various permissions, with 'MANAGE\_SITE\_NC7' selected and highlighted in yellow.

The main configuration area for 'MANAGE\_SITE\_NC7' contains the following fields and options:

- Name:** An empty text input field.
- Tag:** A text input field containing 'MANAGE\_SITE\_NC7'.
- Description:** An empty text input field.
- Applies To Data View:** A dropdown menu set to '-- Any Data View --'.
- Applies To Table:** A dropdown menu set to '-- Any Table --'.
- Enabled:** A checked checkbox.
- Permissions:** A section with four dropdown menus: 'Create' (set to 'Inherit'), 'Read' (set to 'Inherit'), 'Update' (set to 'Allow'), and 'Delete' (set to 'Allow').
- Restricted To:** A table defining access restrictions.

| Resource | Field   | Compare | Value |
|----------|---------|---------|-------|
| site     | site_id | =       | 16    |

At the bottom right of the 'Restricted To' section is an 'Add...' button. At the bottom of the main configuration area are 'Save' and 'Cancel' buttons.

The status bar at the bottom of the window displays '978 items | Refreshed Permissions at 12/4/2020 4:38:27 PM'.



# Steps: New permission... select the site table

Permission Permissions - localhost\sqlexpress

Name:

Tag:

Description:

Applies To Data View:

Applies To Table:

Create:

Restricted To:

Resource

- region
- s9\_site\_inventory
- site
- source\_desc\_observation
- source\_descriptor
- source\_descriptor\_code
- source\_descriptor\_code\_lang
- source\_descriptor\_lang
- sys\_database
- sys\_database\_migration
- sys\_database\_migration\_lang
- sys\_datatrigger

1

# Steps... add the restriction for the site\_id

New Restriction

☒ Restrict By Field Value:

site site\_id

in 50 (INTEGER) 2

☐ Restrict Children By Field Value:

site site\_id

in (INTEGER)

Save Cancel

Steps... change **Applies To -- Any Table --**  
Edit the **Update / Delete** permissions ; Save

localhost\sqlexpress - sqlserver > Permissions > MANAGE\_SITE\_HILO

Name:

Tag:

Description:

Applies To Data View: -- Any Data View --

Applies To Table: -- Any Table -- 3

☒ Enabled

Create:  Read:  Update:  Delete:  4

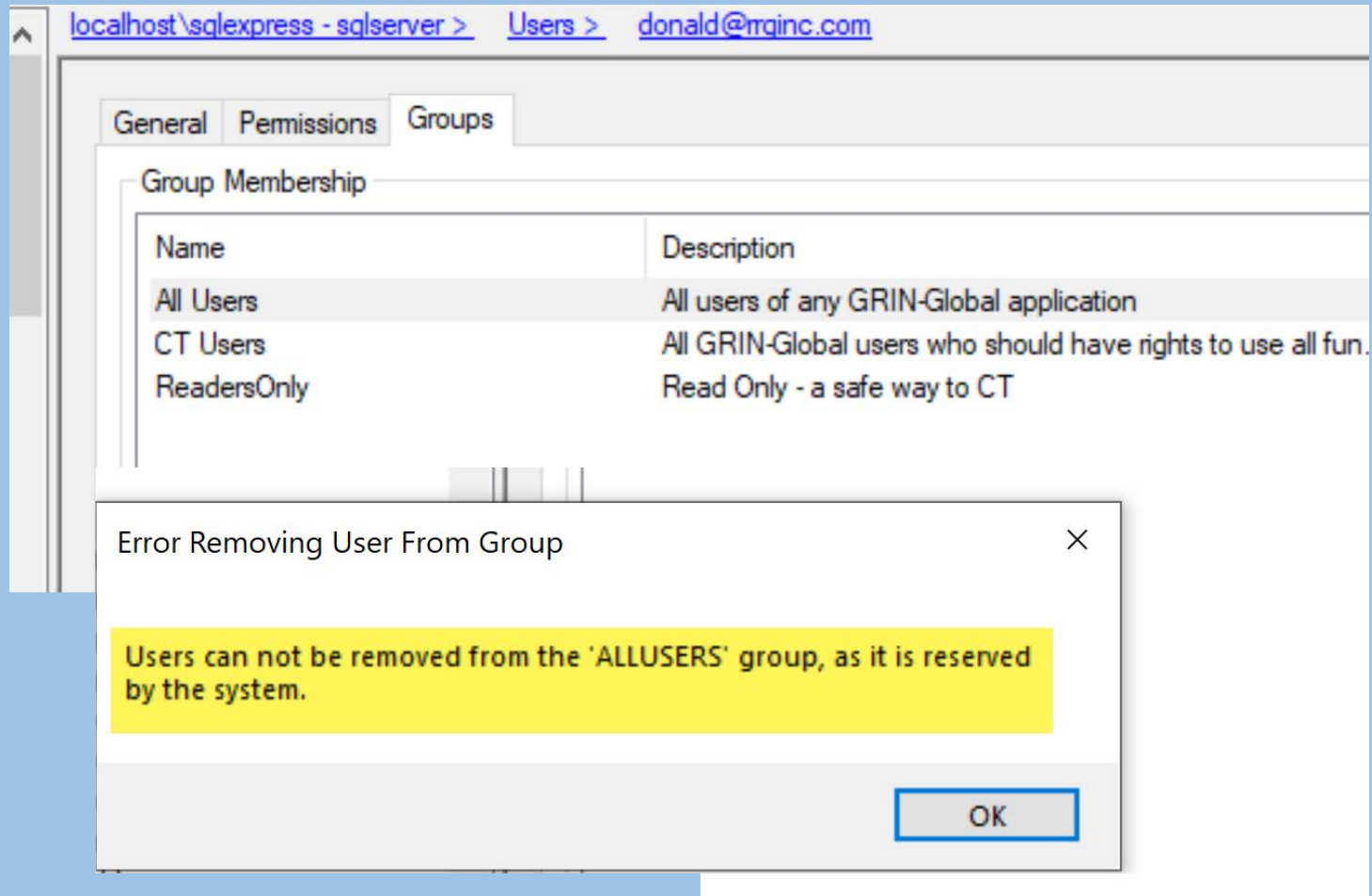
Restricted To:

| Resource | Field   | Compare | Value |
|----------|---------|---------|-------|
| site     | site_id | in      | 50    |

Add...

Save Cancel

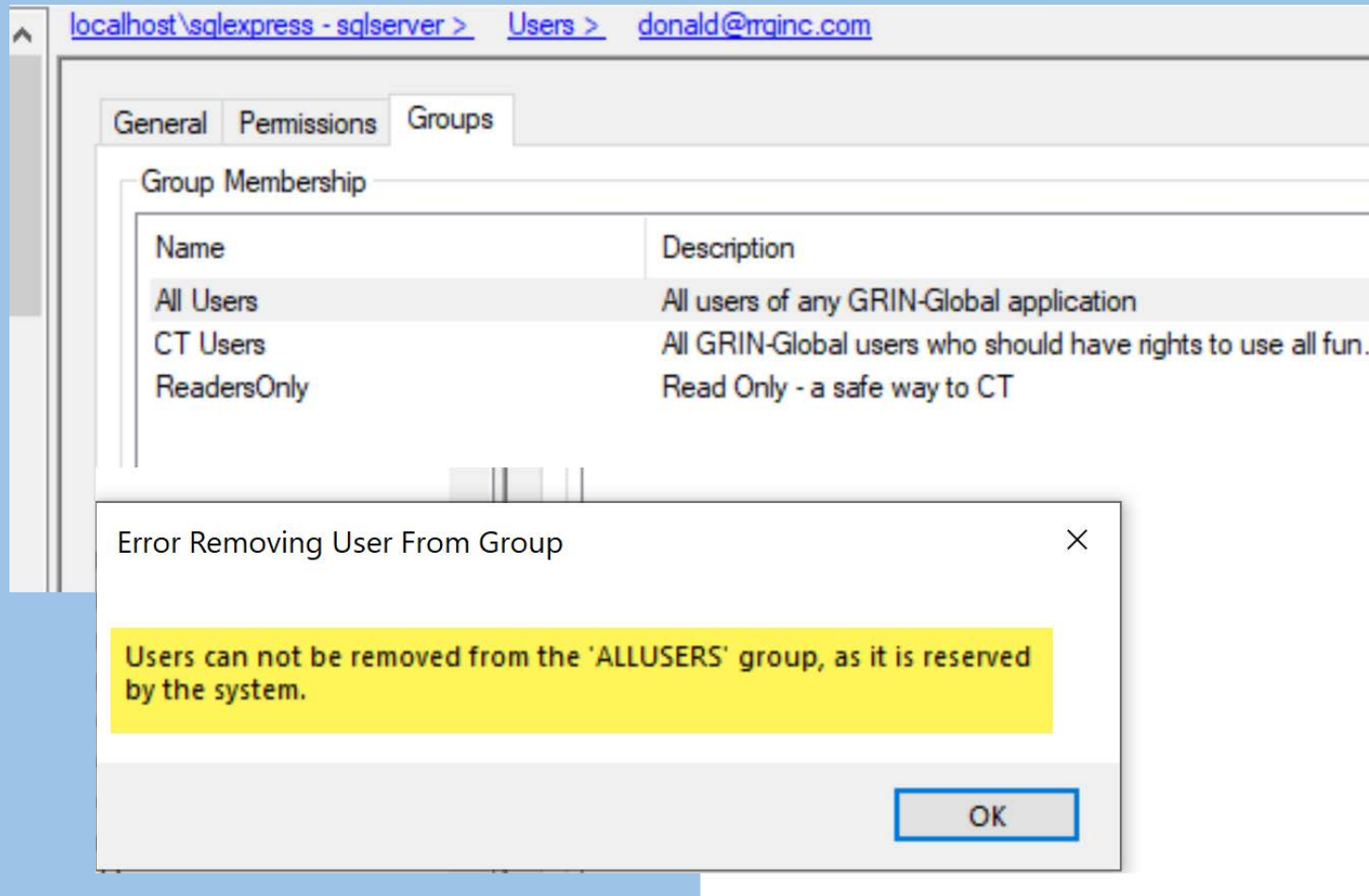
## Ex. 3: Read Permission Only for Users



# Ex. 3: Read Permission Only for Users

Not possible?

[tbd]



# Security Settings

Security is enabled by default

*Perhaps* change to “true” when initially loading data

GRIN-Global Admin v 2.0.3.0 - [Web Application - localhost\sqlexpress]

File View Tools Help

localhost\sqlexpress - sqlserver > Web Application

Connections

- localhost\sqlexpress - sqlserver
  - Groups
  - Users
  - Permissions
  - Dataviews
  - Table Mappings
  - Data Triggers
  - Maintenance
  - Import Wizard
  - Code Groups
  - File Groups
  - Web Application
- localhost\sqlexpress - sqlserver
- 40.84.186.116 - sqlserver
- 3.1.213.237 - sqlserver
- ggcommunity.southcentralus

Application Settings

| Name                      | Value                        |
|---------------------------|------------------------------|
| DataManagerCommandTimeout | 90                           |
| EventLogSourceName        | GrinGlobal.Web               |
| DisableSecurity           | false                        |
| DisableNotifications      | false                        |
| DisableCacheManager       | false                        |
| DisableFriendlyErrors     | false                        |
| EnableAdminViaWeb         | true                         |
| OFF_HttpLogFile           | ~/uploads/logs/http.cs       |
| AnonymousUserName         | guest                        |
| AnonymousPassword         | gdy31mOjsgl8ksO6WC653Y6ACWY= |
| AllowCookies              | true                         |
| DefaultWebTheme           | theme1                       |

# Data Triggers

- Overview – What are They?
- Where are They?
- SQL to List
- Enabling / Disabling
- How to Review Source Code



# Data Triggers - What are they?

Triggers:

“discrete programming code that execute in response to certain conditions or events or certain values stored in a database table.”

# Data Triggers - What are they?

a mechanism for developers to

- connect with the middle tier  
(used for reading and writing data)

- add custom business logic

- typically “RowSaving” - executed before each row is saved (checking for certain conditions before allowing a database update)

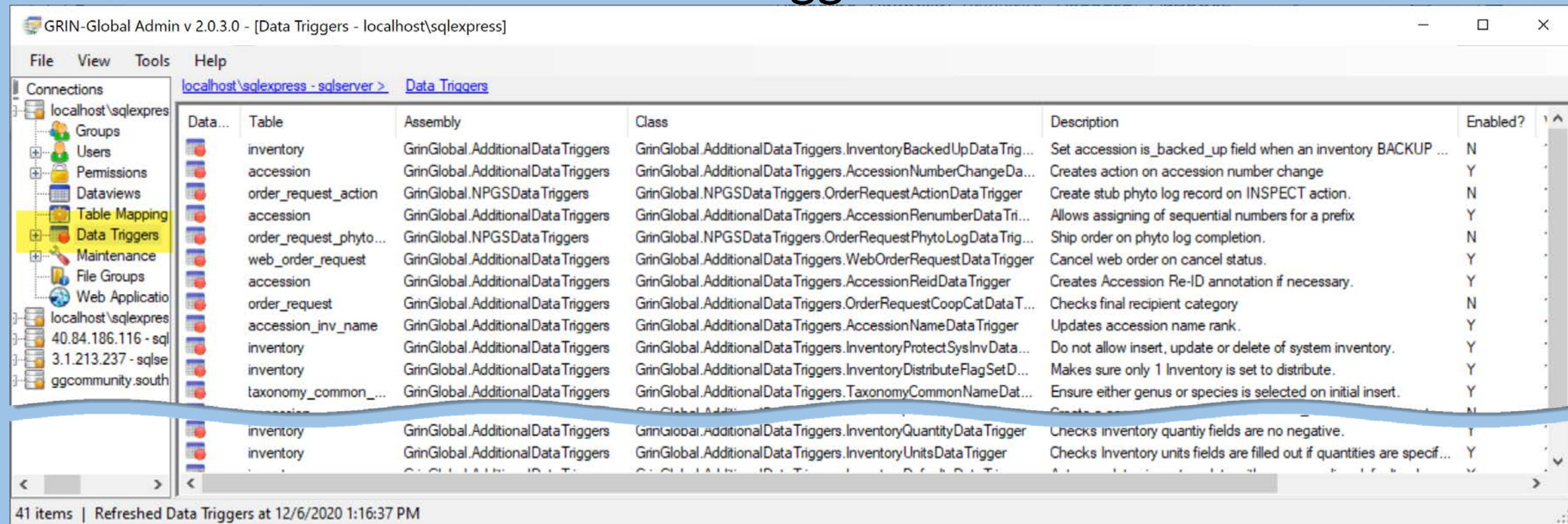
# Data Triggers - What are they?

Many triggers are installed automatically during the GG installation

These triggers may be *enabled* or *disabled*, to match the needs of the organization

# Data Triggers List

A GG administrator can list the triggers within GG's Admin Tool



The screenshot shows the GRIN-Global Admin v 2.0.3.0 - [Data Triggers - localhost\sqlexpress] window. The left sidebar contains a tree view with the following items: Connections, localhost\sqlexpress, Groups, Users, Permissions, Dataviews, Table Mapping, Data Triggers (highlighted), Maintenance, File Groups, and Web Application. The main area displays a table of data triggers.

| Data... | Table                  | Assembly                          | Class  | Description  | Enabled? |
|---------|------------------------|-----------------------------------|--|--|----------|
|         | inventory              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.InventoryBackedUpDataTrig...   | Set accession is_backed_up field when an inventory BACKUP ...            | N        |
|         | accession              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.AccessionNumberChangeDa...     | Creates action on accession number change                                | Y        |
|         | order_request_action   | GrinGlobal.NPGSDDataTriggers      | GrinGlobal.NPGSDDataTriggers.OrderRequestActionDataTrigger       | Create stub phyto log record on INSPECT action.                          | N        |
|         | accession              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.AccessionRenumDataTri...       | Allows assigning of sequential numbers for a prefix                      | Y        |
|         | order_request_phyto... | GrinGlobal.NPGSDDataTriggers      | GrinGlobal.NPGSDDataTriggers.OrderRequestPhytoLogDataTrig...     | Ship order on phyto log completion.                                      | N        |
|         | web_order_request      | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.WebOrderRequestDataTrigger     | Cancel web order on cancel status.                                       | Y        |
|         | accession              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.AccessionReidDataTrigger       | Creates Accession Re-ID annotation if necessary.                         | Y        |
|         | order_request          | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.OrderRequestCoopCatDataT...    | Checks final recipient category  | N        |
|         | accession_inv_name     | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.AccessionNameDataTrigger       | Updates accession name rank.   | Y        |
|         | inventory              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.InventoryProtectSysInvData...  | Do not allow insert, update or delete of system inventory.               | Y        |
|         | inventory              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.InventoryDistributeFlagSetD... | Makes sure only 1 Inventory is set to distribute.                        | Y        |
|         | taxonomy_common_...    | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.TaxonomyCommonNameDat...       | Ensure either genus or species is selected on initial insert.            | Y        |
|         | inventory              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.InventoryQuantityDataTrigger   | Checks inventory quantity fields are no negative.                        | Y        |
|         | inventory              | GrinGlobal.AdditionalDataTriggers | GrinGlobal.AdditionalDataTriggers.InventoryUnitsDataTrigger      | Checks inventory units fields are filled out if quantities are specif... | Y        |

41 items | Refreshed Data Triggers at 12/6/2020 1:16:37 PM

# Trigger Details

GRIN-Global Admin v 2.0.3.0 - [Data Trigger - accession - localhost\sqlexpress]

File View Tools Help

[localhost\sqlexpress - sqlserver >](#) [Data Triggers >](#) [accession](#)

Data Triggers

- accession
- accession
- accession
- accession
- accession**
- accession\_action
- accession\_inv\_annotation
- accession\_inv\_name
- accession\_ipr
- accession\_pedigree
- accession\_quarantine
- accession\_source
- cooperator
- crop\_trait\_observation
- geography

Assembly: GrinGlobal.AdditionalDataTriggers.dll

Dataview: (Any)

Table: accession

Class: GrinGlobal.AdditionalDataTriggers.AccessionNumberChangeDataTrigger

☒ Enabled

Title: Accession Number Change Trigger

Description: Creates action on accession number change

# SQL for Listing Triggers

```
SELECT fully_qualified_class_name,  
d.is_enabled,table_name,title,description  
FROM sys_datatrigger d  
JOIN sys_datatrigger_lang l  
ON l.sys_datatrigger_id = d.sys_datatrigger_id  
JOIN sys_table t  
ON t.sys_table_id=d.sys_table_id  
ORDER BY table_name
```

# Can You See What the Trigger Code Is?

Yes. The triggers are all in the Git repository in the AdditionalDataTriggers project.

See:

<https://gitlab.com/GRIN-Global/GRIN-Global-server/-/tree/master/GrinGlobal.AdditionalDataTriggers>

# GitLab GG Triggers

GitLab

Projects

Groups

Snippets

Help

Search or jump to...

Sign in / Register

GRIN-Global Server

Project overview

Repository

Files

Commits

Branches

Tags

Contributors


Graph

Compare





Locked Files

GRIN-Global > GRIN-Global Server > Repository

master GRIN-Global-server / GrinGlobal.AdditionalDataTriggers History Find file Clone

 Trac 1903 Trigger for updating "Is Backed Up" when NLGRP adds backup lots to GG  
Kurt Endress authored 5 months ago

a7c5e098

| Name  | Last commit   | Last update |
|---|---|-------------|
| ..  |   |             |
|  Properties                    | Trac 1876 Change accession datatrigger to allow high non...   | 1 year ago  |
|  AccessionActionDataTrigger.cs | New additional data triggers for Accession, AccessionActio... | 6 years ago |
|  AccessionDataTrigger.cs       | Trac 1876 Change accession datatrigger to allow high non...   | 1 year ago  |
|  AccessionIPRDataTrigger.cs    | Additional trigger changes.                                   | 4 years ago |

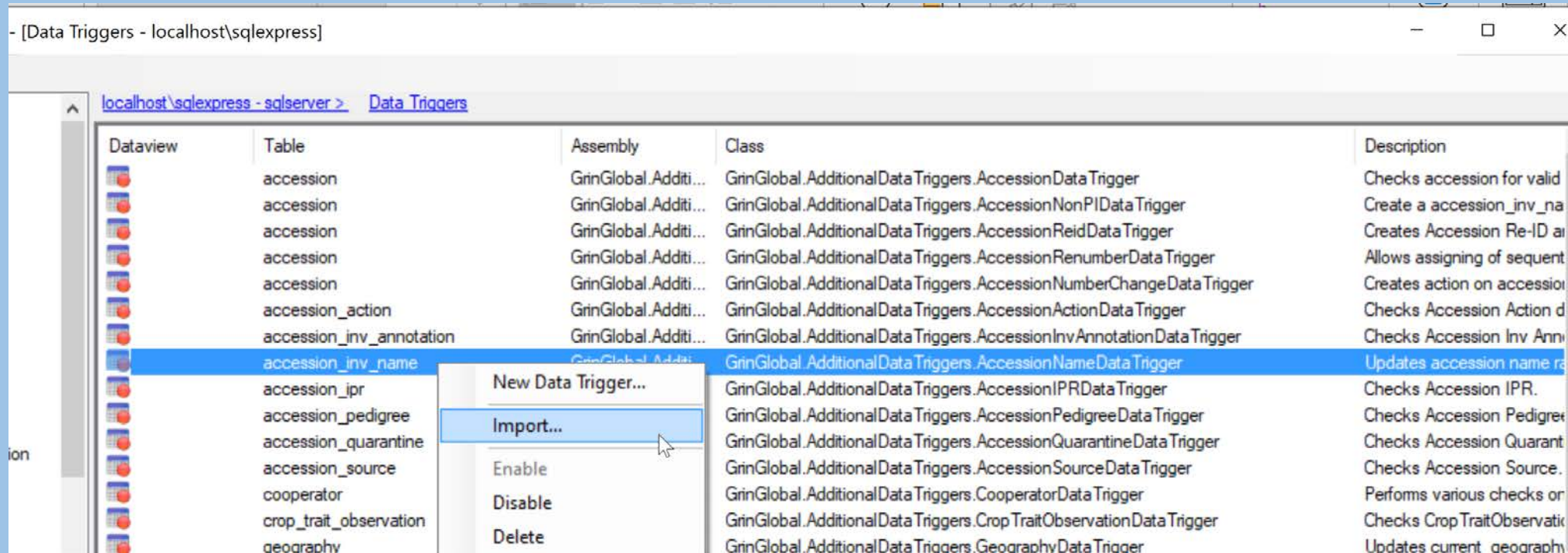


AccessionActionDataTrigger.cs 1.51 KB Edit Web IDE

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using GrinGlobal.Interface.DataTriggers;
6
7 namespace GrinGlobal.AdditionalDataTriggers {
8     public class AccessionActionDataTrigger : TableDataTriggerAdapter {
9
10         public override void TableRowSaving(ISaveDataTriggerArgs args) {
11             if (args.SaveMode == SaveMode.Insert || args.SaveMode == SaveMode.Update) {
12                 var helper = args.Helper;
13
14                 // 1) Completed date must be >= started date
15                 if (helper.AllFieldsExist("started_date", "completed_date") && !helper.IsValueEmpty("started_date") && !helper.IsValueEmpty("completed_date")) {
16                     DateTime started = Convert.ToDateTime(helper.GetValue("started_date", null, true));
17                     DateTime completed = Convert.ToDateTime(helper.GetValue("completed_date", null, true));
18                     if (completed < started) {
19                         args.Cancel("Completed date must be after started date.");
20                     }
21                 }
22             }
23         }
24     }
25 }
```

There is one trigger file for each table, in some cases containing multiple triggers. Each trigger has its own **class** section.

# Not for the weak of heart...



Questions?

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